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**Department of Defense  
Fiscal Year (FY) 2019 Budget Estimates**

February 2018



**Army**

*Justification Book of*  
***Missile Procurement, Army***

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Army • Budget Estimates FY 2019 • Procurement

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# MISSILE PROCUREMENT, ARMY

## Appropriation Language

For construction, procurement, production, modification, and modernization of missile equipment, including ordnance, ground handling equipment, 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, \$5,158,128,000.00 to remain available for obligation until September 30, 2021.

### **COST STATEMENT**

The following Justification Books were prepared at a cost of \$226,413: 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, and Budget Activity 7.

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Department of the Army  
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 (Dollars in Thousands)

19 Jan 2018

Appropriation	FY 2017 (Base + OCO)	FY 2018 PB Request with CR Adj Base	FY 2018 Total PB Requests* with CR Adj Base	FY 2018 PB Request with CR Adj OCO
Missile Procurement, Army	2,891,675	1,523,388	1,523,388	1,214,171
Total Department of the Army	2,891,675	1,523,388	1,523,388	1,214,171

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 (Dollars in Thousands)

19 Jan 2018

Appropriation	FY 2018 Total PB Requests+ with CR Adj OCO	FY 2018 Emergency Requests** Emergency	FY 2018 Less Enacted Div B P.L.115-96*** MDDE + Ship Repairs	FY 2018 Remaining Req Emergency
Missile Procurement, Army	1,214,171	884,000	-884,000	
Total Department of the Army	1,214,171	884,000	-884,000	

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19 Jan 2018

Appropriation	FY 2018 Total PB Requests* with CR Adj Base + OCO + Emergency**	FY 2018 Less Enacted DIV B P.L.115-96*** MDDE + Ship Repairs	FY 2018 Remaining Req with CR Adj Base + OCO + Emergency
Missile Procurement, Army	3,621,559	-884,000	2,737,559
Total Department of the Army	3,621,559	-884,000	2,737,559

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19 Jan 2018

Appropriation	FY 2019 Base	FY 2019 OCO	FY 2019 Total
Missile Procurement, Army	3,355,777	1,802,351	5,158,128
Total Department of the Army	3,355,777	1,802,351	5,158,128

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Department of the Army  
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19 Jan 2018

Appropriation: Missile Procurement, Army

Budget Activity	FY 2017 (Base + OCO)	FY 2018 PB Request with CR Adj Base	FY 2018 Total PB Requests* with CR Adj Base	FY 2018 PB Request with CR Adj OCO
02. Other Missiles	2,417,743	1,770,256	1,770,256	531,283
03. Modification of Missiles	433,284	722,966	722,966	28,000
04. Spares and Repair Parts	34,487	18,915	18,915	
05. Support Equipment and Facilities	6,161	6,917	6,917	
20. Undistributed		-995,666	-995,666	654,888
Total Missile Procurement, Army	2,891,675	1,523,388	1,523,388	1,214,171



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19 Jan 2018

Appropriation: Missile Procurement, Army

Budget Activity	FY 2018 Total PB Requests+ with CR Adj OCO	FY 2018 Emergency Requests** Emergency	FY 2018 Less Enacted Div B P.L.115-96*** MDDE + Ship Repairs	FY 2018 Remaining Req Emergency
02. Other Missiles	531,283	647,000	-647,000	
03. Modification of Missiles	28,000	237,000	-237,000	
04. Spares and Repair Parts				
05. Support Equipment and Facilities				
20. Undistributed	654,888			
Total Missile Procurement, Army	1,214,171	884,000	-884,000	

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19 Jan 2018

Appropriation: Missile Procurement, Army

Budget Activity	FY 2018 Total PB Requests* with CR Adj Base + OCO + Emergency**	FY 2018 Less Enacted DIV B P.L.115-96*** MDDE + Ship Repairs	FY 2018 Remaining Req with CR Adj Base + OCO + Emergency
02. Other Missiles	2,948,539	-647,000	2,301,539
03. Modification of Missiles	987,966	-237,000	750,966
04. Spares and Repair Parts	18,915		18,915
05. Support Equipment and Facilities	6,917		6,917
20. Undistributed	-340,778		-340,778
Total Missile Procurement, Army	3,621,559	-884,000	2,737,559

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Appropriation: Missile Procurement, Army

Budget Activity -----	FY 2019 Base -----	FY 2019 OCO -----	FY 2019 Total -----
02. Other Missiles	2,245,260	1,454,771	3,700,031
03. Modification of Missiles	1,075,161	347,580	1,422,741
04. Spares and Repair Parts	27,737		27,737
05. Support Equipment and Facilities	7,619		7,619
20. Undistributed			
Total Missile Procurement, Army	3,355,777	1,802,351	5,158,128

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Appropriation: 2032A Missile Procurement, Army

Line No	Item Nomenclature	Ident Code	FY 2017 (Base + OCO)		FY 2018 PB Request with CR Adj Base		FY 2018 Total PB Requests* with CR Adj Base		FY 2018 PB Request with CR Adj OCO		S e c
			Quantity	Cost	Quantity	Cost	Quantity	Cost	Quantity	Cost	
<u>Budget Activity 02: Other Missiles</u>											
Surface-to-Air Missile System											
1	Lower Tier Air and Missile Defense (AMD)	A		126,470		140,826		140,826			U
2	MSE Missile		169	809,201	93	459,040	93	459,040			U
3	INDIRECT FIRE PROTECTION CAPABILITY INC 2-I Less: Advance Procurement (PY)	A		(19,319)		(77,061) (-19,319)		(77,061) (-19,319)			U U
				<u>19,319</u>		<u>57,742</u>		<u>57,742</u>			
4	INDIRECT FIRE PROTECTION CAPABILITY INC 2-I Advance Procurement (CY) C (FY 2019 for FY 2020) (M)										U
Air-To-Surface Missile System											
5	Hellfire Sys Summary	A	4478	497,751	998	94,790	998	94,790	2927	278,073	U
6	Joint Air-To-Ground MsIs (JAGM) Less: Advance Procurement (PY)		373	(89,649) (-27,738)	824	(215,532) (-37,100)	824	(215,532) (-37,100)			U U
				<u>61,911</u>		<u>178,432</u>		<u>178,432</u>			
7	Joint Air-To-Ground MsIs (JAGM) Advance Procurement (CY) C (FY 2017 for FY 2018) (M)			37,100 (37,100)							U
Anti-Tank/Assault Missile Sys											
8	Javelin (Aaws-M) System Summary		1129	191,575	525	110,123	525	110,123	47	8,112	U

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Appropriation: 2032A Missile Procurement, Army

Line No	Item Nomenclature	Ident Code	FY 2018 Total PB Requests+ with CR Adj OCO Quantity	Cost	FY 2018 Emergency Requests** Emergency Quantity	Cost	FY 2018 Less Enacted Div B P.L.115-96*** MDDE + Ship Repairs Quantity	Cost	FY 2018 Remaining Req Emergency Quantity	Cost	S e c
Budget Activity 02: Other Missiles											
Surface-to-Air Missile System											
1	Lower Tier Air and Missile Defense (AMD)	A									U
2	MSE Missile				147	647,000	-147	-647,000			U
3	INDIRECT FIRE PROTECTION CAPABILITY INC 2-I Less: Advance Procurement (PY)	A									U
4	INDIRECT FIRE PROTECTION CAPABILITY INC 2-I Advance Procurement (CY) C (FY 2019 for FY 2020) (M)										U
Air-To-Surface Missile System											
5	Hellfire Sys Summary	A	2927	278,073							U
6	Joint Air-To-Ground MsIs (JAGM) Less: Advance Procurement (PY)										U
7	Joint Air-To-Ground MsIs (JAGM) Advance Procurement (CY) C (FY 2017 for FY 2018) (M)										U
Anti-Tank/Assault Missile Sys											
8	Javelin (Aaws-M) System Summary		47	8,112							U

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Appropriation: 2032A Missile Procurement, Army

Line No	Item Nomenclature	Ident Code	FY 2018 Total PB Requests* with CR Adj Base + OCO + Emergency**		FY 2018 Less Enacted DIV B P.L.115-96*** MDDE + Ship Repairs		FY 2018 Remaining Req with CR Adj Base + OCO + Emergency		S e c	
			Quantity	Cost	Quantity	Cost	Quantity	Cost		
Budget Activity 02: Other Missiles										
Surface-to-Air Missile System										
1	Lower Tier Air and Missile Defense (AMD)	A		140,826			140,826	U		
2	MSE Missile		240	1,106,040	-147	-647,000	93	459,040	U	
3	INDIRECT FIRE PROTECTION CAPABILITY INC 2-I Less: Advance Procurement (PY)	A		(77,061) (-19,319)			(77,061) (-19,319)	U U		
				57,742			57,742			
4	INDIRECT FIRE PROTECTION CAPABILITY INC 2-I Advance Procurement (CY) C (FY 2019 for FY 2020) (M)							U		
Air-To-Surface Missile System										
5	Hellfire Sys Summary	A	3925	372,863			3925	372,863	U	
6	Joint Air-To-Ground MsIs (JAGM) Less: Advance Procurement (PY)		824	(215,532) (-37,100)			824	(215,532) (-37,100)	U U	
				178,432			178,432			
7	Joint Air-To-Ground MsIs (JAGM) Advance Procurement (CY) C (FY 2017 for FY 2018) (M)							U		
Anti-Tank/Assault Missile Sys										
8	Javelin (Aaws-M) System Summary		572	118,235			572	118,235	U	

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Line No	Item Nomenclature	Ident Code	FY 2019 Base Quantity Cost	FY 2019 OCO Quantity Cost	FY 2019 Total Quantity Cost	S e c
Budget Activity 02: Other Missiles						
Surface-to-Air Missile System						
1	Lower Tier Air and Missile Defense (AMD)	A	111,395		111,395	U
2	MSE Missile		179 871,276	122 260,000	301 1,131,276	U
3	INDIRECT FIRE PROTECTION CAPABILITY INC 2-I Less: Advance Procurement (PY)	A	(145,636)		(145,636)	U
			145,636		145,636	
4	INDIRECT FIRE PROTECTION CAPABILITY INC 2-I Advance Procurement (CY) C (FY 2019 for FY 2020) (M)		31,286 (31,286)		31,286 (31,286)	U
Air-To-Surface Missile System						
5	Hellfire Sys Summary	A		2684 255,040	2684 255,040	U
6	Joint Air-To-Ground MsIs (JAGM) Less: Advance Procurement (PY)		1046 (276,462)		1046 (276,462)	U
			276,462		276,462	
7	Joint Air-To-Ground MsIs (JAGM) Advance Procurement (CY) C (FY 2017 for FY 2018) (M)					U
Anti-Tank/Assault Missile Sys						
8	Javelin (Aaws-M) System Summary		709 303,665	75 31,120	784 334,785	U

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Appropriation: 2032A Missile Procurement, Army

Line No	Item Nomenclature	Ident Code	FY 2017 (Base + OCO)		FY 2018 PB Request with CR Adj Base		FY 2018 Total PB Requests* with CR Adj Base		FY 2018 PB Request with CR Adj OCO		S e c
			Quantity	Cost	Quantity	Cost	Quantity	Cost	Quantity	Cost	
9	Tow 2 System Summary	A	1948	(181,477)	1156	(105,800)	1156	(105,800)	49	(3,907)	U
	Less: Advance Procurement (PY)					(-19,949)		(-19,949)			U
				181,477		85,851		85,851		3,907	
10	Tow 2 System Summary										
	Advance Procurement (CY)			10,716		19,949		19,949			U
	C (FY 2017 for FY 2018) (M)			(10,716)							
	C (FY 2018 for FY 2019) (M)					(19,949)		(19,949)			
	C (FY 2019 for FY 2020) (M)										
11	Guided MLRS Rocket (GMLRS)		3360	408,842	4458	595,182	4458	595,182	1542	191,522	U
12	MLRS Reduced Range Practice Rockets (RRPR)		1704	18,004	3306	28,321	3306	28,321			U
13	High Mobility Artillery Rocket System (HIMARS)									41,000	U
14	LETHAL MINIATURE AERIAL MISSILE SYSTEM (LMAMS)	A		55,377					120	8,669	U
	Total Other Missiles			2,417,743		1,770,256		1,770,256		531,283	
Budget Activity 03: Modification of Missiles											
Modifications											
15	Patriot Mods			197,107		329,073		329,073			U
16	ATACMS MODS	A		165,943		116,040		116,040			U
17	GMLRS MOD	A		395		531		531			U
18	Stinger Mods			6,578		63,090		63,090		28,000	U
19	Avenger Mods			35,979		62,931		62,931			U
20	Itas/Tow Mods			383		3,500		3,500			U

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Line No	Item Nomenclature	Ident Code	FY 2018 Total PB Requests+ with CR Adj OCO		FY 2018 Emergency Requests** Emergency		FY 2018 Less Enacted Div B P.L.115-96*** MDDE + Ship Repairs		FY 2018 Remaining Req Emergency		S e c
			Quantity	Cost	Quantity	Cost	Quantity	Cost	Quantity	Cost	
9	Tow 2 System Summary	A	49	(3,907)							U
	Less: Advance Procurement (PY)										U
				3,907							
10	Tow 2 System Summary										U
	Advance Procurement (CY)										
	C (FY 2017 for FY 2018) (M)										
	C (FY 2018 for FY 2019) (M)										
	C (FY 2019 for FY 2020) (M)										
11	Guided MLRS Rocket (GMLRS)		1542	191,522							U
12	MLRS Reduced Range Practice Rockets (RRPR)										U
13	High Mobility Artillery Rocket System (HIMARS)			41,000							U
14	LETHAL MINIATURE AERIAL MISSILE SYSTEM (LMAMS)	A	120	8,669							U
	Total Other Missiles			531,283		647,000		-647,000			
Budget Activity 03: Modification of Missiles											
-----											
Modifications											
15	Patriot Mods					167,000		-167,000			U
16	ATACMS MODS	A				70,000		-70,000			U
17	GMLRS MOD	A									U
18	Stinger Mods			28,000							U
19	Avenger Mods										U
20	Itas/Tow Mods										U

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Appropriation: 2032A Missile Procurement, Army

Line No	Item Nomenclature	Ident Code	FY 2018 Total PB Requests* with CR Adj Base + OCO + Emergency** Quantity	Cost	FY 2018 Less Enacted DIV B P.L.115-96*** MDDE + Ship Repairs Quantity	Cost	FY 2018 Remaining Req with CR Adj Base + OCO + Emergency Quantity	Cost	S e c
9	Tow 2 System Summary	A	1205	(109,707)			1205	(109,707)	U
	Less: Advance Procurement (PY)			(-19,949)				(-19,949)	U
				89,758				89,758	
10	Tow 2 System Summary								
	Advance Procurement (CY)			19,949				19,949	U
	C (FY 2017 for FY 2018) (M)								
	C (FY 2018 for FY 2019) (M)			(19,949)				(19,949)	
	C (FY 2019 for FY 2020) (M)								
11	Guided MLRS Rocket (GMLRS)		6000	786,704			6000	786,704	U
12	MLRS Reduced Range Practice Rockets (RRPR)		3306	28,321			3306	28,321	U
13	High Mobility Artillery Rocket System (HIMARS)			41,000				41,000	U
14	LETHAL MINIATURE AERIAL MISSILE SYSTEM (LMAMS)	A	120	8,669			120	8,669	U
	Total Other Missiles			2,948,539		-647,000		2,301,539	
	Budget Activity 03: Modification of Missiles								
	Modifications								
15	Patriot Mods			496,073		-167,000		329,073	U
16	ATACMS MODS	A		186,040		-70,000		116,040	U
17	GMLRS MOD	A		531				531	U
18	Stinger Mods			91,090				91,090	U
19	Avenger Mods			62,931				62,931	U
20	Itas/Tow Mods			3,500				3,500	U

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Appropriation: 2032A Missile Procurement, Army

Line No	Item Nomenclature	Ident Code	FY 2019 Base Quantity	FY 2019 Base Cost	FY 2019 OCO Quantity	FY 2019 OCO Cost	FY 2019 Total Quantity	FY 2019 Total Cost	Se
9	Tow 2 System Summary	A	1472	(124,963)			1472	(124,963)	U
	Less: Advance Procurement (PY)			(-19,949)				(-19,949)	U
				105,014				105,014	
10	Tow 2 System Summary								
	Advance Procurement (CY)			19,949				19,949	U
	C (FY 2017 for FY 2018) (M)								
	C (FY 2018 for FY 2019) (M)								
	C (FY 2019 for FY 2020) (M)			(19,949)				(19,949)	
11	Guided MLRS Rocket (GMLRS)		3267	359,613	7584	624,500	10851	984,113	U
12	MLRS Reduced Range Practice Rockets (RRPR)		2214	20,964			2214	20,964	U
13	High Mobility Artillery Rocket System (HIMARS)				24	171,138	24	171,138	U
14	LETHAL MINIATURE AERIAL MISSILE SYSTEM (LMAMS)	A			1318	112,973	1318	112,973	U
	Total Other Missiles			2,245,260		1,454,771		3,700,031	
	Budget Activity 03: Modification of Missiles								
	Modifications								
15	Patriot Mods			313,228				313,228	U
16	ATACMS MODS	A		221,656		225,580		447,236	U
17	GMLRS MOD	A		266				266	U
18	Stinger Mods			94,756				94,756	U
19	Avenger Mods			48,670				48,670	U
20	Itas/Tow Mods			3,173				3,173	U

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Appropriation: 2032A Missile Procurement, Army

Line No	Item Nomenclature	Ident Code	FY 2017 (Base + OCO) Quantity Cost	FY 2018 PB Request with CR Adj Base Quantity Cost	FY 2018 Total PB Requests* with CR Adj Base Quantity Cost	FY 2018 PB Request with CR Adj OCO Quantity Cost	S e c
21	MLRS Mods		25,052	138,235	138,235		U
22	Himars Modifications		1,847	9,566	9,566		U
Total Modification of Missiles			433,284	722,966	722,966	28,000	
Budget Activity 04: Spares and Repair Parts							
Spares and Repair Parts							
23	Spares and Repair Parts		34,487	18,915	18,915		U
Total Spares and Repair Parts			34,487	18,915	18,915		
Budget Activity 05: Support Equipment and Facilities							
Support Equipment & Facilities							
24	Air Defense Targets		4,915	5,728	5,728		U
25	Production Base Support		1,154	1,189	1,189		U
26	Closed Account Adjustments		92				U
Total Support Equipment and Facilities			6,161	6,917	6,917		
Budget Activity 20: Undistributed							
Undistributed							
27	Adj to Match Continuing Resolution	A		-995,666	-995,666	654,888	U
Total Undistributed				-995,666	-995,666	654,888	
Total Missile Procurement, Army			2,891,675	1,523,388	1,523,388	1,214,171	

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Appropriation: 2032A Missile Procurement, Army

Line No	Item Nomenclature	Ident Code	FY 2018 Total PB Requests+ with CR Adj OCO		FY 2018 Emergency Requests** Emergency		FY 2018 Less Enacted Div B P.L.115-96*** MDDE + Ship Repairs		FY 2018 Remaining Req Emergency		S e c -
			Quantity	Cost	Quantity	Cost	Quantity	Cost	Quantity	Cost	
21	MLRS Mods										U
22	Himars Modifications										U
Total Modification of Missiles				28,000		237,000		-237,000			
Budget Activity 04: Spares and Repair Parts											
Spares and Repair Parts											
23	Spares and Repair Parts										U
Total Spares and Repair Parts											
Budget Activity 05: Support Equipment and Facilities											
Support Equipment & Facilities											
24	Air Defense Targets										U
25	Production Base Support										U
26	Closed Account Adjustments										U
Total Support Equipment and Facilities											
Budget Activity 20: Undistributed											
Undistributed											
27	Adj to Match Continuing Resolution	A		654,888							U
Total Undistributed				654,888							
Total Missile Procurement, Army				1,214,171		884,000		-884,000			

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Department of the Army  
FY 2019 President's Budget  
Exhibit P-1 FY 2019 President's Budget  
Total Obligational Authority  
(Dollars in Thousands)

19 Jan 2018

Appropriation: 2032A Missile Procurement, Army

Line No	Item Nomenclature	Ident Code	FY 2018 Total PB Requests* with CR Adj Base + OCO + Emergency**		FY 2018 Less Enacted DIV B P.L.115-96*** MDDE + Ship Repairs		FY 2018 Remaining Req with CR Adj Base + OCO + Emergency		S e c	
			Quantity	Cost	Quantity	Cost	Quantity	Cost		
21	MLRS Mods			138,235				138,235	U	
22	Himars Modifications			9,566				9,566	U	
Total Modification of Missiles				987,966		-237,000		750,966		
Budget Activity 04: Spares and Repair Parts										
Spares and Repair Parts										
23	Spares and Repair Parts			18,915				18,915	U	
Total Spares and Repair Parts				18,915				18,915		
Budget Activity 05: Support Equipment and Facilities										
Support Equipment & Facilities										
24	Air Defense Targets			5,728				5,728	U	
25	Production Base Support			1,189				1,189	U	
26	Closed Account Adjustments								U	
Total Support Equipment and Facilities				6,917				6,917		
Budget Activity 20: Undistributed										
Undistributed										
27	Adj to Match Continuing Resolution	A		-340,778				-340,778	U	
Total Undistributed				-340,778				-340,778		
Total Missile Procurement, Army				3,621,559		-884,000		2,737,559		

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Department of the Army  
 FY 2019 President's Budget  
 Exhibit P-1 FY 2019 President's Budget  
 Total Obligational Authority  
 (Dollars in Thousands)

19 Jan 2018

Appropriation: 2032A Missile Procurement, Army

Line No	Item Nomenclature	Ident Code	FY 2019 Base Quantity	Cost	FY 2019 OCO Quantity	Cost	FY 2019 Total Quantity	Cost	S e c
21	MLRS Mods		383,216		122,000		505,216		U
22	Himars Modifications		10,196				10,196		U
Total Modification of Missiles			1,075,161		347,580		1,422,741		
Budget Activity 04: Spares and Repair Parts									
Spares and Repair Parts									
23	Spares and Repair Parts		27,737				27,737		U
Total Spares and Repair Parts			27,737				27,737		
Budget Activity 05: Support Equipment and Facilities									
Support Equipment & Facilities									
24	Air Defense Targets		6,417				6,417		U
25	Production Base Support		1,202				1,202		U
26	Closed Account Adjustments								U
Total Support Equipment and Facilities			7,619				7,619		
Budget Activity 20: Undistributed									
Undistributed									
27	Adj to Match Continuing Resolution	A							U
Total Undistributed									
Total Missile Procurement, Army			3,355,777		1,802,351		5,158,128		

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3	02	10	8930C61001	INDIRECT FIRE PROTECTION CAPABILITY INC 2-I.....	14
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***Appropriation 2032A: Missile Procurement, Army***

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GMLRS MOD	1824C57701	17	03	10.....	147
Guided MLRS Rocket (GMLRS)	6005C64400	11	02	30.....	71
HIMARS Modifications	6580C67501	22	03	10.....	179
Hellfire Sys Summary	1338C70000	5	02	20.....	25
High Mobility Artillery Rocket System (HIMARS)	6200C02901	13	02	30.....	92
INDIRECT FIRE PROTECTION CAPABILITY INC 2-I	8930C61001	3	02	10.....	14
INDIRECT FIRE PROTECTION CAPABILITY INC 2-I, Advance Procurement	8930C61001	4	02	10.....	19
ITAS/TOW Mods	3972C61700	20	03	10.....	168
Javelin (AAWS-M) System Summary	0648CC0007	8	02	30.....	47
Joint Air-to-Ground MSLS (JAGM)	2605C70302	6	02	20.....	34
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Patriot Mods	0962C50700	15	03	10.....	108
Production Base Support	4662CA0100	25	05	10.....	193
Spares And Repair Parts	1242CA0250	23	04	10.....	184
Stinger Mods	2684C20000	18	03	10.....	149
TOW 2 System Summary	2104C59300	9	02	30.....	57
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**Exhibit P-40, Budget Line Item Justification:** PB 2019 Army **Date:** February 2018

<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 2032A: Missile Procurement, Army / BA 02: Other Missiles / BSA 10: Surface-to-Air Missile System	<b>P-1 Line Item Number / Title:</b> 7153C50016 / Lower Tier Air and Missile Defense (AMD)
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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 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	To Complete	Total
Procurement Quantity ( <i>Units in Each</i> )	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost ( <i>\$ in Millions</i> )	240.575	126.470	140.826	111.395	-	111.395	130.051	105.044	107.288	106.178	-	1,067.827
Less PY Advance Procurement ( <i>\$ in Millions</i> )	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) ( <i>\$ in Millions</i> )	240.575	126.470	140.826	111.395	-	111.395	130.051	105.044	107.288	106.178	-	1,067.827
Plus CY Advance Procurement ( <i>\$ in Millions</i> )	-	-	-	-	-	-	-	-	-	-	-	-
<b>Total Obligation Authority (<i>\$ in Millions</i>)</b>	<b>240.575</b>	<b>126.470</b>	<b>140.826</b>	<b>111.395</b>	<b>-</b>	<b>111.395</b>	<b>130.051</b>	<b>105.044</b>	<b>107.288</b>	<b>106.178</b>	<b>-</b>	<b>1,067.827</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 Lower Tier Air and Missile Defense (AMD) supports the Field Surveillance Program (FSP), PAC-3 Missile Support Center (P3MSC), International Engineering Services Program (IESP), Integrated Logistics Support (ILS), US Unique Engineering Services (ES), and System Engineering Program Management (SEPM) activities. The mission of the PATRIOT Advanced Capability-3 (PAC-3) Missile Field Surveillance Program (FSP) is required to ensure that the reliability, performance, and safety of fielded PAC-3 missiles remain within the classified system specification for the life of the system. Initial FSP tasks confirm the quality of design, materials, procedures, and processes used in the manufacture of the system. After missile deployment, results from surveillance firings, inspections, functional tests, Storage and Aging Programs, and depot level missile maintenance processing provide the data required for the assessment of reliability, performance, and safety of the missile stockpile. This includes PAC-3 missile tooling and test equipment. The PAC-3 missile is fielded under the Certified Round Concept. Under this approved concept, the PAC-3 missile is capable of being placed in extended storage as part of war reserve stocks or deployed in operational units for variable periods and then fired without intervening tests or checkouts. In accordance with the Certified Round Concept, the reliability/performance of the missile is certified by the Lower Tier Project Office (LTPO) to be at an acceptable level for a stated period of time or corrective action is taken.
- The certification of reliability is made possible through the use of the PAC-3 Missile Support Center (P3MSC) contract to use technical support and knowledge of the testing of discrete lots of component parts, subassemblies and assemblies which the prime contractor Lockheed Martin Missiles and Fire Control (LMMFC) provides as the only source of technical knowledge, expertise, and facilities to perform FSP activities and process PAC-3 missiles.
- The PATRIOT International Engineering Services Program provides continuing engineering support for system software and hardware for the life of the PATRIOT Air Defense System for US and international partners. The Engineering Services Program is designed to sustain, maintain, and improve the PATRIOT system within the performance envelope described in the system specification. The support provided under this program includes PATRIOT software maintenance, Post Deployment Build 8/8.x(PDB-8/8.x), engineering support for PATRIOT peculiar hardware, government furnished equipment, logistics, technical data package, trainers, US Unique ES, and integrated diagnostics support system. This is accomplished through the investigation, analysis, and development of solutions to identified problems. Modifications to hardware are engineered for manufacturing implementation and retrofit of fielded hardware through the modification process. The Dismounted Patriot Information Coordination Central (D-PICC) effort is an example of rehosting tactical Patriot software maintained via engineering services to a smaller, more mobile hardware configuration that will allow flexible, tailorable deployment options by freeing up Battalion level ICC's.
- Systems Engineering and Project Management support encompasses the overall planning, management, and control of the PATRIOT Weapon System. Includes all Engineering and Program Management disciplines and activities. Program office core employee labor costs moved from Procurement (or RDTE) to OMA as part of an OSD auditability directive.
- Logistics Recurring includes all aspects of Integrated Logistics Support (ILS) management, e.g., maintenance support, facilities, personnel, training, testing, and fielding.
- Funding is in support of procuring, fielding, and supporting materiel solutions to counter cybersecurity and electronic warfare shortcomings to all elements of the Lower Tier Battle Space.

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<b>Exhibit P-40, Budget Line Item Justification:</b> PB 2019 Army								<b>Date:</b> February 2018		
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 2032A: Missile Procurement, Army / BA 02: Other Missiles / BSA 10: Surface-to-Air Missile System						<b>P-1 Line Item Number / Title:</b> 7153C50016 / Lower Tier Air and Missile Defense (AMD)				
<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										
Exhibits Schedule					Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 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	C50016 / Lower Tier Air and Missile Defense (AMD)				- / 240.575	- / 126.470	- / 140.826	- / 111.395	- / -	- / 111.395
<b>P-40</b>	<b>Total Gross/Weapon System Cost</b>				<b>- / 240.575</b>	<b>- / 126.470</b>	<b>- / 140.826</b>	<b>- / 111.395</b>	<b>- / -</b>	<b>- / 111.395</b>
<small>*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.</small>										
<small>Note: Totals in this Exhibit P-40 set may not be exact or sum exactly due to rounding.</small>										
<p><b>Justification:</b></p> <p>FY19 base procurement dollars in the amount of \$111.395 million supports materiel solutions to counter cyber security, the Field Surveillance Program (FSP), PAC-3 Missile Support Center (P3MSC), International Engineering Services Program (IESP), and Integrated Logistics Support (ILS).</p> <p>Funds in the program were realigned in FY2015 from C53101 (MSE) to reflect those requirements that are not unique to MSE.</p> <p>FY19 Program Office core employee labor costs moved from Procurement to Operations and Maintenance (OMA) as part of an OSD auditability directive.</p>										

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Exhibit P-5, Cost Analysis: PB 2019 Army										Date: February 2018								
Appropriation / Budget Activity / Budget Sub Activity: 2032A / 02 / 10						P-1 Line Item Number / Title: 7153C50016 / Lower Tier Air and Missile Defense (AMD)						Item Number / Title [DODIC]: C50016 / Lower Tier Air and Missile Defense (AMD)						
ID Code (A=Service Ready, B=Not Service Ready) :										MDAP/MAIS Code:								
Resource Summary				Prior Years		FY 2017		FY 2018		FY 2019 Base		FY 2019 OCO		FY 2019 Total				
Procurement Quantity (Units in Each)				-		-		-		-		-		-				
Gross/Weapon System Cost (\$ in Millions)				240.575		126.470		140.826		111.395		-		111.395				
Less PY Advance Procurement (\$ in Millions)				-		-		-		-		-		-				
Net Procurement (P-1) (\$ in Millions)				240.575		126.470		140.826		111.395		-		111.395				
Plus CY Advance Procurement (\$ in Millions)				-		-		-		-		-		-				
Total Obligation Authority (\$ in Millions)				240.575		126.470		140.826		111.395		-		111.395				
(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 2017			FY 2018			FY 2019 Base			FY 2019 OCO			FY 2019 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																		
Field Surveillance Program	-	-	125.300	-	-	16.500	-	-	15.000	-	-	12.000	-	-	-	-	-	12.000
P3MSC	-	-	5.500	-	-	10.500	-	-	11.300	-	-	5.311	-	-	-	-	-	5.311
International Engr Services Program	-	-	72.000	-	-	59.500	-	-	61.361	-	-	63.474	-	-	-	-	-	63.474
System Engineering/ Project Management	-	-	9.200	-	-	9.600	-	-	14.300	-	-	-	-	-	-	-	-	-
Logistics Recurring	-	-	28.575	-	-	30.370	-	-	38.865	-	-	30.610	-	-	-	-	-	30.610
Subtotal: Recurring Cost	-	-	240.575	-	-	126.470	-	-	140.826	-	-	111.395	-	-	-	-	-	111.395
Subtotal: Flyaway Cost	-	-	240.575	-	-	126.470	-	-	140.826	-	-	111.395	-	-	-	-	-	111.395
Gross/Weapon System Cost	-	-	240.575	-	-	126.470	-	-	140.826	-	-	111.395	-	-	-	-	-	111.395

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<b>Exhibit P-40, Budget Line Item Justification:</b> PB 2019 Army	<b>Date:</b> February 2018
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<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 2032A: Missile Procurement, Army / BA 02: Other Missiles / BSA 10: Surface-to-Air Missile System	<b>P-1 Line Item Number / Title:</b> 8260C53101 / MSE Missile
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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> 0604865A, 0603869A, 0604869A, 0605456A
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**Line Item MDAP/MAIS Code:** 492

Resource Summary	Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	To Complete	Total
Procurement Quantity ( <i>Units in Each</i> )	312	169	240	179	61	240	93	160	160	196	148	1,718
Gross/Weapon System Cost (\$ <i>in Millions</i> )	1,819.589	809.201	1,106.040	871.276	260.000	1,131.276	512.775	734.152	727.032	813.280	793.430	8,446.775
Less PY Advance Procurement (\$ <i>in Millions</i> )	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) (\$ <i>in Millions</i> )	1,819.589	809.201	1,106.040	871.276	260.000	1,131.276	512.775	734.152	727.032	813.280	793.430	8,446.775
Plus CY Advance Procurement (\$ <i>in Millions</i> )	-	-	-	-	-	-	-	-	-	-	-	-
<b>Total Obligation Authority (\$ <i>in Millions</i>)</b>	<b>1,819.589</b>	<b>809.201</b>	<b>1,106.040</b>	<b>871.276</b>	<b>260.000</b>	<b>1,131.276</b>	<b>512.775</b>	<b>734.152</b>	<b>727.032</b>	<b>813.280</b>	<b>793.430</b>	<b>8,446.775</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> )	5,832.016	4,788.172	4,608.500	4,867.464	4,262.295	4,713.650	5,513.710	4,588.450	4,543.950	4,149.388	5,361.014	4,916.633

**Description:**

The Missile Segment Enhancement (MSE) missile evolved from the PATRIOT Advanced Capability 3 (PAC-3) missile. The MSE is based on the PAC-3 Cost Reduction Initiative (CRI) missile design and improves on it for a higher performance, dual pulse, eleven-inch diameter Solid Rocket Motor (SRM) design, improved lethality enhancer, thermally hardened front end for longer fly out, upgraded batteries, enlarged fixed fins, more responsive control surfaces, and upgraded guidance software. These improvements provide a more agile, lethal interceptor missile and coupled with critical ground system improvements (Radar Digital Processor (RDP) and Software) to provide a substantial missile performance improvement while enhancing Insensitive Munitions (IM) compliance. A more IM compliant propellant for the SRM was developed for the MSE program as well as a less sensitive Lethality Enhancer. A single canister design provides enhanced warfighter and logistics flexibility, and facilitates IM compliance for greater warfighter safety. The MSE was developed to integrate with the PATRIOT system for the U.S. and international partners.

Secondary Distribution		FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023
Army	Quantity	169	240	179	61	240	93	160	160	196
	Total Obligation Authority	809.201	1,106.040	871.276	260.000	1,131.276	512.775	734.152	727.032	813.280
<b>Total: Secondary Distribution</b>	<b>Quantity</b>	<b>169</b>	<b>240</b>	<b>179</b>	<b>61</b>	<b>240</b>	<b>93</b>	<b>160</b>	<b>160</b>	<b>196</b>
	<b>Total Obligation Authority</b>	<b>809.201</b>	<b>1,106.040</b>	<b>871.276</b>	<b>260.000</b>	<b>1,131.276</b>	<b>512.775</b>	<b>734.152</b>	<b>727.032</b>	<b>813.280</b>



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<b>Exhibit P-40, Budget Line Item Justification:</b> PB 2019 Army							<b>Date:</b> February 2018			
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 2032A: Missile Procurement, Army / BA 02: Other Missiles / BSA 10: Surface-to-Air Missile System					<b>P-1 Line Item Number / Title:</b> 8260C53101 / MSE Missile					
<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> 0604865A, 0603869A, 0604869A, 0605456A				
<b>Line Item MDAP/MAIS Code:</b> 492										
Exhibits Schedule					Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 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	C53101 / MSE Missile	P-5a, P-21			312 / 1,819.589	169 / 809.201	240 / 1,106.040	179 / 871.276	61 / 260.000	240 / 1,131.276
P-40	<b>Total Gross/Weapon System Cost</b>				<b>312 / 1,819.589</b>	<b>169 / 809.201</b>	<b>240 / 1,106.040</b>	<b>179 / 871.276</b>	<b>61 / 260.000</b>	<b>240 / 1,131.276</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.										
<p><b>Justification:</b></p> <p>The FY 2019 base procurement dollars in the amount of \$871.276 million support the production of 179 Missile Segment Enhancement (MSE) missiles, 40 Launcher Mod Kits (LMK), Field Surveillance Program (FSP), supporting equipment, ancillary missile items, PAC-3 Missile Support Center (P3MSC), Obsolescence, System Engineering/Program Management (SE/PM), and support.</p> <p>The FY 2019 Overseas Contingency Operations (OCO) procurement dollars in the amount of \$260.000 million supports the production of 61 Missile Segment Enhancement (MSE) missiles.</p> <p>Army Acquisition Objective (AAO) is 3376.</p> <p>FY 2019 Program Office core employee labor costs moved from Procurement to Operations and Maintenance, Army (OMA) as part of an OSD auditability directive.</p> <p>*Unit prices reflect an assessed yearly Foreign Military Sales (FMS) procurement of PAC-3 missile variants. In the event FMS procurements do not occur at this level, the budgeted missile unit price may not be achievable.</p> <p>**Quantities will be procured at an optimized rate utilizing price advantage created through contract negotiation, Firm Fixed Price Incentive Fee (FPIF) contract ceiling liability reduction through price determination, other service procurement, and/or foreign military sales (FMS) to increase the Army procurement of MSE Missiles.</p> <p>***Anticipate transition from FPIF to Firm Fixed Price (FFP) in FY19 assuming analysis of FY13-18 cost data demonstrates stable program costs.</p>										

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Exhibit P-5, Cost Analysis: PB 2019 Army												Date: February 2018						
Appropriation / Budget Activity / Budget Sub Activity: 2032A / 02 / 10						P-1 Line Item Number / Title: 8260C53101 / MSE Missile						Item Number / Title [DODIC]: C53101 / MSE Missile						
ID Code (A=Service Ready, B=Not Service Ready) :										MDAP/MAIS Code:								
Resource Summary				Prior Years		FY 2017		FY 2018		FY 2019 Base		FY 2019 OCO		FY 2019 Total				
Procurement Quantity <i>(Units in Each)</i>				312		169		240		179		61		240				
Gross/Weapon System Cost <i>(\$ in Millions)</i>				1,819.589		809.201		1,106.040		871.276		260.000		1,131.276				
Less PY Advance Procurement <i>(\$ in Millions)</i>				-		-		-		-		-		-				
Net Procurement (P-1) <i>(\$ in Millions)</i>				1,819.589		809.201		1,106.040		871.276		260.000		1,131.276				
Plus CY Advance Procurement <i>(\$ in Millions)</i>				-		-		-		-		-		-				
Total Obligation Authority <i>(\$ in Millions)</i>				1,819.589		809.201		1,106.040		871.276		260.000		1,131.276				
(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>				5,832.016		4,788.172		4,608.500		4,867.464		4,262.295		4,713.650				
Note: Subtotals or Totals in this Exhibit P-5 may not be exact or sum exactly due to rounding.																		
Cost Elements	Prior Years			FY 2017			FY 2018			FY 2019 Base			FY 2019 OCO			FY 2019 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																		
Missile Hardware <sup>(†)</sup>	4,324.381	312	1,349.207	4,291.527	169	725.268	4,303.138	240	1,032.753	4,262.296	179	762.951	4,262.295	61	260.000	4,262.296	240	1,022.951
Field Surveillance	-	-	31.400	-	-	5.427	-	-	5.000	-	-	6.096	-	-	-	-	-	6.096
PAC-3 Missile Support Center (P3MSC)	-	-	15.200	-	-	3.600	-	-	3.600	-	-	3.900	-	-	-	-	-	3.900
Obsolescence	-	-	55.205	-	-	10.833	-	-	21.687	-	-	22.049	-	-	-	-	-	22.049
Launcher Mod Kit (LMK)	-	-	25.100	-	-	23.400	243.333	60	14.600	247.500	40	9.900	-	-	-	247.500	40	9.900
Heater Kits	-	-	2.500	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Msl Round Trainer / Empty Round Trainer	-	-	98.626	-	-	18.600	-	-	5.200	-	-	43.700	-	-	-	-	-	43.700
Initial Production Facilitization	-	-	88.313	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Government/Software Engineering	-	-	12.540	-	-	9.440	-	-	9.560	-	-	9.600	-	-	-	-	-	9.600
Sys Engrg/Proj Mgmt (SE/PM) Contractor	-	-	141.498	-	-	12.633	-	-	13.640	-	-	13.080	-	-	-	-	-	13.080
Subtotal: Recurring Cost	-	-	1,819.589	-	-	809.201	-	-	1,106.040	-	-	871.276	-	-	260.000	-	-	1,131.276
Subtotal: Flyaway Cost	-	-	1,819.589	-	-	809.201	-	-	1,106.040	-	-	871.276	-	-	260.000	-	-	1,131.276
Gross/Weapon System Cost	5,832.016	312	1,819.589	4,788.172	169	809.201	4,608.500	240	1,106.040	4,867.464	179	871.276	4,262.295	61	260.000	4,713.650	240	1,131.276

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Exhibit P-5, Cost Analysis: PB 2019 Army					Date: February 2018	
Appropriation / Budget Activity / Budget Sub Activity: 2032A / 02 / 10		P-1 Line Item Number / Title: 8260C53101 / MSE Missile			Item Number / Title [DODIC]: C53101 / MSE Missile	
ID Code (A=Service Ready, B=Not Service Ready) :				MDAP/MAIS Code:		
Secondary Distribution		FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total
Army	Quantity	169	240	179	61	240
	Total Obligation Authority	809.201	1,106.040	871.276	260.000	1,131.276
Total: Secondary Distribution	Quantity	169	240	179	61	240
	Total Obligation Authority	809.201	1,106.040	871.276	260.000	1,131.276

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

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<b>Exhibit P-5a, Procurement History and Planning:</b> PB 2019 Army								<b>Date:</b> February 2018				
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 2032A / 02 / 10				<b>P-1 Line Item Number / Title:</b> 8260C53101 / MSE Missile				<b>Item Number / Title [DODIC]:</b> C53101 / MSE Missile				

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
Missile Hardware <sup>(†)</sup>		2015	LMMFC / Dallas, TX	SS / FPIF	AMCOM, RSA, AL	Jul 2015	Jan 2017	108	4,425.000	Y		May 2014
Missile Hardware <sup>(†)</sup>		2016	LMMFC / Dallas, TX	SS / FPIF	AMCOM, RSA, AL	Dec 2015	Aug 2018	112	3,940.180	Y		May 2014
Missile Hardware <sup>(†)</sup>		2017	LMMFC / Dallas, TX	SS / FPIF	AMCOM, RSA, AL	Dec 2016	Oct 2019	169	4,291.530	Y		Dec 2015
Missile Hardware <sup>(†)</sup>		2018	LMMFC / Dallas, TX	SS / FPIF	AMCOM, RSA, AL	Dec 2017	Jun 2020	240	4,303.140	Y		Dec 2015
Missile Hardware <sup>(†)</sup>		2019	LMMFC / Dallas, TX	SS / FFP	AMCOM, RSA, AL	Dec 2018	Jun 2021	240	4,262.300	Y		Dec 2015

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

**Remarks:**

Anticipate transition from FPIF to FFP in FY19 assuming analysis of FY13-18 cost data demonstrates stable program costs.  
 Delivery dates in excess of PLT of 17 months from Award is due to a mandated change in contract type from FFP to FPIF on an undefinitized contract action.  
 Exhibit P-21, Production Schedule is subject to change.

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Exhibit P-21, Production Schedule: PB 2019 Army																			Date: February 2018																										
Appropriation / Budget Activity / Budget Sub Activity: 2032A / 02 / 10							P-1 Line Item Number / Title: 8260C53101 / MSE Missile														Item Number / Title [DODIC]: C53101 / MSE Missile																								
Cost Elements <i>(Units in Each)</i>							Fiscal Year 2015														Fiscal Year 2016														B A L A N C E										
O C C O	M F R #	FY	SERVICE	PROC QTY	ACCEPT PRIOR TO 1 OCT 2014	BAL DUE AS OF 1 OCT	Calendar Year 2015														Calendar Year 2016																								
							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															
Missile Hardware																																													
Prior Years Deliveries: 92																																													
	1	2015	ARMY	108	0	108															A	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	108							
	1	2016	ARMY	112	0	112															A										-	-	-	-	-	-	-	-	-	-	-	-	-	-	112
	1	2017	ARMY	169	0	169																																							169
	1	2018	ARMY	240	0	240																																							240
	1	2019	ARMY	240	0	240																																							240
							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 2019 Army																				Date: February 2018															
Appropriation / Budget Activity / Budget Sub Activity: 2032A / 02 / 10										P-1 Line Item Number / Title: 8260C53101 / MSE Missile										Item Number / Title [DODIC]: C53101 / MSE Missile															
Cost Elements <i>(Units in Each)</i>							Fiscal Year 2017													Fiscal Year 2018													B A L A N C E		
O C C O	M F R #	FY	SERVICE	PROC QTY	ACCEPT PRIOR TO 1 OCT 2016	BAL DUE AS OF 1 OCT	Calendar Year 2017													Calendar Year 2018															
							O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P	O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P					
Missile Hardware																																			
Prior Years Deliveries: 92																																			
	1	2015	ARMY	108	0	108	-	-	-	10	2	3	3	17	12	12	14	12	12	11														0	
	1	2016	ARMY	112	0	112	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	8	10	94			
	1	2017	ARMY	169	0	169	A -			-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	169				
	1	2018	ARMY	240	0	240	A -														-	-	-	-	-	-	-	-	-	-	-	-	-	-	240
	1	2019	ARMY	240	0	240	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	240				

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Exhibit P-21, Production Schedule: PB 2019 Army																			Date: February 2018												
Appropriation / Budget Activity / Budget Sub Activity: 2032A / 02 / 10							P-1 Line Item Number / Title: 8260C53101 / MSE Missile												Item Number / Title [DODIC]: C53101 / MSE Missile												
Cost Elements (Units in Each)							Fiscal Year 2019												Fiscal Year 2020												BALANCE
OCO	MFR #	FY	SERVICE	PROC QTY	ACCEPT PRIOR TO 1 OCT 2018	BAL DUE AS OF 1 OCT	Calendar Year 2019												Calendar Year 2020												
							OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	
Missile Hardware																															
Prior Years Deliveries: 92																															
	1	2015	ARMY	108	108	0																							0		
	1	2016	ARMY	112	18	94	10	10	10	10	10	12	8	10	14															0	
	1	2017	ARMY	169	0	169	-	-	-	-	-	-	-	-	-	-	-	10	20	20	20	20	20	20	20	19					0
	1	2018	ARMY	240	0	240	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	24	24	24	24	144	
	1	2019	ARMY	240	0	240			A	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	240	
							OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	

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Exhibit P-21, Production Schedule: PB 2019 Army																				Date: February 2018											
Appropriation / Budget Activity / Budget Sub Activity: 2032A / 02 / 10										P-1 Line Item Number / Title: 8260C53101 / MSE Missile										Item Number / Title [DODIC]: C53101 / MSE Missile											
Cost Elements <i>(Units in Each)</i>							Fiscal Year 2021										Fiscal Year 2022														BALANCE
OCO	MFR #	FY	SERVICE	PROC QTY	ACCEPT PRIOR TO 1 OCT 2020	BAL DUE AS OF 1 OCT	Calendar Year 2021							Calendar Year 2022																	
							OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	
Missile Hardware																															
Prior Years Deliveries: 92																															
	1	2015	ARMY	108	108	0																								0	
	1	2016	ARMY	112	112	0																								0	
	1	2017	ARMY	169	169	0																								0	
	1	2018	ARMY	240	96	144																								24	24
	1	2019	ARMY	240	0	240	-	-	-	-	-	-	-	-	24	24	24	24	24	24	24	20	8	10	10						0
							OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR						MAY



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Exhibit P-21, Production Schedule: PB 2019 Army									Date: February 2018			
Appropriation / Budget Activity / Budget Sub Activity: 2032A / 02 / 10					P-1 Line Item Number / Title: 8260C53101 / MSE Missile				Item Number / Title [DODIC]: C53101 / MSE Missile			
MFR Ref #	Manufacturer Name - Location	Production Rates (Each / Year)			Procurement Leadtime (Months)							
		MSR For 2019	1-8-5 For 2019	MAX For 2019	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	LMMFC - Dallas, TX	72	240	360	0	6	17	23	0	6	17	23

**Remarks:**

The PAC-3 MSE production line includes deliveries for both US and Foreign Military Sales (FMS). Gaps between scheduled US missile deliveries are attributed to FMS. FMS and US combine to provide significant production line continuity and buying power efficiencies. Production Rates reflect annual production capacity.

"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-40, Budget Line Item Justification:</b> PB 2019 Army										<b>Date:</b> February 2018		
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 2032A: Missile Procurement, Army / BA 02: Other Missiles / BSA 10: Surface-to-Air Missile System							<b>P-1 Line Item Number / Title:</b> 8930C61001 / INDIRECT FIRE PROTECTION CAPABILITY INC 2-I					
<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												
<b>Resource Summary</b>	<b>Prior Years</b>	<b>FY 2017</b>	<b>FY 2018</b>	<b>FY 2019 Base</b>	<b>FY 2019 OCO</b>	<b>FY 2019 Total</b>	<b>FY 2020</b>	<b>FY 2021</b>	<b>FY 2022</b>	<b>FY 2023</b>	<b>To Complete</b>	<b>Total</b>
Procurement Quantity ( <i>Units in Each</i> )	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost ( <i>\$ in Millions</i> )	-	0.000	77.061	145.636	-	145.636	350.328	402.938	300.466	424.655	Continuing	Continuing
Less PY Advance Procurement ( <i>\$ in Millions</i> )	-	0.000	19.319	0.000	-	0.000	31.286	0.000	0.000	0.000	Continuing	Continuing
Net Procurement (P-1) ( <i>\$ in Millions</i> )	-	0.000	57.742	145.636	-	145.636	319.042	402.938	300.466	424.655	Continuing	Continuing
Plus CY Advance Procurement ( <i>\$ in Millions</i> )	-	19.319	0.000	31.286	-	31.286	0.000	0.000	0.000	0.000	Continuing	Continuing
<b>Total Obligation Authority</b> ( <i>\$ in Millions</i> )	-	<b>19.319</b>	<b>57.742</b>	<b>176.922</b>	-	<b>176.922</b>	<b>319.042</b>	<b>402.938</b>	<b>300.466</b>	<b>424.655</b>	<b>Continuing</b>	<b>Continuing</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> )	-	-	-	-	-	-	-	-	-	-	-	-
<b>Description:</b> The Indirect Fire Protection Capability Increment 2 - Intercept (IFPC Inc 2-I) Block 1 supports the overall integrated Air and Missile Defense (AMD) architecture and provides a robust intercept capability against Cruise Missiles (CM) and Unmanned Aircraft System (UAS).  IFPC Inc 2-I is a ground-based weapon system that is designed to acquire, track, engage, and defeat the UAS, CM, and Rocket, Artillery, and Mortar (RAM) threats. The system provides 360-degree protection and simultaneously engages threats arriving from different azimuths. A block acquisition approach is used to provide this capability. The IFPC Inc 2-I Block 1 system consists of an existing interceptor and sensor and development of fire control software and a Multi-Mission Launcher (MML) to support the UAS and CM defeat mission. The IFPC Inc 2-I system is integrated with the Army Integrated Air and Missile Defense (IAMD) Command and Control (C2) architecture. The IFPC Inc 2-I system is transportable by Army Medium Tactical Vehicle (MTV) common mobile platforms.												
<b>Secondary Distribution</b>		<b>FY 2017</b>	<b>FY 2018</b>	<b>FY 2019 Base</b>	<b>FY 2019 OCO</b>	<b>FY 2019 Total</b>	<b>FY 2020</b>	<b>FY 2021</b>	<b>FY 2022</b>	<b>FY 2023</b>		
Army	Quantity	-	-	-	-	-	-	-	-	-	-	
	Total Obligation Authority	19.319	57.742	176.922	-	176.922	264.822	310.342	12.192	191.628		
ANG	Quantity	-	-	-	-	-	-	-	-	-	-	
	Total Obligation Authority	-	-	-	-	-	54.220	92.596	288.274	233.027		
<b>Total: Secondary Distribution</b>	<b>Quantity</b>	-	-	-	-	-	-	-	-	-	-	
	<b>Total Obligation Authority</b>	<b>19.319</b>	<b>57.742</b>	<b>176.922</b>	-	<b>176.922</b>	<b>319.042</b>	<b>402.938</b>	<b>300.466</b>	<b>424.655</b>		

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<b>Exhibit P-40, Budget Line Item Justification:</b> PB 2019 Army								<b>Date:</b> February 2018		
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 2032A: Missile Procurement, Army / BA 02: Other Missiles / BSA 10: Surface-to-Air Missile System						<b>P-1 Line Item Number / Title:</b> 8930C61001 / INDIRECT FIRE PROTECTION CAPABILITY INC 2-I				
<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										
Exhibits Schedule					Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 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	C62001 / IFPC Inc 2-I Block 1 Missile 1				- / -	- / -	- / 57.742	- / 145.636	- / -	- / 145.636
P-5	C62002 / IFPC INC 2-I BLOCK 1 SYSTEM			473	- / -	- / 0.000	- / 19.319	- / 0.000	- / -	- / 0.000
<b>P-40</b>	<b>Total Gross/Weapon System Cost</b>				- / -	- / 0.000	- / 77.061	- / 145.636	- / -	- / 145.636
<p>*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.</p> <p>Note: Totals in this Exhibit P-40 set may not be exact or sum exactly due to rounding.</p>										
<p><b>Justification:</b>  FY 2019 Base procurement dollars in the amount of \$176.922 million supports the procurement of 286 AIM-9X Block II All-Up-Rounds (AUR), 3 Captive Air Training Missiles (CATM), 15 Dummy Air Training Missiles (DATM), and low rate initial production material components in support of the Multi-Mission Launcher (MML).</p> <p>In accordance with Section 1815 of the FY 2008 National Defense Authorization Act (P.L. 110-81), 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-5, Cost Analysis: PB 2019 Army												Date: February 2018						
Appropriation / Budget Activity / Budget Sub Activity: 2032A / 02 / 10						P-1 Line Item Number / Title: 8930C61001 / INDIRECT FIRE PROTECTION CAPABILITY INC 2-I						Item Number / Title [DODIC]: C62001 / IFPC Inc 2-I Block 1 Missile 1						
ID Code (A=Service Ready, B=Not Service Ready) :										MDAP/MAIS Code:								
Resource Summary				Prior Years		FY 2017		FY 2018		FY 2019 Base		FY 2019 OCO		FY 2019 Total				
Procurement Quantity <i>(Units in Each)</i>				-		-		-		-		-		-		-		
Gross/Weapon System Cost <i>(\$ in Millions)</i>				-		-		57.742		145.636		-		145.636				
Less PY Advance Procurement <i>(\$ in Millions)</i>				-		-		-		-		-		-				
Net Procurement (P-1) <i>(\$ in Millions)</i>				-		-		57.742		145.636		-		145.636				
Plus CY Advance Procurement <i>(\$ in Millions)</i>				-		-		-		-		-		-				
Total Obligation Authority <i>(\$ in Millions)</i>				-		-		57.742		145.636		-		145.636				
(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 2017			FY 2018			FY 2019 Base			FY 2019 OCO			FY 2019 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 Cost - AIM-9X Block II All Up Round (AUR)	-	-	-	-	-	-	458.784	125	57.348	391.056	286	111.842	-	-	-	391.056	286	111.842
Subtotal: Recurring Cost	-	-	-	-	-	-	-	-	57.348	-	-	111.842	-	-	-	-	-	111.842
Non Recurring Cost																		
Other Flyaway	-	-	-	-	-	-	-	-	0.394	-	-	32.424	-	-	-	-	-	32.424
Subtotal: Non Recurring Cost	-	-	-	-	-	-	-	-	0.394	-	-	32.424	-	-	-	-	-	32.424
Subtotal: Flyaway Cost	-	-	-	-	-	-	-	-	57.742	-	-	144.266	-	-	-	-	-	144.266
Logistics Cost																		
Recurring Cost																		
Training - AIM-9X Block II Captive Air Training Missile (CATM)	-	-	-	-	-	-	-	-	-	223.000	3	0.669	-	-	-	223.000	3	0.669
Training - AIM-9X Block II Dummy Air Training Missile (DATM)	-	-	-	-	-	-	-	-	-	46.733	15	0.701	-	-	-	46.733	15	0.701
Subtotal: Recurring Cost	-	-	-	-	-	-	-	-	-	-	-	1.370	-	-	-	-	-	1.370
Subtotal: Logistics Cost	-	-	-	-	-	-	-	-	-	-	-	1.370	-	-	-	-	-	1.370

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<b>Exhibit P-5, Cost Analysis:</b> PB 2019 Army										<b>Date:</b> February 2018							
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 2032A / 02 / 10					<b>P-1 Line Item Number / Title:</b> 8930C61001 / INDIRECT FIRE PROTECTION CAPABILITY INC 2-I					<b>Item Number / Title [DODIC]:</b> C62001 / IFPC Inc 2-I Block 1 Missile 1							

<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 2017			FY 2018			FY 2019 Base			FY 2019 OCO			FY 2019 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	-	-	-	-	-	-	-	-	57.742	-	-	145.636	-	-	-	-	-	145.636

Secondary Distribution		FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total
Army	Quantity	-	-	-	-	-
	Total Obligation Authority	-	57.742	145.636	-	145.636
<b>Total:</b> Secondary Distribution	Quantity	-	-	-	-	-
	Total Obligation Authority	-	57.742	145.636	-	145.636

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Exhibit P-5, Cost Analysis: PB 2019 Army												Date: February 2018							
Appropriation / Budget Activity / Budget Sub Activity: 2032A / 02 / 10						P-1 Line Item Number / Title: 8930C61001 / INDIRECT FIRE PROTECTION CAPABILITY INC 2-I						Item Number / Title [DODIC]: C62002 / IFPC INC 2-I BLOCK 1 SYSTEM							
ID Code (A=Service Ready, B=Not Service Ready) :										MDAP/MAIS Code: 473									
Resource Summary				Prior Years		FY 2017		FY 2018		FY 2019 Base		FY 2019 OCO		FY 2019 Total					
Procurement Quantity (Units in Each)				-		-		-		-		-		-					
Gross/Weapon System Cost (\$ in Millions)				-		0.000		19.319		0.000		-		0.000					
Less PY Advance Procurement (\$ in Millions)				-		0.000		19.319		0.000		-		0.000					
Net Procurement (P-1) (\$ in Millions)				-		0.000		0.000		0.000		-		0.000					
Plus CY Advance Procurement (\$ in Millions)				-		19.319		0.000		31.286		-		31.286					
Total Obligation Authority (\$ in Millions)				-		19.319		0.000		31.286		-		31.286					
(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)																			
Initial Spares (\$ in Millions)				-		-		-		-		-		-					
Gross/Weapon System Unit Cost (\$ in 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 2017			FY 2018			FY 2019 Base			FY 2019 OCO			FY 2019 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)
Launch Cost																			
Recurring Cost																			
Multi-Mission Launcher Materials		-	-	-	-	-	-	-	19.319	-	-	-	-	-	-	-	-	-	
Subtotal: Recurring Cost		-	-	-	-	-	-	-	19.319	-	-	-	-	-	-	-	-	-	
Subtotal: Launch Cost		-	-	-	-	-	-	-	19.319	-	-	-	-	-	-	-	-	-	
Gross/Weapon System Cost		-	-	-	-	-	0.000	-	-	19.319	-	-	0.000	-	-	-	-	0.000	
Secondary Distribution							FY 2017		FY 2018		FY 2019 Base		FY 2019 OCO		FY 2019 Total				
Army		Quantity					-		-		-		-		-				
		Total Obligation Authority					19.319		-		31.286		-		31.286				
Total: Secondary Distribution		Quantity					-		-		-		-		-				
		Total Obligation Authority					19.319		0.000		31.286		-		31.286				

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<b>Exhibit P-40, Advance Procurement Budget Line Item Justification:</b> PB 2019 Army										<b>Date:</b> February 2018		
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 2032A: Missile Procurement, Army / BA 02: Other Missiles / BSA 10: Surface-to-Air Missile System						<b>P-1 Line Item Number / Title:</b> 8930C61001 / INDIRECT FIRE PROTECTION CAPABILITY INC 2-I						
<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												
<b>Resource Summary</b>	<b>Prior Years</b>	<b>FY 2017</b>	<b>FY 2018</b>	<b>FY 2019 Base</b>	<b>FY 2019 OCO</b>	<b>FY 2019 Total</b>	<b>FY 2020</b>	<b>FY 2021</b>	<b>FY 2022</b>	<b>FY 2023</b>	<b>To Complete</b>	<b>Total</b>
Gross/Weapon System Cost (\$ in Millions)	-	19.319	0.000	31.286	-	31.286	0.000	0.000	0.000	0.000	Continuing	Continuing
Net Procurement (P-1) (\$ in Millions)	-	19.319	0.000	31.286	-	31.286	0.000	0.000	0.000	0.000	Continuing	Continuing
<b>Total Obligation Authority (\$ in Millions)</b>	-	<b>19.319</b>	<b>0.000</b>	<b>31.286</b>	-	<b>31.286</b>	<b>0.000</b>	<b>0.000</b>	<b>0.000</b>	<b>0.000</b>	<b>Continuing</b>	<b>Continuing</b>
<p><b>Description:</b>  This program supports the overall integrated Air and Missile Defense (AMD) architecture and provides a robust intercept capability against Cruise Missiles (CM) and Unmanned Aircraft System (UAS).</p> <p>The Indirect Fire Protection Capability Increment 2 - Intercept (IFPC Inc 2-I) is a ground-based weapon system that is designed to acquire, track, engage, and defeat the UAS, CM, and Rocket, Artillery, and Mortar (RAM) threats. The system provides 360-degree protection and simultaneously engages threats arriving from different azimuths. A block acquisition approach is used to provide this capability. The IFPC Inc 2-I Block 1 system consists of an existing interceptor and sensor and development of fire control software and a Multi-Mission Launcher (MML) to support the UAS and CM defeat mission. The IFPC Inc 2-I system is integrated with the Army Integrated Air and Missile Defense (IAMD) Command and Control (C2) architecture. The IFPC Inc 2-I system is transportable by Army Medium Tactical Vehicle (MTV) common mobile platforms.</p> <p>This budget line funds the acquisition of advance procurement items required to support the production of the IFPC Inc 2-I system.</p>												

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<b>Exhibit P-40, Advance Procurement Budget Line Item Justification:</b> PB 2019 Army							<b>Date:</b> February 2018		
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 2032A: Missile Procurement, Army / BA 02: Other Missiles / BSA 10: Surface-to-Air Missile System					<b>P-1 Line Item Number / Title:</b> 8930C61001 / INDIRECT FIRE PROTECTION CAPABILITY INC 2-I				
<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									
Exhibits Schedule				Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total
Exhibit Type	Title*	ID CD	MDAP/MAIS Code	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)
P-10	C62002 / IFPC INC 2-I BLOCK 1 SYSTEM			- / -	- / 19.319	- / 0.000	- / 31.286	- / -	- / 31.286
<b>P-40</b>	<b>Total Gross/Weapon System Cost</b>			<b>- / -</b>	<b>- / 19.319</b>	<b>- / 0.000</b>	<b>- / 31.286</b>	<b>- / -</b>	<b>- / 31.286</b>
<p>*Title represents the P-10 Title for Advance Procurement.</p> <p>Note: Totals in this Exhibit P-40 set may not be exact or sum exactly due to rounding.</p>									
<p><b>Justification:</b></p> <p>The \$31.289M in FY19 budget funds the acquisition of advance procurement items required to support the production of the IFPC Inc 2-I system to include 20 M1273A1P2 variant Family of Medium Tactical Vehicles (FMTV)s for FY20 Low Rate Initial Production (LRIP) and an additional 42 M1273A1P2 variant FMTV to support FY21 production. Due a change in the vehicle configuration which requires additional IFPC qualification testing of the new A2 variant, a multiple year procurement is required to ensure sufficient vehicles are available to meet MML production throughput for initial FRP production lot.</p> <p>In accordance with Section 1815 of the FY 2008 National Defense Authorization Act (P.L. 110-81), 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-10, Advance Procurement Requirements Analysis (page 1 - Budget Funding Justification):</b> PB 2019 Army					<b>Date:</b> February 2018	
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 2032A / 02 / 10		<b>P-1 Line Item Number / Title:</b> 8930C61001 / INDIRECT FIRE PROTECTION CAPABILITY INC 2-I			<b>P-5 Number / Title:</b> C62002 / IFPC INC 2-I BLOCK 1 SYSTEM	
<b>MDAP/MAIS Code:</b> 473						
<b>First System (2019) Award Date:</b> April 2019		<b>First System (2019) Completion Date:</b> December 2020		<b>Interval Between Systems:</b> 12 Months		
<b>IFPC INC 2-I BLOCK 1 SYSTEM</b>		<b>Production Leadtime</b> <i>(Months)</i>	<b>Prior Years</b> <i>(Each)</i>	<b>FY 2017</b> <i>(Each)</i>	<b>FY 2018</b> <i>(Each)</i>	<b>FY 2019</b> <i>(Each)</i>
Quantity			-	-	-	-
<b>Cost Elements</b>		<b>When Required</b> <i>(Months)</i>	<b>Prior Years</b> <i>(\$ M)</i>	<b>FY 2017</b> <i>(\$ M)</i>	<b>FY 2018</b> <i>(\$ M)</i>	<b>FY 2019</b> <i>(\$ M)</i>
<b>GFE</b>						
Network Hardware	0	-	-	-	-	0.818
Generator	0	-	-	-	-	0.104
M1273 FMTV	0	-	-	-	-	5.400
M1273 FMTV (End of Life Buy)	0	-	-	-	-	11.340
M1095 Trailer	0	-	-	-	-	0.745
Azimuth System	0	-	-	-	-	2.535
Common Power Supply	0	-	-	-	-	0.331
Elevation System	0	-	-	-	-	1.270
TFOCA Cabling	0	-	-	-	-	0.050
Launch Control Unit (LCU)	0	-	-	-	-	0.309
Clip Control Unit	0	-	-	-	-	0.892
Door Control Unit	0	-	-	-	-	1.081
Rail Extrusion (Rail and Weapon Control Unit)	0	-	-	-	-	0.623
Elevation Base	0	-	-	-	-	0.571
Elevation Rack	0	-	-	-	-	0.519
Diode OR Assembly	0	-	-	-	-	0.024
Missile Data Link	0	-	-	-	-	0.366
MML Cabling	0	-	-	-	-	0.447
Smart Display Unit	0	-	-	-	-	0.000
Geared Bearing	0	-	-	-	-	0.000
Junction Box	0	-	-	-	-	0.000
Magazine Assembly Cables	0	-	-	-	-	0.000
<b>Total: GFE</b>		-	-	-	-	<b>27.425</b>
<b>Other</b>						

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<b>Exhibit P-10, Advance Procurement Requirements Analysis (page 1 - Budget Funding Justification):</b> PB 2019 Army					<b>Date:</b> February 2018	
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 2032A / 02 / 10		<b>P-1 Line Item Number / Title:</b> 8930C61001 / INDIRECT FIRE PROTECTION CAPABILITY INC 2-I			<b>P-5 Number / Title:</b> C62002 / IFPC INC 2-I BLOCK 1 SYSTEM	
<b>MDAP/MAIS Code:</b> 473						
<b>First System (2019) Award Date:</b> April 2019		<b>First System (2019) Completion Date:</b> December 2020			<b>Interval Between Systems:</b> 12 Months	
<b>Cost Elements</b>	<b>When Required</b> <i>(Months)</i>	<b>Prior Years</b> <i>(\$ M)</i>	<b>FY 2017</b> <i>(\$ M)</i>	<b>FY 2018</b> <i>(\$ M)</i>	<b>FY 2019</b> <i>(\$ M)</i>	
SEPM	0	-	-	-	3.693	
Data	0	-	19.319	-	0.168	
<i>Total: Other</i>		-	19.319	-	3.861	
<b>Total Advance Procurement/Obligation Authority</b>		-	<b>19.319</b>	<b>0.000</b>	<b>31.286</b>	

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Exhibit P-10, Advance Procurement Requirements Analysis (page 2 - Budget Funding Justification): PB 2019 Army						Date: February 2018	
Appropriation / Budget Activity / Budget Sub Activity: 2032A / 02 / 10		P-1 Line Item Number / Title: 8930C61001 / INDIRECT FIRE PROTECTION CAPABILITY INC 2-I				P-5 Number / Title: C62002 / IFPC INC 2-I BLOCK 1 SYSTEM	
Cost Elements	QPA (Each)	FY 2019					
		Production Leadtime (Months)	Unit Cost (\$ K)	Contract Forecast Date	2019 Qty (Each)	For FY	Total Cost Request (\$ M)
GFE							
Network Hardware	1					2020	0.818
Generator	1					2020	0.104
M1273 FMTV	1					2020	5.400
M1273 FMTV (End of Life Buy)	1					2021	11.340
M1095 Trailer	1					2020	0.745
Azimuth System	1					2020	2.535
Common Power Supply	1					2020	0.331
Elevation System	1					2020	1.270
TFOCA Cabling	1					2020	0.050
Launch Control Unit (LCU)	1					2020	0.309
Clip Control Unit	3					2020	0.892
Door Control Unit	3					2020	1.081
Rail Extrusion (Rail and Weapon Control Unit)	15					2020	0.623
Elevation Base	1					2020	0.571
Elevation Rack	1					2020	0.519
Diode OR Assembly	1					2020	0.024
Missile Data Link	1					2020	0.366
MML Cabling	1					2020	0.447
Smart Display Unit	1					2020	0.000
Geared Bearing	1					2020	0.000
Junction Box	1					2020	0.000
Magazine Assembly Cables	3					2020	0.000
Total: GFE							27.425
Other							
SEPM	-					2020	3.693
Data	-					2020	0.168
Total: Other							3.861
Total Advance Procurement/Obligation Authority							31.286

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<b>Exhibit P-10, Advance Procurement Requirements Analysis (page 2 - Budget Funding Justification):</b> PB 2019 Army		<b>Date:</b> February 2018
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 2032A / 02 / 10	<b>P-1 Line Item Number / Title:</b> 8930C61001 / INDIRECT FIRE PROTECTION CAPABILITY INC 2-I	<b>P-5 Number / Title:</b> C62002 / IFPC INC 2-I BLOCK 1 SYSTEM
<p><b>Description:</b> This program supports the overall integrated Air and Missile Defense (AMD) architecture and provides a robust intercept capability against Cruise Missiles (CM) and Unmanned Aircraft System (UAS).</p> <p>The Indirect Fire Protection Capability Increment 2 - Intercept (IFPC Inc 2-I) is a ground-based weapon system that is designed to acquire, track, engage, and defeat the UAS, CM, and Rocket, Artillery, and Mortar (RAM) threats. The system provides 360-degree protection and simultaneously engages threats arriving from different azimuths. A block acquisition approach is used to provide this capability. The IFPC Inc 2-I Block 1 system consists of an existing interceptor and sensor and development of fire control software and a Multi-Mission Launcher (MML) to support the UAS and CM defeat mission. The IFPC Inc 2-I system is integrated with the Army Integrated Air and Missile Defense (IAMD) Command and Control (C2) architecture. The IFPC Inc 2-I system is transportable by Army Medium Tactical Vehicle (MTV) common mobile platforms.</p> <p>This budget line funds the acquisition of advance procurement items required to support the production of the IFPC Inc 2-I system.</p>		

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<b>Exhibit P-40, Budget Line Item Justification:</b> PB 2019 Army										<b>Date:</b> February 2018		
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 2032A: Missile Procurement, Army / BA 02: Other Missiles / BSA 20: Air-To-Surface Missile System							<b>P-1 Line Item Number / Title:</b> 1338C70000 / Hellfire Sys Summary					
<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> 0203802A, 0210109A				
<b>Line Item MDAP/MAIS Code:</b> N/A												
<b>Resource Summary</b>	<b>Prior Years</b>	<b>FY 2017</b>	<b>FY 2018</b>	<b>FY 2019 Base</b>	<b>FY 2019 OCO</b>	<b>FY 2019 Total</b>	<b>FY 2020</b>	<b>FY 2021</b>	<b>FY 2022</b>	<b>FY 2023</b>	<b>To Complete</b>	<b>Total</b>
Procurement Quantity ( <i>Units in Each</i> )	63,779	4,478	3,925	-	2,684	2,684	1,448	878	842	842	-	78,876
Gross/Weapon System Cost ( <i>\$ in Millions</i> )	3,520.029	497.751	372.863	-	255.040	255.040	136.374	83.568	80.000	80.000	-	5,025.625
Less PY Advance Procurement ( <i>\$ in Millions</i> )	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) ( <i>\$ in Millions</i> )	3,520.029	497.751	372.863	-	255.040	255.040	136.374	83.568	80.000	80.000	-	5,025.625
Plus CY Advance Procurement ( <i>\$ in Millions</i> )	-	-	-	-	-	-	-	-	-	-	-	-
<b>Total Obligation Authority</b> ( <i>\$ in Millions</i> )	<b>3,520.029</b>	<b>497.751</b>	<b>372.863</b>	<b>-</b>	<b>255.040</b>	<b>255.040</b>	<b>136.374</b>	<b>83.568</b>	<b>80.000</b>	<b>80.000</b>	<b>-</b>	<b>5,025.625</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> )	55.191	111.155	94.997	-	95.022	95.022	94.181	95.180	95.012	95.012	-	63.716
<b>Description:</b> The HELLFIRE II and Longbow family of air-to-ground missiles (all variants) provide attack helicopters and unmanned aircraft systems (UAS) with point-target precision strike capability to defeat heavy, advanced armor, individual hard point and non-traditional targets. HELLFIRE II Missiles use a semi-active laser terminal guidance and are the primary armaments of the AH-64 Apache, Army UAS and Special Operations aircraft. The HELLFIRE II includes Electro-Optical Countermeasure capability, warhead improvements and an updated electronic fuze. The AGM-114R HELLFIRE II family of missiles replaces all other HELLFIRE II missile configurations (K/N/M/P) except HELLFIRE Longbow. HELLFIRE II procurement funding supports the entire HELLFIRE II and HELLFIRE Longbow systems to include resolution of obsolescence, end-of-life buys, safety, insensitive munitions, reliability, weapon integration activities, test sets, engineering changes, facilitization, production ramp-up activities and production issues. This missile is compatible on all current force UAS and rotary wing platforms.												
<b>Secondary Distribution</b>		<b>FY 2017</b>	<b>FY 2018</b>	<b>FY 2019 Base</b>	<b>FY 2019 OCO</b>	<b>FY 2019 Total</b>	<b>FY 2020</b>	<b>FY 2021</b>	<b>FY 2022</b>	<b>FY 2023</b>		
Army	Quantity	4,478	3,925	0	2,684	2,684	1,448	878	842	842		
	Total Obligation Authority	497.751	372.863	0.000	255.040	255.040	136.374	83.568	80.000	80.000		
<b>Total: Secondary Distribution</b>	<b>Quantity</b>	<b>4,478</b>	<b>3,925</b>	<b>0</b>	<b>2,684</b>	<b>2,684</b>	<b>1,448</b>	<b>878</b>	<b>842</b>	<b>842</b>		
	<b>Total Obligation Authority</b>	<b>497.751</b>	<b>372.863</b>	<b>-</b>	<b>255.040</b>	<b>255.040</b>	<b>136.374</b>	<b>83.568</b>	<b>80.000</b>	<b>80.000</b>		

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<b>Exhibit P-40, Budget Line Item Justification:</b> PB 2019 Army								<b>Date:</b> February 2018		
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 2032A: Missile Procurement, Army / BA 02: Other Missiles / BSA 20: Air-To-Surface Missile System						<b>P-1 Line Item Number / Title:</b> 1338C70000 / Hellfire Sys Summary				
<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> 0203802A, 0210109A			
<b>Line Item MDAP/MAIS Code:</b> N/A										
<b>Exhibits Schedule</b>					<b>Prior Years</b>	<b>FY 2017</b>	<b>FY 2018</b>	<b>FY 2019 Base</b>	<b>FY 2019 OCO</b>	<b>FY 2019 Total</b>
<b>Exhibit Type</b>	<b>Title*</b>	<b>Subexhibits</b>	<b>ID CD</b>	<b>MDAP/MAIS Code</b>	<b>Quantity / Total Cost (Each) / (\$ M)</b>	<b>Quantity / Total Cost (Each) / (\$ M)</b>	<b>Quantity / Total Cost (Each) / (\$ M)</b>	<b>Quantity / Total Cost (Each) / (\$ M)</b>	<b>Quantity / Total Cost (Each) / (\$ M)</b>	<b>Quantity / Total Cost (Each) / (\$ M)</b>
P-5	C70100 / LASER HELLFIRE MSL (BASIC/IHW/HFII)	P-5a, P-21			63,779 / 3,520.029	4,478 / 497.751	3,925 / 372.863	- / -	2,684 / 255.040	2,684 / 255.040
<b>P-40</b>	<b>Total Gross/Weapon System Cost</b>				<b>63,779 / 3,520.029</b>	<b>4,478 / 497.751</b>	<b>3,925 / 372.863</b>	<b>- / -</b>	<b>2,684 / 255.040</b>	<b>2,684 / 255.040</b>
<p>*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.</p> <p>Note: Totals in this Exhibit P-40 set may not be exact or sum exactly due to rounding.</p>										
<p><b>Justification:</b></p> <p>FY 2019 OCO procurement dollars in the amount of \$255.040 million supports the procurement of 2,684 HELLFIRE II missiles in order to replace and replenish missiles expended in wartime operations. OCO funding also covers Production Engineering Support, Project Management, Engineering Services, Acceptance Testing and fielding.</p> <p>The Army intends to convert any price advantage created through contract negotiations, other service procurement and/or Foreign Military sales (FMS) to increase the Army procurement of HELLFIRE II missiles.</p> <p>The historical Army Acquisition Objective was 34,292.</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-5, Cost Analysis: PB 2019 Army										Date: February 2018								
Appropriation / Budget Activity / Budget Sub Activity: 2032A / 02 / 20						P-1 Line Item Number / Title: 1338C70000 / Hellfire Sys Summary						Item Number / Title [DODIC]: C70100 / LASER HELLFIRE MSL (BASIC/IHW/HFII)						
ID Code (A=Service Ready, B=Not Service Ready) :										MDAP/MAIS Code:								
Resource Summary				Prior Years		FY 2017		FY 2018		FY 2019 Base		FY 2019 OCO		FY 2019 Total				
Procurement Quantity (Units in Each)				63,779		4,478		3,925		-		2,684		2,684				
Gross/Weapon System Cost (\$ in Millions)				3,520.029		497.751		372.863		-		255.040		255.040				
Less PY Advance Procurement (\$ in Millions)				-		-		-		-		-		-				
Net Procurement (P-1) (\$ in Millions)				3,520.029		497.751		372.863		-		255.040		255.040				
Plus CY Advance Procurement (\$ in Millions)				-		-		-		-		-		-				
Total Obligation Authority (\$ in Millions)				3,520.029		497.751		372.863		-		255.040		255.040				
(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)				55.191		111.155		94.997		-		95.022		95.022				
Note: Subtotals or Totals in this Exhibit P-5 may not be exact or sum exactly due to rounding.																		
Cost Elements	Prior Years			FY 2017			FY 2018			FY 2019 Base			FY 2019 OCO			FY 2019 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																		
All-up Rounds <sup>(†)</sup>	42.396	63,779	2,703.974	74.158	4,362	323.476	81.998	3,925	321.841	-	-	-	73.885	2,684	198.307	73.885	2,684	198.307
Engineering Services	-	-	407.338	-	-	47.473	-	-	9.740	-	-	-	-	-	9.688	-	-	9.688
Acceptance Testing	-	-	84.302	-	-	1.239	-	-	0.632	-	-	-	-	-	0.808	-	-	0.808
Subtotal: Recurring Cost	-	-	3,195.614	-	-	372.189	-	-	332.214	-	-	0.000	-	-	208.803	-	-	208.803
Subtotal: Flyaway Cost	-	-	3,195.614	-	-	372.189	-	-	332.214	-	-	0.000	-	-	208.803	-	-	208.803
Support - Fielding Cost																		
Fielding	-	-	30.803	-	-	6.931	-	-	3.544	-	-	-	-	-	4.533	-	-	4.533
Subtotal: Support - Fielding Cost	-	-	30.803	-	-	6.931	-	-	3.544	-	-	0.000	-	-	4.533	-	-	4.533
Support - Production Engineering Cost																		
Production Engineering	-	-	89.891	-	-	93.051	-	-	20.827	-	-	-	-	-	23.925	-	-	23.925
Subtotal: Support - Production Engineering Cost	-	-	89.891	-	-	93.051	-	-	20.827	-	-	0.000	-	-	23.925	-	-	23.925
Support - Program Management Cost																		
Government Management	-	-	203.734	-	-	25.580	-	-	16.279	-	-	-	-	-	17.779	-	-	17.779
Subtotal: Support - Program Management Cost	-	-	203.734	-	-	25.580	-	-	16.279	-	-	0.000	-	-	17.779	-	-	17.779
Gross/Weapon System Cost	55.191	63,779	3,520.029	111.155	4,478	497.751	94.997	3,925	372.863	-	-	-	95.022	2,684	255.040	95.022	2,684	255.040

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Exhibit P-5, Cost Analysis: PB 2019 Army				Date: February 2018		
Appropriation / Budget Activity / Budget Sub Activity: 2032A / 02 / 20		P-1 Line Item Number / Title: 1338C70000 / Hellfire Sys Summary		Item Number / Title [DODIC]: C70100 / LASER HELLFIRE MSL (BASIC/IHW/HFII)		
ID Code (A=Service Ready, B=Not Service Ready) :			MDAP/MAIS Code:			
Secondary Distribution		FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total
Army	Quantity	4,478	3,925	0	2,684	2,684
	Total Obligation Authority	497.751	372.863	0.000	255.040	255.040
Total: Secondary Distribution	Quantity	4,478	3,925	-	2,684	2,684
	Total Obligation Authority	497.751	372.863	-	255.040	255.040

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



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<b>Exhibit P-5a, Procurement History and Planning:</b> PB 2019 Army		<b>Date:</b> February 2018
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 2032A / 02 / 20	<b>P-1 Line Item Number / Title:</b> 1338C70000 / Hellfire Sys Summary	<b>Item Number / Title [DODIC]:</b> C70100 / LASER HELLFIRE MSL (BASIC/IHW/HFII)

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
All-up Rounds <sup>(†)</sup>		2016	HELLFIRE Sys Limited Liability / Orlando	SS / FPIF	AMCOM, Redstone Arsenal, AL	Feb 2017	Mar 2019	113	175.000	Y		Dec 2013
All-up Rounds <sup>(†)</sup>		2016	HF Sys Limited Liability / Orlando	SS / FPIF	AMCOM, Redstone Arsenal, AL	Feb 2017	Mar 2019	270	121.000	Y		Dec 2013
All-up Rounds <sup>(†)</sup>		2017	Lockheed Missile and Fire Ctrl / Orlando	SS / FPIF	AMCOM, Redstone Arsenal, AL	Sep 2017	Oct 2019	4,362	74.160	Y		Dec 2013
All-up Rounds <sup>(†)</sup>		2018	Lockheed Missile and Fire Ctrl / Orlando	SS / FPIF	AMCOM, Redstone Arsenal, AL	Sep 2018	Oct 2020	3,925	82.000	Y		Dec 2016
All-up Rounds <sup>(†)</sup>	✓	2019	Lockheed Missile and Fire Ctrl / Orlando	SS / FPIF	AMCOM, Redstone Arsenal, AL	Sep 2019	Oct 2021	2,684	73.890	Y		Dec 2016

(†) indicates the presence of a P-21

**Remarks:**

Fixed Price Incentive Fee (FPIF)

The production unit cost is based on all Services' base and Overseas Contingency Operations (OCO) quantity requirements known at this time. Above quantities are Army only. Total quantities include procurement by US Air Force, US Navy, US Army and FMS cases. All procurement of Hellfire II AGM-114R missiles are reflected on the P21.

See Exhibit P-5 for Unit Cost. Unit cost may change based on quantities procured by all Services and Foreign Military Sales (FMS) customers.

Based on contract structure all customers pay the same Unit Cost for the same configuration.

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Exhibit P-21, Production Schedule: PB 2019 Army																				Date: February 2018													
Appropriation / Budget Activity / Budget Sub Activity: 2032A / 02 / 20							P-1 Line Item Number / Title: 1338C70000 / Hellfire Sys Summary													Item Number / Title [DODIC]: C70100 / LASER HELLFIRE MSL (BASIC/IHW/HFII)													
Cost Elements (Units in Each)							Fiscal Year 2017													Fiscal Year 2018													B A L A N C E
O C C O	M F R #	FY	SERVICE	PROC QTY	ACCEPT PRIOR TO 1 OCT 2016	BAL DUE AS OF 1 OCT	Calendar Year 2017													Calendar Year 2018													
							O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P	O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P			
All-up Rounds																																	
Prior Years Deliveries: 63396																																	
	1	2016	ARMY	113	0	113					A -	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	113	
	1	2016	FMS (†)	1,332	0	1,332					A -	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1,332	
	1	2016	Total	1,445	0	1,445					-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1,445	
	2	2016	ARMY	270	0	270					A -	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	270	
	3	2017	ARMY	4,362	0	4,362											A -	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4,362	
	3	2018	ARMY	3,925	0	3,925																								A -	-	3,925	
✓	3	2019	ARMY	2,684	0	2,684																										2,684	
								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 2019 Army																							Date: February 2018												
Appropriation / Budget Activity / Budget Sub Activity: 2032A / 02 / 20							P-1 Line Item Number / Title: 1338C70000 / Hellfire Sys Summary															Item Number / Title [DODIC]: C70100 / LASER HELLFIRE MSL (BASIC/IHW/HFII)													
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					
All-up Rounds																																			
Prior Years Deliveries: 63396																																			
	1	2016	ARMY	113	0	113	-	-	-	-	-	10	10	10	10	10	9	9	9	9	9	9	9	-	-	-	-	-	-	-	0				
	1	2016	FMS (‡)	1,332	0	1,332	-	-	-	-	-	111	111	111	111	111	111	111	-	-	-	-	-	-	-	-	-	-	-	-	555				
	1	2016	Total	1,445	0	1,445	-	-	-	-	-	121	121	121	121	121	120	120	9	9	9	9	9	-	-	-	-	-	-	-	555				
	2	2016	ARMY	270	0	270	-	-	-	-	-	23	23	23	23	23	23	22	22	22	22	22	22									0			
	3	2017	ARMY	4,362	0	4,362	-	-	-	-	-	-	-	-	-	-	-	-	364	364	364	364	364	364	364	364	364	364	364	358	0				
	3	2018	ARMY	3,925	0	3,925	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3,925				
✓	3	2019	ARMY	2,684	0	2,684													A	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2,684
							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 2019 Army																				Date: February 2018														
Appropriation / Budget Activity / Budget Sub Activity: 2032A / 02 / 20										P-1 Line Item Number / Title: 1338C70000 / Hellfire Sys Summary										Item Number / Title [DODIC]: C70100 / LASER HELLFIRE MSL (BASIC/IHW/HFII)														
Cost Elements <i>(Units in Each)</i>							Fiscal Year 2021										Fiscal Year 2022													BALANCE				
OCO	MFR #	FY	SERVICE	PROC QTY	ACCEPT PRIOR TO 1 OCT 2020	BAL DUE AS OF 1 OCT	Calendar Year 2021										Calendar Year 2022																	
							OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG		SEP			
All-up Rounds																																		
Prior Years Deliveries: 63396																																		
	1	2016	ARMY	113	113	0	-	-	-	-	-																				0			
	1	2016	FMS (‡)	1,332	777	555	111	111	111	111	111																				0			
	1	2016	Total	1,445	890	555	111	111	111	111	111	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0				
	2	2016	ARMY	270	270	0																											0	
	3	2017	ARMY	4,362	4,362	0																											0	
	3	2018	ARMY	3,925	0	3,925	327	327	327	327	327	327	327	327	327	327	328																	0
✓	3	2019	ARMY	2,684	0	2,684	-	-	-	-	-	-	-	-	-	-	-	223	223	223	223	223	223	224	224	224	224	225	225	0				
							OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP				

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<b>Exhibit P-21, Production Schedule:</b> PB 2019 Army					<b>Date:</b> February 2018		
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 2032A / 02 / 20			<b>P-1 Line Item Number / Title:</b> 1338C70000 / Hellfire Sys Summary			<b>Item Number / Title [DODIC]:</b> C70100 / LASER HELLFIRE MSL (BASIC/IHW/HFII)	

MFR Ref #	Manufacturer Name - Location	Production Rates (Each / Year)			Procurement Leadtime (Months)							
		MSR For 2019	1-8-5 For 2019	MAX For 2019	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	HELLFIRE Sys Limited Liability - Orlando	3,600	6,000	11,000	5	12	24	36	5	12	24	36
2	HF Sys Limited Liability - Orlando	3,600	6,000	11,000	5	12	24	36	5	12	24	36
3	Lockheed Missile and Fire Ctrl - Orlando	3,600	6,000	11,000	5	12	24	36	5	12	24	36

**Remarks:**

Yearly Minimum Sustainment Rate (MSR) = 3,600 missiles.  
 Yearly Economical Production Rate (1-8-5) = 6,000 missiles.  
 Yearly Maximum Production Rate (MPR) = 11,000 missiles.

FY19 Other Services and FMS quantities are unavailable at this time.

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

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

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

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<b>Exhibit P-40, Budget Line Item Justification:</b> PB 2019 Army										<b>Date:</b> February 2018		
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 2032A: Missile Procurement, Army / BA 02: Other Missiles / BSA 20: Air-To-Surface Missile System						<b>P-1 Line Item Number / Title:</b> 2605C70302 / Joint Air-to-Ground MSLS (JAGM)						
<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> 0605450A					
<b>Line Item MDAP/MAIS Code:</b> 355												
<b>Resource Summary</b>	<b>Prior Years</b>	<b>FY 2017</b>	<b>FY 2018</b>	<b>FY 2019 Base</b>	<b>FY 2019 OCO</b>	<b>FY 2019 Total</b>	<b>FY 2020</b>	<b>FY 2021</b>	<b>FY 2022</b>	<b>FY 2023</b>	<b>To Complete</b>	<b>Total</b>
Procurement Quantity ( <i>Units in Each</i> )	-	373	824	1,046	-	1,046	1,108	1,320	1,367	1,900	-	7,938
Gross/Weapon System Cost ( <i>\$ in Millions</i> )	0.000	89.649	215.532	276.462	-	276.462	293.589	302.019	305.112	414.099	-	1,896.462
Less PY Advance Procurement ( <i>\$ in Millions</i> )	0.000	27.738	37.100	0.000	-	0.000	0.000	0.000	0.000	0.000	-	64.838
Net Procurement (P-1) ( <i>\$ in Millions</i> )	0.000	61.911	178.432	276.462	-	276.462	293.589	302.019	305.112	414.099	-	1,831.624
Plus CY Advance Procurement ( <i>\$ in Millions</i> )	27.738	37.100	0.000	0.000	-	0.000	0.000	0.000	0.000	0.000	-	64.838
<b>Total Obligation Authority</b> ( <i>\$ in Millions</i> )	<b>27.738</b>	<b>99.011</b>	<b>178.432</b>	<b>276.462</b>	<b>-</b>	<b>276.462</b>	<b>293.589</b>	<b>302.019</b>	<b>305.112</b>	<b>414.099</b>	<b>-</b>	<b>1,896.462</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> )	-	240.346	261.568	264.304	-	264.304	264.972	228.802	223.198	217.947	-	238.909
<b>Description:</b> The Joint Air-to-Ground Missile (JAGM) program is an Army-led, Acquisition Category (ACAT) IC Major Defense Acquisition Program (MDAP) with joint interest with the U.S. Marine Corps (USMC) and U.S. Navy. The JAGM is the next generation of aviation-launched, fire and forget missiles to replace all variants of HELLFIRE. The JAGM multi-mode Guidance Section is integrated with the combat proven HELLFIRE II (AGM-114R) propulsion, warhead, and control section. JAGM will be used by joint service aircraft for destruction of high value stationary, moving, and relocatable land and maritime targets from standoff range in day, night, adverse weather, and obscured battlefield conditions. The program's threshold platforms are the U.S. Army AH-64E Apache and USMC AH-1Z. JAGM procurement funding supports the entire JAGM system to include resolution of obsolescence, safety, reliability, weapon integration activities, test sets, engineering services, facilitization, production ramp-up activities and production issues.												
<b>Secondary Distribution</b>		<b>FY 2017</b>	<b>FY 2018</b>	<b>FY 2019 Base</b>	<b>FY 2019 OCO</b>	<b>FY 2019 Total</b>	<b>FY 2020</b>	<b>FY 2021</b>	<b>FY 2022</b>	<b>FY 2023</b>		
Army	Quantity	373	824	1,046	-	1,046	1,108	1,320	1,367	1,900		
	Total Obligation Authority	99.011	178.432	276.462	-	276.462	293.589	302.019	305.112	414.099		
<b>Total:</b> <b>Secondary Distribution</b>	<b>Quantity</b>	<b>373</b>	<b>824</b>	<b>1,046</b>	<b>-</b>	<b>1,046</b>	<b>1,108</b>	<b>1,320</b>	<b>1,367</b>	<b>1,900</b>		
	<b>Total Obligation Authority</b>	<b>99.011</b>	<b>178.432</b>	<b>276.462</b>	<b>-</b>	<b>276.462</b>	<b>293.589</b>	<b>302.019</b>	<b>305.112</b>	<b>414.099</b>		

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<b>Exhibit P-40, Budget Line Item Justification:</b> PB 2019 Army								<b>Date:</b> February 2018		
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 2032A: Missile Procurement, Army / BA 02: Other Missiles / BSA 20: Air-To-Surface Missile System						<b>P-1 Line Item Number / Title:</b> 2605C70302 / Joint Air-to-Ground MSLS (JAGM)				
<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> 0605450A			
<b>Line Item MDAP/MAIS Code:</b> 355										
Exhibits Schedule					Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 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	C70302 / Joint Air-to-Ground MSLS (JAGM)	P-5a, P-21			- / 0.000	373 / 89.649	824 / 215.532	1,046 / 276.462	- / -	1,046 / 276.462
<b>P-40</b>	<b>Total Gross/Weapon System Cost</b>				<b>- / 0.000</b>	<b>373 / 89.649</b>	<b>824 / 215.532</b>	<b>1,046 / 276.462</b>	<b>- / -</b>	<b>1,046 / 276.462</b>
<p>*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.</p> <p>Note: Totals in this Exhibit P-40 set may not be exact or sum exactly due to rounding.</p>										
<p><b>Justification:</b></p> <p>FY 2019 Base procurement dollars in the amount of \$276.462 million supports the procurement of 1,046 missiles, Project Management Cost and Engineering Services funding, to include obsolescence and facilitization.</p> <p>Facilitization will expand production capability.</p> <p>The Army intends to convert any price advantage created through contract negotiations and/or other service procurement to increase the Army procurement of JAGM missiles.</p> <p>The JAGM Product Office is the procurement agent for all services.</p> <p>The Army Acquisition Objective is 20,303.</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>										

**UNCLASSIFIED**

Exhibit P-5, Cost Analysis: PB 2019 Army												Date: February 2018						
Appropriation / Budget Activity / Budget Sub Activity: 2032A / 02 / 20						P-1 Line Item Number / Title: 2605C70302 / Joint Air-to-Ground MSLS (JAGM)						Item Number / Title [DODIC]: C70302 / Joint Air-to-Ground MSLS (JAGM)						
ID Code (A=Service Ready, B=Not Service Ready) :									MDAP/MAIS Code:									
Resource Summary				Prior Years		FY 2017		FY 2018		FY 2019 Base		FY 2019 OCO		FY 2019 Total				
Procurement Quantity (Units in Each)				-		373		824		1,046		-		1,046				
Gross/Weapon System Cost (\$ in Millions)				0.000		89.649		215.532		276.462		-		276.462				
Less PY Advance Procurement (\$ in Millions)				0.000		27.738		37.100		0.000		-		0.000				
Net Procurement (P-1) (\$ in Millions)				0.000		61.911		178.432		276.462		-		276.462				
Plus CY Advance Procurement (\$ in Millions)				27.738		37.100		0.000		0.000		-		0.000				
Total Obligation Authority (\$ in Millions)				27.738		99.011		178.432		276.462		-		276.462				
(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)				-		240.346		261.568		264.304		-		264.304				
Note: Subtotals or Totals in this Exhibit P-5 may not be exact or sum exactly due to rounding.																		
Cost Elements	Prior Years			FY 2017			FY 2018			FY 2019 Base			FY 2019 OCO			FY 2019 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																		
All Up Rounds (AUR) <sup>(†)</sup>	-	-	-	165.981	373	61.911	174.506	824	143.793	216.297	1,046	226.247	-	-	-	216.297	1,046	226.247
Engineering Services	-	-	-	-	-	-	-	-	-	-	-	16.299	-	-	-	-	-	16.299
Guidance Section Long Lead Items	-	-	-	-	-	24.800	-	-	-	-	-	-	-	-	-	-	-	-
HELLFIRE Backend Long Lead Items	-	-	-	-	-	2.938	-	-	37.100	-	-	-	-	-	-	-	-	-
Subtotal: Recurring Cost	-	-	-	-	-	89.649	-	-	180.893	-	-	242.546	-	-	-	-	-	242.546
Subtotal: Flyaway Cost	-	-	-	-	-	89.649	-	-	180.893	-	-	242.546	-	-	-	-	-	242.546
Support - Non-Recurring Support Cost																		
Facilitization	-	-	-	-	-	-	-	-	-	-	-	15.400	-	-	-	-	-	15.400
Subtotal: Support - Non-Recurring Support Cost	-	-	-	-	-	-	-	-	-	-	-	15.400	-	-	-	-	-	15.400
Support - Production Engineering Cost																		
Production Engineering	-	-	-	-	-	-	-	-	-	-	-	13.542	-	-	-	-	-	13.542
Subtotal: Support - Production Engineering Cost	-	-	-	-	-	-	-	-	-	-	-	13.542	-	-	-	-	-	13.542
Support - Program Management Cost																		
Government Management	-	-	-	-	-	-	-	-	15.430	-	-	4.974	-	-	-	-	-	4.974
Contractor Management	-	-	-	-	-	-	-	-	3.209	-	-	-	-	-	-	-	-	-



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<b>Exhibit P-5, Cost Analysis:</b> PB 2019 Army										<b>Date:</b> February 2018							
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 2032A / 02 / 20					<b>P-1 Line Item Number / Title:</b> 2605C70302 / Joint Air-to-Ground MSLS (JAGM)					<b>Item Number / Title [DODIC]:</b> C70302 / Joint Air-to-Ground MSLS (JAGM)							

<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 2017			FY 2018			FY 2019 Base			FY 2019 OCO			FY 2019 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 - Program Management Cost</i>	-	-	-	-	-	-	-	-	18.639	-	-	4.974	-	-	-	-	-	4.974
Support - System Engineering Cost																		
System Engineering	-	-	-	-	-	-	-	-	16.000	-	-	-	-	-	-	-	-	-
<i>Subtotal: Support - System Engineering Cost</i>	-	-	-	-	-	-	-	-	16.000	-	-	-	-	-	-	-	-	-
<b>Gross/Weapon System Cost</b>	-	-	0.000	240.346	373	89.649	261.568	824	215.532	264.304	1,046	276.462	-	-	-	264.304	1,046	276.462

Secondary Distribution		FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total
Army	Quantity	373	824	1,046	-	1,046
	Total Obligation Authority	99.011	178.432	276.462	-	276.462
<b>Total: Secondary Distribution</b>	<b>Quantity</b>	<b>373</b>	<b>824</b>	<b>1,046</b>	<b>-</b>	<b>1,046</b>
	<b>Total Obligation Authority</b>	<b>99.011</b>	<b>178.432</b>	<b>276.462</b>	<b>-</b>	<b>276.462</b>

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

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<b>Exhibit P-5a, Procurement History and Planning: PB 2019 Army</b>		<b>Date:</b> February 2018
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 2032A / 02 / 20	<b>P-1 Line Item Number / Title:</b> 2605C70302 / Joint Air-to-Ground MSLS (JAGM)	<b>Item Number / Title [DODIC]:</b> C70302 / Joint Air-to-Ground MSLS (JAGM)

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
All Up Rounds (AUR) <sup>(†)</sup>		2017	Lockheed Martin / Orlando	C / FPIF	Redstone Arsenal, AL	May 2018	Dec 2018	373	165.980	Y		Feb 2015
All Up Rounds (AUR) <sup>(†)</sup>		2018	Lockheed Martin / Orlando	C / FPIF	Redstone Arsenal, AL	May 2018	Dec 2019	824	174.510	Y		Feb 2015
All Up Rounds (AUR) <sup>(†)</sup>		2019	Lockheed Martin / Orlando	C / FPIF	Redstone Arsenal, AL	Mar 2019	Dec 2021	1,046	216.300	Y		May 2017

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

## Remarks:

FY 2018:

- EMD LRIP 2 & 2b Option Award procure 824 FY 2018 missiles (496/328). LRIP 2 missiles (496 of the 824) will be procured with the support of FY 2017 advance procurement (AP) for long lead items.
- The LRIP 2 contract actions will be awarded as contract modifications to the existing LRIP 2 contract, so the delivery period will be 24 months instead of 12.
- This will be a one-time deviation from the 12-month funded delivery period, defined as "a 12-month period that begins when the contractor delivers the first item of a fiscal year procurement" to eliminate the need for AP in the future.
- Eliminating AP allows the program to: transition to a regular procurement cycle, mitigate the risk of a production gap between LRIP and Full Rate Production, aligns the Army and Navy production plans, and supports the combining of the HELLFIRE and JAGM procurements into a single contract no later than FY 2020.

FY 2019:

- EMD LRIP 3 Option Award procures 1,046 FY 2019 missiles.

The addition of the Production Engineering line is to prepare for the convergence of Joint Air-to-Ground Missile platform with the HELLFIRE platform.

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Exhibit P-21, Production Schedule: PB 2019 Army																				Date: February 2018																
Appropriation / Budget Activity / Budget Sub Activity: 2032A / 02 / 20							P-1 Line Item Number / Title: 2605C70302 / Joint Air-to-Ground MSLS (JAGM)													Item Number / Title [DODIC]: C70302 / Joint Air-to-Ground MSLS (JAGM)																
Cost Elements (Units in Each)							Fiscal Year 2018													Fiscal Year 2019													B A L A N C E			
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						
All Up Rounds (AUR)																																				
	1	2017	ARMY	373	0	373								A -	-	-	-	-	-	-	32	32	32	32	32	30	30	30	30	31	62					
	1	2017	NAVY (‡)	96	0	96								A -	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	96				
	1	2017	Total	469	0	469								-	-	-	-	-	-	-	32	32	32	32	32	30	30	30	30	31	158					
	1	2018	ARMY	824	0	824								A -	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	824				
	1	2019	ARMY	1,046	0	1,046																				A -	-	-	-	-	-	-	-	-	1,046	
	1	2019	NAVY (‡)	75	0	75																				A -	-	-	-	-	-	-	-	-	75	
	1	2019	Total	1,121	0	1,121																				-	-	-	-	-	-	-	-	-	-	1,121
							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 2019 Army																				Date: February 2018											
Appropriation / Budget Activity / Budget Sub Activity: 2032A / 02 / 20										P-1 Line Item Number / Title: 2605C70302 / Joint Air-to-Ground MSLS (JAGM)										Item Number / Title [DODIC]: C70302 / Joint Air-to-Ground MSLS (JAGM)											
Cost Elements <i>(Units in Each)</i>							Fiscal Year 2020										Fiscal Year 2021										BALANCE				
OCO	MFR #	FY	SERVICE	PROC QTY	ACCEPT PRIOR TO 1 OCT 2019	BAL DUE AS OF 1 OCT	Calendar Year 2020										Calendar Year 2021														
							OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY		JUN	JUL	AUG	SEP
All Up Rounds (AUR)																															
	1	2017	ARMY	373	311	62	31	31	-	-	-																				0
	1	2017	NAVY (†)	96	0	96	-	-	-	46	50																				0
	1	2017	Total	469	311	158	31	31	-	46	50	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	
	1	2018	ARMY	824	0	824	-	-	37	-	-	37	37	37	37	37	37	37	37	37	37	38	38	38	38	38	38	38	38	76	
	1	2019	ARMY	1,046	0	1,046	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1,046		
	1	2019	NAVY (†)	75	0	75	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	75		
	1	2019	Total	1,121	0	1,121	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1,121		
							OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	

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Exhibit P-21, Production Schedule: PB 2019 Army																			Date: February 2018																
Appropriation / Budget Activity / Budget Sub Activity: 2032A / 02 / 20							P-1 Line Item Number / Title: 2605C70302 / Joint Air-to-Ground MSLS (JAGM)														Item Number / Title [DODIC]: C70302 / Joint Air-to-Ground MSLS (JAGM)														
Cost Elements <i>(Units in Each)</i>							Fiscal Year 2022														Fiscal Year 2023														BALANCE
OCO	MFR #	FY	SERVICE	PROC QTY	ACCEPT PRIOR TO 1 OCT 2021	BAL DUE AS OF 1 OCT	Calendar Year 2022														Calendar Year 2023														
							OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP					
All Up Rounds (AUR)																																			
	1	2017	ARMY	373	373	0																													0
	1	2017	NAVY (†)	96	96	0																													0
	1	2017	Total	469	469	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0					
	1	2018	ARMY	824	748	76	38	38																								0			
	1	2019	ARMY	1,046	0	1,046	-	-	87	87	87	87	87	87	87	87	87	88	88											0					
	1	2019	NAVY (†)	75	0	75	-	-	6	6	6	6	6	6	6	6	7	7	7											0					
	1	2019	Total	1,121	0	1,121	-	-	93	93	93	93	93	93	93	93	94	95	95	-	-	-	-	-	-	-	-	-	-	0					
							OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP					

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<b>Exhibit P-21, Production Schedule:</b> PB 2019 Army								<b>Date:</b> February 2018			
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 2032A / 02 / 20					<b>P-1 Line Item Number / Title:</b> 2605C70302 / Joint Air-to-Ground MSLS (JAGM)				<b>Item Number / Title [DODIC]:</b> C70302 / Joint Air-to-Ground MSLS (JAGM)		

MFR Ref #	Manufacturer Name - Location	Production Rates (Each / Year)			Procurement Leadtime (Months)							
		MSR For 2019	1-8-5 For 2019	MAX For 2019	Initial				Reorder			
					ALT Prior to Oct 1	ALT After Oct 1	Manufacturing PLT	Total After Oct 1	ALT Prior to Oct 1	ALT After Oct 1	Manufacturing PLT	Total After Oct 1
1	Lockheed Martin - Orlando	420	1,200	1,200	5	12	24	36	5	12	24	36

**Remarks:**

In order to eliminate the need for advance procurement beyond LRIP 2 & 2b, FY 2018 missile procurement (824 All Up Rounds) will be procured on two separate contact actions, both to be awarded in 3rd Quarter, FY 2018. The LRIP 2 & 2b Option Award procures 824 (496/328) FY 2018 missiles. LRIP 2 missiles will be procured with the support of FY 2017 advance procurement (AP) for long lead items. The LRIP 2 & 2b contract actions will be awarded as contract modifications to the existing contact, so the delivery period will be 24 months instead of 12. This will be a one-time deviation from the 12-month funded delivery period, defined as "a 12-month period that begins when the contractor delivers the first item of a fiscal year procurement" to eliminate the need for AP in the future. Eliminating AP allows the program to: transition to a regular procurement cycle, mitigate the risk of a production gap between LRIP and FRP, align the Army and Navy production plans, and support the combining of the HELLFIRE and JAGM procurements into a single contract no later than FY 2020.

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

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

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

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<b>Exhibit P-40, Advance Procurement Budget Line Item Justification:</b> PB 2019 Army	<b>Date:</b> February 2018
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<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 2032A: Missile Procurement, Army / BA 02: Other Missiles / BSA 20: Air-To-Surface Missile System	<b>P-1 Line Item Number / Title:</b> 2605C70302 / Joint Air-to-Ground MSLS (JAGM)
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<b>Program Elements for Code B Items:</b> N/A	<b>Other Related Program Elements:</b> 0605450A
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**Line Item MDAP/MAIS Code:** 355

Resource Summary	Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	To Complete	Total
Gross/Weapon System Cost (\$ in Millions)	27.738	37.100	0.000	0.000	-	0.000	0.000	0.000	0.000	0.000	-	64.838
Net Procurement (P-1) (\$ in Millions)	27.738	37.100	0.000	0.000	-	0.000	0.000	0.000	0.000	0.000	-	64.838
<b>Total Obligation Authority (\$ in Millions)</b>	<b>27.738</b>	<b>37.100</b>	<b>0.000</b>	<b>0.000</b>	<b>-</b>	<b>0.000</b>	<b>0.000</b>	<b>0.000</b>	<b>0.000</b>	<b>0.000</b>	<b>-</b>	<b>64.838</b>

**Description:**

The Joint Air-to-Ground Missile (JAGM) program is an Army-led, Acquisition Category (ACAT) IC Major Defense Acquisition Program (MDAP) with joint interest with the U.S. Marine Corps (USMC) and U.S. Navy. The JAGM is the next generation of aviation-launched, fire and forget missiles to replace all variants of HELLFIRE. The JAGM multi-mode Guidance Section is integrated with the combat proven HELLFIRE II (AGM-114R) propulsion, warhead, and control section. JAGM will be used by joint service aircraft for destruction of high value stationary, moving, and relocatable land and maritime targets from standoff range in day, night, adverse weather, and obscured battlefield conditions. The program's threshold platforms are the U.S. Army AH-64E Apache and USMC AH-1Z.

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<b>Exhibit P-40, Advance Procurement Budget Line Item Justification:</b> PB 2019 Army							<b>Date:</b> February 2018		
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 2032A: Missile Procurement, Army / BA 02: Other Missiles / BSA 20: Air-To-Surface Missile System					<b>P-1 Line Item Number / Title:</b> 2605C70302 / Joint Air-to-Ground MSLS (JAGM)				
<b>Program Elements for Code B Items:</b> N/A					<b>Other Related Program Elements:</b> 0605450A				
<b>Line Item MDAP/MAIS Code:</b> 355									
Exhibits Schedule				Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total
Exhibit Type	Title*	ID CD	MDAP/MAIS Code	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)
P-10	C70302 / Joint Air-to-Ground MSLS (JAGM)			- / 27.738	373 / 37.100	824 / 0.000	1,046 / 0.000	- / -	1,046 / 0.000
<b>P-40</b>	<b>Total Gross/Weapon System Cost</b>			<b>- / 27.738</b>	<b>373 / 37.100</b>	<b>824 / 0.000</b>	<b>1,046 / 0.000</b>	<b>- / -</b>	<b>1,046 / 0.000</b>
*Title represents the P-10 Title for Advance Procurement.									
Note: Totals in this Exhibit P-40 set may not be exact or sum exactly due to rounding.									

**Justification:**



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<b>Exhibit P-10, Advance Procurement Requirements Analysis (page 1 - Budget Funding Justification):</b> PB 2019 Army					<b>Date:</b> February 2018	
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 2032A / 02 / 20		<b>P-1 Line Item Number / Title:</b> 2605C70302 / Joint Air-to-Ground MSLS (JAGM)			<b>P-5 Number / Title:</b> C70302 / Joint Air-to-Ground MSLS (JAGM)	
<b>First System (2019) Award Date:</b> April 2016		<b>First System (2019) Completion Date:</b> March 2018		<b>Interval Between Systems:</b> 0 Months		
<b>Joint Air-to-Ground MSLS (JAGM)</b>		<b>Production Leadtime</b> <i>(Months)</i>	<b>Prior Years</b> <i>(Each)</i>	<b>FY 2017</b> <i>(Each)</i>	<b>FY 2018</b> <i>(Each)</i>	<b>FY 2019</b> <i>(Each)</i>
Quantity			-	373	824	1,046
<b>Cost Elements</b>		<b>When Required</b> <i>(Months)</i>	<b>Prior Years</b> <i>(\$ M)</i>	<b>FY 2017</b> <i>(\$ M)</i>	<b>FY 2018</b> <i>(\$ M)</i>	<b>FY 2019</b> <i>(\$ M)</i>
<b>Other</b>						
Guidance Section LL Items (LRIP 1)		23	24.800	-	-	-
HELLFIRE Backend LL Items (LRIP 1)		23	2.938	-	-	-
Guidance Section LL Items (LRIP 2)		23	-	-	-	0.000
HELLFIRE Backend LL Items (LRIP 2)		23	-	37.100	-	-
<i>Total: Other</i>			27.738	37.100	-	-
<b>Total Advance Procurement/Obligation Authority</b>			<b>27.738</b>	<b>37.100</b>	<b>0.000</b>	<b>0.000</b>

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<b>Exhibit P-10, Advance Procurement Requirements Analysis (page 2 - Budget Funding Justification):</b> PB 2019 Army						<b>Date:</b> February 2018	
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 2032A / 02 / 20		<b>P-1 Line Item Number / Title:</b> 2605C70302 / Joint Air-to-Ground MSLS (JAGM)				<b>P-5 Number / Title:</b> C70302 / Joint Air-to-Ground MSLS (JAGM)	
		<b>FY 2019</b>					
<b>Cost Elements</b>	<b>QPA</b> <i>(Each)</i>	<b>Production Leadtime</b> <i>(Months)</i>	<b>Unit Cost</b> <i>(\$ K)</i>	<b>Contract Forecast Date</b>	<b>2019 Qty</b> <i>(Each)</i>	<b>For FY</b>	<b>Total Cost Request</b> <i>(\$ M)</i>
<b>Other</b>							
Guidance Section LL Items (LRIP 1)	-						-
HELLFIRE Backend LL Items (LRIP 1)	-						-
Guidance Section LL Items (LRIP 2)	-						0.000
HELLFIRE Backend LL Items (LRIP 2)	-						-
<i>Total: Other</i>							-
<b>Total Advance Procurement/Obligation Authority</b>							<b>0.000</b>
<b>Description:</b> No Advance Procurement is required beyond FY 2017							

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<b>Exhibit P-40, Budget Line Item Justification:</b> PB 2019 Army										<b>Date:</b> February 2018		
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 2032A: Missile Procurement, Army / BA 02: Other Missiles / BSA 30: Anti-Tank/ Assault Missile Sys						<b>P-1 Line Item Number / Title:</b> 0648CC0007 / Javelin (AAWS-M) System Summary						
<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> 0604611A					
<b>Line Item MDAP/MAIS Code:</b> 280												
<b>Resource Summary</b>	<b>Prior Years</b>	<b>FY 2017</b>	<b>FY 2018</b>	<b>FY 2019 Base</b>	<b>FY 2019 OCO</b>	<b>FY 2019 Total</b>	<b>FY 2020</b>	<b>FY 2021</b>	<b>FY 2022</b>	<b>FY 2023</b>	<b>To Complete</b>	<b>Total</b>
Procurement Quantity ( <i>Units in Each</i> )	28,804	1,129	572	709	75	784	550	666	1,120	1,323	-	34,948
Gross/Weapon System Cost ( <i>\$ in Millions</i> )	4,654.213	191.575	118.235	303.665	31.120	334.785	116.742	135.070	212.930	246.157	-	6,009.707
Less PY Advance Procurement ( <i>\$ in Millions</i> )	100.622	0.000	0.000	0.000	-	0.000	0.000	0.000	0.000	0.000	-	100.622
Net Procurement (P-1) ( <i>\$ in Millions</i> )	4,553.591	191.575	118.235	303.665	31.120	334.785	116.742	135.070	212.930	246.157	-	5,909.085
Plus CY Advance Procurement ( <i>\$ in Millions</i> )	100.622	0.000	0.000	0.000	-	0.000	0.000	0.000	0.000	0.000	-	100.622
<b>Total Obligation Authority</b> ( <i>\$ in Millions</i> )	<b>4,654.213</b>	<b>191.575</b>	<b>118.235</b>	<b>303.665</b>	<b>31.120</b>	<b>334.785</b>	<b>116.742</b>	<b>135.070</b>	<b>212.930</b>	<b>246.157</b>	-	<b>6,009.707</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> )	161.582	169.686	206.705	428.300	414.933	427.022	212.258	202.808	190.116	186.060	-	171.961
<b>Description:</b> Javelin provides the United States Army and United States Marine Corps (USMC) a man-portable, fire-and-forget, medium-range missile with enhanced situational awareness and precision direct-fire effects to defeat armored vehicles, fortifications, and soft targets in a range of military operations. Javelin has a high kill rate against a variety of targets at extended ranges under day/night, battlefield obscurants, adverse weather and multiple counter-measure conditions. The system's soft launch feature permits firing from a fighting position or an enclosure. Javelin uses a modular design to allow the system to evolve to meet changing threats and requirements via both software and hardware upgrades. The system consists of a reusable Command Launch Unit (CLU) with a built-in-test (BIT), and a modular missile encased in a disposable launch tube assembly. The system also includes training devices for tactical training and classroom training. Javelin's fire-and-forget technology allows the gunner to fire and immediately take cover, to move to another fighting position, or to reload. The Javelin provides enhanced lethality through the use of a tandem multi-purpose warhead which will defeat all known armor threats. It is effective against both stationary and moving targets. This system also provides defensive capability against attacking/hovering helicopters. In current conflicts the CLU is being used as a stand-alone surveillance and target acquisition asset. The Army is the lead for this joint program with the USMC.												
<b>Secondary Distribution</b>		<b>FY 2017</b>	<b>FY 2018</b>	<b>FY 2019 Base</b>	<b>FY 2019 OCO</b>	<b>FY 2019 Total</b>	<b>FY 2020</b>	<b>FY 2021</b>	<b>FY 2022</b>	<b>FY 2023</b>		
Army	Quantity	1,129	572	709	75	784	550	666	1,120	1,323		
	Total Obligation Authority	191.575	118.235	303.665	31.120	334.785	116.742	135.070	212.930	246.157		
<b>Total:</b> <b>Secondary Distribution</b>	<b>Quantity</b>	<b>1,129</b>	<b>572</b>	<b>709</b>	<b>75</b>	<b>784</b>	<b>550</b>	<b>666</b>	<b>1,120</b>	<b>1,323</b>		
	<b>Total Obligation Authority</b>	<b>191.575</b>	<b>118.235</b>	<b>303.665</b>	<b>31.120</b>	<b>334.785</b>	<b>116.742</b>	<b>135.070</b>	<b>212.930</b>	<b>246.157</b>		

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<b>Exhibit P-40, Budget Line Item Justification:</b> PB 2019 Army								<b>Date:</b> February 2018		
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 2032A: Missile Procurement, Army / BA 02: Other Missiles / BSA 30: Anti-Tank/ Assault Missile Sys						<b>P-1 Line Item Number / Title:</b> 0648CC0007 / Javelin (AAWS-M) System Summary				
<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> 0604611A				
<b>Line Item MDAP/MAIS Code:</b> 280										
Exhibits Schedule					Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 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	H06102 / JAVELIN (AAWS-M)	P-5a, P-21			28,804 / 4,654.213	1,129 / 191.575	572 / 118.235	709 / 281.165	75 / 31.120	784 / 312.285
P-5	H06103 / Javelin Lightweight Command Launch Unit (CLU)				- / -	- / -	- / -	- / 22.500	- / -	- / 22.500
<b>P-40</b>	<b>Total Gross/Weapon System Cost</b>				<b>28,804 / 4,654.213</b>	<b>1,129 / 191.575</b>	<b>572 / 118.235</b>	<b>709 / 303.665</b>	<b>75 / 31.120</b>	<b>784 / 334.785</b>
<p>*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.</p> <p>Note: Totals in this Exhibit P-40 set may not be exact or sum exactly due to rounding.</p>										
<p><b>Justification:</b></p> <p>FY19 Base procurement dollars in the amount of \$123.425 million support the procurement of 709 Missiles.</p> <p>FY19 Base procurement dollars in the amount of \$138.894 million pays to convert 834 Block 0 CLUs to Block 1 Configuration in order to purefleet the Block I capability to the total Army.</p> <p>FY19 Base procurement dollars in the amount of \$22.500 million pays to convert 135 Block 0 CLUs to Block 1 Configuration in order to purefleet the Block I capability to the total Army.</p> <p>Prior to implementing the Lightweight CLU in FY21, the Army plans to pure fleet the existing CLUs through an upgrade from Block 0 to Block 1. Currently only Armored Brigade Combat Teams (ABCTs) have Block 0 CLUs. This upgrade gives ABCTs the same capability as the rest of the combat force.</p> <p>FY19 Javelin OCO dollars in the amount of \$13.056 million support the procurement of 75 Missiles.</p> <p>FY19 Javelin OCO dollars in the amount of \$17.320 million pays to convert 104 Block 0 CLUs to Block 1 Configuration in order to provide this capability to 2 ABCTs.</p> <p>The estimated missile unit prices are based on combined United States Army, other services, and FMS procurements of 850 missiles per year.</p> <p>The Army intends to convert any price advantage created through contract negotiations, other service procurement, and/or foreign military sales to increase the Army procurement of Javelin missiles, increase procurement of Block 0 to Block I retrofits, and/or address obsolescence, modernization, cost reduction, and production initiatives.</p> <p>Beginning in FY19, Program Office core employee labor costs moved from Procurement to OMA as part of an OSD auditability directive.</p> <p>The cut in of the G-Model Missile Engineering Change Proposal will begin in FY19. G-Model missile production will begin in FY21.</p> <p>Javelin Lightweight CLU production will begin in FY21.</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-5, Cost Analysis: PB 2019 Army												Date: February 2018						
Appropriation / Budget Activity / Budget Sub Activity: 2032A / 02 / 30						P-1 Line Item Number / Title: 0648CC0007 / Javelin (AAWS-M) System Summary						Item Number / Title [DODIC]: H06102 / JAVELIN (AAWS-M)						
ID Code (A=Service Ready, B=Not Service Ready) :									MDAP/MAIS Code:									
Resource Summary				Prior Years		FY 2017		FY 2018		FY 2019 Base		FY 2019 OCO		FY 2019 Total				
Procurement Quantity <i>(Units in Each)</i>				28,804		1,129		572		709		75		784				
Gross/Weapon System Cost <i>(\$ in Millions)</i>				4,654.213		191.575		118.235		281.165		31.120		312.285				
Less PY Advance Procurement <i>(\$ in Millions)</i>				100.622		0.000		0.000		0.000		-		0.000				
Net Procurement (P-1) <i>(\$ in Millions)</i>				4,553.591		191.575		118.235		281.165		31.120		312.285				
Plus CY Advance Procurement <i>(\$ in Millions)</i>				100.622		0.000		0.000		0.000		-		0.000				
Total Obligation Authority <i>(\$ in Millions)</i>				4,654.213		191.575		118.235		281.165		31.120		312.285				
(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>				161.582		169.686		206.705		396.566		414.933		398.323				
Note: Subtotals or Totals in this Exhibit P-5 may not be exact or sum exactly due to rounding.																		
Cost Elements	Prior Years			FY 2017			FY 2018			FY 2019 Base			FY 2019 OCO			FY 2019 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																		
All Up Round <sup>(1)</sup>	99.101	28,804	2,854.505	152.059	1,129	171.675	170.670	572	97.623	174.083	709	123.425	174.080	75	13.056	174.083	784	136.481
Engineering Services	-	-	148.963	-	-	7.377	-	-	7.774	-	-	8.012	-	-	-	-	-	8.012
Engineering Change Orders	-	-	11.374	-	-	0.069	-	-	0.138	-	-	1.123	-	-	0.018	-	-	1.141
Acceptance Testing	-	-	56.214	-	-	0.983	-	-	1.003	-	-	1.023	-	-	0.130	-	-	1.153
Production Engineering	-	-	104.105	-	-	4.558	-	-	4.649	-	-	4.742	-	-	-	-	-	4.742
Publications/Technical Data	-	-	2.596	-	-	0.075	-	-	0.075	-	-	0.076	-	-	-	-	-	0.076
CLU Retrofits	-	-	-	-	-	-	-	-	-	166.540	834	138.894	166.538	104	17.320	166.539	938	156.214
Advanced Procurement	-	-	100.622	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Subtotal: Recurring Cost	-	-	3,278.379	-	-	184.737	-	-	111.262	-	-	277.295	-	-	30.524	-	-	307.819
Subtotal: Flyaway Cost	-	-	3,278.379	-	-	184.737	-	-	111.262	-	-	277.295	-	-	30.524	-	-	307.819
Support - Program Management Cost																		
Government Management	-	-	1,375.834	-	-	6.838	-	-	6.973	-	-	3.870	-	-	0.595	-	-	4.465
Subtotal: Support - Program Management Cost	-	-	1,375.834	-	-	6.838	-	-	6.973	-	-	3.870	-	-	0.595	-	-	4.465
Gross/Weapon System Cost	161.582	28,804	4,654.213	169.686	1,129	191.575	206.705	572	118.235	396.566	709	281.165	414.933	75	31.120	398.323	784	312.285

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Exhibit P-5, Cost Analysis: PB 2019 Army					Date: February 2018	
Appropriation / Budget Activity / Budget Sub Activity: 2032A / 02 / 30		P-1 Line Item Number / Title: 0648CC0007 / Javelin (AAWS-M) System Summary			Item Number / Title [DODIC]: H06102 / JAVELIN (AAWS-M)	
ID Code (A=Service Ready, B=Not Service Ready) :				MDAP/MAIS Code:		
Secondary Distribution		FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total
Army	Quantity	1,129	572	709	75	784
	Total Obligation Authority	191.575	118.235	281.165	31.120	312.285
Total:	Quantity	1,129	572	709	75	784
Secondary Distribution	Total Obligation Authority	191.575	118.235	281.165	31.120	312.285

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

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<b>Exhibit P-5a, Procurement History and Planning:</b> PB 2019 Army								<b>Date:</b> February 2018				
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 2032A / 02 / 30				<b>P-1 Line Item Number / Title:</b> 0648CC0007 / Javelin (AAWS-M) System Summary				<b>Item Number / Title [DODIC]:</b> H06102 / JAVELIN (AAWS-M)				

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
All Up Round <sup>(†)</sup>		2017	JJV All Up Round / Tucson AZ Orlando FL	SS / FFP	AMCOM, Redstone Arsenal, AL	Jul 2017	May 2019	1,129	152.060	Y		Feb 2016
All Up Round <sup>(†)</sup>		2018	JJV All Up Round / Tucson AZ Orlando FL	SS / FFP	AMCOM, Redstone Arsenal, AL	Jun 2018	Apr 2020	572	170.670	Y		Aug 2017
All Up Round <sup>(†)</sup>		2019	JJV All Up Round / Tucson AZ Orlando FL	SS / FFP	AMCOM, Redstone Arsenal, AL	Mar 2019	Jan 2021	784	174.080	Y		Mar 2018

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

**Remarks:**

Javelin Joint Venture (JJV) includes Raytheon in Tucson, AZ and Lockheed Martin in Orlando, FL.

Sole Source (SS)

Firm Fixed Price (FFP)

Aviation and Missile Command (AMCOM)

Missile unit prices are affected by combining Army procurement quantities with other U.S. services and foreign military sales quantities. Estimated unit price is based on combined U.S. Army, other services and FMS procurements of 850 missiles per year.

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Exhibit P-21, Production Schedule: PB 2019 Army																			Date: February 2018																								
Appropriation / Budget Activity / Budget Sub Activity: 2032A / 02 / 30							P-1 Line Item Number / Title: 0648CC0007 / Javelin (AAWS-M) System Summary												Item Number / Title [DODIC]: H06102 / JAVELIN (AAWS-M)																								
Cost Elements (Units in Each)							Fiscal Year 2017												Fiscal Year 2018												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 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													
All Up Round																																											
Prior Years Deliveries: 28804																																											
	1	2017	ARMY	1,129	0	1,129													A -	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1,129						
	1	2017	FMS (†)	245	0	245													A -	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	245						
	1	2017	MC (†)	526	0	526													A -	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	526						
	1	2017	NAVY (†)	46	0	46													A -	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	46						
	1	2017	Total	1,946	0	1,946													-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1,946						
	1	2018	ARMY	572	0	572																									A -	-	-	-	-	572							
	1	2018	FMS (†)	55	0	55																									A -	-	-	-	-	55							
	1	2018	MC (†)	223	0	223																									A -	-	-	-	-	223							
	1	2018	Total	850	0	850																									-	-	-	-	-	850							
	1	2019	ARMY	784	0	784																																					784
	1	2019	FMS (†)	66	0	66																																					66
	1	2019	Total	850	0	850																																					850
							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 2019 Army																					Date: February 2018														
Appropriation / Budget Activity / Budget Sub Activity: 2032A / 02 / 30							P-1 Line Item Number / Title: 0648CC0007 / Javelin (AAWS-M) System Summary														Item Number / Title [DODIC]: H06102 / JAVELIN (AAWS-M)														
Cost Elements (Units in Each)							Fiscal Year 2019														Fiscal Year 2020														BALANCE
OCO	MFR #	FY	SERVICE	PROC QTY	ACCEPT PRIOR TO 1 OCT 2018	BAL DUE AS OF 1 OCT	Calendar Year 2019														Calendar Year 2020														
							OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP					
All Up Round																																			
Prior Years Deliveries: 28804																																			
	1	2017	ARMY	1,129	0	1,129	-	-	-	-	-	-	-	177	177	177	177	177	177	67	-	-	-	-							0				
	1	2017	FMS (‡)	245	0	245	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	68	177							0				
	1	2017	MC (‡)	526	0	526	-	-	-	-	-	-	-	-	-	-	-	-	-	63	177	177	109	-							0				
	1	2017	NAVY (‡)	46	0	46	-	-	-	-	-	-	-	-	-	-	-	-	-	46	-	-	-	-							0				
	1	2017	Total	1,946	0	1,946	-	-	-	-	-	-	-	177	177	177	177	177	177	176	177	177	177	177	-	-	-	-	-	-	0				
	1	2018	ARMY	572	0	572	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	94	94	94	94	94	95	7				
	1	2018	FMS (‡)	55	0	55	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	55				
	1	2018	MC (‡)	223	0	223	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	223				
	1	2018	Total	850	0	850	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	94	94	94	94	94	95	285				
	1	2019	ARMY	784	0	784						A	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	784				
	1	2019	FMS (‡)	66	0	66						A	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	66				
	1	2019	Total	850	0	850						-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	850				
							OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP					

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Exhibit P-21, Production Schedule: PB 2019 Army																				Date: February 2018												
Appropriation / Budget Activity / Budget Sub Activity: 2032A / 02 / 30										P-1 Line Item Number / Title: 0648CC0007 / Javelin (AAWS-M) System Summary										Item Number / Title [DODIC]: H06102 / JAVELIN (AAWS-M)												
Cost Elements (Units in Each)							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	
All Up Round																																
Prior Years Deliveries: 28804																																
	1	2017	ARMY	1,129	1,129	0																										0
	1	2017	FMS (‡)	245	245	0																										0
	1	2017	MC (‡)	526	526	0																										0
	1	2017	NAVY (‡)	46	46	0																										0
	1	2017	Total	1,946	1,946	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0		
	1	2018	ARMY	572	565	7	7	-	-																			0				
	1	2018	FMS (‡)	55	0	55	-	-	55																			0				
	1	2018	MC (‡)	223	0	223	88	95	40																			0				
	1	2018	Total	850	565	285	95	95	95	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0		
	1	2019	ARMY	784	0	784	-	-	-	71	71	71	71	71	71	71	71	71	71	70	4								0			
	1	2019	FMS (‡)	66	0	66	-	-	-	-	-	-	-	-	-	-	-	-	-	66								0				
	1	2019	Total	850	0	850	-	-	-	71	71	71	71	71	71	71	71	71	70	70	-	-	-	-	-	-	-	-	-	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 2019 Army							<b>Date:</b> February 2018
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 2032A / 02 / 30				<b>P-1 Line Item Number / Title:</b> 0648CC0007 / Javelin (AAWS-M) System Summary			<b>Item Number / Title [DODIC]:</b> H06102 / JAVELIN (AAWS-M)

MFR Ref #	Manufacturer Name - Location	Production Rates (Each / Year)			Procurement Leadtime (Months)							
		MSR For 2019	1-8-5 For 2019	MAX For 2019	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	JJV All Up Round - Tucson AZ Orlando FL	850	3,960	6,480	11	3	23	26	6	3	29	32

**Remarks:**

FY17-18 Army production quantity includes Base and OCO missiles on the P-21.

(±) Delivery rows marked with this symbol indicate that they are funded through a separate Line Item. See the respective components' exhibits for details, including the full delivery schedule.

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

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

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Exhibit P-5, Cost Analysis: PB 2019 Army												Date: February 2018						
Appropriation / Budget Activity / Budget Sub Activity: 2032A / 02 / 30						P-1 Line Item Number / Title: 0648CC0007 / Javelin (AAWS-M) System Summary						Item Number / Title [DODIC]: H06103 / Javelin Lightweight Command Launch Unit (CLU)						
ID Code (A=Service Ready, B=Not Service Ready) :										MDAP/MAIS Code:								
Resource Summary				Prior Years		FY 2017		FY 2018		FY 2019 Base		FY 2019 OCO		FY 2019 Total				
Procurement Quantity (Units in Each)				-		-		-		-		-		-				
Gross/Weapon System Cost (\$ in Millions)				-		-		-		22.500		-		22.500				
Less PY Advance Procurement (\$ in Millions)				-		-		-		-		-		-				
Net Procurement (P-1) (\$ in Millions)				-		-		-		22.500		-		22.500				
Plus CY Advance Procurement (\$ in Millions)				-		-		-		-		-		-				
Total Obligation Authority (\$ in Millions)				-		-		-		22.500		-		22.500				
(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 2017			FY 2018			FY 2019 Base			FY 2019 OCO			FY 2019 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																		
CLU Retrofits (Block 0 to Block 1)	-	-	-	-	-	-	-	-	-	166.667	135	22.500	-	-	-	166.667	135	22.500
Subtotal: Recurring Cost	-	-	-	-	-	-	-	-	-	-	-	22.500	-	-	-	-	-	22.500
Subtotal: Flyaway Cost	-	-	-	-	-	-	-	-	-	-	-	22.500	-	-	-	-	-	22.500
Gross/Weapon System Cost	-	-	-	-	-	-	-	-	-	-	-	22.500	-	-	-	-	-	22.500
Secondary Distribution							FY 2017		FY 2018		FY 2019 Base		FY 2019 OCO		FY 2019 Total			
Army		Quantity					-		-		-		-		-			
		Total Obligation Authority					-		-		22.500		-		22.500			
Total: Secondary Distribution		Quantity					-		-		-		-		-			
		Total Obligation Authority					-		-		22.500		-		22.500			

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<b>Exhibit P-40, Budget Line Item Justification:</b> PB 2019 Army										<b>Date:</b> February 2018		
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 2032A: Missile Procurement, Army / BA 02: Other Missiles / BSA 30: Anti-Tank/ Assault Missile Sys						<b>P-1 Line Item Number / Title:</b> 2104C59300 / TOW 2 System Summary						
<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												
<b>Resource Summary</b>	<b>Prior Years</b>	<b>FY 2017</b>	<b>FY 2018</b>	<b>FY 2019 Base</b>	<b>FY 2019 OCO</b>	<b>FY 2019 Total</b>	<b>FY 2020</b>	<b>FY 2021</b>	<b>FY 2022</b>	<b>FY 2023</b>	<b>To Complete</b>	<b>Total</b>
Procurement Quantity ( <i>Units in Each</i> )	169,251	1,948	1,205	1,472	-	1,472	924	1,396	1,366	1,184	Continuing	Continuing
Gross/Weapon System Cost ( <i>\$ in Millions</i> )	3,229.441	181.477	100.474	124.963	-	124.963	81.002	124.604	140.038	126.235	Continuing	Continuing
Less PY Advance Procurement ( <i>\$ in Millions</i> )	177.207	0.000	10.716	19.949	-	19.949	19.949	10.500	0.000	0.000	Continuing	Continuing
Net Procurement (P-1) ( <i>\$ in Millions</i> )	3,052.234	181.477	89.758	105.014	-	105.014	61.053	114.104	140.038	126.235	Continuing	Continuing
Plus CY Advance Procurement ( <i>\$ in Millions</i> )	177.207	10.716	19.949	19.949	-	19.949	10.500	0.000	0.000	0.000	Continuing	Continuing
<b>Total Obligation Authority</b> ( <i>\$ in Millions</i> )	<b>3,229.441</b>	<b>192.193</b>	<b>109.707</b>	<b>124.963</b>	<b>-</b>	<b>124.963</b>	<b>71.553</b>	<b>114.104</b>	<b>140.038</b>	<b>126.235</b>	<b>Continuing</b>	<b>Continuing</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> )	19.081	93.161	83.381	84.893	-	84.893	87.665	89.258	102.517	106.617	Continuing	Continuing
<b>Description:</b>												
TOW missiles (BGM-71 Series) are combat proven missiles that provide heavy anti-armor/assault capability to the Army's Infantry Brigade Combat Teams (IBCT), the Stryker Brigade Combat Teams (SBCT) and the Bradley equipped Armor Brigade Combat Team (ABCT). TOW continues to be used consistently as the weapon of choice in precision combat engagements. TOW missiles are the primary heavy anti-armor/assault missile for the U.S. Marine Corps (USMC) and 43 allied nations. Warfighters employ TOW missiles against buildings and field fortifications taking advantage of the missile's inherent precise assault capability against such targets.												
TOW missiles are launched from a variety of combat systems in the active Army including the Improved Target Acquisition System (ITAS), all infantry and cavalry variants of Bradley Fighting Vehicle Systems (BFVS), the Stryker Anti-Tank Guided Missile (ATGM) Light Armored Vehicle (LAV), and the M220A2 TOW 2 launcher. The USMC employs the TOW missile from its ITAS launchers, ATGM, and AH-1W Cobra helicopters. The TOW missile provides the warfighter with a highly lethal, cost effective, interoperable, multi-purpose weapon.												
<b>Secondary Distribution</b>		<b>FY 2017</b>	<b>FY 2018</b>	<b>FY 2019 Base</b>	<b>FY 2019 OCO</b>	<b>FY 2019 Total</b>	<b>FY 2020</b>	<b>FY 2021</b>	<b>FY 2022</b>	<b>FY 2023</b>		
Army	Quantity	1,948	1,205	1,472	-	1,472	924	1,396	1,366	1,184		
	Total Obligation Authority	192.193	109.707	124.963	-	124.963	71.553	114.104	140.038	126.235		
<b>Total:</b> <b>Secondary Distribution</b>	<b>Quantity</b>	<b>1,948</b>	<b>1,205</b>	<b>1,472</b>	<b>-</b>	<b>1,472</b>	<b>924</b>	<b>1,396</b>	<b>1,366</b>	<b>1,184</b>		
	<b>Total Obligation Authority</b>	<b>192.193</b>	<b>109.707</b>	<b>124.963</b>	<b>-</b>	<b>124.963</b>	<b>71.553</b>	<b>114.104</b>	<b>140.038</b>	<b>126.235</b>		

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<b>Exhibit P-40, Budget Line Item Justification:</b> PB 2019 Army								<b>Date:</b> February 2018		
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 2032A: Missile Procurement, Army / BA 02: Other Missiles / BSA 30: Anti-Tank/ Assault Missile Sys						<b>P-1 Line Item Number / Title:</b> 2104C59300 / TOW 2 System Summary				
<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										
Exhibits Schedule					Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 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	C59403 / TOW Family of Missiles	P-5a, P-21			169,251 / 3,229.441	1,948 / 181.477	1,205 / 100.474	1,472 / 124.963	- / -	1,472 / 124.963
<b>P-40</b>	<b>Total Gross/Weapon System Cost</b>				<b>169,251 / 3,229.441</b>	<b>1,948 / 181.477</b>	<b>1,205 / 100.474</b>	<b>1,472 / 124.963</b>	<b>- / -</b>	<b>1,472 / 124.963</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.										
<p><b>Justification:</b> FY 2019 Base dollars in the amount of \$124,963 million support the third year of a five year (FY17-21) multi-year contract.</p> <p>FY17-21 multi-year procurement contains advanced procurement in years FY17-20 to support the procurement of components in economic order quantities required for missile production. FY19 advanced procurement in the amount of \$19,949 million is the third year of advanced procurement.</p> <p>Adjustments in FY 18 quantity from 1205 to 1076 are due to the FY 17 Advanced Procurement Congressional Mark received after the PB 18 P-form submission.</p> <p>IAW 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 civil authorities.</p> <p><b>NOTES:</b> The Army intends to convert any price advantage created through contract negotiations, other service procurement, and/or foreign military sales to increase the Army procurement of TOW missiles, and to mitigate safety and obsolescence.</p>										

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Exhibit P-5, Cost Analysis: PB 2019 Army												Date: February 2018						
Appropriation / Budget Activity / Budget Sub Activity: 2032A / 02 / 30						P-1 Line Item Number / Title: 2104C59300 / TOW 2 System Summary						Item Number / Title [DODIC]: C59403 / TOW Family of Missiles						
ID Code (A=Service Ready, B=Not Service Ready) :									MDAP/MAIS Code:									
Resource Summary				Prior Years		FY 2017		FY 2018		FY 2019 Base		FY 2019 OCO		FY 2019 Total				
Procurement Quantity <i>(Units in Each)</i>				169,251		1,948		1,205		1,472		-		1,472				
Gross/Weapon System Cost <i>(\$ in Millions)</i>				3,229.441		181.477		100.474		124.963		-		124.963				
Less PY Advance Procurement <i>(\$ in Millions)</i>				177.207		0.000		10.716		19.949		-		19.949				
Net Procurement (P-1) <i>(\$ in Millions)</i>				3,052.234		181.477		89.758		105.014		-		105.014				
Plus CY Advance Procurement <i>(\$ in Millions)</i>				177.207		10.716		19.949		19.949		-		19.949				
Total Obligation Authority <i>(\$ in Millions)</i>				3,229.441		192.193		109.707		124.963		-		124.963				
(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>				19.081		93.161		83.381		84.893		-		84.893				
Note: Subtotals or Totals in this Exhibit P-5 may not be exact or sum exactly due to rounding.																		
Cost Elements	Prior Years			FY 2017			FY 2018			FY 2019 Base			FY 2019 OCO			FY 2019 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																		
Missile Contract <sup>(†)</sup>	18.749	169,251	3,173.287	77.720	1,948	151.399	71.705	1,076	77.155	74.780	1,472	110.076	-	-	-	74.780	1,472	110.076
Less: Prior Year Adv Proc	-	-	-177.207	-	-	-	-	-	-10.716	-	-	-19.949	-	-	-	-	-	-19.949
PLUS P-1 CY Adv. Proc.	-	-	177.207	-	-	10.716	-	-	19.949	-	-	19.949	-	-	-	-	-	19.949
Subtotal: Recurring Cost	-	-	3,173.287	-	-	162.115	-	-	86.388	-	-	110.076	-	-	-	-	-	110.076
Subtotal: Flyaway Cost	-	-	3,173.287	-	-	162.115	-	-	86.388	-	-	110.076	-	-	-	-	-	110.076
Support - Acceptance Testing Cost																		
Acceptance Test	-	-	4.914	-	-	4.382	-	-	3.638	-	-	3.038	-	-	-	-	-	3.038
Subtotal: Support - Acceptance Testing Cost	-	-	4.914	-	-	4.382	-	-	3.638	-	-	3.038	-	-	-	-	-	3.038
Support - Program Management Cost																		
Government Management	-	-	31.919	-	-	7.943	-	-	8.130	-	-	9.123	-	-	-	-	-	9.123
Subtotal: Support - Program Management Cost	-	-	31.919	-	-	7.943	-	-	8.130	-	-	9.123	-	-	-	-	-	9.123
Support - System Engineering Cost																		
System Engineering	-	-	19.321	-	-	7.037	-	-	2.318	-	-	2.726	-	-	-	-	-	2.726
Subtotal: Support - System Engineering Cost	-	-	19.321	-	-	7.037	-	-	2.318	-	-	2.726	-	-	-	-	-	2.726
Gross/Weapon System Cost	19.081	169,251	3,229.441	93.161	1,948	181.477	83.381	1,205	100.474	84.893	1,472	124.963	-	-	-	84.893	1,472	124.963

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Exhibit P-5, Cost Analysis: PB 2019 Army					Date: February 2018	
Appropriation / Budget Activity / Budget Sub Activity: 2032A / 02 / 30		P-1 Line Item Number / Title: 2104C59300 / TOW 2 System Summary			Item Number / Title [DODIC]: C59403 / TOW Family of Missiles	
ID Code (A=Service Ready, B=Not Service Ready) :				MDAP/MAIS Code:		
Secondary Distribution		FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total
Army	Quantity	1,948	1,205	1,472	-	1,472
	Total Obligation Authority	192.193	109.707	124.963	-	124.963
Total: Secondary Distribution	Quantity	1,948	1,205	1,472	-	1,472
	Total Obligation Authority	192.193	109.707	124.963	-	124.963

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



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<b>Exhibit P-5a, Procurement History and Planning:</b> PB 2019 Army									<b>Date:</b> February 2018			
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 2032A / 02 / 30				<b>P-1 Line Item Number / Title:</b> 2104C59300 / TOW 2 System Summary					<b>Item Number / Title [DODIC]:</b> C59403 / TOW Family of Missiles			
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
Missile Contract <sup>(†)</sup>		2014	Raytheon / Tucson	SS / FFP	AMCOM, Redstone Arsenal, AL	Nov 2013	Nov 2015	988	79.980	Y		
Missile Contract <sup>(†)</sup>		2015	Raytheon / Tucson	SS / FFP	AMCOM, Redstone Arsenal, AL	Dec 2014	Jul 2016	1,008	79.980	Y		
Missile Contract <sup>(†)</sup>		2016	Raytheon / Tucson	SS / FFP	AMCOM, Redstone Arsenal, AL	Dec 2015	Jul 2017	1,704	67.700	Y		
Missile Contract <sup>(†)</sup>		2017	Raytheon / Tucson	SS / FPIF	AMCOM, Redstone Arsenal, AL	Sep 2017	Apr 2019	1,948	77.720	Y		
Missile Contract <sup>(†)</sup>		2018	Raytheon / Tucson	SS / FPIF	AMCOM, Redstone Arsenal, AL	Mar 2018	Mar 2020	1,076	71.710	Y		
Missile Contract <sup>(†)</sup>		2019	Raytheon / Tucson	SS / FPIF	AMCOM, Redstone Arsenal, AL	Mar 2019	Mar 2020	1,472	74.780	Y	Jan 2018	

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

## Remarks:

FY 2019 Base procurement dollars in the amount of \$124,963 million supports the third year of a five-year (FY17-21) multi-year contract.

Raytheon is currently the only industry source that is both facilitized and qualified to produce TOW missiles.

AMCOM Aviation Missile Command  
FPIF Fixed Price Incentive Fee  
MY Multi-Year

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Exhibit P-21, Production Schedule: PB 2019 Army																							Date: February 2018													
Appropriation / Budget Activity / Budget Sub Activity: 2032A / 02 / 30							P-1 Line Item Number / Title: 2104C59300 / TOW 2 System Summary															Item Number / Title [DODIC]: C59403 / TOW Family of Missiles														
Cost Elements <i>(Units in Thousands)</i>							Fiscal Year 2014												Fiscal Year 2015												B A L A N C E					
O C C O	M F R #	FY	SERVICE	PROC QTY	ACCEPT PRIOR TO 1 OCT 2013	BAL DUE AS OF 1 OCT	Calendar Year 2014												Calendar Year 2015																	
							O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P	O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P						
Missile Contract																																				
Prior Years Deliveries: 165551																																				
	1	2014	ARMY	.988	.000	.988		A -	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	.988					
	1	2014	FMS <sup>(†)</sup>	13.809	.000	13.809		A -	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	13.809					
	1	2014	Total	14.797	.000	14.797		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	14.797					
	1	2015	ARMY	1.008	.000	1.008																A -	-	-	-	-	-	-	-	-	-	-	-	-	-	1.008
	1	2016	ARMY	1.704	.000	1.704																										1.704				
	1	2016	MC <sup>(†)</sup>	.417	.000	.417																										.417				
	1	2016	Total	2.121	.000	2.121																										2.121				
	1	2017	ARMY	1.948	.000	1.948																										1.948				
	1	2017	MC <sup>(†)</sup>	1.023	.000	1.023																										1.023				
	1	2017	Total	2.971	.000	2.971																										2.971				
	1	2018	ARMY	1.076	.000	1.076																										1.076				
	1	2019	ARMY	1.472	.000	1.472																										1.472				
							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 2019 Army																								Date: February 2018											
Appropriation / Budget Activity / Budget Sub Activity: 2032A / 02 / 30										P-1 Line Item Number / Title: 2104C59300 / TOW 2 System Summary														Item Number / Title [DODIC]: C59403 / TOW Family of Missiles											
Cost Elements <i>(Units in Thousands)</i>							Fiscal Year 2016														Fiscal Year 2017														B A L A N C E
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					
Missile Contract																																			
Prior Years Deliveries: 165551																																			
	1	2014	ARMY		.988	.000	.988	-	.175	.175	.175	.175	.175	.113	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	.000			
	1	2014	FMS <sup>(†)</sup>		13.809	.000	13.809	-	-	-	.385	.385	.385	.233	.363	.363	.272	.507	.507	.507	.507	.507	.507	.507	.506	.506	.506	.506	.232	.232	.232	5.154			
	1	2014	Total		14.797	.000	14.797	-	.175	.175	.560	.560	.560	.346	.363	.363	.272	.507	.507	.507	.507	.507	.507	.507	.506	.506	.506	.506	.232	.232	.232	5.154			
	1	2015	ARMY		1.008	.000	1.008	-	-	-	-	-	-	-	-	.084	.084	.084	.084	.084	.084	.084	.084	.084	.084	.084	.084				.000				
	1	2016	ARMY		1.704	.000	1.704			A -	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	.142	.142	.142	1.278				
	1	2016	MC <sup>(†)</sup>		.417	.000	.417			A -	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	.417				
	1	2016	Total		2.121	.000	2.121			-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	.142	.142	.142	1.695				
	1	2017	ARMY		1.948	.000	1.948																							A -	1.948				
	1	2017	MC <sup>(†)</sup>		1.023	.000	1.023																							A -	1.023				
	1	2017	Total		2.971	.000	2.971																						-		2.971				
	1	2018	ARMY		1.076	.000	1.076																								1.076				
	1	2019	ARMY		1.472	.000	1.472																								1.472				
								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 2019 Army																							Date: February 2018												
Appropriation / Budget Activity / Budget Sub Activity: 2032A / 02 / 30										P-1 Line Item Number / Title: 2104C59300 / TOW 2 System Summary													Item Number / Title [DODIC]: C59403 / TOW Family of Missiles												
Cost Elements <i>(Units in Thousands)</i>							Fiscal Year 2018												Fiscal Year 2019												BALANCE				
OCO	MFR #	FY	SERVICE	PROC QTY	ACCEPT PRIOR TO 1 OCT 2017	BAL DUE AS OF 1 OCT	Calendar Year 2018															Calendar Year 2019													
							OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP					
Missile Contract																																			
Prior Years Deliveries: 165551																																			
	1	2014	ARMY		.988	.988	.000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	.000			
	1	2014	FMS <sup>(†)</sup>	13.809	8.655	5.154	.232	.230	.293	.293	.293	.293	.293	.293	.293	.293	.293	.293	.293	.293	.293	.293	.293	.293	.004								.000		
	1	2014	Total	14.797	9.643	5.154	.232	.230	.293	.293	.293	.293	.293	.293	.293	.293	.293	.293	.293	.293	.293	.293	.293	.293	.004	-	-	-	-	-	-	.000			
	1	2015	ARMY	1.008	1.008	.000																													.000
	1	2016	ARMY	1.704	.426	1.278	.142	.142	.142	.142	.142	.142	.142	.142	-	-	-	-	-																.000
	1	2016	MC <sup>(†)</sup>	.417	.000	.417	-	-	-	-	-	-	-	-	.085	.083	.083	.083	.083																.000
	1	2016	Total	2.121	.426	1.695	.142	.142	.142	.142	.142	.142	.142	.142	.085	.083	.083	.083	.083	-	-	-	-	-	-	-	-	-	-	-	-	.000			
	1	2017	ARMY	1.948	.000	1.948	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	.175	.175	.175	.175	.175	.175	.175	.898				
	1	2017	MC <sup>(†)</sup>	1.023	.000	1.023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	.175	.175	.175	.175	.175	.148	-	-	-	.000				
	1	2017	Total	2.971	.000	2.971	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	.175	.175	.175	.350	.350	.323	.175	.175	.175	.898				
	1	2018	ARMY	1.076	.000	1.076						A	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1.076				
	1	2019	ARMY	1.472	.000	1.472																A					-	-	-	-	-	-	-	-	1.472
							OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP					

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Exhibit P-21, Production Schedule: PB 2019 Army																				Date: February 2018																
Appropriation / Budget Activity / Budget Sub Activity: 2032A / 02 / 30										P-1 Line Item Number / Title: 2104C59300 / TOW 2 System Summary										Item Number / Title [DODIC]: C59403 / TOW Family of Missiles																
Cost Elements <i>(Units in Thousands)</i>							Fiscal Year 2020										Fiscal Year 2021														BALANCE					
OCO	MFR #	FY	SERVICE	PROC QTY	ACCEP PRIOR TO 1 OCT 2019	BAL DUE AS OF 1 OCT				Calendar Year 2020										Calendar Year 2021																
							OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP						
Missile Contract																																				
Prior Years Deliveries: 165551																																				
	1	2014	ARMY		.988	.988	.000																													.000
	1	2014	FMS (+)		13.809	13.809	.000																													.000
	1	2014	Total		14.797	14.797	.000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	.000				
	1	2015	ARMY		1.008	1.008	.000																													.000
	1	2016	ARMY		1.704	1.704	.000																													.000
	1	2016	MC (+)		.417	.417	.000																													.000
	1	2016	Total		2.121	2.121	.000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	.000				
	1	2017	ARMY		1.948	1.050	.898	.175	.175	.175	.175	.175	.023																							.000
	1	2017	MC (+)		1.023	1.023	.000	-	-	-	-	-	-																							.000
	1	2017	Total		2.971	2.073	.898	.175	.175	.175	.175	.175	.023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	.000				
	1	2018	ARMY		1.076	.000	1.076	-	-	-	-	-	.175	.175	.175	.175	.175	.026																		.000
	1	2019	ARMY		1.472	.000	1.472	-	-	-	-	-	.175	.175	.175	.175	.175	.175	.175	.072																.000
								OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP					

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<b>Exhibit P-21, Production Schedule:</b> PB 2019 Army								<b>Date:</b> February 2018			
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 2032A / 02 / 30					<b>P-1 Line Item Number / Title:</b> 2104C59300 / TOW 2 System Summary				<b>Item Number / Title [DODIC]:</b> C59403 / TOW Family of Missiles		

MFR Ref #	Manufacturer Name - Location	Production Rates (Each / Year)			Procurement Leadtime (Months)							
		MSR For 2019	1-8-5 For 2019	MAX For 2019	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	Raytheon - Tucson	2,100	7,200	16,800	3	2	16	18	3	2	16	18

**Remarks:**

Multiyear contracts do not follow the Administrative Lead Time shown for annual year contracts.

FY17-FY21 Army: 6,602 (FY17 Base: 500, Options: 633, OCO: 815; FY18 Base: 500, Options: 656, OCO: 49; FY19 Base: 500; Options: 972, FY20 Base: 500; Options: 424; FY21 Base: 500; Options: 896).

FY17 USMC: 60.

FY22 Army: 1,366.

FY23 Army: 1,184.

FMS: Saudi Arabia National Guard purchased 13,795 missiles and received 14 missiles for consideration (13,809 missiles total).

10 U.S. Code #2431 and DoD Financial Mgt Reg Vol 2B, Ch4 mandate Production Rates be defined in terms of "budget year."

(±) Delivery rows marked with this symbol indicate that they are funded through a separate Line Item. See the respective components' exhibits for details, including the full delivery schedule.

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

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

# UNCLASSIFIED

**Exhibit P-40, Advance Procurement Budget Line Item Justification:** PB 2019 Army **Date:** February 2018

<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 2032A: Missile Procurement, Army / BA 02: Other Missiles / BSA 30: Anti-Tank/ Assault Missile Sys	<b>P-1 Line Item Number / Title:</b> 2104C59300 / TOW 2 System Summary
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<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 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	To Complete	Total
Gross/Weapon System Cost (\$ in Millions)	177.207	10.716	19.949	19.949	-	19.949	10.500	0.000	0.000	0.000	Continuing	Continuing
Net Procurement (P-1) (\$ in Millions)	177.207	10.716	19.949	19.949	-	19.949	10.500	0.000	0.000	0.000	Continuing	Continuing
<b>Total Obligation Authority (\$ in Millions)</b>	<b>177.207</b>	<b>10.716</b>	<b>19.949</b>	<b>19.949</b>	<b>-</b>	<b>19.949</b>	<b>10.500</b>	<b>0.000</b>	<b>0.000</b>	<b>0.000</b>	<b>Continuing</b>	<b>Continuing</b>

## Description:

TOW missiles (BGM-71 Series) are combat proven missiles that provide heavy anti-armor/assault capability to the Army's Infantry Brigade Combat Teams (IBCT), the Stryker Brigade Combat Teams (SBCT) and the Bradley equipped Armor Brigade Combat Team (ABCT). TOW continues to be used consistently as the weapon of choice in precision combat engagements. TOW missiles are the primary heavy anti-armor/assault missile for the U.S. Marine Corps (USMC) and 43 allied nations. Warfighters employ TOW missiles against buildings and field fortifications taking advantage of the missile's inherent precise assault capability against such targets.

TOW missiles are launched from a variety of combat systems in the active Army including the Improved Target Acquisition System (ITAS), all infantry and cavalry variants of Bradley Fighting Vehicle Systems (BFVS), the Stryker Anti-Tank Guided Missile (ATGM) Light Armored Vehicle (LAV), and the M220A2 TOW 2 launcher. The USMC employs the TOW missile from its ITAS launchers, ATGM, and AH-1W Cobra helicopters. The TOW missile provides the warfighter with a highly lethal, cost effective, interoperable, multi-purpose weapon.

**UNCLASSIFIED**

<b>Exhibit P-40, Advance Procurement Budget Line Item Justification:</b> PB 2019 Army							<b>Date:</b> February 2018		
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 2032A: Missile Procurement, Army / BA 02: Other Missiles / BSA 30: Anti-Tank/ Assault Missile Sys					<b>P-1 Line Item Number / Title:</b> 2104C59300 / TOW 2 System Summary				
<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									
Exhibits Schedule				Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total
Exhibit Type	Title*	ID CD	MDAP/MAIS Code	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)
P-10	C59403 / TOW Family of Missiles			169,251 / 177.207	1,948 / 10.716	1,205 / 19.949	1,472 / 19.949	- / -	1,472 / 19.949
<b>P-40</b>	<b>Total Gross/Weapon System Cost</b>			<b>169,251 / 177.207</b>	<b>1,948 / 10.716</b>	<b>1,205 / 19.949</b>	<b>1,472 / 19.949</b>	<b>- / -</b>	<b>1,472 / 19.949</b>
*Title represents the P-10 Title for Advance Procurement.									
Note: Totals in this Exhibit P-40 set may not be exact or sum exactly due to rounding.									
<p><b>Justification:</b> FY 2019 Base procurement dollars in the amount of \$124,963 million support the third year of a five year (FY 17-21) multi-year contract.</p> <p>FY17-21 multi-year procurement contains advanced procurement in years FY17-20 to support the procurement of components in economic order quantities required for missile production. FY19 advanced procurement in the amount of \$19,949 million is the third year of advanced procurement.</p> <p>IAW 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 civil authorities.</p> <p><b>NOTES:</b> The Army intends to convert any price advantage created through contract negotiations, other service procurement, and/or foreign military sales to increase the Army procurement of TOW missiles, and to mitigate safety and obsolescence.</p>									



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<b>Exhibit P-10, Advance Procurement Requirements Analysis (page 1 - Budget Funding Justification):</b> PB 2019 Army					<b>Date:</b> February 2018	
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 2032A / 02 / 30		<b>P-1 Line Item Number / Title:</b> 2104C59300 / TOW 2 System Summary			<b>P-5 Number / Title:</b> C59403 / TOW Family of Missiles	
<b>First System (2019) Award Date:</b> December 2017		<b>First System (2019) Completion Date:</b> July 2018		<b>Interval Between Systems:</b> 12 Months		
<b>TOW Family of Missiles</b>		<b>Production Leadtime</b> <i>(Months)</i>	<b>Prior Years</b> <i>(Each)</i>	<b>FY 2017</b> <i>(Each)</i>	<b>FY 2018</b> <i>(Each)</i>	<b>FY 2019</b> <i>(Each)</i>
Quantity			169,251	1,948	1,205	1,472
<b>Cost Elements</b>		<b>When Required</b> <i>(Months)</i>	<b>Prior Years</b> <i>(\$ M)</i>	<b>FY 2017</b> <i>(\$ M)</i>	<b>FY 2018</b> <i>(\$ M)</i>	<b>FY 2019</b> <i>(\$ M)</i>
<b>Other</b>						
Warhead	19	72.424	6.611	15.581	7.942	
Launch Motor	14	9.460	0.838	1.101	0.838	
Flight Motor	12	2.983	0.158	0.158	0.158	
2B Sensor	18	57.143	-	-	7.902	
Gyro	13	16.181	1.433	1.433	1.433	
Flight Motor Case Kit	10	3.669	0.325	0.325	0.325	
Control Surface Actuator	13	9.575	0.848	0.848	0.848	
Beacon Shutter Actuator	11	5.772	0.503	0.503	0.503	
<i>Total: Other</i>		177.207	10.716	19.949	19.949	
<b>Total Advance Procurement/Obligation Authority</b>		<b>177.207</b>	<b>10.716</b>	<b>19.949</b>	<b>19.949</b>	

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Exhibit P-10, Advance Procurement Requirements Analysis (page 2 - Budget Funding Justification): PB 2019 Army				Date: February 2018			
Appropriation / Budget Activity / Budget Sub Activity: 2032A / 02 / 30		P-1 Line Item Number / Title: 2104C59300 / TOW 2 System Summary			P-5 Number / Title: C59403 / TOW Family of Missiles		
Cost Elements	QPA (Each)	FY 2019					
		Production Leadtime (Months)	Unit Cost (\$ K)	Contract Forecast Date	2019 Qty (Each)	For FY	Total Cost Request (\$ M)
Other							
Warhead	1						7.942
Launch Motor	1						0.838
Flight Motor	1						0.158
2B Sensor	1						7.902
Gyro	1						1.433
Flight Motor Case Kit	1						0.325
Control Surface Actuator	1						0.848
Beacon Shutter Actuator	1						0.503
Total: Other							19.949
Total Advance Procurement/Obligation Authority							19.949
<p><b>Description:</b></p> <p>Advanced procurement funding in FY17, FY18, FY19 &amp; FY20 procures EOQ to support the FY17-21 multi-year contract for 2,500 missiles.</p> <p>On the P-10A the End Item Quantity for FY17 shows a quantity of 1,948 which is the sum of the FY17 Base and FY17 OCO. It should only show the FY17 Base which is 500.</p> <p>On the P-10A the End Item Quantity for FY18 shows a quantity of 1,205 which is the sum of the FY18 Base, FY18 Option and FY18 OCO. It should only show the FY18 Base which is 500.</p>							

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<b>Exhibit P-40, Budget Line Item Justification:</b> PB 2019 Army										<b>Date:</b> February 2018		
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 2032A: Missile Procurement, Army / BA 02: Other Missiles / BSA 30: Anti-Tank/ Assault Missile Sys							<b>P-1 Line Item Number / Title:</b> 6005C64400 / Guided MLRS Rocket (GMLRS)					
<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> 0603778A, 0205778A					
<b>Line Item MDAP/MAIS Code:</b> 260												
<b>Resource Summary</b>	<b>Prior Years</b>	<b>FY 2017</b>	<b>FY 2018</b>	<b>FY 2019 Base</b>	<b>FY 2019 OCO</b>	<b>FY 2019 Total</b>	<b>FY 2020</b>	<b>FY 2021</b>	<b>FY 2022</b>	<b>FY 2023</b>	<b>To Complete</b>	<b>Total</b>
Procurement Quantity ( <i>Units in Each</i> )	24,556	3,360	6,084	3,267	6,183	9,450	5,100	5,082	5,082	3,918	Continuing	Continuing
Gross/Weapon System Cost ( <i>\$ in Millions</i> )	2,986.965	408.842	786.704	359.613	624.500	984.113	598.977	655.304	718.791	875.675	Continuing	Continuing
Less PY Advance Procurement ( <i>\$ in Millions</i> )	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) ( <i>\$ in Millions</i> )	2,986.965	408.842	786.704	359.613	624.500	984.113	598.977	655.304	718.791	875.675	Continuing	Continuing
Plus CY Advance Procurement ( <i>\$ in Millions</i> )	-	-	-	-	-	-	-	-	-	-	-	-
<b>Total Obligation Authority</b> ( <i>\$ in Millions</i> )	<b>2,986.965</b>	<b>408.842</b>	<b>786.704</b>	<b>359.613</b>	<b>624.500</b>	<b>984.113</b>	<b>598.977</b>	<b>655.304</b>	<b>718.791</b>	<b>875.675</b>	<b>Continuing</b>	<b>Continuing</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> )	121.639	121.679	129.307	110.074	101.003	104.139	117.446	128.946	141.439	223.501	Continuing	Continuing
<b>Description:</b> Guided Multiple Launch Rocket System (GMLRS) rockets are surface-to-surface artillery rockets fired from the Multiple Launch Rocket System (MLRS) and High Mobility Artillery Rocket System (HIMARS) launchers. GMLRS rockets provide 24/7, all-weather precision fires to engage both area and point targets at short, medium, and long ranges. The U.S. Marine Corps also procures GMLRS rockets through the Army project office.  The GMLRS Program consists of three variants. GMLRS Dual Purpose Improved Conventional Munition (DPICM) is a cluster munition that replaced the shorter range MLRS rockets to engage area or imprecisely located targets. GMLRS DPICM Production was terminated in response to the June 2008 Department of Defense (DoD) Cluster Munitions Policy. GMLRS Unitary utilizes a 200-pound high explosive warhead to engage point targets with limited collateral damage. GMLRS Alternative Warhead (AW) was developed as a non-cluster munition for engagement of area and imprecisely located targets. The GMLRS AW rocket is 90% common with the Unitary variant. GMLRS Unitary and AW are currently in full rate production												
<b>Secondary Distribution</b>		<b>FY 2017</b>	<b>FY 2018</b>	<b>FY 2019 Base</b>	<b>FY 2019 OCO</b>	<b>FY 2019 Total</b>	<b>FY 2020</b>	<b>FY 2021</b>	<b>FY 2022</b>	<b>FY 2023</b>		
Army	Quantity	3,360	6,084	3,267	6,183	9,450	5,100	5,082	5,082	3,918		
	Total Obligation Authority	408.842	786.704	359.613	624.500	984.113	598.977	655.304	718.791	875.675		
<b>Total:</b> <b>Secondary Distribution</b>	<b>Quantity</b>	<b>3,360</b>	<b>6,084</b>	<b>3,267</b>	<b>6,183</b>	<b>9,450</b>	<b>5,100</b>	<b>5,082</b>	<b>5,082</b>	<b>3,918</b>		
	<b>Total Obligation Authority</b>	<b>408.842</b>	<b>786.704</b>	<b>359.613</b>	<b>624.500</b>	<b>984.113</b>	<b>598.977</b>	<b>655.304</b>	<b>718.791</b>	<b>875.675</b>		

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<b>Exhibit P-40, Budget Line Item Justification:</b> PB 2019 Army								<b>Date:</b> February 2018		
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 2032A: Missile Procurement, Army / BA 02: Other Missiles / BSA 30: Anti-Tank/ Assault Missile Sys						<b>P-1 Line Item Number / Title:</b> 6005C64400 / Guided MLRS Rocket (GMLRS)				
<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> 0603778A, 0205778A				
<b>Line Item MDAP/MAIS Code:</b> 260										
<b>Exhibits Schedule</b>					<b>Prior Years</b>	<b>FY 2017</b>	<b>FY 2018</b>	<b>FY 2019 Base</b>	<b>FY 2019 OCO</b>	<b>FY 2019 Total</b>
<b>Exhibit Type</b>	<b>Title*</b>	<b>Subexhibits</b>	<b>ID CD</b>	<b>MDAP/MAIS Code</b>	<b>Quantity / Total Cost (Each) / (\$ M)</b>	<b>Quantity / Total Cost (Each) / (\$ M)</b>	<b>Quantity / Total Cost (Each) / (\$ M)</b>	<b>Quantity / Total Cost (Each) / (\$ M)</b>	<b>Quantity / Total Cost (Each) / (\$ M)</b>	<b>Quantity / Total Cost (Each) / (\$ M)</b>
P-5	C65404 / GUIDED MLRS ROCKET (GMLRS)	P-5a, P-21			24,556 / 2,983.898	3,360 / 408.392	6,084 / 786.213	3,267 / 359.124	6,183 / 624.500	9,450 / 983.624
P-40a	C65406 / GMLRS Training Devices				- / 3.067	- / 0.450	- / 0.491	- / 0.489	- / -	- / 0.489
<b>P-40</b>	<b>Total Gross/Weapon System Cost</b>				<b>24,556 / 2,986.965</b>	<b>3,360 / 408.842</b>	<b>6,084 / 786.704</b>	<b>3,267 / 359.613</b>	<b>6,183 / 624.500</b>	<b>9,450 / 984.113</b>
<p>*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.</p> <p>Note: Totals in this Exhibit P-40 set may not be exact or sum exactly due to rounding.</p>										
<p><b>Justification:</b></p> <p>FY 2019 Base procurement dollars in the amount of \$359.120 million support the acquisition of 3,267 GMLRS rockets for the United States Army. Army Procurement Objective is 43,560. In addition, Base procurement dollars in the amount of \$0.489 million support the acquisition of equipment and support to ensure Guided Multiple Launch Rocket Common Training Device alignment with the production configuration. The actual missile buy quantities are subject to the mix between AW and Unitary warheads, Insensitive Munitions (IM) rocket motor cut-in, and 10,000 tooling capacity ramp-up.</p> <p>FY 2019 OCO procurement dollars in the amount of \$624.500 million support the COCOM requirement for unit equipment sets to deter potential adversaries and support the Operation Inherent Resolve (OIR). The procurements include 6,183 GMLRS rockets.</p> <p>All funding goes to the Active Component.</p> <p>Program Office core employee labor costs moved from Procurement to OMA as part of an OSD auditability directive.</p> <p>Difference between Base and OCO unit cost is due to production synergies which benefit OCO units.</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-5, Cost Analysis: PB 2019 Army											Date: February 2018							
Appropriation / Budget Activity / Budget Sub Activity: 2032A / 02 / 30						P-1 Line Item Number / Title: 6005C64400 / Guided MLRS Rocket (GMLRS)						Item Number / Title [DODIC]: C65404 / GUIDED MLRS ROCKET (GMLRS)						
ID Code (A=Service Ready, B=Not Service Ready) :										MDAP/MAIS Code:								
Resource Summary				Prior Years		FY 2017		FY 2018		FY 2019 Base		FY 2019 OCO		FY 2019 Total				
Procurement Quantity (Units in Each)				24,556		3,360		6,084		3,267		6,183		9,450				
Gross/Weapon System Cost (\$ in Millions)				2,983.898		408.392		786.213		359.124		624.500		983.624				
Less PY Advance Procurement (\$ in Millions)				-		-		-		-		-		-				
Net Procurement (P-1) (\$ in Millions)				2,983.898		408.392		786.213		359.124		624.500		983.624				
Plus CY Advance Procurement (\$ in Millions)				-		-		-		-		-		-				
Total Obligation Authority (\$ in Millions)				2,983.898		408.392		786.213		359.124		624.500		983.624				
(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)				121.514		121.545		129.226		109.925		101.003		104.087				
Note: Subtotals or Totals in this Exhibit P-5 may not be exact or sum exactly due to rounding.																		
Cost Elements	Prior Years			FY 2017			FY 2018			FY 2019 Base			FY 2019 OCO			FY 2019 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 GMLRS Hardware <sup>(†)</sup>	103.349	24,556	2,537.847	112.273	3,360	377.237	123.162	6,084	749.318	105.665	3,267	345.206	97.088	6,183	600.298	100.053	9,450	945.504
Ind Maint/Init Prod Fac	-	-	59.461	-	-	-	-	-	4.749	-	-	1.771	-	-	3.081	-	-	4.852
Production Verification Testing	-	-	55.741	-	-	6.407	-	-	6.548	-	-	2.433	-	-	4.231	-	-	6.664
First Destination Transportation	-	-	3.844	-	-	0.408	-	-	0.817	-	-	0.471	-	-	0.818	-	-	1.289
Production Engineering Support	-	-	154.609	-	-	12.088	-	-	12.308	-	-	4.590	-	-	7.982	-	-	12.572
Spares	-	-	1.277	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Subtotal: Recurring Cost	-	-	2,812.770	-	-	396.140	-	-	773.740	-	-	354.473	-	-	616.407	-	-	970.880
Subtotal: Flyaway Cost	-	-	2,812.770	-	-	396.140	-	-	773.740	-	-	354.473	-	-	616.407	-	-	970.880
Support - Engineering Change Proposals Cost																		
Engineering Change Proposals	-	-	97.187	-	-	5.797	-	-	5.901	-	-	2.201	-	-	3.828	-	-	6.029
Subtotal: Support - Engineering Change Proposals Cost	-	-	97.187	-	-	5.797	-	-	5.901	-	-	2.201	-	-	3.828	-	-	6.029
Support - Program Management Cost																		
Government Management	-	-	73.932	-	-	6.455	-	-	6.572	-	-	2.451	-	-	4.263	-	-	6.714

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<b>Exhibit P-5, Cost Analysis: PB 2019 Army</b>										<b>Date:</b> February 2018							
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 2032A / 02 / 30					<b>P-1 Line Item Number / Title:</b> 6005C64400 / Guided MLRS Rocket (GMLRS)					<b>Item Number / Title [DODIC]:</b> C65404 / GUIDED MLRS ROCKET (GMLRS)							

<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 2017			FY 2018			FY 2019 Base			FY 2019 OCO			FY 2019 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 - Program Management Cost</i>	-	-	73.932	-	-	6.455	-	-	6.572	-	-	2.451	-	-	4.263	-	-	6.714
<b>Gross/Weapon System Cost</b>	121.514	24,556	2,983.898	121.545	3,360	408.392	129.226	6,084	786.213	109.925	3,267	359.124	101.003	6,183	624.500	104.087	9,450	983.624

Secondary Distribution		FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total
Army	Quantity	3,360	6,084	3,267	6,183	9,450
	Total Obligation Authority	408.392	786.213	359.124	624.500	983.624
<b>Total: Secondary Distribution</b>	Quantity	<b>3,360</b>	<b>6,084</b>	<b>3,267</b>	<b>6,183</b>	<b>9,450</b>
	Total Obligation Authority	<b>408.392</b>	<b>786.213</b>	<b>359.124</b>	<b>624.500</b>	<b>983.624</b>

(†) indicates the presence of a P-5a

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Exhibit P-5a, Procurement History and Planning: PB 2019 Army								Date: February 2018				
Appropriation / Budget Activity / Budget Sub Activity: 2032A / 02 / 30			P-1 Line Item Number / Title: 6005C64400 / Guided MLRS Rocket (GMLRS)					Item Number / Title [DODIC]: C65404 / GUIDED MLRS ROCKET (GMLRS)				
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
Tactical GMLRS Hardware <sup>(†)</sup>		2015	Lockheed Martin M.&F.C Sys. / Dallas, TX	SS / FPIF	Aviation and Missile Command	Jun 2015	Jun 2016	450	125.576			Feb 2013
Tactical GMLRS Hardware <sup>(†)</sup>		2016	Lockheed Martin M.&F.C Sys. / Dallas, TX	SS / FPIF	Aviation and Missile Command	May 2016	May 2017	1,542	138.800			Feb 2016
Tactical GMLRS Hardware <sup>(†)</sup>		2017	Lockheed Martin M.&F.C Sys. / Dallas, TX	SS / FPIF	Aviation and Missile Command	May 2017	Jul 2018	3,360	112.270			Feb 2016
Tactical GMLRS Hardware <sup>(†)</sup>		2018	Lockheed Martin M.&F.C Sys. / Dallas, TX	SS / FPIF	Aviation and Missile Command	Feb 2018	Apr 2019	6,084	123.160			Feb 2017
Tactical GMLRS Hardware <sup>(†)</sup>		2019	Lockheed Martin M.&F.C Sys. / Dallas, TX	SS / FPIF	Aviation and Missile Command	Feb 2019	Apr 2020	9,450	100.050			Feb 2018
<sup>(†)</sup> indicates the presence of a P-21												
<b>Remarks:</b> Lockheed Martin is currently the industry source that is both facilitized and qualified to produce the GMLRS rocket.												
*Sole Source/Fixed Price Incentive Firm												
**Aviation and Missile Command, Redstone Arsenal, Alabama												

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Exhibit P-21, Production Schedule: PB 2019 Army																				Date: February 2018														
Appropriation / Budget Activity / Budget Sub Activity: 2032A / 02 / 30										P-1 Line Item Number / Title: 6005C64400 / Guided MLRS Rocket (GMLRS)										Item Number / Title [DODIC]: C65404 / GUIDED MLRS ROCKET (GMLRS)														
Cost Elements (Units in Each)							Fiscal Year 2015										Fiscal Year 2016													BALANCE				
OCO	MFR #	FY	SERVICE	PROC QTY	ACCEP T PRIOR TO 1 OCT 2014	BAL DUE AS OF 1 OCT				Calendar Year 2015										Calendar Year 2016														
							OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG		SEP			
Tactical GMLRS Hardware																																		
Prior Years Deliveries: 22564																																		
	1	2015	ARMY	450	0	450								A -	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	42	42	42	36	288
	1	2015	MC (+)	60	0	60								A -	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	6	6	6	6	36
	1	2015	Total	510	0	510								-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	48	48	48	42	324
	1	2016	ARMY	1,542	0	1,542																		A -	-	-	-	-	-	1,542				
	1	2016	FMS (+)	414	0	414																		A -	-	-	-	-	-	414				
	1	2016	MC (+)	90	0	90																		A -	-	-	-	-	-	90				
	1	2016	Total	2,046	0	2,046																		-	-	-	-	-	-	2,046				
	1	2017	ARMY	3,360	0	3,360																									3,360			
	1	2017	FMS (+)	810	0	810																									810			
	1	2017	MC (+)	336	0	336																									336			
	1	2017	Total	4,506	0	4,506																									4,506			
	1	2018	ARMY	6,084	0	6,084																									6,084			
	1	2018	FMS (+)	216	0	216																									216			
	1	2018	MC (+)	402	0	402																									402			
	1	2018	Total	6,702	0	6,702																									6,702			
	1	2019	ARMY	9,450	0	9,450																									9,450			
	1	2019	FMS (+)	168	0	168																									168			
	1	2019	MC (+)	144	0	144																									144			
	1	2019	Total	9,762	0	9,762																									9,762			
							OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP				



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Exhibit P-21, Production Schedule: PB 2019 Army																				Date: February 2018																		
Appropriation / Budget Activity / Budget Sub Activity: 2032A / 02 / 30										P-1 Line Item Number / Title: 6005C64400 / Guided MLRS Rocket (GMLRS)										Item Number / Title [DODIC]: C65404 / GUIDED MLRS ROCKET (GMLRS)																		
Cost Elements (Units in Each)							Fiscal Year 2017													Fiscal Year 2018													B A L A N C E					
O C O	M F R #	FY	SERVICE	PROC QTY	ACCEP T P R I O R T O 1 O C T 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								
Tactical GMLRS Hardware																																						
Prior Years Deliveries: 22564																																						
	1	2015	ARMY	450	162	288	36	36	36	36	36	36	36	36																			0					
	1	2015	MC (+)	60	24	36	6	6	6	6	6	6	-	-																			0					
	1	2015	Total	510	186	324	42	42	42	42	42	42	36	36	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0						
	1	2016	ARMY	1,542	0	1,542	-	-	-	-	-	-	-	162	162	162	162	162	162	162	84	84	84	84	72						0							
	1	2016	FMS (+)	414	0	414	-	-	-	-	-	-	-	36	36	36	36	36	36	36	36	30	30	30						0								
	1	2016	MC (+)	90	0	90	-	-	-	-	-	-	-	12	12	12	6	6	6	6	6	6	6	6						0								
	1	2016	Total	2,046	0	2,046	-	-	-	-	-	-	-	210	210	210	204	204	204	204	126	126	120	120	108	-	-	-	-	-	0							
	1	2017	ARMY	3,360	0	3,360								A -	-	-	-	-	-	-	-	-	-	-	-	-	-	-	284	284	284	2,508						
	1	2017	FMS (+)	810	0	810								A -	-	-	-	-	-	-	-	-	-	-	-	-	-	-	67	67	67	609						
	1	2017	MC (+)	336	0	336								A -	-	-	-	-	-	-	-	-	-	-	-	-	-	-	28	28	28	252						
	1	2017	Total	4,506	0	4,506								-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	379	379	379	3,369						
	1	2018	ARMY	6,084	0	6,084																		A -	-	-	-	-	-	-	-	-	-	-	-	-	6,084	
	1	2018	FMS (+)	216	0	216																		A -	-	-	-	-	-	-	-	-	-	-	-	-	-	216
	1	2018	MC (+)	402	0	402																		A -	-	-	-	-	-	-	-	-	-	-	-	-	-	402
	1	2018	Total	6,702	0	6,702																		-	-	-	-	-	-	-	-	-	-	-	-	-	-	6,702
	1	2019	ARMY	9,450	0	9,450																												9,450				
	1	2019	FMS (+)	168	0	168																												168				
	1	2019	MC (+)	144	0	144																												144				
	1	2019	Total	9,762	0	9,762	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	9,762							

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Exhibit P-21, Production Schedule: PB 2019 Army																				Date: February 2018														
Appropriation / Budget Activity / Budget Sub Activity: 2032A / 02 / 30										P-1 Line Item Number / Title: 6005C64400 / Guided MLRS Rocket (GMLRS)										Item Number / Title [DODIC]: C65404 / GUIDED MLRS ROCKET (GMLRS)														
Cost Elements (Units in Each)							Fiscal Year 2019												Fiscal Year 2020												BALANCE			
OCO	MFR #	FY	SERVICE	PROC QTY	ACCEPT PRIOR TO 1 OCT 2018	BAL DUE AS OF 1 OCT				Calendar Year 2019												Calendar Year 2020												
							OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP				
Tactical GMLRS Hardware																																		
Prior Years Deliveries: 22564																																		
	1	2015	ARMY	450	450	0																												0
	1	2015	MC (+)	60	60	0																												0
	1	2015	Total	510	510	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0			
	1	2016	ARMY	1,542	1,542	0																												0
	1	2016	FMS (+)	414	414	0																												0
	1	2016	MC (+)	90	90	0																												0
	1	2016	Total	2,046	2,046	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0			
	1	2017	ARMY	3,360	852	2,508	284	278	278	278	278	278	278	278													0							
	1	2017	FMS (+)	810	201	609	67	67	67	68	68	68	68	68													0							
	1	2017	MC (+)	336	84	252	28	28	28	28	28	28	28	28													0							
	1	2017	Total	4,506	1,137	3,369	379	373	373	374	374	374	374	374	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0			
	1	2018	ARMY	6,084	0	6,084	-	-	-	-	-	-	510	510	510	510	510	510	504	504	504	504	504	504						0				
	1	2018	FMS (+)	216	0	216	-	-	-	-	-	-	18	18	18	18	18	18	18	18	18	18	18						0					
	1	2018	MC (+)	402	0	402	-	-	-	-	-	-	33	33	33	33	33	33	34	34	34	34	34	34						0				
	1	2018	Total	6,702	0	6,702	-	-	-	-	-	-	561	561	561	561	561	561	556	556	556	556	556	556	-	-	-	-	-	-	0			
	1	2019	ARMY	9,450	0	9,450						A	-	-	-	-	-	-	-	-	-	-	-	-	788	788	788	787	787	787	4,725			
	1	2019	FMS (+)	168	0	168						A	-	-	-	-	-	-	-	-	-	-	-	-	14	14	14	14	14	14	84			
	1	2019	MC (+)	144	0	144						A	-	-	-	-	-	-	-	-	-	-	-	-	12	12	12	12	12	12	72			
	1	2019	Total	9,762	0	9,762						-	-	-	-	-	-	-	-	-	-	-	-	-	814	814	814	813	813	813	4,881			
							OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP				

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Exhibit P-21, Production Schedule: PB 2019 Army																				Date: February 2018													
Appropriation / Budget Activity / Budget Sub Activity: 2032A / 02 / 30										P-1 Line Item Number / Title: 6005C64400 / Guided MLRS Rocket (GMLRS)										Item Number / Title [DODIC]: C65404 / GUIDED MLRS ROCKET (GMLRS)													
Cost Elements (Units in Each)							Fiscal Year 2021										Fiscal Year 2022										BALANCE						
OCO	MFR #	FY	SERVICE	PROC QTY	ACCEPT PRIOR TO 1 OCT 2020	BAL DUE AS OF 1 OCT				Calendar Year 2021										Calendar Year 2022													
							OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY		JUN	JUL	AUG	SEP		
Tactical GMLRS Hardware																																	
Prior Years Deliveries: 22564																																	
	1	2015	ARMY	450	450	0																											0
	1	2015	MC (+)	60	60	0																											0
	1	2015	Total	510	510	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0		
	1	2016	ARMY	1,542	1,542	0																											0
	1	2016	FMS (+)	414	414	0																											0
	1	2016	MC (+)	90	90	0																											0
	1	2016	Total	2,046	2,046	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0		
	1	2017	ARMY	3,360	3,360	0																											0
	1	2017	FMS (+)	810	810	0																											0
	1	2017	MC (+)	336	336	0																											0
	1	2017	Total	4,506	4,506	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0		
	1	2018	ARMY	6,084	6,084	0																											0
	1	2018	FMS (+)	216	216	0																											0
	1	2018	MC (+)	402	402	0																											0
	1	2018	Total	6,702	6,702	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0		
	1	2019	ARMY	9,450	4,725	4,725	788	788	788	787	787	787																					0
	1	2019	FMS (+)	168	84	84	14	14	14	14	14	14																					0
	1	2019	MC (+)	144	72	72	12	12	12	12	12	12																					0
	1	2019	Total	9,762	4,881	4,881	814	814	814	813	813	813	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0		
							OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP			

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Exhibit P-21, Production Schedule: PB 2019 Army									Date: February 2018				
Appropriation / Budget Activity / Budget Sub Activity: 2032A / 02 / 30					P-1 Line Item Number / Title: 6005C64400 / Guided MLRS Rocket (GMLRS)					Item Number / Title [DODIC]: C65404 / GUIDED MLRS ROCKET (GMLRS)			
MFR Ref #	Manufacturer Name - Location	Production Rates (Each / Year)			Procurement Leadtime (Months)								
		MSR For 2019	1-8-5 For 2019	MAX For 2019	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 M.&F.C Sys. - Dallas, TX	2,160	6,000	10,000	0	2	16	18	0	2	16	18	
<div>Remarks:</div> <div>Production of GMLRS varies as this program shares a production line with Low Cost Reduced Range Practice Rockets (LCRRPR). There are no production gaps during months that GMLRS are not being produced as LCRRPR Rocket production continues. GMLRS and LCRRPR synergized production efforts result in a decreased unit cost for both programs. An established organic industrial base is in place to perform download/demate of M26 rocket pods to support production efforts for both programs.</div> <div>To account for FY19 US Army, Marine Corps, and Foreign Military Sales (FMS) deliveries, the maximum production rate was adjusted from 500 per month to 675 per month.</div> <div>(‡) Delivery rows marked with this symbol indicate that they are funded through a separate Line Item. See the respective components' exhibits for details, including the full delivery schedule.</div> <div>"A" in the Delivery Schedule indicates the Contract Award Date.</div> <div>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).</div>													

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Exhibit P-40a, Budget Item Justification For Aggregated Items: PB 2019 Army															Date: February 2018					
Appropriation / Budget Activity / Budget Sub Activity: 2032A / 02 / 30							P-1 Line Item Number / Title: 6005C64400 / Guided MLRS Rocket (GMLRS)							Aggregated Items Title: Various						
Item Number / Title [DODIC]	ID CD	MDAP/MAIS Code	Prior Years			FY 2017			FY 2018			FY 2019 Base			FY 2019 OCO			FY 2019 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)
GMLRS Training Devices																				
C65406 / GMLRS Training Devices			-	-	3.067	-	-	0.450	-	-	0.491	-	-	0.489	-	-	-	-	-	0.489
Secondary Distribution																				
Army				-	-		-	0.450		-	0.491		-	0.489		-	-		-	0.489
Subtotal: GMLRS Training Devices			-	-	3.067	-	-	0.450	-	-	0.491	-	-	0.489	-	-	-	-	-	0.489
Total			-	-	3.067	-	-	0.450	-	-	0.491	-	-	0.489	-	-	-	-	-	0.489

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

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<b>Exhibit P-40, Budget Line Item Justification:</b> PB 2019 Army										<b>Date:</b> February 2018		
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 2032A: Missile Procurement, Army / BA 02: Other Missiles / BSA 30: Anti-Tank/ Assault Missile Sys							<b>P-1 Line Item Number / Title:</b> 6060C65405 / MLRS Reduced Range Practice Rockets (RRPR)					
<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> 0210602A					
<b>Line Item MDAP/MAIS Code:</b> N/A												
<b>Resource Summary</b>	<b>Prior Years</b>	<b>FY 2017</b>	<b>FY 2018</b>	<b>FY 2019 Base</b>	<b>FY 2019 OCO</b>	<b>FY 2019 Total</b>	<b>FY 2020</b>	<b>FY 2021</b>	<b>FY 2022</b>	<b>FY 2023</b>	<b>To Complete</b>	<b>Total</b>
Procurement Quantity ( <i>Units in Each</i> )	40,581	1,704	3,420	2,214	-	2,214	2,040	3,306	3,414	2,874	Continuing	Continuing
Gross/Weapon System Cost ( <i>\$ in Millions</i> )	229.779	18.004	28.321	20.964	-	20.964	19.455	31.199	32.788	28.448	Continuing	Continuing
Less PY Advance Procurement ( <i>\$ in Millions</i> )	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) ( <i>\$ in Millions</i> )	229.779	18.004	28.321	20.964	-	20.964	19.455	31.199	32.788	28.448	Continuing	Continuing
Plus CY Advance Procurement ( <i>\$ in Millions</i> )	-	-	-	-	-	-	-	-	-	-	-	-
<b>Total Obligation Authority</b> ( <i>\$ in Millions</i> )	<b>229.779</b>	<b>18.004</b>	<b>28.321</b>	<b>20.964</b>	<b>-</b>	<b>20.964</b>	<b>19.455</b>	<b>31.199</b>	<b>32.788</b>	<b>28.448</b>	<b>Continuing</b>	<b>Continuing</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> )	5.662	10.566	8.281	9.469	-	9.469	9.537	9.437	9.604	9.898	Continuing	Continuing
<b>Description:</b> The Multiple Launch Rocket System (MLRS) Low Cost Reduced Range Practice Rocket (LCRRPR) is the only live training rocket for High Mobility Artillery Rocket System (HIMARS) and M270/M270A1 MLRS Launcher units/crews. LCRRPR meets a critical validated requirement for Active and National Guard HIMARS and M270A1 launcher units to achieve and maintain combat readiness. HIMARS and M270A1 Battalions are organic and attached to modular Fires Brigades supporting Brigade Combat Teams (BCTs), Joint Expeditionary Force, and Joint Special Operations Force combatant commanders. The training rocket has an inert payload section and blunt nose for inducing reduced range for use at multiple facilities in the United States and foreign countries.  LCRRPRs are manufactured by Lockheed Martin in Camden, Arkansas and Letterkenny Munitions Center (LEMC) in Chambersburg, Pennsylvania. LEMC provides an organic dual source. The LCRRPR program includes the cost to Download/Demate (DL/DM) the M26 pod and rocket motor for production reuse. Total cost also includes Bunker Storage and the procurement of Performance Oriented Packaging (POP) boxes.												
<b>Secondary Distribution</b>		<b>FY 2017</b>	<b>FY 2018</b>	<b>FY 2019 Base</b>	<b>FY 2019 OCO</b>	<b>FY 2019 Total</b>	<b>FY 2020</b>	<b>FY 2021</b>	<b>FY 2022</b>	<b>FY 2023</b>		
Army	Quantity	1,092	2,664	1,554	-	1,554	1,428	2,316	2,388	2,874		
	Total Obligation Authority	11.523	22.153	14.715	-	14.715	13.619	21.856	22.934	28.448		
ANG	Quantity	612	756	660	-	660	612	990	1,026	-		
	Total Obligation Authority	6.481	6.168	6.249	-	6.249	5.836	9.343	9.854	-		
<b>Total: Secondary Distribution</b>	<b>Quantity</b>	<b>1,704</b>	<b>3,420</b>	<b>2,214</b>	<b>-</b>	<b>2,214</b>	<b>2,040</b>	<b>3,306</b>	<b>3,414</b>	<b>2,874</b>		
	<b>Total Obligation Authority</b>	<b>18.004</b>	<b>28.321</b>	<b>20.964</b>	<b>-</b>	<b>20.964</b>	<b>19.455</b>	<b>31.199</b>	<b>32.788</b>	<b>28.448</b>		

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<b>Exhibit P-40, Budget Line Item Justification:</b> PB 2019 Army							<b>Date:</b> February 2018			
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 2032A: Missile Procurement, Army / BA 02: Other Missiles / BSA 30: Anti-Tank/ Assault Missile Sys					<b>P-1 Line Item Number / Title:</b> 6060C65405 / MLRS Reduced Range Practice Rockets (RRPR)					
<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> 0210602A				
<b>Line Item MDAP/MAIS Code:</b> N/A										
Exhibits Schedule					Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 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	C65405 / MLRS Reduced Range Practice Rockets (RRPR)	P-5a, P-21			40,581 / 229.779	1,704 / 18.004	3,420 / 28.321	2,214 / 20.964	- / -	2,214 / 20.964
<b>P-40</b>	<b>Total Gross/Weapon System Cost</b>				<b>40,581 / 229.779</b>	<b>1,704 / 18.004</b>	<b>3,420 / 28.321</b>	<b>2,214 / 20.964</b>	<b>- / -</b>	<b>2,214 / 20.964</b>
<p>*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.</p> <p>Note: Totals in this Exhibit P-40 set may not be exact or sum exactly due to rounding.</p>										
<p><b>Justification:</b></p> <p>FY2019 Base procurement dollars in the amount of \$20.964 million support the procurement of 2,214 LCRRPRs which are required to maintain the practice rocket inventory for Standards in Training Commission (STRC) requirements.</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-5, Cost Analysis: PB 2019 Army												Date: February 2018						
Appropriation / Budget Activity / Budget Sub Activity: 2032A / 02 / 30						P-1 Line Item Number / Title: 6060C65405 / MLRS Reduced Range Practice Rockets (RRPR)						Item Number / Title [DODIC]: C65405 / MLRS Reduced Range Practice Rockets (RRPR)						
ID Code (A=Service Ready, B=Not Service Ready) :										MDAP/MAIS Code:								
Resource Summary				Prior Years		FY 2017		FY 2018		FY 2019 Base		FY 2019 OCO		FY 2019 Total				
Procurement Quantity (Units in Each)				40,581		1,704		3,420		2,214		-		2,214				
Gross/Weapon System Cost (\$ in Millions)				229.779		18.004		28.321		20.964		-		20.964				
Less PY Advance Procurement (\$ in Millions)				-		-		-		-		-		-				
Net Procurement (P-1) (\$ in Millions)				229.779		18.004		28.321		20.964		-		20.964				
Plus CY Advance Procurement (\$ in Millions)				-		-		-		-		-		-				
Total Obligation Authority (\$ in Millions)				229.779		18.004		28.321		20.964		-		20.964				
(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)				5.662		10.566		8.281		9.469		-		9.469				
Note: Subtotals or Totals in this Exhibit P-5 may not be exact or sum exactly due to rounding.																		
Cost Elements	Prior Years			FY 2017			FY 2018			FY 2019 Base			FY 2019 OCO			FY 2019 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																		
Reduced Range Practice Rocket (LCRRPR) <sup>(†)</sup>	4.428	39,549	175.138	8.095	1,704	13.794	6.525	3,420	22.317	7.509	2,214	16.626	-	-	-	7.509	2,214	16.626
Warheads Govt Furnished Equip (GFE)	-	-	20.161	-	-	1.421	-	-	2.905	-	-	1.921	-	-	-	-	-	1.921
Production Verification Testing	-	-	3.573	-	-	0.073	-	-	0.074	-	-	0.076	-	-	-	-	-	0.076
First Destination Transportation	-	-	1.033	-	-	0.108	-	-	0.220	-	-	0.146	-	-	-	-	-	0.146
Production Engineering Support	-	-	14.284	-	-	1.511	-	-	1.689	-	-	1.606	-	-	-	-	-	1.606
Subtotal: Recurring Cost	-	-	214.174	-	-	16.907	-	-	27.204	-	-	20.374	-	-	-	-	-	20.374
Subtotal: Flyaway Cost	-	-	214.174	-	-	16.907	-	-	27.204	-	-	20.374	-	-	-	-	-	20.374
Support - Production Engineering Cost																		
Production Engineering	-	-	5.313	-	-	0.480	-	-	0.489	-	-	0.500	-	-	-	-	-	0.500
Subtotal: Support - Production Engineering Cost	-	-	5.313	-	-	0.480	-	-	0.489	-	-	0.500	-	-	-	-	-	0.500
Support - Program Management Cost																		
Government Management	-	-	10.277	-	-	0.617	-	-	0.628	-	-	0.090	-	-	-	-	-	0.090



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<b>Exhibit P-5, Cost Analysis: PB 2019 Army</b>										<b>Date:</b> February 2018							
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 2032A / 02 / 30					<b>P-1 Line Item Number / Title:</b> 6060C65405 / MLRS Reduced Range Practice Rockets (RRPR)					<b>Item Number / Title [DODIC]:</b> C65405 / MLRS Reduced Range Practice Rockets (RRPR)							

<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 2017			FY 2018			FY 2019 Base			FY 2019 OCO			FY 2019 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)
Subtotal: Support - Program Management Cost	-	-	10.277	-	-	0.617	-	-	0.628	-	-	0.090	-	-	-	-	-	0.090
Gross/Weapon System Cost	5.662	40,581	229.779	10.566	1,704	18.004	8.281	3,420	28.321	9.469	2,214	20.964	-	-	-	9.469	2,214	20.964

Secondary Distribution		FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total
Army	Quantity	1,092	2,664	1,554	-	1,554
	Total Obligation Authority	11.523	22.153	14.715	-	14.715
ANG	Quantity	612	756	660	-	660
	Total Obligation Authority	6.481	6.168	6.249	-	6.249
<b>Total: Secondary Distribution</b>		<b>Quantity</b>	<b>1,704</b>	<b>3,420</b>	<b>2,214</b>	<b>2,214</b>
		<b>Total Obligation Authority</b>	<b>18.004</b>	<b>28.321</b>	<b>20.964</b>	<b>20.964</b>

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

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<b>Exhibit P-5a, Procurement History and Planning:</b> PB 2019 Army									<b>Date:</b> February 2018			
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 2032A / 02 / 30			<b>P-1 Line Item Number / Title:</b> 6060C65405 / MLRS Reduced Range Practice Rockets (RRPR)						<b>Item Number / Title [DODIC]:</b> C65405 / MLRS Reduced Range Practice Rockets (RRPR)			
<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>
Reduced Range Practice Rocket (LCRRPR) <sup>(†)</sup>		2015	Lockheed Martin / Dallas, TX	SS / FPIF	AMCOM,RSA,AL	Jun 2015	Jun 2016	726	6,230.000	Y		Feb 2013
Reduced Range Practice Rocket (LCRRPR) <sup>(†)</sup>		2015	Letterkenny Munitions Center / Chambersburg, PA	MIPR	LEMC, PA	Jan 2015	Feb 2017	642	5,350.000	Y		
Reduced Range Practice Rocket (LCRRPR) <sup>(†)</sup>		2016	Lockheed Martin / Dallas, TX	SS / FPIF	AMCOM,RSA,AL	May 2016	May 2017	3,204	9,300.000	Y		Feb 2016
Reduced Range Practice Rocket (LCRRPR) <sup>(†)</sup>		2016	Letterkenny Munitions Center / Chambersburg, PA	MIPR	LEMC, PA	Jan 2017	Feb 2017	276	5,650.000	Y		
Reduced Range Practice Rocket (LCRRPR) <sup>(†)</sup>		2017	Lockheed Martin / Dallas, TX	SS / FPIF	AMCOM,RSA,AL	May 2017	May 2018	1,362	8,660.000	Y		Feb 2016
Reduced Range Practice Rocket (LCRRPR) <sup>(†)</sup>		2017	Letterkenny Munitions Center / Chambersburg, PA	MIPR	LEMC, PA	Mar 2018	Apr 2018	342	5,850.000	Y		
Reduced Range Practice Rocket (LCRRPR) <sup>(†)</sup>		2018	Lockheed Martin / Dallas, TX	SS / FPIF	AMCOM,RSA,AL	Feb 2018	Apr 2019	3,078	6,590.000	Y		Feb 2017
Reduced Range Practice Rocket (LCRRPR) <sup>(†)</sup>		2018	Letterkenny Munitions Center / Chambersburg, PA	MIPR	LEMC, PA	Mar 2019	Apr 2019	342	5,960.000	Y		
Reduced Range Practice Rocket (LCRRPR) <sup>(†)</sup>		2019	Lockheed Martin / Dallas, TX	SS / FPIF	AMCOM,RSA,AL	Feb 2019	Apr 2020	1,872	7,760.000	Y		Feb 2018
Reduced Range Practice Rocket (LCRRPR) <sup>(†)</sup>		2019	Letterkenny Munitions Center / Chambersburg, PA	MIPR	LEMC, PA	Mar 2020	Apr 2020	342	6,090.000	Y		
<sup>(†)</sup> indicates the presence of a P-21  <b>Remarks:</b> Lockheed Martin is currently the industry source that is both facilitized and qualified to produce the Low Cost Reduced Range Practice Rocket (LCRRPR). Letterkenny Munitions Center (LEMC) has been established as the organic source that is both facilitized and qualified to produce the LCRRPR.  * Sole Source/Fixed Price Incentive Firm ** Aviation and Missile Command, Redstone Arsenal, AL												

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Exhibit P-21, Production Schedule: PB 2019 Army																				Date: February 2018																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																														
Appropriation / Budget Activity / Budget Sub Activity: 2032A / 02 / 30										P-1 Line Item Number / Title: 6060C65405 / MLRS Reduced Range Practice Rockets (RRPR)										Item Number / Title [DODIC]: C65405 / MLRS Reduced Range Practice Rockets (RRPR)																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																														
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	1	2015	ARMY	726	0	726								A -	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	60	60	60	61	485																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																
	1	2015	MC <sup>(+)</sup>	648	0	648								A -	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	54	54	54	54	432																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																
	1	2015	Total	1,374	0	1,374								-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	114	114	114	115	917																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																
	2	2015	ARMY	642	0	642				A -	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	642																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																	
	1	2016	ARMY	3,204	0	3,204																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																												</

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Exhibit P-21, Production Schedule: PB 2019 Army																				Date: February 2018																					
Appropriation / Budget Activity / Budget Sub Activity: 2032A / 02 / 30										P-1 Line Item Number / Title: 6060C65405 / MLRS Reduced Range Practice Rockets (RRPR)										Item Number / Title [DODIC]: C65405 / MLRS Reduced Range Practice Rockets (RRPR)																					
Cost Elements (Units in Each)							Fiscal Year 2017													Fiscal Year 2018													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 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											
Reduced Range Practice Rocket (LCRRPR)																																									
Prior Years Deliveries: 34701																																									
	1	2015	ARMY	726	241	485	61	61	61	61	61	60	60	60																			0								
	1	2015	MC (+)	648	216	432	54	54	54	54	54	54	54	54																			0								
	1	2015	Total	1,374	457	917	115	115	115	115	115	114	114	114	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0										
	2	2015	ARMY	642	0	642	-	-	-	-	53	53	53	53	54	54	54	54	54	54	53	53											0								
	1	2016	ARMY	3,204	0	3,204	-	-	-	-	-	-	-	267	267	267	267	267	267	267	267	267	267	267	267	267	267	267	267	267	0										
	1	2016	MC (+)	648	0	648	-	-	-	-	-	-	-	54	54	54	54	54	54	54	54	54	54	54	54	54	54	54	54	54	0										
	1	2016	Total	3,852	0	3,852	-	-	-	-	-	-	-	321	321	321	321	321	321	321	321	321	321	321	321	321	321	321	321	321	0										
	2	2016	ARMY	276	0	276					A -	23	23	23	23	23	23	23	23	23	23	23											0								
	1	2017	ARMY	1,362	0	1,362								A -	-	-	-	-	-	-	-	-	-	-	-	-	-	-	113	113	113	113	113	797							
	1	2017	MC (+)	648	0	648								A -	-	-	-	-	-	-	-	-	-	-	-	-	-	-	54	54	54	54	54	378							
	1	2017	Total	2,010	0	2,010								-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	167	167	167	167	167	1,175							
	2	2017	ARMY	342	0	342																			A -	28	28	29	29	29	29	29	29	29	29	170					
	1	2018	ARMY	3,078	0	3,078																			A -	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3,078
	1	2018	MC (+)	648	0	648																			A -	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	648
	1	2018	Total	3,726	0	3,726																			-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3,726
	2	2018	ARMY	342	0	342																											342								
	1	2019	ARMY	1,872	0	1,872																											1,872								
	1	2019	MC (+)	648	0	648																											648								
	1	2019	Total	2,520	0	2,520																											2,520								
	2	2019	ARMY	342	0	342																											342								
							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 2019 Army																				Date: February 2018													
Appropriation / Budget Activity / Budget Sub Activity: 2032A / 02 / 30										P-1 Line Item Number / Title: 6060C65405 / MLRS Reduced Range Practice Rockets (RRPR)										Item Number / Title [DODIC]: C65405 / MLRS Reduced Range Practice Rockets (RRPR)													
Cost Elements (Units in Each)							Fiscal Year 2019													Fiscal Year 2020													BALANCE
OCO	MFR #	FY	SERVICE	PROC QTY	ACCEPT PRIOR TO 1 OCT 2018	BAL DUE AS OF 1 OCT				Calendar Year 2019										Calendar Year 2020													
							OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP			
Reduced Range Practice Rocket (LCRRPR)																																	
Prior Years Deliveries: 34701																																	
	1	2015	ARMY	726	726	0																											0
	1	2015	MC (+)	648	648	0																											0
	1	2015	Total	1,374	1,374	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0			
	2	2015	ARMY	642	642	0																											0
	1	2016	ARMY	3,204	3,204	0																											0
	1	2016	MC (+)	648	648	0																											0
	1	2016	Total	3,852	3,852	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0			
	2	2016	ARMY	276	276	0																											0
	1	2017	ARMY	1,362	565	797	114	114	114	114	114	114	113																				0
	1	2017	MC (+)	648	270	378	54	54	54	54	54	54	54																				0
	1	2017	Total	2,010	835	1,175	168	168	168	168	168	168	167	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0			
	2	2017	ARMY	342	172	170	29	29	28	28	28	28																					0
	1	2018	ARMY	3,078	0	3,078	-	-	-	-	-	-	256	256	256	256	257	257	257	257	257	256	256							0			
	1	2018	MC (+)	648	0	648	-	-	-	-	-	-	54	54	54	54	54	54	54	54	54	54							0				
	1	2018	Total	3,726	0	3,726	-	-	-	-	-	-	310	310	310	310	311	311	311	311	311	310	310	-	-	-	-	-	0				
	2	2018	ARMY	342	0	342						A -	28	28	28	29	29	29	29	29	29	28	28	28							0		
	1	2019	ARMY	1,872	0	1,872						A -	-	-	-	-	-	-	-	-	-	-	-	156	156	156	156	156	156	936			
	1	2019	MC (+)	648	0	648						A -	-	-	-	-	-	-	-	-	-	-	-	54	54	54	54	54	54	324			
	1	2019	Total	2,520	0	2,520						-	-	-	-	-	-	-	-	-	-	-	-	210	210	210	210	210	210	1,260			
	2	2019	ARMY	342	0	342																	A -	28	28	28	29	29	29				171
							OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP			

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Exhibit P-21, Production Schedule: PB 2019 Army																				Date: February 2018														
Appropriation / Budget Activity / Budget Sub Activity: 2032A / 02 / 30										P-1 Line Item Number / Title: 6060C65405 / MLRS Reduced Range Practice Rockets (RRPR)										Item Number / Title [DODIC]: C65405 / MLRS Reduced Range Practice Rockets (RRPR)														
Cost Elements (Units in Each)							Fiscal Year 2021													Fiscal Year 2022													BALANCE	
OCO	MFR #	FY	SERVICE	PROC QTY	ACCEPT PRIOR TO 1 OCT 2020	BAL DUE AS OF 1 OCT				Calendar Year 2021										Calendar Year 2022														
							OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP				
Reduced Range Practice Rocket (LCRRPR)																																		
Prior Years Deliveries: 34701																																		
	1	2015	ARMY	726	726	0																												0
	1	2015	MC (+)	648	648	0																												0
	1	2015	Total	1,374	1,374	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0			
	2	2015	ARMY	642	642	0																												0
	1	2016	ARMY	3,204	3,204	0																												0
	1	2016	MC (+)	648	648	0																												0
	1	2016	Total	3,852	3,852	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0			
	2	2016	ARMY	276	276	0																												0
	1	2017	ARMY	1,362	1,362	0																												0
	1	2017	MC (+)	648	648	0																												0
	1	2017	Total	2,010	2,010	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0			
	2	2017	ARMY	342	342	0																												0
	1	2018	ARMY	3,078	3,078	0																												0
	1	2018	MC (+)	648	648	0																												0
	1	2018	Total	3,726	3,726	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0			
	2	2018	ARMY	342	342	0																												0
	1	2019	ARMY	1,872	936	936	156	156	156	156	156	156																						0
	1	2019	MC (+)	648	324	324	54	54	54	54	54	54																						0
	1	2019	Total	2,520	1,260	1,260	210	210	210	210	210	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0			
	2	2019	ARMY	342	171	171	29	29	29	28	28	28																						0
							OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP				

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Exhibit P-21, Production Schedule: PB 2019 Army									Date: February 2018			
Appropriation / Budget Activity / Budget Sub Activity: 2032A / 02 / 30					P-1 Line Item Number / Title: 6060C65405 / MLRS Reduced Range Practice Rockets (RRPR)				Item Number / Title [DODIC]: C65405 / MLRS Reduced Range Practice Rockets (RRPR)			
MFR Ref #	Manufacturer Name - Location	Production Rates (Each / Year)			Procurement Leadtime (Months)							
		MSR For 2019	1-8-5 For 2019	MAX For 2019	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 - Dallas, TX	504	9,216	11,520	0	2	16	18	0	2	16	18
2	Letterkenny Munitions Center - Chambersburg, PA	504	1,500	1,968	0	2	16	18	0	2	16	18
<p><b>Remarks:</b> Production of Low Cost Reduced Range Practice Rockets (LCRRPRs) varies as this program shares a production line with Guide Multiple Launch Rocket System (GMLRS). There are no production gaps during months that LCRRPRs are not being produced as GMLRS Rocket production continues. Continued production of LCRRPRs at Camden, Arkansas mitigates shared production costs with GMLRS and Army Tactical Missile System (ATACMS).</p> <p>(‡) Delivery rows marked with this symbol indicate that they are funded through a separate Line Item. See the respective components' exhibits for details, including the full delivery schedule.</p> <p>"A" in the Delivery Schedule indicates the Contract Award Date.</p> <p><b>Note:</b> 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).</p>												

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<b>Exhibit P-40, Budget Line Item Justification:</b> PB 2019 Army										<b>Date:</b> February 2018		
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 2032A: Missile Procurement, Army / BA 02: Other Missiles / BSA 30: Anti-Tank/ Assault Missile Sys							<b>P-1 Line Item Number / Title:</b> 6200C02901 / High Mobility Artillery Rocket System (HIMARS)					
<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> 0210608A, 0603778A				
<b>Line Item MDAP/MAIS Code:</b> 367												
<b>Resource Summary</b>	<b>Prior Years</b>	<b>FY 2017</b>	<b>FY 2018</b>	<b>FY 2019 Base</b>	<b>FY 2019 OCO</b>	<b>FY 2019 Total</b>	<b>FY 2020</b>	<b>FY 2021</b>	<b>FY 2022</b>	<b>FY 2023</b>	<b>To Complete</b>	<b>Total</b>
Procurement Quantity ( <i>Units in Each</i> )	387	-	-	-	24	24	-	-	13	5	-	429
Gross/Weapon System Cost ( <i>\$ in Millions</i> )	1,623.489	-	41.000	-	171.138	171.138	-	-	89.077	41.274	-	1,965.978
Less PY Advance Procurement ( <i>\$ in Millions</i> )	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) ( <i>\$ in Millions</i> )	1,623.489	-	41.000	-	171.138	171.138	-	-	89.077	41.274	-	1,965.978
Plus CY Advance Procurement ( <i>\$ in Millions</i> )	-	-	-	-	-	-	-	-	-	-	-	-
<b>Total Obligation Authority</b> ( <i>\$ in Millions</i> )	<b>1,623.489</b>	<b>-</b>	<b>41.000</b>	<b>-</b>	<b>171.138</b>	<b>171.138</b>	<b>-</b>	<b>-</b>	<b>89.077</b>	<b>41.274</b>	<b>-</b>	<b>1,965.978</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> )	4,195.062	-	-	-	7,130.750	7,130.750	-	-	6,852.077	8,254.800	-	4,582.699
<b>Description:</b> The M142 High Mobility Artillery Rocket System (HIMARS) launcher is a full spectrum, combat proven, all weather, 24/7 lethal and responsive, precision strike weapon system. HIMARS provides critical missile precision strike, operational shaping fires, counter-fire, and close support destructive and suppressive fires. HIMARS is a C-130 or C-17 transportable, wheeled, indirect fire, rocket/missile launcher capable of firing one pod of precision rockets/missiles from the Multiple Launch Rocket System (MLRS) Family of Munitions (MFOM), to include the Guided Multiple Launch Rocket System (GMLRS) and the Army Tactical Missile System (ATACMS). These munitions are capable of engaging targets with precision at ranges up to 300 kilometers. Army Acquisition Objective (AAO) is 363 HIMARS launchers.												
<b>Secondary Distribution</b>		<b>FY 2017</b>	<b>FY 2018</b>	<b>FY 2019 Base</b>	<b>FY 2019 OCO</b>	<b>FY 2019 Total</b>	<b>FY 2020</b>	<b>FY 2021</b>	<b>FY 2022</b>	<b>FY 2023</b>		
Army	Quantity	-	0	0	24	24	-	-	13	5		
	Total Obligation Authority	-	41.000	0.000	171.138	171.138	-	-	89.077	41.274		
<b>Total:</b> <b>Secondary Distribution</b>	<b>Quantity</b>	<b>-</b>	<b>-</b>	<b>0</b>	<b>24</b>	<b>24</b>	<b>-</b>	<b>-</b>	<b>13</b>	<b>5</b>		
	<b>Total Obligation Authority</b>	<b>-</b>	<b>41.000</b>	<b>-</b>	<b>171.138</b>	<b>171.138</b>	<b>-</b>	<b>-</b>	<b>89.077</b>	<b>41.274</b>		



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<b>Exhibit P-40, Budget Line Item Justification:</b> PB 2019 Army								<b>Date:</b> February 2018		
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 2032A: Missile Procurement, Army / BA 02: Other Missiles / BSA 30: Anti-Tank/ Assault Missile Sys						<b>P-1 Line Item Number / Title:</b> 6200C02901 / High Mobility Artillery Rocket System (HIMARS)				
<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> 0210608A, 0603778A				
<b>Line Item MDAP/MAIS Code:</b> 367										
Exhibits Schedule					Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 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	C03000 / HIMARS LAUNCHER	P-5a, P-21			387 / 1,623.489	- / -	- / 41.000	- / -	24 / 171.138	24 / 171.138
<b>P-40</b>	<b>Total Gross/Weapon System Cost</b>				<b>387 / 1,623.489</b>	<b>- / -</b>	<b>- / 41.000</b>	<b>- / -</b>	<b>24 / 171.138</b>	<b>24 / 171.138</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:**

FY2019 Overseas Contingency Operations (OCO) procurement dollars in the amount of \$171.138 million supports the procurement of 24 M142 HIMARS launchers for the European Deterrence Initiative.

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

**UNCLASSIFIED**

Exhibit P-5, Cost Analysis: PB 2019 Army													Date: February 2018					
Appropriation / Budget Activity / Budget Sub Activity: 2032A / 02 / 30						P-1 Line Item Number / Title: 6200C02901 / High Mobility Artillery Rocket System (HIMARS)							Item Number / Title [DODIC]: C03000 / HIMARS LAUNCHER					
ID Code (A=Service Ready, B=Not Service Ready) :										MDAP/MAIS Code:								
Resource Summary				Prior Years		FY 2017		FY 2018		FY 2019 Base		FY 2019 OCO		FY 2019 Total				
Procurement Quantity <i>(Units in Each)</i>				387		-		-		-		24		24				
Gross/Weapon System Cost <i>(\$ in Millions)</i>				1,623.489		-		41.000		-		171.138		171.138				
Less PY Advance Procurement <i>(\$ in Millions)</i>				-		-		-		-		-		-				
Net Procurement (P-1) <i>(\$ in Millions)</i>				1,623.489		-		41.000		-		171.138		171.138				
Plus CY Advance Procurement <i>(\$ in Millions)</i>				-		-		-		-		-		-				
Total Obligation Authority <i>(\$ in Millions)</i>				1,623.489		-		41.000		-		171.138		171.138				
(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>				4,195.062		-		-		-		7,130.750		7,130.750				
Note: Subtotals or Totals in this Exhibit P-5 may not be exact or sum exactly due to rounding.																		
Cost Elements	Prior Years			FY 2017			FY 2018			FY 2019 Base			FY 2019 OCO			FY 2019 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																		
Launcher <sup>(†)</sup>	-	-	1,050.619	-	-	-	-	-	-	-	-	-	5,389.958	24	129.359	5,389.958	24	129.359
Carrier	-	-	189.532	-	-	-	-	-	-	-	-	-	597.625	24	14.343	597.625	24	14.343
Engineering Services	-	-	118.849	-	-	-	-	-	-	-	-	-	-	-	6.259	-	-	6.259
Fielding	-	-	63.549	-	-	-	-	-	-	-	-	-	-	-	6.049	-	-	6.049
Facilitization	-	-	28.410	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Systems Engineering and Program Management (SEPM)	-	-	8.090	-	-	-	-	-	-	-	-	-	-	-	1.267	-	-	1.267
Production Engineering	-	-	96.080	-	-	-	-	-	-	-	-	-	-	-	11.399	-	-	11.399
Government Testing	-	-	31.173	-	-	-	-	-	-	-	-	-	-	-	1.392	-	-	1.392
Peculiar Support Equipment	-	-	37.187	-	-	-	-	-	-	-	-	-	-	-	1.070	-	-	1.070
Subtotal: Recurring Cost	-	-	1,623.489	-	-	-	-	-	-	-	-	0.000	-	-	171.138	-	-	171.138
Non Recurring Cost																		
European Deterrence Initiative Production Restart - Obsolescence Mitigation	-	-	-	-	-	-	-	-	41.000	-	-	-	-	-	-	-	-	-
Subtotal: Non Recurring Cost	-	-	-	-	-	-	-	-	41.000	-	-	-	-	-	-	-	-	-
Subtotal: Flyaway Cost	-	-	1,623.489	-	-	-	-	-	41.000	-	-	0.000	-	-	171.138	-	-	171.138

**UNCLASSIFIED**

<b>Exhibit P-5, Cost Analysis:</b> PB 2019 Army										<b>Date:</b> February 2018				
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 2032A / 02 / 30					<b>P-1 Line Item Number / Title:</b> 6200C02901 / High Mobility Artillery Rocket System (HIMARS)					<b>Item Number / Title [DODIC]:</b> C03000 / HIMARS LAUNCHER				

<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 2017			FY 2018			FY 2019 Base			FY 2019 OCO			FY 2019 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	4,195.062	387	1,623.489	-	-	-	-	-	41.000	-	-	-	7,130.750	24	171.138	7,130.750	24	171.138

Secondary Distribution		FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total
Army	Quantity	-	0	0	24	24
	Total Obligation Authority	-	41.000	0.000	171.138	171.138
<b>Total:</b>		-	-	-	24	24
<b>Secondary Distribution</b>		-	41.000	-	171.138	171.138

(†) indicates the presence of a P-5a

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Exhibit P-5a, Procurement History and Planning: PB 2019 Army									Date: February 2018			
Appropriation / Budget Activity / Budget Sub Activity: 2032A / 02 / 30				P-1 Line Item Number / Title: 6200C02901 / High Mobility Artillery Rocket System (HIMARS)					Item Number / Title [DODIC]: C03000 / HIMARS LAUNCHER			
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
Launcher <sup>(†)</sup>	✓	2019	TBD / TBD	SS / FFP	Redstone Arsenal	Jun 2019	Jun 2020	24	5,389.960	Y		Jun 2018

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

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Exhibit P-21, Production Schedule: PB 2019 Army																				Date: February 2018															
Appropriation / Budget Activity / Budget Sub Activity: 2032A / 02 / 30										P-1 Line Item Number / Title: 6200C02901 / High Mobility Artillery Rocket System (HIMARS)										Item Number / Title [DODIC]: C03000 / HIMARS LAUNCHER															
Cost Elements (Units in Each)							Fiscal Year 2019													Fiscal Year 2020													BALANCE		
OCO#	MFR#	FY	SERVICE	PROC QTY	ACCEPT PRIOR TO 1 OCT 2018	BAL DUE AS OF 1 OCT	Calendar Year 2019													Calendar Year 2020															
							OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP					
Launcher																																			
✓	1	2019	ARMY	24	0	24									A	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3	3	3	3	12
							OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP					

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Exhibit P-21, Production Schedule: PB 2019 Army																			Date: February 2018													
Appropriation / Budget Activity / Budget Sub Activity: 2032A / 02 / 30										P-1 Line Item Number / Title: 6200C02901 / High Mobility Artillery Rocket System (HIMARS)										Item Number / Title [DODIC]: C03000 / HIMARS LAUNCHER												
Cost Elements (Units in Each)							Fiscal Year 2021										Fiscal Year 2022													BALANCE		
OCO#	MFR#	FY	SERVICE	PROC QTY	ACCEPT PRIOR TO 1 OCT 2020	BAL DUE AS OF 1 OCT	Calendar Year 2021										Calendar Year 2022															
							OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG		SEP	
Launcher																																0
✓	1	2019	ARMY	24	12	12	3	3	3	3																						0
							OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP		

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Exhibit P-21, Production Schedule: PB 2019 Army									Date: February 2018				
Appropriation / Budget Activity / Budget Sub Activity: 2032A / 02 / 30					P-1 Line Item Number / Title: 6200C02901 / High Mobility Artillery Rocket System (HIMARS)					Item Number / Title [DODIC]: C03000 / HIMARS LAUNCHER			
MFR Ref #	Manufacturer Name - Location	Production Rates (Each / Month)			Procurement Leadtime (Months)								
		MSR For 2019	1-8-5 For 2019	MAX For 2019	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	3	8	8	3	14	17	0	3	14	17	

"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-40, Budget Line Item Justification:</b> PB 2019 Army										<b>Date:</b> February 2018		
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 2032A: Missile Procurement, Army / BA 02: Other Missiles / BSA 30: Anti-Tank/ Assault Missile Sys						<b>P-1 Line Item Number / Title:</b> 6870C88001 / LETHAL MINIATURE AERIAL MISSILE SYSTEM (LMAMS)						
<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												
<b>Resource Summary</b>	<b>Prior Years</b>	<b>FY 2017</b>	<b>FY 2018</b>	<b>FY 2019 Base</b>	<b>FY 2019 OCO</b>	<b>FY 2019 Total</b>	<b>FY 2020</b>	<b>FY 2021</b>	<b>FY 2022</b>	<b>FY 2023</b>	<b>To Complete</b>	<b>Total</b>
Procurement Quantity ( <i>Units in Each</i> )	-	-	120	-	1,318	1,318	-	-	-	-	-	1,438
Gross/Weapon System Cost ( <i>\$ in Millions</i> )	-	55.377	8.669	-	112.973	112.973	-	-	-	-	-	177.019
Less PY Advance Procurement ( <i>\$ in Millions</i> )	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) ( <i>\$ in Millions</i> )	-	55.377	8.669	-	112.973	112.973	-	-	-	-	-	177.019
Plus CY Advance Procurement ( <i>\$ in Millions</i> )	-	-	-	-	-	-	-	-	-	-	-	-
<b>Total Obligation Authority</b> ( <i>\$ in Millions</i> )	-	<b>55.377</b>	<b>8.669</b>	-	<b>112.973</b>	<b>112.973</b>	-	-	-	-	-	<b>177.019</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> )	-	-	72.242	-	85.715	85.715	-	-	-	-	-	123.101
<b>Description:</b> Lethal Miniature Aerial Missile System (LMAMS) is a single man-portable/operable, light-weight organic, beyond line-of-sight, precision guided, loitering aerial missile system capable of locating and engaging obscured and/or fleeting enemy targets who otherwise cannot be engaged by typical direct fire weapon systems. Front and Side Look High Resolution Electro-Optical (day) and Front Look Infrared (night) cameras allow the Warfighter to have eyes on the target for positive identification. LMAMS Wave-Off capability allows the operator to wave-off or re-direct the LMAMS flight path up to seconds prior to impact, if necessary. The system is comprised of a fire control unit, launcher, missile, and a modular payload capable of high lethality against unprotected Combatant Personnel and producing casualties against Personnel in Soft Skinned Vehicles. LMAMS has the ability to be employed in less than two minutes.  FY17 All Up Rounds (AUR) Quantity is 509. FY18 All Up Rounds (AUR) Quantity is 0, the FY18 quantity of 120 is Inert Training Missiles. FY19 All Up Rounds (AUR) Quantity is 1,318.												
<b>Secondary Distribution</b>		<b>FY 2017</b>	<b>FY 2018</b>	<b>FY 2019 Base</b>	<b>FY 2019 OCO</b>	<b>FY 2019 Total</b>	<b>FY 2020</b>	<b>FY 2021</b>	<b>FY 2022</b>	<b>FY 2023</b>		
Army	Quantity	-	120	0	1,318	1,318	-	-	-	-		
	Total Obligation Authority	55.377	8.669	0.000	112.973	112.973	-	-	-	-		
<b>Total: Secondary Distribution</b>	<b>Quantity</b>	<b>-</b>	<b>120</b>	<b>0</b>	<b>1,318</b>	<b>1,318</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>		
	<b>Total Obligation Authority</b>	<b>55.377</b>	<b>8.669</b>	<b>-</b>	<b>112.973</b>	<b>112.973</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>		



# UNCLASSIFIED

<b>Exhibit P-40, Budget Line Item Justification:</b> PB 2019 Army							<b>Date:</b> February 2018			
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 2032A: Missile Procurement, Army / BA 02: Other Missiles / BSA 30: Anti-Tank/ Assault Missile Sys					<b>P-1 Line Item Number / Title:</b> 6870C88001 / LETHAL MINIATURE AERIAL MISSILE SYSTEM (LMAMS)					
<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										
Exhibits Schedule					Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 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	C88022 / LETHAL MINIATURE AERIAL MISSILE SYSTEM (LMAMS)	P-5a, P-21			- / -	- / 55.377	120 / 8.669	- / -	1,318 / 112.973	1,318 / 112.973
<b>P-40</b>	<b>Total Gross/Weapon System Cost</b>				<b>- / -</b>	<b>- / 55.377</b>	<b>120 / 8.669</b>	<b>- / -</b>	<b>1,318 / 112.973</b>	<b>1,318 / 112.973</b>
<small>*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.</small>										
<small>Note: Totals in this Exhibit P-40 set may not be exact or sum exactly due to rounding.</small>										

**Justification:**  
 FY 2019 Overseas Contingency Operations (OCO) dollars in the amount of \$112.973 million procures 1,318 All Up Rounds (AUR), 200 Inert Training Missiles, 40 Training Simulators, 40 Fire Control Units, 10 Multi-Pack Launchers, training support equipment, and fielding of hardware. LMAMS hardware is required to replenish and maintain asset inventory in support of Joint Urgent Operational Need 0556 and 0008.

**UNCLASSIFIED**

Exhibit P-5, Cost Analysis: PB 2019 Army												Date: February 2018						
Appropriation / Budget Activity / Budget Sub Activity: 2032A / 02 / 30						P-1 Line Item Number / Title: 6870C88001 / LETHAL MINIATURE AERIAL MISSILE SYSTEM (LMAMS)						Item Number / Title [DODIC]: C88022 / LETHAL MINIATURE AERIAL MISSILE SYSTEM (LMAMS)						
ID Code (A=Service Ready, B=Not Service Ready) :										MDAP/MAIS Code:								
Resource Summary				Prior Years		FY 2017		FY 2018		FY 2019 Base		FY 2019 OCO		FY 2019 Total				
Procurement Quantity <i>(Units in Each)</i>				-		-		120		-		1,318		1,318				
Gross/Weapon System Cost <i>(\$ in Millions)</i>				-		55.377		8.669		-		112.973		112.973				
Less PY Advance Procurement <i>(\$ in Millions)</i>				-		-		-		-		-		-				
Net Procurement (P-1) <i>(\$ in Millions)</i>				-		55.377		8.669		-		112.973		112.973				
Plus CY Advance Procurement <i>(\$ in Millions)</i>				-		-		-		-		-		-				
Total Obligation Authority <i>(\$ in Millions)</i>				-		55.377		8.669		-		112.973		112.973				
(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>				-		-		72.242		-		85.715		85.715				
Note: Subtotals or Totals in this Exhibit P-5 may not be exact or sum exactly due to rounding.																		
Cost Elements	Prior Years			FY 2017			FY 2018			FY 2019 Base			FY 2019 OCO			FY 2019 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																		
All Up Rounds <sup>(†)</sup>	-	-	-	61.100	509	31.100	-	-	-	-	-	-	57.358	1,318	75.598	57.358	1,318	75.598
Inert Training Missiles	-	-	-	52.320	200	10.464	44.558	120	5.347	-	-	-	44.255	200	8.851	44.255	200	8.851
Training Simulators	-	-	-	25.400	39	0.991	-	-	-	-	-	-	25.175	40	1.007	25.175	40	1.007
Multi-Pack Launcher	-	-	-	-	-	-	-	-	-	-	-	-	81.000	10	0.810	81.000	10	0.810
Training Support Equipment	-	-	-	-	-	0.345	-	-	0.035	-	-	-	-	-	1.292	-	-	1.292
Fielding	-	-	-	-	-	6.424	-	-	2.749	-	-	-	-	-	14.916	-	-	14.916
Subtotal: Recurring Cost	-	-	-	-	-	49.324	-	-	8.131	-	-	0.000	-	-	102.474	-	-	102.474
Subtotal: Hardware Cost	-	-	-	-	-	49.324	-	-	8.131	-	-	0.000	-	-	102.474	-	-	102.474
Command and Launch Cost																		
Fire Control Units	-	-	-	25.083	39	0.978	-	-	-	-	-	-	24.700	40	0.988	24.700	40	0.988
Subtotal: Command and Launch Cost	-	-	-	-	-	0.978	-	-	-	-	-	0.000	-	-	0.988	-	-	0.988
Support - Acceptance Testing Cost																		
Acceptance Test	-	-	-	-	-	1.016	-	-	-	-	-	-	-	-	4.653	-	-	4.653
Subtotal: Support - Acceptance Testing Cost	-	-	-	-	-	1.016	-	-	-	-	-	0.000	-	-	4.653	-	-	4.653
Support - Program Management Cost																		
Government Management	-	-	-	-	-	4.059	-	-	0.538	-	-	-	-	-	4.858	-	-	4.858

**UNCLASSIFIED**

<b>Exhibit P-5, Cost Analysis:</b> PB 2019 Army										<b>Date:</b> February 2018							
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 2032A / 02 / 30					<b>P-1 Line Item Number / Title:</b> 6870C88001 / LETHAL MINIATURE AERIAL MISSILE SYSTEM (LMAMS)					<b>Item Number / Title [DODIC]:</b> C88022 / LETHAL MINIATURE AERIAL MISSILE SYSTEM (LMAMS)							

<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 2017			FY 2018			FY 2019 Base			FY 2019 OCO			FY 2019 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 - Program Management Cost</i>	-	-	-	-	-	4.059	-	-	0.538	-	-	0.000	-	-	4.858	-	-	4.858
<b>Gross/Weapon System Cost</b>	-	-	-	-	-	55.377	72.242	120	8.669	-	-	-	85.715	1,318	112.973	85.715	1,318	112.973

Secondary Distribution		FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total
Army	Quantity	-	120	0	1,318	1,318
	Total Obligation Authority	55.377	8.669	0.000	112.973	112.973
<b>Total: Secondary Distribution</b>	Quantity	-	120	-	1,318	1,318
	Total Obligation Authority	55.377	8.669	-	112.973	112.973

(†) indicates the presence of a P-5a

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Exhibit P-5a, Procurement History and Planning: PB 2019 Army									Date: February 2018			
Appropriation / Budget Activity / Budget Sub Activity: 2032A / 02 / 30				P-1 Line Item Number / Title: 6870C88001 / LETHAL MINIATURE AERIAL MISSILE SYSTEM (LMAMS)					Item Number / Title [DODIC]: C88022 / LETHAL MINIATURE AERIAL MISSILE SYSTEM (LMAMS)			
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
All Up Rounds <sup>(†)</sup>		2017	AeroVironment / Simi Valley, CA	SS / FFP	AMCOM, Redstone Arsenal, AL	Sep 2017	Apr 2018	509	61.100	Y		
All Up Rounds <sup>(†)</sup>	✓	2019	AeroVironment / Simi Valley, CA	SS / FFP	AMCOM, Redstone Arsenal, AL	Mar 2019	Oct 2019	1,318	57.360	Y		

(†) indicates the presence of a P-21

**Remarks:**

FY All Up Round Quantities:

FY17 Army OCO: 509.

FY18 Army OCO: 0.

FY19 Army OCO: 1,318.

10 U.S. Code #2431 and DoD Financial Mgt Reg

Vol 2B, Ch4 mandate Production Rates be

defined in terms of ""budget year.""

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Exhibit P-21, Production Schedule: PB 2019 Army																			Date: February 2018														
Appropriation / Budget Activity / Budget Sub Activity: 2032A / 02 / 30							P-1 Line Item Number / Title: 6870C88001 / LETHAL MINIATURE AERIAL MISSILE SYSTEM (LMAMS)												Item Number / Title [DODIC]: C88022 / LETHAL MINIATURE AERIAL MISSILE SYSTEM (LMAMS)														
Cost Elements (Units in Each)							Fiscal Year 2017												Fiscal Year 2018												B A L A N C E		
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			
All Up Rounds																																	
	1	2017	ARMY	509	0	509													A -	-	-	-	-	-	-	-	60	60	60	60	60	60	149
✓	1	2019	ARMY	1,318	0	1,318																									1,318		
							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 2019 Army																				Date: February 2018														
Appropriation / Budget Activity / Budget Sub Activity: 2032A / 02 / 30										P-1 Line Item Number / Title: 6870C88001 / LETHAL MINIATURE AERIAL MISSILE SYSTEM (LMAMS)										Item Number / Title [DODIC]: C88022 / LETHAL MINIATURE AERIAL MISSILE SYSTEM (LMAMS)														
Cost Elements (Units in Each)							Fiscal Year 2019													Fiscal Year 2020													BALANCE	
OCO	MFR#	FY	SERVICE	PROCQTY	ACCEPT PRIOR TO 1 OCT 2018	BAL DUE AS OF 1 OCT	Calendar Year 2019													Calendar Year 2020														
							OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP				
All Up Rounds																																		
	1	2017	ARMY	509	360	149	60	60	29																									0
✓	1	2019	ARMY	1,318	0	1,318					A	-	-	-	-	-	-	110	110	110	110	110	110	110	110	110	110	108	0					
							OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP				

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Exhibit P-21, Production Schedule: PB 2019 Army									Date: February 2018			
Appropriation / Budget Activity / Budget Sub Activity: 2032A / 02 / 30				P-1 Line Item Number / Title: 6870C88001 / LETHAL MINIATURE AERIAL MISSILE SYSTEM (LMAMS)					Item Number / Title [DODIC]: C88022 / LETHAL MINIATURE AERIAL MISSILE SYSTEM (LMAMS)			
MFR Ref #	Manufacturer Name - Location	Production Rates (Each / Year)			Procurement Leadtime (Months)							
		MSR For 2019	1-8-5 For 2019	MAX For 2019	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	AeroVironment - Simi Valley, CA	600	660	1,380	1	1	3	4	1	1	3	4
Remarks: MSR and MAX does not apply to LMAMS, as All Up Rounds are delivered in response to JUONS.												
"A" in the Delivery Schedule indicates the Contract Award Date. <b>Note:</b> 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 2019 Army **Date:** February 2018

<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 2032A: Missile Procurement, Army / BA 03: Modification of Missiles / BSA 10: Modifications	<b>P-1 Line Item Number / Title:</b> 0962C50700 / Patriot 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> 0607865A
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**Line Item MDAP/MAIS Code:** N/A

Resource Summary	Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	To Complete	Total
Procurement Quantity ( <i>Units in Each</i> )	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost ( <i>\$ in Millions</i> )	3,429.927	197.107	496.073	313.228	-	313.228	292.218	209.387	146.657	160.679	Continuing	Continuing
Less PY Advance Procurement ( <i>\$ in Millions</i> )	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) ( <i>\$ in Millions</i> )	3,429.927	197.107	496.073	313.228	-	313.228	292.218	209.387	146.657	160.679	Continuing	Continuing
Plus CY Advance Procurement ( <i>\$ in Millions</i> )	-	-	-	-	-	-	-	-	-	-	-	-
<b>Total Obligation Authority (<i>\$ in Millions</i>)</b>	<b>3,429.927</b>	<b>197.107</b>	<b>496.073</b>	<b>313.228</b>	<b>-</b>	<b>313.228</b>	<b>292.218</b>	<b>209.387</b>	<b>146.657</b>	<b>160.679</b>	<b>Continuing</b>	<b>Continuing</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> )	-	-	-	-	-	-	-	-	-	-	-	-

## Description:

The PATRIOT Mods program implements critical capability, readiness and sustainability modifications to the weapon system and maintains Integrated Logistics Support. Required modifications are identified through various means to include: validated requirement documents such as the Capability Production Document (CPD), Capabilities Development Document (CDD), and the Operational Needs Statement (ONS); material changes supported by improved operational effectiveness as identified in the PATRIOT Product Improvement Program (PIP); material deficiencies identified in the field; obsolescence issues; emerging technologies; software improvements related to warfighter machine and crew interface requirements and communication upgrades. ?

PATRIOT Mods funding supports Reliability, Availability, and Maintainability (RAM) Mods; Recapitalization (RECAP); Battery Command Post/ Tactical Command System /Computer Software Module (BCP/TCS/ CSM) Mod; the Combined Crypto Modification Phase I (CCMPI) upgrade; the Radar Digital Processor-Configuration (RDP-C) upgrade; PATRIOT Maintenance Trainer (PMT); PATRIOT Multi-Echelon Training (PMET); Reconfigurable Table Top Trainers (RT3); Assured Positioning, Navigation, and Timing (PNT); Test Detachment; Enhanced Launcher Electronic Systems (ELES); SIPRNet/NIPRNet Access Point/ Troposcatter (SNAP/TROPO); Digital Sidelobe Canceller (DSLC); Command Obsolescence Alleviation; 35th Brigade Modification Kits and ADI TPX 57 Obsolescence.

RAM modifications provide resolution to field failures which are identified through component analysis, field data collection, obsolescence issues and emerging technologies which are prioritized based on readiness and Operations and Support (O&S) impacts. This effort includes the engineering, acquisition, qualification testing, installation, technical support and training device upgrades associated with modification and design changes which are essential to stabilize the system at the highest readiness posture available and reduction of O&S. Kit quantity is based on expected Engineering Change Proposals (ECPs) to be applied to Major End Items (MEIs). Quantities will be procured at an optimized rate utilizing price advantage created through contract negotiation, other service procurement, and/or foreign military sales into a buy-to-budget procurement strategy.

Recapitalization (RECAP) Modifications include critical upgrades including but not limited to: Family of Medium Tactical Vehicles (FMTV), and Depot Maintenance Plant Equipment (DMPE), Harmonic Generator Kits, Post Deployment Build 8 (PDB-8) S/W & H/W, Cryptographic Modernization Kits, Modern Man Station (MMS), Antenna Mast Group (AMG) Cable upgrades, Electronic Power Plant (EPP) C3 Power Distribution Unit (PDU) kits, Information and Coordination Central (ICC) External Time Reference (ETR) kits, and Cooling Liquid Electron Tube (CLET) kits. These modifications are synchronized within the RECAP program. RECAP is a battalion set, resulting in a more supportable, reliable, and capable unit in the force. Quantity represents 1 battalion a year.

The Battery Command Post/Tactical Command System/Computer Software Module (BCP/TCS/CSM) effort continues the development of the Capabilities Development Document (CDD) required Battle Management, Command, Control, Communications, Computers, and Intelligence (BMC4I) capability to maintain compatibility with tactical software enhancements, while enhancing and improving the defense design and planning capabilities for the PATRIOT warfighter. This includes systems engineering, software requirements, software design/code/test and independent validation and verification testing. This effort



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Exhibit P-40, Budget Line Item Justification: PB 2019 Army		Date: February 2018
Appropriation / Budget Activity / Budget Sub Activity: 2032A: Missile Procurement, Army / BA 03: Modification of Missiles / BSA 10: Modifications		P-1 Line Item Number / Title: 0962C50700 / Patriot Mods
ID Code (A=Service Ready, B=Not Service Ready):	Program Elements for Code B Items: N/A	Other Related Program Elements: 0607865A
Line Item MDAP/MAIS Code: N/A		
also provides Integrated Logistics Support, required due to the large amount of Commercial Off The Shelf components, of the 62 Battery Command Posts and 17 Tactical Command Systems. Additionally, this effort supports the BCP/TCS/CSM fielding upgrades for each PATRIOT Post Deployment Build updates. Note: Quantities procured and installed in prior years.		
Combined Crypto Modification Phase I (CCMPI): The planned PATRIOT communications upgrade program is a phased approach leveraging National Security Agency (NSA) mandated crypto updates, user generated requirements, (PATRIOT Data Information Link (PADIL) over IP), Beyond Line of Sight (BLOS) communications, and communications hardware obsolescence mitigation efforts. This approach allows cost efficiencies and better business practices by synergizing these efforts. CCMPI is fully funded and addresses the PAC-3 Capability Production Document (CPD) requirements including the crypto modernization, a limited PADIL over Internet Protocol (IP) capability, and 3011C multi-cast (protocol). CCMPI installs a Black Station Clock Upgrade (BSCU) to allow for increased data rates; the Ruggedized iQ1000 (RiQ) for data processing and IP overlay; and interfaces for soldier provided SIPR/NIPR devices. The CCMPI program also replaces KG-94A/194A encryptors with KIV-7M encryptors.		
The Radar Digital Processor-Configuration (RDP-C) replaces obsolete digital processors with single rack commercial off-the-shelf based modern processors. Battery Replaceable Units (BRUs) are reduced from 759 to 56 with 13 power supplies and 18 racks removed. Benefits of the RDP-C include improvement in radar reliability, life cycle cost savings, and capability and growth potential through software improvements. The RDP-C modification will enable full AN/TPX-57(v)1 Identification Friend or Foe (IFF) Mode 5 Level 1 and 2 and new Combat Identification capabilities. The enhanced IFF capability allows for expanded target reports from the AN/TPX-57 which will include: National Origin, Platform ID Number (PIN), and GPS position (Level 2). The RDP-C is a prerequisite for migration to an IAMD Netted Sensor. The RDP-C will support efforts to counter emerging threats and growth to the netted sensor concept. This effort includes funding for kits and some spares.		
Patriot Multi-Echelon Training (PMET), Reconfigurable Table Top Trainer (RT3): The PATRIOT Weapons System uses tactical equipment and training aids, devices, simulators, and simulations (TADSS) to conduct multi-level training for both operators and maintenance personnel. This includes both hardware devices and software programs utilized to include; the Patriot Maintenance Trainer (PMT), Reconfigurable Table Top Trainer (RT3) and the Patriot Multi-Echelon Training (PMET). The PMT is a new device being developed and planned for fielding to the Air Defense Artillery Schools at Fort Sill, OK. The PMT trains 14E, 140E, 14T, 94S and 948D 6D tasks. It reduces dependency on tactical equipment by merging physical simulators and virtual simulations replicating a realistic training environment. The PMT will have one instructor station, one radar set, one launching station, and an engagement control station. Some components will be actual physical representations of the tactical hardware while other components will be virtually simulated using state of the art gaming technology of P-MET. The two environments will work seamlessly together to simulate the tactical end items. P-MET is a Microsoft Windows based software application utilizing state of the art gaming technology to train U.S. Army personnel in the proper trouble-shooting techniques to repair and maintain the PATRIOT Missile System. P-MET is the Life Cycle Replacement for the PATRIOT Intermediate Maintenance Institutional Trainer (PIMIT) for Intermediate Maintenance training but is also used for Organizational, NET, and even Depot maintenance training. P-MET is used in an institutional, field and depot environment. P-MET is designed and developed to operate on the RT3. The RT3 provides a flexible training platform that may be configured to support multiple training levels and systems, via removable hard drives. In PATRIOT the RT3 is used to run the PATRIOT tactical embedded training software (re-hosted tactical training software, PATRIOT Conduct of Fire Trainer (PCOFT)) for operations tasks, the P-MET software for maintenance tasks, and the PATRIOT Skills Library (PSL) lessons for both maintenance and operator tasks. Other weapon systems may also use the RT3 platform for training (i.e., C-RAM, THAAD, and JLENS). The RT3 is a Life Cycle Replacement for the PCOFT and the PATRIOT Intermediate Maintenance Institutional Trainer (PIMIT) hardware platforms.		
The Enhanced Launcher Electronics System (ELES) modification upgrades a PAC-2 Launcher to a PAC-3 Capability. In addition to the ELES modification kit, last time procurement of obsolete components will occur to support the assured producibility of the ELES.		
SIPRNet/NIPRNet Access Point/Troposcatter (SNAP/TROPO). The SNAP/TROPO program provides units with an organic Beyond Line of Sight (BLOS) capability and completes the 94 AAMDC UMR requirement to support both intra battalion and external battalion communications. Troposcatter terminals allow connectivity between PATRIOT shelters when local terrain or long distances make organic Ultra High Frequency (UHF) Line of Sight (LOS) communications impossible to support fire control quality data exchanges. SNAP terminals allow a PATRIOT shelter without access to any local infrastructure to remotely connect to both SIPRnet and NIPRnet using Ku, Ka, or X band satellites for range extension in response to Operational Need Statements from combatant commands.		
Assured Position, Navigation and Timing (PNT) - Purchases integrated Project Manager (PM) PNT M-code capable hardware for integration on Patriot Major End Items (MEI). Effort supports mandated FY2011 National Defense Authorization Act; public law 111-383 Sec. 913.		
Test Detachment - A manned and equipped unit consisting of various ancillary PATRIOT Ground Support Equipment elements that will assume the testing role and relieve operational units. The Air and Missile Defense (AMD) test detachment is a Table of Distribution and Allowances (TDA) unit consisting of 143 personnel containing a mixture of air defense, communications and maintenance Military		

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<b>Exhibit P-40, Budget Line Item Justification:</b> PB 2019 Army		<b>Date:</b> February 2018
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 2032A: Missile Procurement, Army / BA 03: Modification of Missiles / BSA 10: Modifications		<b>P-1 Line Item Number / Title:</b> 0962C50700 / Patriot Mods
<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> 0607865A
<b>Line Item MDAP/MAIS Code:</b> N/A		
<p>Occupational Specialty (MOS) Soldiers which participate in all government developmental tests, missile flight tests, Tactics Techniques and Procedures (TTP) development and operational testing in support of the development, modernization and sustainment of current and future AMD programs. Applied modernization configuration and capability will include funding to support the Radar Digital Processor (RDP), Modern Man Station (MMS), Combined Crypto Modernization Phase-1 (CCMP-1) and Post Deployment Build 8 (PDB-8) enhancements. Use of this detachment to support testing versus tasking operational PATRIOT units allows execution of currently scheduled testing while vastly minimizing the stress on the 15 PATRIOT Battalions in the operational force.</p> <p>Digital Sidelobe Canceller (DSLCL) is an Electronic Counter Measures (ECM) technique used to cancel the interference that is entering the radar via the antenna sidelobes. This is currently being performed using analog hardware in the PATRIOT radar. DSLCL replaces the analog hardware and performs this task digitally in the radars processor. Benefits of the DSLCL include improved Side Lobe Canceller (SLC) Reliability and Maintainability, removal of complicated SLC adjustments, improves radar availability, removes 5 SLC Racks, provides hardware base for improved capability, and eliminates known and future obsolescence in SLC racks.</p> <p>Command Obsolescence Alleviation supports updates for interoperability and supportability by working obsolescence alleviation and engineering changes.</p> <p>35th Brigade Modernization: Modification kits were used in FY17 to support the critical and urgent VCSA initiative that accelerated the 35th Brigade modernization. The effort to procure kits and to modify tactical assets to the C3+ configuration will continue for the remaining PATRIOT Battalions.</p> <p>The Air Defense Interrogator (ADI) TPX 57 uses an Interrogator Reply Processor (IRP) card that is obsolete. The IRP card does not allow for SW/HW upgrades to the ADI. Once the spares in the field are absorbed the radar will become non mission capable (NMC).</p> <p>MAP/RDP Encryption Compliance: The operating systems in Modernized Adjunct Processor (MAP) and Radar Digital Processor (RDP) require upgrade and DoD level certification of the encryption algorithms that protect the contained Critical Program Information.</p> <p>IFF Antenna Redesign: IFF antenna elements are not supportable. Upgrade circa 1970's design with new technology to mitigate obsolescence, reduce costs, and improve reliability.</p> <p>Communications Obsolescence: Task is to replace obsolete PATRIOT communications equipment that is no longer supportable, with modern communications equipment for four PATRIOT Battalions.</p> <p>Report Rocket Classification: The modern Air and Missile Defense environment contains a wide variety and large quantities of TBM and rocket threats. This task provides situational awareness for operators and allows for greater efficiency in management of interceptor inventories in the complex AMD environment.</p>		

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<b>Exhibit P-40, Budget Line Item Justification:</b> PB 2019 Army								<b>Date:</b> February 2018	
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 2032A: Missile Procurement, Army / BA 03: Modification of Missiles / BSA 10: Modifications						<b>P-1 Line Item Number / Title:</b> 0962C50700 / Patriot Mods			
<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> 0607865A			
<b>Line Item MDAP/MAIS Code:</b> N/A									

Exhibits Schedule					Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 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	C50700 / PATRIOT MODS (Various)				- / 3,429.927	- / 197.107	- / 496.073	- / 313.228	- / -	- / 313.228
<b>P-40</b>	<b>Total Gross/Weapon System Cost</b>				<b>- / 3,429.927</b>	<b>- / 197.107</b>	<b>- / 496.073</b>	<b>- / 313.228</b>	<b>- / -</b>	<b>- / 313.228</b>

Exhibits Schedule					FY 2020	FY 2021	FY 2022	FY 2023	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	C50700 / PATRIOT MODS (Various)				- / 292.218	- / 209.387	- / 146.657	- / 160.679	Continuing	Continuing
<b>P-40</b>	<b>Total Gross/Weapon System Cost</b>				<b>- / 292.218</b>	<b>- / 209.387</b>	<b>- / 146.657</b>	<b>- / 160.679</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 2019 base procurement dollars in the amount of \$313.228 million support the modifications for Reliability, Availability, and Maintainability Modifications (RAM Mods), Recapitalization (RECAP), Battery Command Post/ Tactical Command System/ Computer Software Module (BCP/TCS/CSM), Radar Digital Processor-Configuration (RDP-C), Enhanced Launcher Electronics System (ELES), SIPRNet/NIPRNet Access Point/Troposcatter (SNAP/TROPO), PATRIOT Multi-Echelon Training (PMET), Reconfigurable Table Top Trainers (RT3), Digital Sidelobe Canceller (DSLCL), and Command Obsolescence Alleviation.

Efforts have been and will continue to be made to expedite PATRIOT materiel solutions (e.g., Radar Digital Processor and Communications Upgrades) to both enhance capability and facilitate integration into the Integrated Air and Missile Defense (IAMD) architecture.

In accordance with Section 1815 of the FY 2008 National Defense Authorization Act (P.L. 110-181), this item is necessary for 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 2019 Army							<b>Date:</b> February 2018				
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 2032A / 03 / 10				<b>P-1 Line Item Number / Title:</b> 0962C50700 / Patriot Mods				<b>Modification Number / Title:</b> C50700 / PATRIOT MODS			

ID Code (A=Service Ready, B=Not Service Ready) :							MDAP/MAIS Code:					
Resource Summary	Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	To Complete	Total
Procurement Quantity (Units in Each)	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost (\$ in Millions)	3,429.927	197.107	496.073	313.228	-	313.228	292.218	209.387	146.657	160.679	Continuing	Continuing
Less PY Advance Procurement (\$ in Millions)	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) (\$ in Millions)	3,429.927	197.107	496.073	313.228	-	313.228	292.218	209.387	146.657	160.679	Continuing	Continuing
Plus CY Advance Procurement (\$ in Millions)	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority (\$ in Millions)	3,429.927	197.107	496.073	313.228	-	313.228	292.218	209.387	146.657	160.679	Continuing	Continuing
(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)	-	-	-	-	-	-	-	-	-	-	-	-

**Description:**

The PATRIOT weapon system modernization program implements modifications to the weapon system and maintains Integrated Logistics Support. Required modifications are identified through various means, including the following: validated requirements documents such as Capability Production Documents and Operational Needs Statements; material changes identified in the PATRIOT Product Improvement Program (PIP); material deficiencies identified in the field; obsolescence issues; emerging technologies; software improvements; crew interface and communications upgrades.

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Exhibit P-3a, Individual Modification: PB 2019 Army									Date: February 2018				
Appropriation / Budget Activity / Budget Sub Activity: 2032A / 03 / 10				P-1 Line Item Number / Title: 0962C50700 / Patriot Mods					Modification Number / Title: C50700 / PATRIOT MODS				
ID Code (A=Service Ready, B=Not Service Ready) :							MDAP/MAIS Code:						
Models of Systems Affected: Various				Modification Type: Various				Related RDT&E PEs:					
Financial Plan	Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	To Complete	Total	
	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	
Procurement													
Modification Item 1 of 22: RAM Mods													
A Kits													
Recurring													
Kit Quantity	6,434 / 639.659	129 / 27.161	131 / 20.593	126 / 20.791	- / -	126 / 20.791	162 / 21.979	145 / 21.987	148 / 22.830	148 / 22.995	Continuing	Continuing	
Training	- / 61.733	- / 12.925	- / 15.601	- / 15.749	- / -	- / 15.749	- / 16.650	- / 16.656	- / 17.294	- / 17.419	Continuing	Continuing	
Training Equipment	- / 23.729	- / 2.585	- / 3.113	- / 3.151	- / -	- / 3.151	- / 3.331	- / 3.332	- / 3.460	- / 3.485	Continuing	Continuing	
Support Equipment	- / 39.378	- / 6.721	- / 8.116	- / 8.189	- / -	- / 8.189	- / 8.657	- / 8.661	- / 8.993	- / 9.058	Continuing	Continuing	
Fielding Support and NET	- / 71.017	- / 11.374	- / 13.729	- / 13.860	- / -	- / 13.860	- / 14.652	- / 14.658	- / 15.219	- / 15.329	Continuing	Continuing	
Integrated Logistics Support	- / 9.737	- / 1.034	- / 1.257	- / 1.260	- / -	- / 1.260	- / 1.332	- / 1.332	- / 1.383	- / 1.393	Continuing	Continuing	
Subtotal: Recurring	6,434 / 845.253	129 / 61.800	131 / 62.409	126 / 63.000	- / -	126 / 63.000	162 / 66.601	145 / 66.626	148 / 69.179	148 / 69.679	Continuing	Continuing	
Subtotal: RAM Mods	6,434 / 845.253	129 / 61.800	131 / 62.409	126 / 63.000	- / -	126 / 63.000	162 / 66.601	145 / 66.626	148 / 69.179	148 / 69.679	Continuing	Continuing	
Modification Item 2 of 22: Recapitalization													
A Kits													
Recurring													
Kit Quantity	13 / 221.339	1 / 12.411	1 / 12.650	1 / 13.100	- / -	1 / 13.100	1 / 14.100	1 / 14.100	1 / 14.300	- / 14.300	Continuing	Continuing	
Integrated Logistics Support	- / 16.506	- / 0.802	- / 1.650	- / 1.100	- / -	- / 1.100	- / 1.100	- / 1.100	- / 1.200	- / 1.200	Continuing	Continuing	
Subtotal: Recurring	13 / 237.845	1 / 13.213	1 / 14.300	1 / 14.200	- / -	1 / 14.200	1 / 15.200	1 / 15.200	1 / 15.500	- / 15.500	Continuing	Continuing	
Subtotal: Recapitalization	13 / 237.845	1 / 13.213	1 / 14.300	1 / 14.200	- / -	1 / 14.200	1 / 15.200	1 / 15.200	1 / 15.500	- / 15.500	Continuing	Continuing	
Modification Item 3 of 22: BCP/TCS/CSM													
A Kits													
Recurring													
Engineering Change Orders	- / 2.075	- / 0.770	- / 0.770	- / 0.770	- / -	- / 0.770	- / 0.770	- / 0.770	- / 0.770	- / 0.770	Continuing	Continuing	
Fielding Support	- / 3.979	- / 0.980	- / 0.980	- / 0.980	- / -	- / 0.980	- / 0.980	- / 0.980	- / 0.980	- / 0.980	Continuing	Continuing	
Obsolescence/Tech Refresh	- / 0.733	- / 0.280	- / 0.280	- / 0.280	- / -	- / 0.280	- / 0.280	- / 0.280	- / 0.280	- / 0.280	Continuing	Continuing	
Software/Systems Engineering	- / 29.050	- / 0.980	- / 0.980	- / 0.980	- / -	- / 0.980	- / 0.980	- / 0.980	- / 0.980	- / 0.980	Continuing	Continuing	
Integrated Logistics Support	- / 42.210	- / 3.990	- / 3.990	- / 3.990	- / -	- / 3.990	- / 3.990	- / 3.990	- / 3.990	- / 3.990	Continuing	Continuing	
Subtotal: Recurring	- / 78.047	- / 7.000	- / 7.000	- / 7.000	- / -	- / 7.000	- / 7.000	- / 7.000	- / 7.000	- / 7.000	Continuing	Continuing	
Non-Recurring													
BCP Kit Quantity	62 / 29.435	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.000	62 / 29.435	
TCS Kit Quantity	17 / 0.000	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.000	17 / 0.000	
Subtotal: Non-Recurring	79 / 29.435	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	79 / 29.435	

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Exhibit P-3a, Individual Modification: PB 2019 Army									Date: February 2018				
Appropriation / Budget Activity / Budget Sub Activity: 2032A / 03 / 10				P-1 Line Item Number / Title: 0962C50700 / Patriot Mods					Modification Number / Title: C50700 / PATRIOT MODS				
ID Code (A=Service Ready, B=Not Service Ready) :							MDAP/MAIS Code:						
Models of Systems Affected: Various				Modification Type: Various				Related RDT&E PEs:					
Financial Plan	Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	To Complete	Total	
	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	
Subtotal: BCP/TCS/CSM	79 / 107.482	- / 7.000	- / 7.000	- / 7.000	- / -	- / 7.000	- / 7.000	- / 7.000	- / 7.000	- / 7.000	Continuing	Continuing	
Modification Item 4 of 22: Combined Crypto Modification Phase I (CCMPI)													
A Kits													
Recurring													
Kit Quantity	150 / 48.970	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.000	150 / 48.970	
Kit Quantity (GFE)	- / 0.804	- / 0.268	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.000	- / 1.072	
Subtotal: Recurring	150 / 49.774	- / 0.268	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	150 / 50.042	
Non-Recurring													
Training	- / 0.396	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.000	- / 0.396	
Subtotal: Non-Recurring	- / 0.396	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.396	
Subtotal: Combined Crypto Modification Phase I (CCMPI)	150 / 50.170	- / 0.268	- / -	- / 0.000	- / -	- / 0.000	- / -	- / -	- / -	- / -	- / -	150 / 50.438	
Modification Item 5 of 22: Radar Digital Processor - Configuration (RDP-C)													
A Kits													
Recurring													
Kit Quantity	80 / 240.766	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.000	80 / 240.766	
Fielding	- / 4.000	- / 4.000	- / 4.000	- / 2.000	- / -	- / 2.000	- / -	- / -	- / -	- / -	- / 0.000	- / 14.000	
Support Equipment	- / 36.942	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.000	- / 36.942	
Subtotal: Recurring	80 / 281.708	- / 4.000	- / 4.000	- / 2.000	- / -	- / 2.000	- / -	- / -	- / -	- / -	- / -	80 / 291.708	
Subtotal: Radar Digital Processor - Configuration (RDP-C)	80 / 281.708	- / 4.000	- / 4.000	- / 2.000	- / -	- / 2.000	- / -	- / -	- / -	- / -	- / -	80 / 291.708	
Modification Item 6 of 22: Air Defense Artillery School Upgrades/ TADSS													
A Kits													
Recurring													
Radar Kit Quantity	4 / 96.000	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.000	4 / 96.000	
Subtotal: Recurring	4 / 96.000	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	4 / 96.000	
Subtotal: Air Defense Artillery School Upgrades/ TADSS	4 / 96.000	- / -	- / -	- / 0.000	- / -	- / 0.000	- / -	- / -	- / -	- / -	- / -	4 / 96.000	
Modification Item 7 of 22: Modern Manstation (MMS)													
A Kits													
Recurring													

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Exhibit P-3a, Individual Modification: PB 2019 Army								Date: February 2018				
Appropriation / Budget Activity / Budget Sub Activity: 2032A / 03 / 10			P-1 Line Item Number / Title: 0962C50700 / Patriot Mods					Modification Number / Title: C50700 / PATRIOT MODS				
ID Code (A=Service Ready, B=Not Service Ready) :							MDAP/MAIS Code:					
Models of Systems Affected: Various			Modification Type: Various					Related RDT&E PEs:				
Financial Plan	Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	To Complete	Total
	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)
Fielding	- / 7.825	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.000	- / 7.825
Support Equipment	- / 56.567	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.000	- / 56.567
Subtotal: Recurring	- / 64.392	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 64.392
Non-Recurring												
Kit Quantity	82 / 55.842	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.000	82 / 55.842
Subtotal: Non-Recurring	82 / 55.842	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	82 / 55.842
Subtotal: Modern Manstation (MMS)	82 / 120.234	- / -	- / -	- / 0.000	- / -	- / 0.000	- / -	- / -	- / -	- / -	- / -	82 / 120.234
Modification Item 8 of 22: Enhanced Launcher Electronics System (ELES)												
A Kits												
Recurring												
Kit Quantity	219 / 67.304	- / -	72 / 286.623	38 / 145.278	- / -	38 / 145.278	34 / 131.917	12 / 48.861	- / -	- / -	- / 0.000	375 / 679.983
Subtotal: Recurring	219 / 67.304	- / -	72 / 286.623	38 / 145.278	- / -	38 / 145.278	34 / 131.917	12 / 48.861	- / -	- / -	- / -	375 / 679.983
Subtotal: Enhanced Launcher Electronics System (ELES)	219 / 67.304	- / -	72 / 286.623	38 / 145.278	- / -	38 / 145.278	34 / 131.917	12 / 48.861	- / -	- / -	- / -	375 / 679.983
Modification Item 9 of 22: SNAP/TROPO												
A Kits												
Recurring												
Kit Quantity SNAP	4 / 0.548	2 / 0.282	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.000	6 / 0.830
Support	- / 1.799	- / 2.897	- / 1.115	- / 1.115	- / -	- / 1.115	- / 1.115	- / -	- / -	- / -	- / 0.000	- / 8.041
Integrated Logistics Support	- / 1.048	- / 1.046	- / 0.633	- / 0.633	- / -	- / 0.633	- / 0.633	- / -	- / -	- / -	- / 0.000	- / 3.993
Training	- / 0.089	- / 0.080	- / 0.002	- / 0.002	- / -	- / 0.002	- / 0.002	- / -	- / -	- / -	- / 0.000	- / 0.175
Equipment	- / 0.859	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.000	- / 0.859
Subtotal: Recurring	4 / 4.343	2 / 4.305	- / 1.750	- / 1.750	- / -	- / 1.750	- / 1.750	- / -	- / -	- / -	- / -	6 / 13.898
Non-Recurring												
Kit Quantity TROPO	10 / 4.689	16 / 8.195	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.000	26 / 12.884
Subtotal: Non-Recurring	10 / 4.689	16 / 8.195	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	26 / 12.884
Subtotal: SNAP/TROPO	14 / 9.032	18 / 12.500	- / 1.750	- / 1.750	- / -	- / 1.750	- / 1.750	- / -	- / -	- / -	- / -	32 / 26.782
Modification Item 10 of 22: PATRIOT Maintenance Trainer (PMT)												
A Kits												
Recurring												
Kit Quantity	1 / 15.941	1 / 15.000	2 / 27.000	- / -	- / -	- / -	- / -	1 / 10.000	- / -	- / -	- / 0.000	5 / 67.941

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Exhibit P-3a, Individual Modification: PB 2019 Army								Date: February 2018				
Appropriation / Budget Activity / Budget Sub Activity: 2032A / 03 / 10			P-1 Line Item Number / Title: 0962C50700 / Patriot Mods					Modification Number / Title: C50700 / PATRIOT MODS				
ID Code (A=Service Ready, B=Not Service Ready) :							MDAP/MAIS Code:					
Models of Systems Affected: Various			Modification Type: Various					Related RDT&E PEs:				
Financial Plan	Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	To Complete	Total
	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)
Subtotal: Recurring	1 / 15.941	1 / 15.000	2 / 27.000	- / -	- / -	- / -	- / -	1 / 10.000	- / -	- / -	- / -	5 / 67.941
Non-Recurring												
Training Support	- / 4.000	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.000	- / 4.000
Subtotal: Non-Recurring	- / 4.000	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 4.000
Subtotal: PATRIOT Maintenance Trainer (PMT)	1 / 19.941	1 / 15.000	2 / 27.000	- / 0.000	- / -	- / 0.000	- / -	1 / 10.000	- / -	- / -	- / -	5 / 71.941
Modification Item 11 of 22: PATRIOT Multi-Echelon Training (PMET)												
A Kits												
Recurring												
Kit Quantity	8 / 10.880	4 / 5.300	4 / 5.000	4 / 5.000	- / -	4 / 5.000	4 / 7.000	4 / 7.000	4 / 7.000	4 / 7.000	Continuing	Continuing
Subtotal: Recurring	8 / 10.880	4 / 5.300	4 / 5.000	4 / 5.000	- / -	4 / 5.000	4 / 7.000	4 / 7.000	4 / 7.000	4 / 7.000	Continuing	Continuing
Subtotal: PATRIOT Multi-Echelon Training (PMET)	8 / 10.880	4 / 5.300	4 / 5.000	4 / 5.000	- / -	4 / 5.000	4 / 7.000	4 / 7.000	4 / 7.000	4 / 7.000	Continuing	Continuing
Modification Item 12 of 22: Reconfigurable Table Top Trainers (RT3)												
A Kits												
Recurring												
Kit Quantity	326 / 13.838	100 / 7.500	- / -	163 / 15.000	- / -	163 / 15.000	- / -	- / -	- / -	- / -	- / 0.000	589 / 36.338
Subtotal: Recurring	326 / 13.838	100 / 7.500	- / -	163 / 15.000	- / -	163 / 15.000	- / -	- / -	- / -	- / -	- / -	589 / 36.338
Subtotal: Reconfigurable Table Top Trainers (RT3)	326 / 13.838	100 / 7.500	- / -	163 / 15.000	- / -	163 / 15.000	- / -	- / -	- / -	- / -	- / -	589 / 36.338
Modification Item 13 of 22: Assured PNT												
A Kits												
Recurring												
Hardware Integration	- / -	798 / 3.000	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.000	798 / 3.000
Subtotal: Recurring	- / -	798 / 3.000	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	798 / 3.000
Subtotal: Assured PNT	- / -	798 / 3.000	- / -	- / 0.000	- / -	- / 0.000	- / -	- / -	- / -	- / -	- / -	798 / 3.000
Modification Item 14 of 22: Test Detachment												
A Kits												
Recurring												
Equipment	- / -	1 / 49.409	- / 6.591	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.000	1 / 56.000
Subtotal: Recurring	- / -	1 / 49.409	- / 6.591	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	1 / 56.000
Subtotal: Test Detachment	- / -	1 / 49.409	- / 6.591	- / 0.000	- / -	- / 0.000	- / -	- / -	- / -	- / -	- / -	1 / 56.000



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Exhibit P-3a, Individual Modification: PB 2019 Army								Date: February 2018				
Appropriation / Budget Activity / Budget Sub Activity: 2032A / 03 / 10				P-1 Line Item Number / Title: 0962C50700 / Patriot Mods				Modification Number / Title: C50700 / PATRIOT MODS				
ID Code (A=Service Ready, B=Not Service Ready) :							MDAP/MAIS Code:					
Models of Systems Affected: Various				Modification Type: Various				Related RDT&E PEs:				
Financial Plan	Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	To Complete	Total
	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)
Modification Item 15 of 22: Digital Sidelobe Cancellor (DSLC)												
A Kits												
Recurring												
Kit Quantity	- / -	5 / 12.900	38 / 77.800	28 / 56.800	- / -	28 / 56.800	10 / 20.800	- / -	- / -	- / -	- / 0.000	81 / 168.300
Subtotal: Recurring	- / -	5 / 12.900	38 / 77.800	28 / 56.800	- / -	28 / 56.800	10 / 20.800	- / -	- / -	- / -	- / -	81 / 168.300
Subtotal: Digital Sidelobe Cancellor (DSLC)	- / -	5 / 12.900	38 / 77.800	28 / 56.800	- / -	28 / 56.800	10 / 20.800	- / -	- / -	- / -	- / -	81 / 168.300
Modification Item 16 of 22: Command Obsolescence Alleviation												
A Kits												
Recurring												
Command Obsolescenece Alleviation	- / -	- / 3.000	- / 2.000	- / 2.000	- / -	- / 2.000	- / 11.750	- / 5.500	- / 5.000	- / -	- / 0.000	- / 29.250
Subtotal: Recurring	- / -	- / 3.000	- / 2.000	- / 2.000	- / -	- / 2.000	- / 11.750	- / 5.500	- / 5.000	- / -	- / -	- / 29.250
Subtotal: Command Obsolescence Alleviation	- / -	- / 3.000	- / 2.000	- / 2.000	- / -	- / 2.000	- / 11.750	- / 5.500	- / 5.000	- / -	- / -	- / 29.250
Modification Item 17 of 22: 35th Brigade Modification Kits												
A Kits												
Non-Recurring												
Modification Kits	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	56 / 15.200	- / 0.000	56 / 15.200
Subtotal: Non-Recurring	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	56 / 15.200	- / -	56 / 15.200
Subtotal: 35th Brigade Modification Kits	- / -	- / -	- / -	- / 0.000	- / -	- / 0.000	- / -	- / -	- / -	56 / 15.200	- / -	56 / 15.200
Modification Item 18 of 22: ADI TPX 57 Obsolescence												
A Kits												
Non-Recurring												
ADI TPX	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	169 / 8.000	- / 0.000	169 / 8.000
Subtotal: Non-Recurring	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	169 / 8.000	- / -	169 / 8.000
Subtotal: ADI TPX 57 Obsolescence	- / -	- / -	- / -	- / 0.000	- / -	- / 0.000	- / -	- / -	- / -	169 / 8.000	- / -	169 / 8.000
Modification Item 19 of 22: MAP/RDP Encryption Compliance												
A Kits												
Non-Recurring												
Certification	- / -	- / -	- / -	- / -	- / -	- / -	- / 8.000	- / 12.000	- / -	- / -	- / 0.000	- / 20.000

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Exhibit P-3a, Individual Modification: PB 2019 Army								Date: February 2018					
Appropriation / Budget Activity / Budget Sub Activity: 2032A / 03 / 10				P-1 Line Item Number / Title: 0962C50700 / Patriot Mods				Modification Number / Title: C50700 / PATRIOT MODS					
ID Code (A=Service Ready, B=Not Service Ready) :							MDAP/MAIS Code:						
Models of Systems Affected: Various				Modification Type: Various				Related RDT&E PEs:					
Financial Plan	Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	To Complete	Total	
	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	
Subtotal: Non-Recurring	- / -	- / -	- / -	- / -	- / -	- / -	- / 8.000	- / 12.000	- / -	- / -	- / -	- / 20.000	
Subtotal: MAP/RDP Encryption Compliance	- / -	- / -	- / -	- / 0.000	- / -	- / 0.000	- / 8.000	- / 12.000	- / -	- / -	- / -	- / 20.000	
Modification Item 20 of 22: IFF Antenna Redesign													
A Kits													
Non-Recurring													
Kits	- / -	- / -	- / -	- / -	- / -	- / -	12 / 5.000	12 / 2.000	- / -	- / -	- / 0.000	24 / 7.000	
Subtotal: Non-Recurring	- / -	- / -	- / -	- / -	- / -	- / -	12 / 5.000	12 / 2.000	- / -	- / -	- / -	24 / 7.000	
Subtotal: IFF Antenna Redesign	- / -	- / -	- / -	- / 0.000	- / -	- / 0.000	12 / 5.000	12 / 2.000	- / -	- / -	- / -	24 / 7.000	
Modification Item 21 of 22: Communications Obsolescence													
A Kits													
Non-Recurring													
Kits	- / -	- / -	- / -	- / -	- / -	- / -	- / -	24 / 28.000	24 / 35.678	24 / 29.000	- / 0.000	72 / 92.678	
Engineering	- / -	- / -	- / -	- / -	- / -	- / -	- / 12.000	- / -	- / -	- / -	- / 0.000	- / 12.000	
Subtotal: Non-Recurring	- / -	- / -	- / -	- / -	- / -	- / -	- / 12.000	24 / 28.000	24 / 35.678	24 / 29.000	- / -	72 / 104.678	
Subtotal: Communications Obsolescence	- / -	- / -	- / -	- / 0.000	- / -	- / 0.000	- / 12.000	24 / 28.000	24 / 35.678	24 / 29.000	- / -	72 / 104.678	
Modification Item 22 of 22: Report Rocket Classification													
A Kits													
Non-Recurring													
Kits	- / -	- / -	- / -	- / -	- / -	- / -	- / 4.000	- / 6.000	- / 6.000	- / 8.000	- / 0.000	- / 24.000	
Subtotal: Non-Recurring	- / -	- / -	- / -	- / -	- / -	- / -	- / 4.000	- / 6.000	- / 6.000	- / 8.000	- / -	- / 24.000	
Subtotal: Report Rocket Classification	- / -	- / -	- / -	- / 0.000	- / -	- / 0.000	- / 4.000	- / 6.000	- / 6.000	- / 8.000	- / -	- / 24.000	
Subtotal: Procurement, All Modification Items	7,410 / 1,859.687	1,057 / 194.890	248 / 494.473	360 / 312.028	- / -	360 / 312.028	223 / 291.018	199 / 208.187	177 / 145.357	401 / 159.379	Continuing	Continuing	
Installation													
Modification Item 1 of 22: RAM Mods	6,434 / 151.613	100 / 0.000	120 / 0.000	130 / 0.000	- / -	130 / 0.000	129 / 0.000	144 / 0.000	153 / 0.000	146 / 0.000	6,757 / 0.000	14,113 / 151.613	
Modification Item 2 of 22: Recapitalization	13 / 225.745	1 / 0.985	1 / 1.100	1 / 1.200	- / -	1 / 1.200	1 / 1.200	1 / 1.200	1 / 1.300	1 / 1.300	10 / 0.000	30 / 234.030	
Modification Item 3 of 22: BCP/TCS/CSM	79 / 1,192.582	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	79 / 1,192.582	
Modification Item 4 of 22: Combined Crypto Modification Phase I (CCMPI)	53 / 0.300	59 / 1.232	38 / 0.500	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	150 / 2.032	

**UNCLASSIFIED**

Exhibit P-3a, Individual Modification: PB 2019 Army								Date: February 2018				
Appropriation / Budget Activity / Budget Sub Activity: 2032A / 03 / 10				P-1 Line Item Number / Title: 0962C50700 / Patriot Mods				Modification Number / Title: C50700 / PATRIOT MODS				
ID Code (A=Service Ready, B=Not Service Ready) :							MDAP/MAIS Code:					
Models of Systems Affected: Various			Modification Type: Various					Related RDT&E PEs:				
Financial Plan	Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	To Complete	Total
	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)
Modification Item 5 of 22: Radar Digital Processor - Configuration (RDP-C)	6 / 0.000	46 / 0.000	25 / 0.000	3 / 0.000	- / -	3 / 0.000	- / -	- / -	- / -	- / -	- / -	80 / 0.000
Modification Item 6 of 22: Air Defense Artillery School Upgrades/ TADSS	- / -	1 / 0.000	3 / 0.000	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	4 / 0.000
Modification Item 7 of 22: Modern Manstation (MMS)	82 / 0.000	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	82 / 0.000
Modification Item 8 of 22: Enhanced Launcher Electronics System (ELES)	211 / 0.000	8 / 0.000	- / -	36 / 0.000	- / -	36 / 0.000	36 / 0.000	38 / 0.000	34 / 0.000	12 / 0.000	- / -	375 / 0.000
Modification Item 9 of 22: SNAP/TROPO	14 / 0.000	18 / 0.000	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	32 / 0.000
Modification Item 10 of 22: PATRIOT Maintenance Trainer (PMT)	1 / 0.000	1 / 0.000	2 / 0.000	- / -	- / -	- / -	- / -	1 / 0.000	- / -	- / -	- / -	5 / 0.000
Modification Item 11 of 22: PATRIOT Multi-Echelon Training (PMET)	8 / 0.000	4 / 0.000	4 / 0.000	4 / 0.000	- / -	4 / 0.000	4 / 0.000	4 / 0.000	4 / 0.000	4 / 0.000	4 / 0.000	40 / 0.000
Modification Item 12 of 22: Reconfigurable Table Top Trainers (RT3)	326 / 0.000	- / -	100 / 0.000	- / -	- / -	- / -	163 / 0.000	- / -	- / -	- / -	- / -	589 / 0.000
Modification Item 13 of 22: Assured PNT	- / -	- / -	798 / 0.000	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	798 / 0.000
Modification Item 14 of 22: Test Detachment	- / -	1 / 0.000	1 / 0.000	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	2 / 0.000
Modification Item 15 of 22: Digital Sidelobe Cancellor (DSLCL)	- / -	- / -	5 / 0.000	38 / 0.000	- / -	38 / 0.000	28 / 0.000	10 / 0.000	- / -	- / -	- / -	81 / 0.000
Modification Item 17 of 22: 35th Brigade Modification Kits	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	56 / 0.000	56 / 0.000
Modification Item 18 of 22: ADI TPX 57 Obsolescence	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	169 / 0.000	169 / 0.000
Modification Item 20 of 22: IFF Antenna Redesign	- / -	- / -	- / -	- / -	- / -	- / -	- / -	12 / 0.000	12 / 0.000	- / -	- / -	24 / 0.000
Modification Item 21 of 22: Communications Obsolescence	- / -	- / -	- / -	- / -	- / -	- / -	- / -	16 / 0.000	24 / 0.000	24 / 0.000	8 / 0.000	72 / 0.000
Subtotal: Installation	7,227 / 1,570.240	239 / 2.217	1,097 / 1.600	212 / 1.200	0 / 0.000	212 / 1.200	361 / 1.200	226 / 1.200	228 / 1.300	187 / 1.300	7,004 / 0.000	16,781 / 1,580.257
Total												
Total Cost (Procurement + Support + Installation)	3,429.927	197.107	496.073	313.228	-	313.228	292.218	209.387	146.657	160.679	Continuing	Continuing

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<b>Exhibit P-3a, Individual Modification:</b> PB 2019 Army											<b>Date:</b> February 2018																								
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 2032A / 03 / 10											<b>P-1 Line Item Number / Title:</b> 0962C50700 / Patriot Mods											<b>Modification Number / Title:</b> C50700 / PATRIOT MODS													
<b>ID Code</b> (A=Service Ready, B=Not Service Ready) :											<b>MDAP/MAIS Code:</b>																								
<b>Modification Item 1 of 22:</b> RAM Mods																																			
<b>Manufacturer Information</b>																																			
Manufacturer Name: Raytheon													Manufacturer Location: Andover, MA																						
Administrative Leadtime (in Months): 2													Production Leadtime (in Months): 14																						
<b>Dates</b>	<b>FY 2017</b>					<b>FY 2018</b>					<b>FY 2019</b>					<b>FY 2020</b>					<b>FY 2021</b>					<b>FY 2022</b>					<b>FY 2023</b>				
Contract Dates	Dec 2016					Dec 2017					Dec 2018					Dec 2019					Dec 2020					Dec 2021					Dec 2022				
Delivery Dates	Feb 2018					Feb 2019					Feb 2020					Feb 2021					Feb 2022					Feb 2023					Feb 2024				
<b>Installation Information</b>																																			
<b>Method of Implementation:</b> Lead Logistics Fielding Team																																			
<b>Installation Cost</b>		<b>Prior Years</b>	<b>FY 2017</b>	<b>FY 2018</b>	<b>FY 2019 Base</b>	<b>FY 2019 OCO</b>	<b>FY 2019 Total</b>	<b>FY 2020</b>	<b>FY 2021</b>	<b>FY 2022</b>	<b>FY 2023</b>	<b>To Complete</b>	<b>Total</b>																						
		Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)																				
Prior Years		6,434 / 151.613	100 / 0.000	54 / 0.000	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	6,588 / 151.613																					
FY 2017		- / -	- / -	66 / 0.000	64 / 0.000	- / -	64 / 0.000	- / -	- / -	- / -	- / -	- / -	- / -	130 / 0.000																					
FY 2018		- / -	- / -	- / -	66 / 0.000	- / -	66 / 0.000	65 / 0.000	- / -	- / -	- / -	- / -	- / -	131 / 0.000																					
FY 2019		- / -	- / -	- / -	0 / 0.000	- / -	0 / 0.000	64 / 0.000	62 / 0.000	- / -	- / -	- / -	126 / 0.000																						
FY 2020		- / -	- / -	- / -	0 / 0.000	- / -	0 / 0.000	- / -	82 / 0.000	80 / 0.000	- / -	- / -	162 / 0.000																						
FY 2021		- / -	- / -	- / -	0 / 0.000	- / -	0 / 0.000	- / -	- / -	73 / 0.000	72 / 0.000	- / -	145 / 0.000																						
FY 2022		- / -	- / -	- / -	0 / 0.000	- / -	0 / 0.000	- / -	- / -	- / -	74 / 0.000	74 / 0.000	148 / 0.000																						
FY 2023		- / -	- / -	- / -	0 / 0.000	- / -	0 / 0.000	- / -	- / -	- / -	- / -	148 / 0.000	148 / 0.000																						
To Complete		- / -	- / -	- / -	0 / 0.000	- / -	0 / 0.000	- / -	- / -	- / -	- / -	6,535 / 0.000	6,535 / 0.000																						
Total		6,434 / 151.613	100 / 0.000	120 / 0.000	130 / 0.000	0 / 0.000	130 / 0.000	129 / 0.000	144 / 0.000	153 / 0.000	146 / 0.000	6,757 / 0.000	14,113 / 151.613																						
<b>Installation Schedule</b>																																			
	<b>PYS</b>	<b>FY 2017</b>				<b>FY 2018</b>				<b>FY 2019</b>				<b>FY 2020</b>				<b>FY 2021</b>				<b>FY 2022</b>				<b>FY 2023</b>				<b>TC</b>	<b>Tot</b>				
		<b>Q1</b>	<b>Q2</b>	<b>Q3</b>	<b>Q4</b>	<b>Q1</b>	<b>Q2</b>	<b>Q3</b>	<b>Q4</b>	<b>Q1</b>	<b>Q2</b>	<b>Q3</b>	<b>Q4</b>	<b>Q1</b>	<b>Q2</b>	<b>Q3</b>	<b>Q4</b>	<b>Q1</b>	<b>Q2</b>	<b>Q3</b>	<b>Q4</b>	<b>Q1</b>	<b>Q2</b>	<b>Q3</b>	<b>Q4</b>	<b>Q1</b>	<b>Q2</b>	<b>Q3</b>	<b>Q4</b>						
In	6,563	22	28	28	27	27	33	32	32	32	33	33	33	32	32	32	31	31	41	41	40	40	37	36	36	36	37	37	37	6,614	14,113				
Out	6,504	22	22	28	28	27	27	33	32	32	32	33	33	33	32	32	32	31	31	41	41	40	40	37	36	36	36	37	37	6,688	14,113				

## UNCLASSIFIED

<b>Exhibit P-3a, Individual Modification:</b> PB 2019 Army											<b>Date:</b> February 2018																					
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 2032A / 03 / 10											<b>P-1 Line Item Number / Title:</b> 0962C50700 / Patriot Mods											<b>Modification Number / Title:</b> C50700 / PATRIOT MODS										
<b>ID Code</b> (A=Service Ready, B=Not Service Ready) :											<b>MDAP/MAIS Code:</b>																					
<b>Modification Item 2 of 22:</b> Recapitalization																																
<b>Manufacturer Information</b>																																
Manufacturer Name: Various													Manufacturer Location: Various																			
Administrative Leadtime (in Months): 6													Production Leadtime (in Months): 12																			
<b>Dates</b>		<b>FY 2017</b>				<b>FY 2018</b>				<b>FY 2019</b>				<b>FY 2020</b>				<b>FY 2021</b>				<b>FY 2022</b>				<b>FY 2023</b>						
Contract Dates		Apr 2017				Apr 2018				Apr 2019				Apr 2020				Apr 2021				Apr 2022				Apr 2023						
Delivery Dates		Apr 2018				Apr 2019				Apr 2020				Apr 2021				Apr 2022				Apr 2023				Apr 2024						
<b>Installation Information</b>																																
<b>Method of Implementation:</b> Depot, PM Office, contractor team																																
<b>Installation Cost</b>		<b>Prior Years</b>	<b>FY 2017</b>		<b>FY 2018</b>		<b>FY 2019 Base</b>		<b>FY 2019 OCO</b>		<b>FY 2019 Total</b>		<b>FY 2020</b>		<b>FY 2021</b>		<b>FY 2022</b>		<b>FY 2023</b>		<b>To Complete</b>		<b>Total</b>									
		Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)		Qty (Each) / Total Cost (\$ M)		Qty (Each) / Total Cost (\$ M)		Qty (Each) / Total Cost (\$ M)		Qty (Each) / Total Cost (\$ M)		Qty (Each) / Total Cost (\$ M)		Qty (Each) / Total Cost (\$ M)		Qty (Each) / Total Cost (\$ M)		Qty (Each) / Total Cost (\$ M)		Qty (Each) / Total Cost (\$ M)		Qty (Each) / Total Cost (\$ M)									
Prior Years		13 / 225.745		1 / 0.985		- / -		- / -		- / -		- / -		- / -		- / -		- / -		- / -		- / -		14 / 226.730								
FY 2017		- / -		- / -		1 / 1.100		- / -		- / -		- / -		- / -		- / -		- / -		- / -		- / -		1 / 1.100								
FY 2018		- / -		- / -		- / -		1 / 1.200		- / -		1 / 1.200		- / -		- / -		- / -		- / -		- / -		1 / 1.200								
FY 2019		- / -		- / -		- / -		- / -		- / -		- / -		1 / 1.200		- / -		- / -		- / -		- / -		1 / 1.200								
FY 2020		- / -		- / -		- / -		- / -		- / -		- / -		- / -		1 / 1.200		- / -		- / -		- / -		1 / 1.200								
FY 2021		- / -		- / -		- / -		- / -		- / -		- / -		- / -		- / -		1 / 1.300		- / -		- / -		1 / 1.300								
FY 2022		- / -		- / -		- / -		- / -		- / -		- / -		- / -		- / -		- / -		1 / 1.300		- / -		1 / 1.300								
FY 2023		- / -		- / -		- / -		0 / 0.000		- / -		0 / 0.000		- / -		- / -		- / -		- / -		1 / 0.000		1 / 0.000								
To Complete		- / -		- / -		- / -		0 / 0.000		- / -		0 / 0.000		- / -		- / -		- / -		- / -		9 / 0.000		9 / 0.000								
Total		13 / 225.745		1 / 0.985		1 / 1.100		1 / 1.200		0 / 0.000		1 / 1.200		1 / 1.200		1 / 1.200		1 / 1.300		1 / 1.300		10 / 0.000		30 / 234.030								
<b>Installation Schedule</b>																																
	<b>PYS</b>	<b>FY 2017</b>				<b>FY 2018</b>				<b>FY 2019</b>				<b>FY 2020</b>				<b>FY 2021</b>				<b>FY 2022</b>				<b>FY 2023</b>				<b>TC</b>	<b>Tot</b>	
		<b>Q1</b>	<b>Q2</b>	<b>Q3</b>	<b>Q4</b>	<b>Q1</b>	<b>Q2</b>	<b>Q3</b>	<b>Q4</b>	<b>Q1</b>	<b>Q2</b>	<b>Q3</b>	<b>Q4</b>	<b>Q1</b>	<b>Q2</b>	<b>Q3</b>	<b>Q4</b>	<b>Q1</b>	<b>Q2</b>	<b>Q3</b>	<b>Q4</b>	<b>Q1</b>	<b>Q2</b>	<b>Q3</b>	<b>Q4</b>	<b>Q1</b>	<b>Q2</b>	<b>Q3</b>	<b>Q4</b>			
In	13	-	-	1	-	-	-	-	1	-	-	-	-	1	-	-	-	-	1	-	-	-	-	1	-	-	-	-	1	-	10	30
Out	12	-	1	-	-	-	1	-	-	-	-	1	-	-	-	-	1	-	-	-	-	1	-	-	-	-	1	-	-	-	11	30

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<b>Exhibit P-3a, Individual Modification:</b> PB 2019 Army												<b>Date:</b> February 2018																			
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 2032A / 03 / 10								<b>P-1 Line Item Number / Title:</b> 0962C50700 / Patriot Mods								<b>Modification Number / Title:</b> C50700 / PATRIOT MODS															
<b>ID Code</b> (A=Service Ready, B=Not Service Ready) :												<b>MDAP/MAIS Code:</b>																			
<b>Modification Item 3 of 22:</b> BCP/TCS/CSM																															
<b>Manufacturer Information</b>																															
Manufacturer Name: Various												Manufacturer Location: Various																			
Administrative Leadtime (in Months):												Production Leadtime (in Months):																			
<b>Dates</b>	<b>FY 2017</b>				<b>FY 2018</b>				<b>FY 2019</b>				<b>FY 2020</b>				<b>FY 2021</b>				<b>FY 2022</b>				<b>FY 2023</b>						
Contract Dates																															
Delivery Dates																															
<b>Installation Information</b>																															
<b>Method of Implementation:</b> Various																															
<b>Installation Cost</b>		<b>Prior Years</b>	<b>FY 2017</b>	<b>FY 2018</b>	<b>FY 2019 Base</b>	<b>FY 2019 OCO</b>	<b>FY 2019 Total</b>	<b>FY 2020</b>	<b>FY 2021</b>	<b>FY 2022</b>	<b>FY 2023</b>	<b>To Complete</b>	<b>Total</b>																		
		Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (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		79 / 1,192.582	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	79 / 1,192.582																	
FY 2017		- / -	- / -	- / -	0 / 0.000	- / -	0 / 0.000	- / -	- / -	- / -	- / -	- / -	- / -	- / -																	
FY 2018		- / -	- / -	- / -	0 / 0.000	- / -	0 / 0.000	- / -	- / -	- / -	- / -	- / -	- / -	- / -																	
FY 2019		- / -	- / -	- / -	0 / 0.000	- / -	0 / 0.000	- / -	- / -	- / -	- / -	- / -	- / -	- / -																	
FY 2020		- / -	- / -	- / -	0 / 0.000	- / -	0 / 0.000	- / -	- / -	- / -	- / -	- / -	- / -	- / -																	
FY 2021		- / -	- / -	- / -	0 / 0.000	- / -	0 / 0.000	- / -	- / -	- / -	- / -	- / -	- / -	- / -																	
FY 2022		- / -	- / -	- / -	0 / 0.000	- / -	0 / 0.000	- / -	- / -	- / -	- / -	- / -	- / -	- / -																	
FY 2023		- / -	- / -	- / -	0 / 0.000	- / -	0 / 0.000	- / -	- / -	- / -	- / -	- / -	- / -	- / -																	
To Complete		- / -	- / -	- / -	0 / 0.000	- / -	0 / 0.000	- / -	- / -	- / -	- / -	- / -	- / -	- / -																	
Total		79 / 1,192.582	0 / 0.000	0 / 0.000	0 / 0.000	0 / 0.000	0 / 0.000	- / -	- / -	- / -	- / -	- / -	- / -	79 / 1,192.582																	
<b>Installation Schedule</b>																															
	<b>PYS</b>	<b>FY 2017</b>				<b>FY 2018</b>				<b>FY 2019</b>				<b>FY 2020</b>				<b>FY 2021</b>				<b>FY 2022</b>				<b>FY 2023</b>				<b>TC</b>	<b>Tot</b>
		<b>Q1</b>	<b>Q2</b>	<b>Q3</b>	<b>Q4</b>	<b>Q1</b>	<b>Q2</b>	<b>Q3</b>	<b>Q4</b>	<b>Q1</b>	<b>Q2</b>	<b>Q3</b>	<b>Q4</b>	<b>Q1</b>	<b>Q2</b>	<b>Q3</b>	<b>Q4</b>	<b>Q1</b>	<b>Q2</b>	<b>Q3</b>	<b>Q4</b>	<b>Q1</b>	<b>Q2</b>	<b>Q3</b>	<b>Q4</b>	<b>Q1</b>	<b>Q2</b>	<b>Q3</b>	<b>Q4</b>		
In	79	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	79
Out	79	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	79

## UNCLASSIFIED

<b>Exhibit P-3a, Individual Modification:</b> PB 2019 Army										<b>Date:</b> February 2018																					
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 2032A / 03 / 10										<b>P-1 Line Item Number / Title:</b> 0962C50700 / Patriot Mods										<b>Modification Number / Title:</b> C50700 / PATRIOT MODS											
<b>ID Code</b> (A=Service Ready, B=Not Service Ready) :															<b>MDAP/MAIS Code:</b>																
<b>Modification Item 4 of 22:</b> Combined Crypto Modification Phase I (CCMPI)																															
<b>Manufacturer Information</b>																															
Manufacturer Name: Raytheon															Manufacturer Location: Andover, MA																
Administrative Leadtime (in Months): 3															Production Leadtime (in Months): 12																
<b>Dates</b>		<b>FY 2017</b>				<b>FY 2018</b>				<b>FY 2019</b>				<b>FY 2020</b>				<b>FY 2021</b>				<b>FY 2022</b>				<b>FY 2023</b>					
Contract Dates		Dec 2016																													
Delivery Dates		Dec 2017																													
<b>Installation Information</b>																															
<b>Method of Implementation:</b> Lead Logistics Fielding Team																															
<b>Installation Cost</b>		<b>Prior Years</b>		<b>FY 2017</b>		<b>FY 2018</b>		<b>FY 2019 Base</b>		<b>FY 2019 OCO</b>		<b>FY 2019 Total</b>		<b>FY 2020</b>		<b>FY 2021</b>		<b>FY 2022</b>		<b>FY 2023</b>		<b>To Complete</b>		<b>Total</b>							
		Qty (Each) / Total Cost (\$ M)		Qty (Each) / Total Cost (\$ M)		Qty (Each) / Total Cost (\$ M)		Qty (Each) / Total Cost (\$ M)		Qty (Each) / Total Cost (\$ M)		Qty (Each) / Total Cost (\$ M)		Qty (Each) / Total Cost (\$ M)		Qty (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		53 / 0.300		59 / 1.232		38 / 0.500		- / -		- / -		- / -		- / -		- / -		- / -		- / -		- / -		- / -		150 / 2.032					
FY 2017		- / -		- / -		- / -		0 / 0.000		- / -		0 / 0.000		- / -		- / -		- / -		- / -		- / -		- / -		- / -					
FY 2018		- / -		- / -		- / -		0 / 0.000		- / -		0 / 0.000		- / -		- / -		- / -		- / -		- / -		- / -		- / -					
FY 2019		- / -		- / -		- / -		0 / 0.000		- / -		0 / 0.000		- / -		- / -		- / -		- / -		- / -		- / -		- / -					
FY 2020		- / -		- / -		- / -		0 / 0.000		- / -		0 / 0.000		- / -		- / -		- / -		- / -		- / -		- / -		- / -					
FY 2021		- / -		- / -		- / -		0 / 0.000		- / -		0 / 0.000		- / -		- / -		- / -		- / -		- / -		- / -		- / -					
FY 2022		- / -		- / -		- / -		0 / 0.000		- / -		0 / 0.000		- / -		- / -		- / -		- / -		- / -		- / -		- / -					
FY 2023		- / -		- / -		- / -		0 / 0.000		- / -		0 / 0.000		- / -		- / -		- / -		- / -		- / -		- / -		- / -					
To Complete		- / -		- / -		- / -		0 / 0.000		- / -		0 / 0.000		- / -		- / -		- / -		- / -		- / -		- / -		- / -					
Total		53 / 0.300		59 / 1.232		38 / 0.500		0 / 0.000		0 / 0.000		0 / 0.000		- / -		- / -		- / -		- / -		- / -		- / -		150 / 2.032					
<b>Installation Schedule</b>																															
	<b>PYS</b>	<b>FY 2017</b>				<b>FY 2018</b>				<b>FY 2019</b>				<b>FY 2020</b>				<b>FY 2021</b>				<b>FY 2022</b>				<b>FY 2023</b>				<b>TC</b>	<b>Tot</b>
		<b>Q1</b>	<b>Q2</b>	<b>Q3</b>	<b>Q4</b>	<b>Q1</b>	<b>Q2</b>	<b>Q3</b>	<b>Q4</b>	<b>Q1</b>	<b>Q2</b>	<b>Q3</b>	<b>Q4</b>	<b>Q1</b>	<b>Q2</b>	<b>Q3</b>	<b>Q4</b>	<b>Q1</b>	<b>Q2</b>	<b>Q3</b>	<b>Q4</b>	<b>Q1</b>	<b>Q2</b>	<b>Q3</b>	<b>Q4</b>	<b>Q1</b>	<b>Q2</b>	<b>Q3</b>	<b>Q4</b>		
In	72	20	20	19	19	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	150
Out	53	10	9	20	20	19	19	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	150

## UNCLASSIFIED

<b>Exhibit P-3a, Individual Modification:</b> PB 2019 Army											<b>Date:</b> February 2018																				
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 2032A / 03 / 10						<b>P-1 Line Item Number / Title:</b> 0962C50700 / Patriot Mods						<b>Modification Number / Title:</b> C50700 / PATRIOT MODS																			
<b>ID Code</b> (A=Service Ready, B=Not Service Ready) :											<b>MDAP/MAIS Code:</b>																				
<b>Modification Item 5 of 22:</b> Radar Digital Processor - Configuration (RDP-C)																															
<b>Manufacturer Information</b>																															
Manufacturer Name: Raytheon											Manufacturer Location: Andover, MA																				
Administrative Leadtime (in Months): 8											Production Leadtime (in Months): 20																				
<b>Dates</b>	<b>FY 2017</b>				<b>FY 2018</b>				<b>FY 2019</b>				<b>FY 2020</b>				<b>FY 2021</b>				<b>FY 2022</b>				<b>FY 2023</b>						
Contract Dates																															
Delivery Dates																															
<b>Installation Information</b>																															
<b>Method of Implementation:</b> Depot, PM Office, contractor team																															
<b>Installation Cost</b>		<b>Prior Years</b>	<b>FY 2017</b>	<b>FY 2018</b>	<b>FY 2019 Base</b>	<b>FY 2019 OCO</b>	<b>FY 2019 Total</b>	<b>FY 2020</b>	<b>FY 2021</b>	<b>FY 2022</b>	<b>FY 2023</b>	<b>To Complete</b>	<b>Total</b>																		
		Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)																		
Prior Years		6 / 0.000	46 / 0.000	25 / 0.000	3 / 0.000	- / -	3 / 0.000	- / -	- / -	- / -	- / -	- / -	80 / 0.000																		
FY 2017		- / -	- / -	- / -	0 / 0.000	- / -	0 / 0.000	- / -	- / -	- / -	- / -	- / -	- / -																		
FY 2018		- / -	- / -	- / -	0 / 0.000	- / -	0 / 0.000	- / -	- / -	- / -	- / -	- / -	- / -																		
FY 2019		- / -	- / -	- / -	0 / 0.000	- / -	0 / 0.000	- / -	- / -	- / -	- / -	- / -	- / -																		
FY 2020		- / -	- / -	- / -	0 / 0.000	- / -	0 / 0.000	- / -	- / -	- / -	- / -	- / -	- / -																		
FY 2021		- / -	- / -	- / -	0 / 0.000	- / -	0 / 0.000	- / -	- / -	- / -	- / -	- / -	- / -																		
FY 2022		- / -	- / -	- / -	0 / 0.000	- / -	0 / 0.000	- / -	- / -	- / -	- / -	- / -	- / -																		
FY 2023		- / -	- / -	- / -	0 / 0.000	- / -	0 / 0.000	- / -	- / -	- / -	- / -	- / -	- / -																		
To Complete		- / -	- / -	- / -	0 / 0.000	- / -	0 / 0.000	- / -	- / -	- / -	- / -	- / -	- / -																		
Total		6 / 0.000	46 / 0.000	25 / 0.000	3 / 0.000	0 / 0.000	3 / 0.000	- / -	- / -	- / -	- / -	- / -	80 / 0.000																		
<b>Installation Schedule</b>																															
	<b>PYS</b>	<b>FY 2017</b>				<b>FY 2018</b>				<b>FY 2019</b>				<b>FY 2020</b>				<b>FY 2021</b>				<b>FY 2022</b>				<b>FY 2023</b>				<b>TC</b>	<b>Tot</b>
		<b>Q1</b>	<b>Q2</b>	<b>Q3</b>	<b>Q4</b>	<b>Q1</b>	<b>Q2</b>	<b>Q3</b>	<b>Q4</b>	<b>Q1</b>	<b>Q2</b>	<b>Q3</b>	<b>Q4</b>	<b>Q1</b>	<b>Q2</b>	<b>Q3</b>	<b>Q4</b>	<b>Q1</b>	<b>Q2</b>	<b>Q3</b>	<b>Q4</b>	<b>Q1</b>	<b>Q2</b>	<b>Q3</b>	<b>Q4</b>	<b>Q1</b>	<b>Q2</b>	<b>Q3</b>	<b>Q4</b>		
In	52	15	4	3	3	3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	80
Out	6	-	16	15	15	15	4	3	3	3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	80



## UNCLASSIFIED

<b>Exhibit P-3a, Individual Modification:</b> PB 2019 Army											<b>Date:</b> February 2018																					
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 2032A / 03 / 10											<b>P-1 Line Item Number / Title:</b> 0962C50700 / Patriot Mods											<b>Modification Number / Title:</b> C50700 / PATRIOT MODS										
<b>ID Code</b> (A=Service Ready, B=Not Service Ready) :											<b>MDAP/MAIS Code:</b>																					
<b>Modification Item 6 of 22:</b> Air Defense Artillery School Upgrades/ TADSS																																
<b>Manufacturer Information</b>																																
Manufacturer Name: PM Office, contractor team													Manufacturer Location: Various																			
Administrative Leadtime <i>(in Months)</i> : 6													Production Leadtime <i>(in Months)</i> : 18																			
<b>Dates</b>		<b>FY 2017</b>				<b>FY 2018</b>				<b>FY 2019</b>				<b>FY 2020</b>				<b>FY 2021</b>				<b>FY 2022</b>				<b>FY 2023</b>						
Contract Dates																																
Delivery Dates																																
<b>Installation Information</b>																																
<b>Method of Implementation:</b> PM fielding team																																
<b>Installation Cost</b>		<b>Prior Years</b>		<b>FY 2017</b>		<b>FY 2018</b>		<b>FY 2019 Base</b>		<b>FY 2019 OCO</b>		<b>FY 2019 Total</b>		<b>FY 2020</b>		<b>FY 2021</b>		<b>FY 2022</b>		<b>FY 2023</b>		<b>To Complete</b>		<b>Total</b>								
		Qty (Each) / Total Cost (\$ M)		Qty (Each) / Total Cost (\$ M)		Qty (Each) / Total Cost (\$ M)		Qty (Each) / Total Cost (\$ M)		Qty (Each) / Total Cost (\$ M)		Qty (Each) / Total Cost (\$ M)		Qty (Each) / Total Cost (\$ M)		Qty (Each) / Total Cost (\$ M)		Qty (Each) / Total Cost (\$ M)		Qty (Each) / Total Cost (\$ M)		Qty (Each) / Total Cost (\$ M)		Qty (Each) / Total Cost (\$ M)								
Prior Years		- / -		1 / 0.000		3 / 0.000		0 / 0.000		- / -		0 / 0.000		- / -		- / -		- / -		- / -		- / -		- / -		4 / 0.000						
FY 2017		- / -		- / -		- / -		0 / 0.000		- / -		0 / 0.000		- / -		- / -		- / -		- / -		- / -		- / -		- / -						
FY 2018		- / -		- / -		- / -		0 / 0.000		- / -		0 / 0.000		- / -		- / -		- / -		- / -		- / -		- / -		- / -						
FY 2019		- / -		- / -		- / -		0 / 0.000		- / -		0 / 0.000		- / -		- / -		- / -		- / -		- / -		- / -		- / -						
FY 2020		- / -		- / -		- / -		0 / 0.000		- / -		0 / 0.000		- / -		- / -		- / -		- / -		- / -		- / -		- / -						
FY 2021		- / -		- / -		- / -		0 / 0.000		- / -		0 / 0.000		- / -		- / -		- / -		- / -		- / -		- / -		- / -						
FY 2022		- / -		- / -		- / -		0 / 0.000		- / -		0 / 0.000		- / -		- / -		- / -		- / -		- / -		- / -		- / -						
FY 2023		- / -		- / -		- / -		0 / 0.000		- / -		0 / 0.000		- / -		- / -		- / -		- / -		- / -		- / -		- / -						
To Complete		- / -		- / -		- / -		0 / 0.000		- / -		0 / 0.000		- / -		- / -		- / -		- / -		- / -		- / -		- / -						
Total		0 / 0.000		1 / 0.000		3 / 0.000		0 / 0.000		0 / 0.000		0 / 0.000		- / -		- / -		- / -		- / -		- / -		- / -		4 / 0.000						
<b>Installation Schedule</b>																																
	<b>PYS</b>	<b>FY 2017</b>				<b>FY 2018</b>				<b>FY 2019</b>				<b>FY 2020</b>				<b>FY 2021</b>				<b>FY 2022</b>				<b>FY 2023</b>				<b>TC</b>	<b>Tot</b>	
		<b>Q1</b>	<b>Q2</b>	<b>Q3</b>	<b>Q4</b>	<b>Q1</b>	<b>Q2</b>	<b>Q3</b>	<b>Q4</b>	<b>Q1</b>	<b>Q2</b>	<b>Q3</b>	<b>Q4</b>	<b>Q1</b>	<b>Q2</b>	<b>Q3</b>	<b>Q4</b>	<b>Q1</b>	<b>Q2</b>	<b>Q3</b>	<b>Q4</b>	<b>Q1</b>	<b>Q2</b>	<b>Q3</b>	<b>Q4</b>	<b>Q1</b>	<b>Q2</b>	<b>Q3</b>	<b>Q4</b>			
In	-	-	-	-	1	1	1	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4		
Out	-	-	-	-	1	1	1	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4		

## UNCLASSIFIED

<b>Exhibit P-3a, Individual Modification:</b> PB 2019 Army											<b>Date:</b> February 2018																					
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 2032A / 03 / 10											<b>P-1 Line Item Number / Title:</b> 0962C50700 / Patriot Mods											<b>Modification Number / Title:</b> C50700 / PATRIOT MODS										
<b>ID Code</b> (A=Service Ready, B=Not Service Ready) :											<b>MDAP/MAIS Code:</b>																					
<b>Modification Item 7 of 22:</b> Modern Manstation (MMS)																																
<b>Manufacturer Information</b>																																
Manufacturer Name: Raytheon													Manufacturer Location: Andover, MA																			
Administrative Leadtime (in Months): 6													Production Leadtime (in Months): 15																			
<b>Dates</b>		<b>FY 2017</b>				<b>FY 2018</b>				<b>FY 2019</b>				<b>FY 2020</b>				<b>FY 2021</b>				<b>FY 2022</b>				<b>FY 2023</b>						
Contract Dates																																
Delivery Dates																																
<b>Installation Information</b>																																
<b>Method of Implementation:</b> Various																																
<b>Installation Cost</b>		<b>Prior Years</b>	<b>FY 2017</b>		<b>FY 2018</b>		<b>FY 2019 Base</b>		<b>FY 2019 OCO</b>		<b>FY 2019 Total</b>		<b>FY 2020</b>		<b>FY 2021</b>		<b>FY 2022</b>		<b>FY 2023</b>		<b>To Complete</b>		<b>Total</b>									
		Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)		Qty (Each) / Total Cost (\$ M)		Qty (Each) / Total Cost (\$ M)		Qty (Each) / Total Cost (\$ M)		Qty (Each) / Total Cost (\$ M)		Qty (Each) / Total Cost (\$ M)		Qty (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		82 / 0.000	- / -		- / -		0 / 0.000		- / -		0 / 0.000		- / -		- / -		- / -		- / -		- / -		82 / 0.000									
FY 2017		- / -	- / -		- / -		0 / 0.000		- / -		0 / 0.000		- / -		- / -		- / -		- / -		- / -		- / -									
FY 2018		- / -	- / -		- / -		0 / 0.000		- / -		0 / 0.000		- / -		- / -		- / -		- / -		- / -		- / -									
FY 2019		- / -	- / -		- / -		0 / 0.000		- / -		0 / 0.000		- / -		- / -		- / -		- / -		- / -		- / -									
FY 2020		- / -	- / -		- / -		0 / 0.000		- / -		0 / 0.000		- / -		- / -		- / -		- / -		- / -		- / -									
FY 2021		- / -	- / -		- / -		0 / 0.000		- / -		0 / 0.000		- / -		- / -		- / -		- / -		- / -		- / -									
FY 2022		- / -	- / -		- / -		0 / 0.000		- / -		0 / 0.000		- / -		- / -		- / -		- / -		- / -		- / -									
FY 2023		- / -	- / -		- / -		0 / 0.000		- / -		0 / 0.000		- / -		- / -		- / -		- / -		- / -		- / -									
To Complete		- / -	- / -		- / -		0 / 0.000		- / -		0 / 0.000		- / -		- / -		- / -		- / -		- / -		- / -									
Total		82 / 0.000	0 / 0.000		0 / 0.000		0 / 0.000		0 / 0.000		0 / 0.000		- / -		- / -		- / -		- / -		- / -		82 / 0.000									
<b>Installation Schedule</b>																																
	<b>PYS</b>	<b>FY 2017</b>				<b>FY 2018</b>				<b>FY 2019</b>				<b>FY 2020</b>				<b>FY 2021</b>				<b>FY 2022</b>				<b>FY 2023</b>				<b>TC</b>	<b>Tot</b>	
		<b>Q1</b>	<b>Q2</b>	<b>Q3</b>	<b>Q4</b>	<b>Q1</b>	<b>Q2</b>	<b>Q3</b>	<b>Q4</b>	<b>Q1</b>	<b>Q2</b>	<b>Q3</b>	<b>Q4</b>	<b>Q1</b>	<b>Q2</b>	<b>Q3</b>	<b>Q4</b>	<b>Q1</b>	<b>Q2</b>	<b>Q3</b>	<b>Q4</b>	<b>Q1</b>	<b>Q2</b>	<b>Q3</b>	<b>Q4</b>	<b>Q1</b>	<b>Q2</b>	<b>Q3</b>	<b>Q4</b>			
In	82	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	82	
Out	82	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	82	

## UNCLASSIFIED

<b>Exhibit P-3a, Individual Modification:</b> PB 2019 Army											<b>Date:</b> February 2018																					
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 2032A / 03 / 10											<b>P-1 Line Item Number / Title:</b> 0962C50700 / Patriot Mods											<b>Modification Number / Title:</b> C50700 / PATRIOT MODS										
<b>ID Code</b> (A=Service Ready, B=Not Service Ready) :											<b>MDAP/MAIS Code:</b>																					
<b>Modification Item 8 of 22:</b> Enhanced Launcher Electronics System (ELES)																																
<b>Manufacturer Information</b>																																
Manufacturer Name: Various													Manufacturer Location: Various																			
Administrative Leadtime <i>(in Months)</i> : 3													Production Leadtime <i>(in Months)</i> : 18																			
<b>Dates</b>		<b>FY 2017</b>				<b>FY 2018</b>				<b>FY 2019</b>				<b>FY 2020</b>				<b>FY 2021</b>				<b>FY 2022</b>				<b>FY 2023</b>						
Contract Dates						Dec 2017				Dec 2018				Dec 2019				Dec 2020				Dec 2021				Dec 2022						
Delivery Dates						Jun 2019				Jun 2020				Jun 2021				Jun 2022				Jun 2023				Jun 2024						
<b>Installation Information</b>																																
<b>Method of Implementation:</b> Fielding Team (Included in unit cost)																																
<b>Installation Cost</b>		<b>Prior Years</b>	<b>FY 2017</b>		<b>FY 2018</b>		<b>FY 2019 Base</b>		<b>FY 2019 OCO</b>		<b>FY 2019 Total</b>		<b>FY 2020</b>		<b>FY 2021</b>		<b>FY 2022</b>		<b>FY 2023</b>		<b>To Complete</b>		<b>Total</b>									
		Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)		Qty (Each) / Total Cost (\$ M)		Qty (Each) / Total Cost (\$ M)		Qty (Each) / Total Cost (\$ M)		Qty (Each) / Total Cost (\$ M)		Qty (Each) / Total Cost (\$ M)		Qty (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		211 / 0.000		8 / 0.000		- / -		0 / 0.000		- / -		0 / 0.000		- / -		- / -		- / -		- / -		- / -		219 / 0.000								
FY 2017		- / -		- / -		- / -		0 / 0.000		- / -		0 / 0.000		- / -		- / -		- / -		- / -		- / -		- / -								
FY 2018		- / -		- / -		- / -		36 / 0.000		- / -		36 / 0.000		36 / 0.000		- / -		- / -		- / -		- / -		72 / 0.000								
FY 2019		- / -		- / -		- / -		0 / 0.000		- / -		0 / 0.000		- / -		38 / 0.000		- / -		- / -		- / -		38 / 0.000								
FY 2020		- / -		- / -		- / -		0 / 0.000		- / -		0 / 0.000		- / -		- / -		34 / 0.000		- / -		- / -		34 / 0.000								
FY 2021		- / -		- / -		- / -		0 / 0.000		- / -		0 / 0.000		- / -		- / -		- / -		12 / 0.000		- / -		12 / 0.000								
FY 2022		- / -		- / -		- / -		0 / 0.000		- / -		0 / 0.000		- / -		- / -		- / -		- / -		- / -		- / -								
FY 2023		- / -		- / -		- / -		0 / 0.000		- / -		0 / 0.000		- / -		- / -		- / -		- / -		- / -		- / -								
To Complete		- / -		- / -		- / -		0 / 0.000		- / -		0 / 0.000		- / -		- / -		- / -		- / -		- / -		- / -								
Total		211 / 0.000		8 / 0.000		0 / 0.000		36 / 0.000		0 / 0.000		36 / 0.000		36 / 0.000		38 / 0.000		34 / 0.000		12 / 0.000		- / -		375 / 0.000								
<b>Installation Schedule</b>																																
	<b>PYS</b>	<b>FY 2017</b>				<b>FY 2018</b>				<b>FY 2019</b>				<b>FY 2020</b>				<b>FY 2021</b>				<b>FY 2022</b>				<b>FY 2023</b>				<b>TC</b>	<b>Tot</b>	
		<b>Q1</b>	<b>Q2</b>	<b>Q3</b>	<b>Q4</b>	<b>Q1</b>	<b>Q2</b>	<b>Q3</b>	<b>Q4</b>	<b>Q1</b>	<b>Q2</b>	<b>Q3</b>	<b>Q4</b>	<b>Q1</b>	<b>Q2</b>	<b>Q3</b>	<b>Q4</b>	<b>Q1</b>	<b>Q2</b>	<b>Q3</b>	<b>Q4</b>	<b>Q1</b>	<b>Q2</b>	<b>Q3</b>	<b>Q4</b>	<b>Q1</b>	<b>Q2</b>	<b>Q3</b>	<b>Q4</b>			
In	211	-	-	8	-	-	-	-	-	-	-	18	18	18	18	19	19	-	-	17	17	-	-	6	6	-	-	-	-	-	375	
Out	211	-	-	8	-	-	-	-	-	-	-	18	18	18	18	19	19	-	-	17	17	-	-	6	6	-	-	-	-	-	375	

## UNCLASSIFIED

<b>Exhibit P-3a, Individual Modification:</b> PB 2019 Army											<b>Date:</b> February 2018																					
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 2032A / 03 / 10											<b>P-1 Line Item Number / Title:</b> 0962C50700 / Patriot Mods											<b>Modification Number / Title:</b> C50700 / PATRIOT MODS										
<b>ID Code</b> (A=Service Ready, B=Not Service Ready) :											<b>MDAP/MAIS Code:</b>																					
<b>Modification Item 9 of 22:</b> SNAP/TROPO																																
<b>Manufacturer Information</b>																																
Manufacturer Name: TeleCommunication Systems (TCS)													Manufacturer Location: Tampa, FL																			
Administrative Leadtime <i>(in Months)</i> : 1													Production Leadtime <i>(in Months)</i> : 9																			
<b>Dates</b>		<b>FY 2017</b>				<b>FY 2018</b>				<b>FY 2019</b>				<b>FY 2020</b>				<b>FY 2021</b>				<b>FY 2022</b>				<b>FY 2023</b>						
Contract Dates		Oct 2016																														
Delivery Dates		Jul 2017																														
<b>Installation Information</b>																																
<b>Method of Implementation:</b> Depot, PM, contractor team																																
<b>Installation Cost</b>		<b>Prior Years</b>	<b>FY 2017</b>		<b>FY 2018</b>		<b>FY 2019 Base</b>		<b>FY 2019 OCO</b>		<b>FY 2019 Total</b>		<b>FY 2020</b>		<b>FY 2021</b>		<b>FY 2022</b>		<b>FY 2023</b>		<b>To Complete</b>		<b>Total</b>									
		Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)		Qty (Each) / Total Cost (\$ M)		Qty (Each) / Total Cost (\$ M)		Qty (Each) / Total Cost (\$ M)		Qty (Each) / Total Cost (\$ M)		Qty (Each) / Total Cost (\$ M)		Qty (Each) / Total Cost (\$ M)		Qty (Each) / Total Cost (\$ M)		Qty (Each) / Total Cost (\$ M)		Qty (Each) / Total Cost (\$ M)		Qty (Each) / Total Cost (\$ M)									
Prior Years		14 / 0.000		- / -		- / -		0 / 0.000		- / -		0 / 0.000		- / -		- / -		- / -		- / -		- / -		14 / 0.000								
FY 2017		- / -		18 / 0.000		- / -		0 / 0.000		- / -		0 / 0.000		- / -		- / -		- / -		- / -		- / -		18 / 0.000								
FY 2018		- / -		- / -		- / -		0 / 0.000		- / -		0 / 0.000		- / -		- / -		- / -		- / -		- / -		- / -								
FY 2019		- / -		- / -		- / -		0 / 0.000		- / -		0 / 0.000		- / -		- / -		- / -		- / -		- / -		- / -								
FY 2020		- / -		- / -		- / -		0 / 0.000		- / -		0 / 0.000		- / -		- / -		- / -		- / -		- / -		- / -								
FY 2021		- / -		- / -		- / -		0 / 0.000		- / -		0 / 0.000		- / -		- / -		- / -		- / -		- / -		- / -								
FY 2022		- / -		- / -		- / -		0 / 0.000		- / -		0 / 0.000		- / -		- / -		- / -		- / -		- / -		- / -								
FY 2023		- / -		- / -		- / -		0 / 0.000		- / -		0 / 0.000		- / -		- / -		- / -		- / -		- / -		- / -								
To Complete		- / -		- / -		- / -		0 / 0.000		- / -		0 / 0.000		- / -		- / -		- / -		- / -		- / -		- / -								
Total		14 / 0.000		18 / 0.000		0 / 0.000		0 / 0.000		0 / 0.000		0 / 0.000		- / -		- / -		- / -		- / -		- / -		32 / 0.000								
<b>Installation Schedule</b>																																
	<b>PYS</b>	<b>FY 2017</b>				<b>FY 2018</b>				<b>FY 2019</b>				<b>FY 2020</b>				<b>FY 2021</b>				<b>FY 2022</b>				<b>FY 2023</b>				<b>TC</b>	<b>Tot</b>	
		<b>Q1</b>	<b>Q2</b>	<b>Q3</b>	<b>Q4</b>	<b>Q1</b>	<b>Q2</b>	<b>Q3</b>	<b>Q4</b>	<b>Q1</b>	<b>Q2</b>	<b>Q3</b>	<b>Q4</b>	<b>Q1</b>	<b>Q2</b>	<b>Q3</b>	<b>Q4</b>	<b>Q1</b>	<b>Q2</b>	<b>Q3</b>	<b>Q4</b>	<b>Q1</b>	<b>Q2</b>	<b>Q3</b>	<b>Q4</b>	<b>Q1</b>	<b>Q2</b>	<b>Q3</b>	<b>Q4</b>			
In	14	-	-	18	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	32	
Out	14	-	-	-	18	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	32	

**UNCLASSIFIED**

<b>Exhibit P-3a, Individual Modification:</b> PB 2019 Army											<b>Date:</b> February 2018																					
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 2032A / 03 / 10											<b>P-1 Line Item Number / Title:</b> 0962C50700 / Patriot Mods											<b>Modification Number / Title:</b> C50700 / PATRIOT MODS										
<b>ID Code</b> (A=Service Ready, B=Not Service Ready) :																<b>MDAP/MAIS Code:</b>																
<b>Modification Item 10 of 22:</b> PATRIOT Maintenance Trainer (PMT)																																
<b>Manufacturer Information</b>																																
Manufacturer Name: Raytheon														Manufacturer Location: Tewksbury, MA																		
Administrative Leadtime (in Months): 4														Production Leadtime (in Months): 4																		
<b>Dates</b>		<b>FY 2017</b>				<b>FY 2018</b>				<b>FY 2019</b>				<b>FY 2020</b>				<b>FY 2021</b>				<b>FY 2022</b>				<b>FY 2023</b>						
Contract Dates		Feb 2017				Feb 2018												Feb 2021														
Delivery Dates		Jun 2017				Jun 2018												Jun 2021														
<b>Installation Information</b>																																
<b>Method of Implementation:</b> PM Office, contractor team																																
<b>Installation Cost</b>		<b>Prior Years</b>		<b>FY 2017</b>		<b>FY 2018</b>		<b>FY 2019 Base</b>		<b>FY 2019 OCO</b>		<b>FY 2019 Total</b>		<b>FY 2020</b>		<b>FY 2021</b>		<b>FY 2022</b>		<b>FY 2023</b>		<b>To Complete</b>		<b>Total</b>								
		Qty (Each) / Total Cost (\$ M)		Qty (Each) / Total Cost (\$ M)		Qty (Each) / Total Cost (\$ M)		Qty (Each) / Total Cost (\$ M)		Qty (Each) / Total Cost (\$ M)		Qty (Each) / Total Cost (\$ M)		Qty (Each) / Total Cost (\$ M)		Qty (Each) / Total Cost (\$ M)		Qty (Each) / Total Cost (\$ M)		Qty (Each) / Total Cost (\$ M)		Qty (Each) / Total Cost (\$ M)		Qty (Each) / Total Cost (\$ M)								
Prior Years		1 / 0.000		- / -		- / -		0 / 0.000		- / -		0 / 0.000		- / -		- / -		- / -		- / -		- / -		- / -		1 / 0.000						
FY 2017		- / -		1 / 0.000		- / -		0 / 0.000		- / -		0 / 0.000		- / -		- / -		- / -		- / -		- / -		- / -		1 / 0.000						
FY 2018		- / -		- / -		2 / 0.000		0 / 0.000		- / -		0 / 0.000		- / -		- / -		- / -		- / -		- / -		- / -		2 / 0.000						
FY 2019		- / -		- / -		- / -		0 / 0.000		- / -		0 / 0.000		- / -		- / -		- / -		- / -		- / -		- / -		- / -						
FY 2020		- / -		- / -		- / -		0 / 0.000		- / -		0 / 0.000		- / -		- / -		- / -		- / -		- / -		- / -		- / -						
FY 2021		- / -		- / -		- / -		0 / 0.000		- / -		0 / 0.000		- / -		1 / 0.000		- / -		- / -		- / -		- / -		1 / 0.000						
FY 2022		- / -		- / -		- / -		0 / 0.000		- / -		0 / 0.000		- / -		- / -		- / -		- / -		- / -		- / -		- / -						
FY 2023		- / -		- / -		- / -		0 / 0.000		- / -		0 / 0.000		- / -		- / -		- / -		- / -		- / -		- / -		- / -						
To Complete		- / -		- / -		- / -		0 / 0.000		- / -		0 / 0.000		- / -		- / -		- / -		- / -		- / -		- / -		- / -						
Total		1 / 0.000		1 / 0.000		2 / 0.000		0 / 0.000		0 / 0.000		0 / 0.000		- / -		1 / 0.000		- / -		- / -		- / -		- / -		5 / 0.000						
<b>Installation Schedule</b>																																
	<b>PYS</b>	<b>FY 2017</b>				<b>FY 2018</b>				<b>FY 2019</b>				<b>FY 2020</b>				<b>FY 2021</b>				<b>FY 2022</b>				<b>FY 2023</b>				<b>TC</b>	<b>Tot</b>	
		<b>Q1</b>	<b>Q2</b>	<b>Q3</b>	<b>Q4</b>	<b>Q1</b>	<b>Q2</b>	<b>Q3</b>	<b>Q4</b>	<b>Q1</b>	<b>Q2</b>	<b>Q3</b>	<b>Q4</b>	<b>Q1</b>	<b>Q2</b>	<b>Q3</b>	<b>Q4</b>	<b>Q1</b>	<b>Q2</b>	<b>Q3</b>	<b>Q4</b>	<b>Q1</b>	<b>Q2</b>	<b>Q3</b>	<b>Q4</b>	<b>Q1</b>	<b>Q2</b>	<b>Q3</b>	<b>Q4</b>			
In	1	-	-	1	-	-	-	-	2	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-		
Out	1	-	-	1	-	-	-	-	2	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-		

**UNCLASSIFIED**

<b>Exhibit P-3a, Individual Modification:</b> PB 2019 Army											<b>Date:</b> February 2018																					
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 2032A / 03 / 10											<b>P-1 Line Item Number / Title:</b> 0962C50700 / Patriot Mods											<b>Modification Number / Title:</b> C50700 / PATRIOT MODS										
<b>ID Code</b> (A=Service Ready, B=Not Service Ready) :																<b>MDAP/MAIS Code:</b>																
<b>Modification Item 11 of 22:</b> PATRIOT Multi-Echelon Training (PMET)																																
<b>Manufacturer Information</b>																																
Manufacturer Name: Raytheon														Manufacturer Location: Tewksbury, MA																		
Administrative Leadtime (in Months): 4														Production Leadtime (in Months): 4																		
<b>Dates</b>		<b>FY 2017</b>				<b>FY 2018</b>				<b>FY 2019</b>				<b>FY 2020</b>				<b>FY 2021</b>				<b>FY 2022</b>				<b>FY 2023</b>						
Contract Dates		Feb 2017				Feb 2018				Feb 2019				Feb 2020				Feb 2021				Feb 2022				Feb 2023						
Delivery Dates		May 2017				May 2018				May 2019				May 2020				May 2021				May 2022				May 2023						
<b>Installation Information</b>																																
<b>Method of Implementation:</b> PM Office, contractor team																																
<b>Installation Cost</b>		<b>Prior Years</b>	<b>FY 2017</b>		<b>FY 2018</b>		<b>FY 2019 Base</b>		<b>FY 2019 OCO</b>		<b>FY 2019 Total</b>		<b>FY 2020</b>		<b>FY 2021</b>		<b>FY 2022</b>		<b>FY 2023</b>		<b>To Complete</b>		<b>Total</b>									
		Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)		Qty (Each) / Total Cost (\$ M)		Qty (Each) / Total Cost (\$ M)		Qty (Each) / Total Cost (\$ M)		Qty (Each) / Total Cost (\$ M)		Qty (Each) / Total Cost (\$ M)		Qty (Each) / Total Cost (\$ M)		Qty (Each) / Total Cost (\$ M)		Qty (Each) / Total Cost (\$ M)		Qty (Each) / Total Cost (\$ M)		Qty (Each) / Total Cost (\$ M)									
Prior Years		8 / 0.000	- / -		- / -		0 / 0.000		- / -		0 / 0.000		- / -		- / -		- / -		- / -		- / -		- / -		8 / 0.000							
FY 2017		- / -	4 / 0.000		- / -		0 / 0.000		- / -		0 / 0.000		- / -		- / -		- / -		- / -		- / -		- / -		4 / 0.000							
FY 2018		- / -	- / -		4 / 0.000		0 / 0.000		- / -		0 / 0.000		- / -		- / -		- / -		- / -		- / -		- / -		4 / 0.000							
FY 2019		- / -	- / -		- / -		4 / 0.000		- / -		4 / 0.000		- / -		- / -		- / -		- / -		- / -		- / -		4 / 0.000							
FY 2020		- / -	- / -		- / -		0 / 0.000		- / -		0 / 0.000		4 / 0.000		- / -		- / -		- / -		- / -		- / -		4 / 0.000							
FY 2021		- / -	- / -		- / -		0 / 0.000		- / -		0 / 0.000		- / -		4 / 0.000		- / -		- / -		- / -		- / -		4 / 0.000							
FY 2022		- / -	- / -		- / -		0 / 0.000		- / -		0 / 0.000		- / -		- / -		4 / 0.000		- / -		- / -		- / -		4 / 0.000							
FY 2023		- / -	- / -		- / -		0 / 0.000		- / -		0 / 0.000		- / -		- / -		- / -		4 / 0.000		- / -		- / -		4 / 0.000							
To Complete		- / -	- / -		- / -		0 / 0.000		- / -		0 / 0.000		- / -		- / -		- / -		- / -		- / -		4 / 0.000		4 / 0.000							
Total		8 / 0.000	4 / 0.000		4 / 0.000		4 / 0.000		0 / 0.000		4 / 0.000		4 / 0.000		4 / 0.000		4 / 0.000		4 / 0.000		4 / 0.000		4 / 0.000		40 / 0.000							
<b>Installation Schedule</b>																																
	<b>PYS</b>	<b>FY 2017</b>				<b>FY 2018</b>				<b>FY 2019</b>				<b>FY 2020</b>				<b>FY 2021</b>				<b>FY 2022</b>				<b>FY 2023</b>				<b>TC</b>	<b>Tot</b>	
		<b>Q1</b>	<b>Q2</b>	<b>Q3</b>	<b>Q4</b>	<b>Q1</b>	<b>Q2</b>	<b>Q3</b>	<b>Q4</b>	<b>Q1</b>	<b>Q2</b>	<b>Q3</b>	<b>Q4</b>	<b>Q1</b>	<b>Q2</b>	<b>Q3</b>	<b>Q4</b>	<b>Q1</b>	<b>Q2</b>	<b>Q3</b>	<b>Q4</b>	<b>Q1</b>	<b>Q2</b>	<b>Q3</b>	<b>Q4</b>	<b>Q1</b>	<b>Q2</b>	<b>Q3</b>	<b>Q4</b>			
In	8	-	-	4	-	-	-	-	4	-	-	-	-	4	-	-	-	-	4	-	-	-	-	4	-	-	-	-	4	-	4	40
Out	8	-	-	4	-	-	-	-	4	-	-	-	-	4	-	-	-	-	4	-	-	-	-	4	-	-	-	-	4	-	4	40

## UNCLASSIFIED

<b>Exhibit P-3a, Individual Modification:</b> PB 2019 Army											<b>Date:</b> February 2018																					
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 2032A / 03 / 10											<b>P-1 Line Item Number / Title:</b> 0962C50700 / Patriot Mods											<b>Modification Number / Title:</b> C50700 / PATRIOT MODS										
<b>ID Code</b> (A=Service Ready, B=Not Service Ready) :											<b>MDAP/MAIS Code:</b>																					
<b>Modification Item 12 of 22:</b> Reconfigurable Table Top Trainers (RT3)																																
<b>Manufacturer Information</b>																																
Manufacturer Name: Raytheon													Manufacturer Location: Tewksbury, MA																			
Administrative Leadtime (in Months): 3													Production Leadtime (in Months): 9																			
<b>Dates</b>		<b>FY 2017</b>				<b>FY 2018</b>				<b>FY 2019</b>				<b>FY 2020</b>				<b>FY 2021</b>				<b>FY 2022</b>				<b>FY 2023</b>						
Contract Dates		Dec 2016								Dec 2018																						
Delivery Dates		Oct 2017								Oct 2019																						
<b>Installation Information</b>																																
<b>Method of Implementation:</b> PM Office, contractor team																																
<b>Installation Cost</b>		<b>Prior Years</b>	<b>FY 2017</b>		<b>FY 2018</b>		<b>FY 2019 Base</b>		<b>FY 2019 OCO</b>		<b>FY 2019 Total</b>		<b>FY 2020</b>		<b>FY 2021</b>		<b>FY 2022</b>		<b>FY 2023</b>		<b>To Complete</b>		<b>Total</b>									
		Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)		Qty (Each) / Total Cost (\$ M)		Qty (Each) / Total Cost (\$ M)		Qty (Each) / Total Cost (\$ M)		Qty (Each) / Total Cost (\$ M)		Qty (Each) / Total Cost (\$ M)		Qty (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		326 / 0.000		- / -		- / -		0 / 0.000		- / -		0 / 0.000		- / -		- / -		- / -		- / -		- / -		326 / 0.000								
FY 2017		- / -		- / -		100 / 0.000		0 / 0.000		- / -		0 / 0.000		- / -		- / -		- / -		- / -		- / -		100 / 0.000								
FY 2018		- / -		- / -		- / -		0 / 0.000		- / -		0 / 0.000		- / -		- / -		- / -		- / -		- / -		- / -								
FY 2019		- / -		- / -		- / -		0 / 0.000		- / -		0 / 0.000		163 / 0.000		- / -		- / -		- / -		- / -		163 / 0.000								
FY 2020		- / -		- / -		- / -		0 / 0.000		- / -		0 / 0.000		- / -		- / -		- / -		- / -		- / -		- / -								
FY 2021		- / -		- / -		- / -		0 / 0.000		- / -		0 / 0.000		- / -		- / -		- / -		- / -		- / -		- / -								
FY 2022		- / -		- / -		- / -		0 / 0.000		- / -		0 / 0.000		- / -		- / -		- / -		- / -		- / -		- / -								
FY 2023		- / -		- / -		- / -		0 / 0.000		- / -		0 / 0.000		- / -		- / -		- / -		- / -		- / -		- / -								
To Complete		- / -		- / -		- / -		0 / 0.000		- / -		0 / 0.000		- / -		- / -		- / -		- / -		- / -		- / -								
Total		326 / 0.000		0 / 0.000		100 / 0.000		0 / 0.000		0 / 0.000		0 / 0.000		163 / 0.000		- / -		- / -		- / -		- / -		589 / 0.000								
<b>Installation Schedule</b>																																
	<b>PYS</b>	<b>FY 2017</b>				<b>FY 2018</b>				<b>FY 2019</b>				<b>FY 2020</b>				<b>FY 2021</b>				<b>FY 2022</b>				<b>FY 2023</b>				<b>TC</b>	<b>Tot</b>	
		<b>Q1</b>	<b>Q2</b>	<b>Q3</b>	<b>Q4</b>	<b>Q1</b>	<b>Q2</b>	<b>Q3</b>	<b>Q4</b>	<b>Q1</b>	<b>Q2</b>	<b>Q3</b>	<b>Q4</b>	<b>Q1</b>	<b>Q2</b>	<b>Q3</b>	<b>Q4</b>	<b>Q1</b>	<b>Q2</b>	<b>Q3</b>	<b>Q4</b>	<b>Q1</b>	<b>Q2</b>	<b>Q3</b>	<b>Q4</b>	<b>Q1</b>	<b>Q2</b>	<b>Q3</b>	<b>Q4</b>			
In	326	-	-	-	-	25	25	25	25	-	-	-	-	41	41	41	40	-	-	-	-	-	-	-	-	-	-	-	-	30	619	
Out	326	-	-	-	-	25	25	25	25	-	-	-	-	41	41	41	40	-	-	-	-	-	-	-	-	-	-	-	-	30	619	

## UNCLASSIFIED

<b>Exhibit P-3a, Individual Modification:</b> PB 2019 Army											<b>Date:</b> February 2018																				
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 2032A / 03 / 10						<b>P-1 Line Item Number / Title:</b> 0962C50700 / Patriot Mods						<b>Modification Number / Title:</b> C50700 / PATRIOT MODS																			
<b>ID Code</b> (A=Service Ready, B=Not Service Ready) :											<b>MDAP/MAIS Code:</b>																				
<b>Modification Item 13 of 22:</b> Assured PNT																															
<b>Manufacturer Information</b>																															
Manufacturer Name: TBD											Manufacturer Location: TBD																				
Administrative Leadtime <i>(in Months)</i> : 4											Production Leadtime <i>(in Months)</i> : 14																				
<b>Dates</b>	<b>FY 2017</b>	<b>FY 2018</b>	<b>FY 2019</b>	<b>FY 2020</b>	<b>FY 2021</b>	<b>FY 2022</b>	<b>FY 2023</b>																								
Contract Dates	Jan 2017																														
Delivery Dates	Mar 2018																														
<b>Installation Information</b>																															
<b>Method of Implementation:</b> Logistics Fielding Team																															
<b>Installation Cost</b>		<b>Prior Years</b>	<b>FY 2017</b>	<b>FY 2018</b>	<b>FY 2019 Base</b>	<b>FY 2019 OCO</b>	<b>FY 2019 Total</b>	<b>FY 2020</b>	<b>FY 2021</b>	<b>FY 2022</b>	<b>FY 2023</b>	<b>To Complete</b>	<b>Total</b>																		
		<i>Qty (Each) / Total Cost (\$ M)</i>	<i>Qty (Each) / Total Cost (\$ M)</i>	<i>Qty (Each) / Total Cost (\$ M)</i>	<i>Qty (Each) / Total Cost (\$ M)</i>	<i>Qty (Each) / Total Cost (\$ M)</i>	<i>Qty (Each) / Total Cost (\$ M)</i>	<i>Qty (Each) / Total Cost (\$ M)</i>	<i>Qty (Each) / Total Cost (\$ M)</i>	<i>Qty (Each) / Total Cost (\$ M)</i>	<i>Qty (Each) / Total Cost (\$ M)</i>	<i>Qty (Each) / Total Cost (\$ M)</i>	<i>Qty (Each) / Total Cost (\$ M)</i>	<i>Qty (Each) / Total Cost (\$ M)</i>	<i>Qty (Each) / Total Cost (\$ M)</i>																
Prior Years		- / -	- / -	- / -	0 / 0.000	- / -	0 / 0.000	- / -	- / -	- / -	- / -	- / -	- / -	- / -																	
FY 2017		- / -	- / -	798 / 0.000	0 / 0.000	- / -	0 / 0.000	- / -	- / -	- / -	- / -	- / -	- / -	798 / 0.000																	
FY 2018		- / -	- / -	- / -	0 / 0.000	- / -	0 / 0.000	- / -	- / -	- / -	- / -	- / -	- / -	- / -																	
FY 2019		- / -	- / -	- / -	0 / 0.000	- / -	0 / 0.000	- / -	- / -	- / -	- / -	- / -	- / -	- / -																	
FY 2020		- / -	- / -	- / -	0 / 0.000	- / -	0 / 0.000	- / -	- / -	- / -	- / -	- / -	- / -	- / -																	
FY 2021		- / -	- / -	- / -	0 / 0.000	- / -	0 / 0.000	- / -	- / -	- / -	- / -	- / -	- / -	- / -																	
FY 2022		- / -	- / -	- / -	0 / 0.000	- / -	0 / 0.000	- / -	- / -	- / -	- / -	- / -	- / -	- / -																	
FY 2023		- / -	- / -	- / -	0 / 0.000	- / -	0 / 0.000	- / -	- / -	- / -	- / -	- / -	- / -	- / -																	
To Complete		- / -	- / -	- / -	0 / 0.000	- / -	0 / 0.000	- / -	- / -	- / -	- / -	- / -	- / -	- / -																	
Total		0 / 0.000	0 / 0.000	798 / 0.000	0 / 0.000	0 / 0.000	0 / 0.000	- / -	- / -	- / -	- / -	- / -	- / -	798 / 0.000																	
<b>Installation Schedule</b>																															
	<b>PYS</b>	<b>FY 2017</b>				<b>FY 2018</b>				<b>FY 2019</b>				<b>FY 2020</b>				<b>FY 2021</b>				<b>FY 2022</b>				<b>FY 2023</b>				<b>TC</b>	<b>Tot</b>
		<b>Q1</b>	<b>Q2</b>	<b>Q3</b>	<b>Q4</b>	<b>Q1</b>	<b>Q2</b>	<b>Q3</b>	<b>Q4</b>	<b>Q1</b>	<b>Q2</b>	<b>Q3</b>	<b>Q4</b>	<b>Q1</b>	<b>Q2</b>	<b>Q3</b>	<b>Q4</b>	<b>Q1</b>	<b>Q2</b>	<b>Q3</b>	<b>Q4</b>	<b>Q1</b>	<b>Q2</b>	<b>Q3</b>	<b>Q4</b>	<b>Q1</b>	<b>Q2</b>	<b>Q3</b>	<b>Q4</b>		
In	-	-	-	-	-	-	798	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	798
Out	-	-	-	-	-	-	-	798	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	798



## UNCLASSIFIED

<b>Exhibit P-3a, Individual Modification:</b> PB 2019 Army											<b>Date:</b> February 2018																					
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 2032A / 03 / 10											<b>P-1 Line Item Number / Title:</b> 0962C50700 / Patriot Mods											<b>Modification Number / Title:</b> C50700 / PATRIOT MODS										
<b>ID Code</b> (A=Service Ready, B=Not Service Ready) :											<b>MDAP/MAIS Code:</b>																					
<b>Modification Item 14 of 22:</b> Test Detachment																																
<b>Manufacturer Information</b>																																
Manufacturer Name: Various													Manufacturer Location: Various																			
Administrative Leadtime (in Months): 4													Production Leadtime (in Months): 8																			
<b>Dates</b>		<b>FY 2017</b>				<b>FY 2018</b>				<b>FY 2019</b>				<b>FY 2020</b>				<b>FY 2021</b>				<b>FY 2022</b>				<b>FY 2023</b>						
Contract Dates		Feb 2017																														
Delivery Dates		Sep 2017																														
<b>Installation Information</b>																																
<b>Method of Implementation:</b> WSMR PM owned test bed personnel																																
<b>Installation Cost</b>		<b>Prior Years</b>	<b>FY 2017</b>		<b>FY 2018</b>		<b>FY 2019 Base</b>		<b>FY 2019 OCO</b>		<b>FY 2019 Total</b>		<b>FY 2020</b>		<b>FY 2021</b>		<b>FY 2022</b>		<b>FY 2023</b>		<b>To Complete</b>		<b>Total</b>									
		Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)		Qty (Each) / Total Cost (\$ M)		Qty (Each) / Total Cost (\$ M)		Qty (Each) / Total Cost (\$ M)		Qty (Each) / Total Cost (\$ M)		Qty (Each) / Total Cost (\$ M)		Qty (Each) / Total Cost (\$ M)		Qty (Each) / Total Cost (\$ M)		Qty (Each) / Total Cost (\$ M)		Qty (Each) / Total Cost (\$ M)		Qty (Each) / Total Cost (\$ M)									
Prior Years		- / -	- / -		- / -		0 / 0.000		- / -		0 / 0.000		- / -		- / -		- / -		- / -		- / -		- / -		- / -							
FY 2017		- / -	1 / 0.000		1 / 0.000		0 / 0.000		- / -		0 / 0.000		- / -		- / -		- / -		- / -		- / -		- / -		2 / 0.000							
FY 2018		- / -	- / -		- / -		0 / 0.000		- / -		0 / 0.000		- / -		- / -		- / -		- / -		- / -		- / -		- / -							
FY 2019		- / -	- / -		- / -		0 / 0.000		- / -		0 / 0.000		- / -		- / -		- / -		- / -		- / -		- / -		- / -							
FY 2020		- / -	- / -		- / -		0 / 0.000		- / -		0 / 0.000		- / -		- / -		- / -		- / -		- / -		- / -		- / -							
FY 2021		- / -	- / -		- / -		0 / 0.000		- / -		0 / 0.000		- / -		- / -		- / -		- / -		- / -		- / -		- / -							
FY 2022		- / -	- / -		- / -		0 / 0.000		- / -		0 / 0.000		- / -		- / -		- / -		- / -		- / -		- / -		- / -							
FY 2023		- / -	- / -		- / -		0 / 0.000		- / -		0 / 0.000		- / -		- / -		- / -		- / -		- / -		- / -		- / -							
To Complete		- / -	- / -		- / -		0 / 0.000		- / -		0 / 0.000		- / -		- / -		- / -		- / -		- / -		- / -		- / -							
Total		0 / 0.000	1 / 0.000		1 / 0.000		0 / 0.000		0 / 0.000		0 / 0.000		- / -		- / -		- / -		- / -		- / -		- / -		2 / 0.000							
<b>Installation Schedule</b>																																
	<b>PYS</b>	<b>FY 2017</b>				<b>FY 2018</b>				<b>FY 2019</b>				<b>FY 2020</b>				<b>FY 2021</b>				<b>FY 2022</b>				<b>FY 2023</b>				<b>TC</b>	<b>Tot</b>	
		<b>Q1</b>	<b>Q2</b>	<b>Q3</b>	<b>Q4</b>	<b>Q1</b>	<b>Q2</b>	<b>Q3</b>	<b>Q4</b>	<b>Q1</b>	<b>Q2</b>	<b>Q3</b>	<b>Q4</b>	<b>Q1</b>	<b>Q2</b>	<b>Q3</b>	<b>Q4</b>	<b>Q1</b>	<b>Q2</b>	<b>Q3</b>	<b>Q4</b>	<b>Q1</b>	<b>Q2</b>	<b>Q3</b>	<b>Q4</b>	<b>Q1</b>	<b>Q2</b>	<b>Q3</b>	<b>Q4</b>			
In	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	
Out	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	

## UNCLASSIFIED

<b>Exhibit P-3a, Individual Modification:</b> PB 2019 Army											<b>Date:</b> February 2018																				
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 2032A / 03 / 10										<b>P-1 Line Item Number / Title:</b> 0962C50700 / Patriot Mods										<b>Modification Number / Title:</b> C50700 / PATRIOT MODS											
<b>ID Code</b> (A=Service Ready, B=Not Service Ready) :															<b>MDAP/MAIS Code:</b>																
<b>Modification Item 15 of 22:</b> Digital Sidelobe Cancellor (DSLCL)																															
<b>Manufacturer Information</b>																															
Manufacturer Name: TBD														Manufacturer Location: TBD																	
Administrative Leadtime (in Months): 3														Production Leadtime (in Months): 18																	
<b>Dates</b>		<b>FY 2017</b>				<b>FY 2018</b>				<b>FY 2019</b>				<b>FY 2020</b>				<b>FY 2021</b>				<b>FY 2022</b>				<b>FY 2023</b>					
Contract Dates		Jan 2017				Jan 2018				Jan 2019				Jan 2020																	
Delivery Dates		Jul 2018				Jul 2019				Jul 2020				Jul 2021																	
<b>Installation Information</b>																															
<b>Method of Implementation:</b> Depot, PM Office, contractor team																															
<b>Installation Cost</b>		<b>Prior Years</b>		<b>FY 2017</b>		<b>FY 2018</b>		<b>FY 2019 Base</b>		<b>FY 2019 OCO</b>		<b>FY 2019 Total</b>		<b>FY 2020</b>		<b>FY 2021</b>		<b>FY 2022</b>		<b>FY 2023</b>		<b>To Complete</b>		<b>Total</b>							
		Qty (Each) / Total Cost (\$ M)		Qty (Each) / Total Cost (\$ M)		Qty (Each) / Total Cost (\$ M)		Qty (Each) / Total Cost (\$ M)		Qty (Each) / Total Cost (\$ M)		Qty (Each) / Total Cost (\$ M)		Qty (Each) / Total Cost (\$ M)		Qty (Each) / Total Cost (\$ M)		Qty (Each) / Total Cost (\$ M)		Qty (Each) / Total Cost (\$ M)		Qty (Each) / Total Cost (\$ M)		Qty (Each) / Total Cost (\$ M)							
Prior Years		- / -		- / -		- / -		0 / 0.000		- / -		0 / 0.000		- / -		- / -		- / -		- / -		- / -		- / -		- / -					
FY 2017		- / -		- / -		5 / 0.000		0 / 0.000		- / -		0 / 0.000		- / -		- / -		- / -		- / -		- / -		- / -		5 / 0.000					
FY 2018		- / -		- / -		- / -		38 / 0.000		- / -		38 / 0.000		- / -		- / -		- / -		- / -		- / -		- / -		38 / 0.000					
FY 2019		- / -		- / -		- / -		0 / 0.000		- / -		0 / 0.000		28 / 0.000		- / -		- / -		- / -		- / -		- / -		28 / 0.000					
FY 2020		- / -		- / -		- / -		0 / 0.000		- / -		0 / 0.000		- / -		10 / 0.000		- / -		- / -		- / -		- / -		10 / 0.000					
FY 2021		- / -		- / -		- / -		0 / 0.000		- / -		0 / 0.000		- / -		- / -		- / -		- / -		- / -		- / -		- / -					
FY 2022		- / -		- / -		- / -		0 / 0.000		- / -		0 / 0.000		- / -		- / -		- / -		- / -		- / -		- / -		- / -					
FY 2023		- / -		- / -		- / -		0 / 0.000		- / -		0 / 0.000		- / -		- / -		- / -		- / -		- / -		- / -		- / -					
To Complete		- / -		- / -		- / -		0 / 0.000		- / -		0 / 0.000		- / -		- / -		- / -		- / -		- / -		- / -		- / -					
Total		0 / 0.000		0 / 0.000		5 / 0.000		38 / 0.000		0 / 0.000		38 / 0.000		28 / 0.000		10 / 0.000		- / -		- / -		- / -		- / -		81 / 0.000					
<b>Installation Schedule</b>																															
	<b>PYS</b>	<b>FY 2017</b>				<b>FY 2018</b>				<b>FY 2019</b>				<b>FY 2020</b>				<b>FY 2021</b>				<b>FY 2022</b>				<b>FY 2023</b>				<b>TC</b>	<b>Tot</b>
		<b>Q1</b>	<b>Q2</b>	<b>Q3</b>	<b>Q4</b>	<b>Q1</b>	<b>Q2</b>	<b>Q3</b>	<b>Q4</b>	<b>Q1</b>	<b>Q2</b>	<b>Q3</b>	<b>Q4</b>	<b>Q1</b>	<b>Q2</b>	<b>Q3</b>	<b>Q4</b>	<b>Q1</b>	<b>Q2</b>	<b>Q3</b>	<b>Q4</b>	<b>Q1</b>	<b>Q2</b>	<b>Q3</b>	<b>Q4</b>	<b>Q1</b>	<b>Q2</b>	<b>Q3</b>	<b>Q4</b>		
In	-	-	-	-	-	-	-	-	5	-	-	-	38	-	-	-	28	-	-	-	10	-	-	-	-	-	-	-	-	-	81
Out	-	-	-	-	-	-	-	-	5	-	-	-	38	-	-	-	28	-	-	-	10	-	-	-	-	-	-	-	-	-	81

UNCLASSIFIED

Exhibit P-3a, Individual Modification: PB 2019 Army					Date: February 2018		
Appropriation / Budget Activity / Budget Sub Activity: 2032A / 03 / 10			P-1 Line Item Number / Title: 0962C50700 / Patriot Mods			Modification Number / Title: C50700 / PATRIOT MODS	
ID Code (A=Service Ready, B=Not Service Ready) :				MDAP/MAIS Code:			
Modification Item 16 of 22: Command Obsolescence Alleviation							
Manufacturer Information							
Manufacturer Name: Various				Manufacturer Location: Various			
Administrative Leadtime (in Months): 8				Production Leadtime (in Months): 5			
Dates	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023
Contract Dates							
Delivery Dates							
Installation Information							
Method of Implementation (Organic): PM Office, contractor team					Installation Quantity: 0		

## UNCLASSIFIED

<b>Exhibit P-3a, Individual Modification:</b> PB 2019 Army											<b>Date:</b> February 2018																					
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 2032A / 03 / 10											<b>P-1 Line Item Number / Title:</b> 0962C50700 / Patriot Mods											<b>Modification Number / Title:</b> C50700 / PATRIOT MODS										
<b>ID Code</b> (A=Service Ready, B=Not Service Ready) :											<b>MDAP/MAIS Code:</b>																					
<b>Modification Item 17 of 22:</b> 35th Brigade Modification Kits																																
<b>Manufacturer Information</b>																																
Manufacturer Name: TBD													Manufacturer Location: TBD																			
Administrative Leadtime (in Months):													Production Leadtime (in Months):																			
<b>Dates</b>		<b>FY 2017</b>				<b>FY 2018</b>				<b>FY 2019</b>				<b>FY 2020</b>				<b>FY 2021</b>				<b>FY 2022</b>				<b>FY 2023</b>						
Contract Dates																																
Delivery Dates																																
<b>Installation Information</b>																																
<b>Method of Implementation:</b> TBD																																
<b>Installation Cost</b>		<b>Prior Years</b>		<b>FY 2017</b>		<b>FY 2018</b>		<b>FY 2019 Base</b>		<b>FY 2019 OCO</b>		<b>FY 2019 Total</b>		<b>FY 2020</b>		<b>FY 2021</b>		<b>FY 2022</b>		<b>FY 2023</b>		<b>To Complete</b>		<b>Total</b>								
		Qty (Each) / Total Cost (\$ M)		Qty (Each) / Total Cost (\$ M)		Qty (Each) / Total Cost (\$ M)		Qty (Each) / Total Cost (\$ M)		Qty (Each) / Total Cost (\$ M)		Qty (Each) / Total Cost (\$ M)		Qty (Each) / Total Cost (\$ M)		Qty (Each) / Total Cost (\$ M)		Qty (Each) / Total Cost (\$ M)		Qty (Each) / Total Cost (\$ M)		Qty (Each) / Total Cost (\$ M)		Qty (Each) / Total Cost (\$ M)								
Prior Years		- / -		- / -		- / -		0 / 0.000		- / -		0 / 0.000		- / -		- / -		- / -		- / -		- / -		- / -		- / -						
FY 2017		- / -		- / -		- / -		0 / 0.000		- / -		0 / 0.000		- / -		- / -		- / -		- / -		- / -		- / -		- / -						
FY 2018		- / -		- / -		- / -		0 / 0.000		- / -		0 / 0.000		- / -		- / -		- / -		- / -		- / -		- / -		- / -						
FY 2019		- / -		- / -		- / -		0 / 0.000		- / -		0 / 0.000		- / -		- / -		- / -		- / -		- / -		- / -		- / -						
FY 2020		- / -		- / -		- / -		0 / 0.000		- / -		0 / 0.000		- / -		- / -		- / -		- / -		- / -		- / -		- / -						
FY 2021		- / -		- / -		- / -		0 / 0.000		- / -		0 / 0.000		- / -		- / -		- / -		- / -		- / -		- / -		- / -						
FY 2022		- / -		- / -		- / -		0 / 0.000		- / -		0 / 0.000		- / -		- / -		- / -		- / -		- / -		- / -		- / -						
FY 2023		- / -		- / -		- / -		0 / 0.000		- / -		0 / 0.000		- / -		- / -		- / -		- / -		- / -		- / -		- / -						
To Complete		- / -		- / -		- / -		0 / 0.000		- / -		0 / 0.000		- / -		- / -		- / -		- / -		- / -		56 / 0.000		56 / 0.000						
Total		0 / 0.000		0 / 0.000		0 / 0.000		0 / 0.000		0 / 0.000		0 / 0.000		- / -		- / -		- / -		- / -		- / -		56 / 0.000		56 / 0.000						
<b>Installation Schedule</b>																																
	<b>PYS</b>	<b>FY 2017</b>				<b>FY 2018</b>				<b>FY 2019</b>				<b>FY 2020</b>				<b>FY 2021</b>				<b>FY 2022</b>				<b>FY 2023</b>				<b>TC</b>	<b>Tot</b>	
		<b>Q1</b>	<b>Q2</b>	<b>Q3</b>	<b>Q4</b>	<b>Q1</b>	<b>Q2</b>	<b>Q3</b>	<b>Q4</b>	<b>Q1</b>	<b>Q2</b>	<b>Q3</b>	<b>Q4</b>	<b>Q1</b>	<b>Q2</b>	<b>Q3</b>	<b>Q4</b>	<b>Q1</b>	<b>Q2</b>	<b>Q3</b>	<b>Q4</b>	<b>Q1</b>	<b>Q2</b>	<b>Q3</b>	<b>Q4</b>	<b>Q1</b>	<b>Q2</b>	<b>Q3</b>	<b>Q4</b>			
In	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	56	56	
Out	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	56	56	

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<b>Exhibit P-3a, Individual Modification:</b> PB 2019 Army											<b>Date:</b> February 2018																								
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 2032A / 03 / 10											<b>P-1 Line Item Number / Title:</b> 0962C50700 / Patriot Mods											<b>Modification Number / Title:</b> C50700 / PATRIOT MODS													
<b>ID Code</b> (A=Service Ready, B=Not Service Ready) :											<b>MDAP/MAIS Code:</b>																								
<b>Modification Item 18 of 22:</b> ADI TPX 57 Obsolescence																																			
<b>Manufacturer Information</b>																																			
Manufacturer Name: TBD													Manufacturer Location: TBD																						
Administrative Leadtime (in Months):													Production Leadtime (in Months):																						
<b>Dates</b>	<b>FY 2017</b>					<b>FY 2018</b>					<b>FY 2019</b>					<b>FY 2020</b>					<b>FY 2021</b>					<b>FY 2022</b>					<b>FY 2023</b>				
Contract Dates																																			
Delivery Dates																																			
<b>Installation Information</b>																																			
<b>Method of Implementation:</b> TBD																																			
<b>Installation Cost</b>	<b>Prior Years</b>	<b>FY 2017</b>	<b>FY 2018</b>	<b>FY 2019 Base</b>	<b>FY 2019 OCO</b>	<b>FY 2019 Total</b>	<b>FY 2020</b>	<b>FY 2021</b>	<b>FY 2022</b>	<b>FY 2023</b>	<b>To Complete</b>	<b>Total</b>																							
	<i>Qty (Each) / Total Cost (\$ M)</i>	<i>Qty (Each) / Total Cost (\$ M)</i>	<i>Qty (Each) / Total Cost (\$ M)</i>	<i>Qty (Each) / Total Cost (\$ M)</i>	<i>Qty (Each) / Total Cost (\$ M)</i>	<i>Qty (Each) / Total Cost (\$ M)</i>	<i>Qty (Each) / Total Cost (\$ M)</i>	<i>Qty (Each) / Total Cost (\$ M)</i>	<i>Qty (Each) / Total Cost (\$ M)</i>	<i>Qty (Each) / Total Cost (\$ M)</i>	<i>Qty (Each) / Total Cost (\$ M)</i>	<i>Qty (Each) / Total Cost (\$ M)</i>	<i>Qty (Each) / Total Cost (\$ M)</i>																						
Prior Years	- / -	- / -	- / -	0 / 0.000	- / -	0 / 0.000	- / -	- / -	- / -	- / -	- / -	- / -	- / -																						
FY 2017	- / -	- / -	- / -	0 / 0.000	- / -	0 / 0.000	- / -	- / -	- / -	- / -	- / -	- / -	- / -																						
FY 2018	- / -	- / -	- / -	0 / 0.000	- / -	0 / 0.000	- / -	- / -	- / -	- / -	- / -	- / -	- / -																						
FY 2019	- / -	- / -	- / -	0 / 0.000	- / -	0 / 0.000	- / -	- / -	- / -	- / -	- / -	- / -	- / -																						
FY 2020	- / -	- / -	- / -	0 / 0.000	- / -	0 / 0.000	- / -	- / -	- / -	- / -	- / -	- / -	- / -																						
FY 2021	- / -	- / -	- / -	0 / 0.000	- / -	0 / 0.000	- / -	- / -	- / -	- / -	- / -	- / -	- / -																						
FY 2022	- / -	- / -	- / -	0 / 0.000	- / -	0 / 0.000	- / -	- / -	- / -	- / -	- / -	- / -	- / -																						
FY 2023	- / -	- / -	- / -	0 / 0.000	- / -	0 / 0.000	- / -	- / -	- / -	- / -	- / -	- / -	- / -																						
To Complete	- / -	- / -	- / -	0 / 0.000	- / -	0 / 0.000	- / -	- / -	- / -	- / -	- / -	169 / 0.000	169 / 0.000																						
Total	0 / 0.000	0 / 0.000	0 / 0.000	0 / 0.000	0 / 0.000	0 / 0.000	- / -	- / -	- / -	- / -	- / -	169 / 0.000	169 / 0.000																						
<b>Installation Schedule</b>																																			
	<b>PYS</b>	<b>FY 2017</b>				<b>FY 2018</b>				<b>FY 2019</b>				<b>FY 2020</b>				<b>FY 2021</b>				<b>FY 2022</b>				<b>FY 2023</b>				<b>TC</b>	<b>Tot</b>				
		<b>Q1</b>	<b>Q2</b>	<b>Q3</b>	<b>Q4</b>	<b>Q1</b>	<b>Q2</b>	<b>Q3</b>	<b>Q4</b>	<b>Q1</b>	<b>Q2</b>	<b>Q3</b>	<b>Q4</b>	<b>Q1</b>	<b>Q2</b>	<b>Q3</b>	<b>Q4</b>	<b>Q1</b>	<b>Q2</b>	<b>Q3</b>	<b>Q4</b>	<b>Q1</b>	<b>Q2</b>	<b>Q3</b>	<b>Q4</b>	<b>Q1</b>	<b>Q2</b>	<b>Q3</b>	<b>Q4</b>						
In	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	169	169				
Out	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	169	169				

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<b>Exhibit P-3a, Individual Modification:</b> PB 2019 Army					<b>Date:</b> February 2018		
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 2032A / 03 / 10			<b>P-1 Line Item Number / Title:</b> 0962C50700 / Patriot Mods		<b>Modification Number / Title:</b> C50700 / PATRIOT MODS		
<b>ID Code</b> (A=Service Ready, B=Not Service Ready) :				<b>MDAP/MAIS Code:</b>			
<b>Modification Item 19 of 22:</b> MAP/RDP Encryption Compliance							
<b>Manufacturer Information</b>							
Manufacturer Name: Raytheon				Manufacturer Location: Andover, MA			
Administrative Leadtime ( <i>in Months</i> ): 4				Production Leadtime ( <i>in Months</i> ): 5			
<b>Dates</b>	<b>FY 2017</b>	<b>FY 2018</b>	<b>FY 2019</b>	<b>FY 2020</b>	<b>FY 2021</b>	<b>FY 2022</b>	<b>FY 2023</b>
Contract Dates				Jan 2020	Jan 2021		
Delivery Dates				Jun 2020	Jun 2021		
<b>Installation Information</b>							
<b>Method of Implementation (Organic):</b> Contractor Team, PM Fielding Team					<b>Installation Quantity:</b> 0		

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<b>Exhibit P-3a, Individual Modification:</b> PB 2019 Army										<b>Date:</b> February 2018																					
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 2032A / 03 / 10					<b>P-1 Line Item Number / Title:</b> 0962C50700 / Patriot Mods										<b>Modification Number / Title:</b> C50700 / PATRIOT MODS																
<b>ID Code</b> (A=Service Ready, B=Not Service Ready) :										<b>MDAP/MAIS Code:</b>																					
<b>Modification Item 20 of 22:</b> IFF Antenna Redesign																															
<b>Manufacturer Information</b>																															
Manufacturer Name: Raytheon										Manufacturer Location: Andover, MA																					
Administrative Leadtime (in Months): 4										Production Leadtime (in Months):																					
<b>Dates</b>	<b>FY 2017</b>				<b>FY 2018</b>				<b>FY 2019</b>				<b>FY 2020</b>				<b>FY 2021</b>				<b>FY 2022</b>				<b>FY 2023</b>						
Contract Dates													Jan 2020				Jan 2021														
Delivery Dates													Feb 2021				Feb 2022														
<b>Installation Information</b>																															
<b>Method of Implementation:</b> PM Fielding Team																															
<b>Installation Cost</b>		<b>Prior Years</b>	<b>FY 2017</b>	<b>FY 2018</b>	<b>FY 2019 Base</b>	<b>FY 2019 OCO</b>	<b>FY 2019 Total</b>	<b>FY 2020</b>	<b>FY 2021</b>	<b>FY 2022</b>	<b>FY 2023</b>	<b>To Complete</b>	<b>Total</b>																		
		Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)																
Prior Years		- / -	- / -	- / -	0 / 0.000	- / -	0 / 0.000	- / -	- / -	- / -	- / -	- / -	- / -	- / -																	
FY 2017		- / -	- / -	- / -	0 / 0.000	- / -	0 / 0.000	- / -	- / -	- / -	- / -	- / -	- / -	- / -																	
FY 2018		- / -	- / -	- / -	0 / 0.000	- / -	0 / 0.000	- / -	- / -	- / -	- / -	- / -	- / -	- / -																	
FY 2019		- / -	- / -	- / -	0 / 0.000	- / -	0 / 0.000	- / -	- / -	- / -	- / -	- / -	- / -	- / -																	
FY 2020		- / -	- / -	- / -	0 / 0.000	- / -	0 / 0.000	- / -	- / -	12 / 0.000	- / -	- / -	- / -	- / -																	
FY 2021		- / -	- / -	- / -	0 / 0.000	- / -	0 / 0.000	- / -	- / -	12 / 0.000	- / -	- / -	- / -	- / -																	
FY 2022		- / -	- / -	- / -	0 / 0.000	- / -	0 / 0.000	- / -	- / -	- / -	- / -	- / -	- / -	- / -																	
FY 2023		- / -	- / -	- / -	0 / 0.000	- / -	0 / 0.000	- / -	- / -	- / -	- / -	- / -	- / -	- / -																	
To Complete		- / -	- / -	- / -	0 / 0.000	- / -	0 / 0.000	- / -	- / -	- / -	- / -	- / -	- / -	- / -																	
Total		0 / 0.000	0 / 0.000	0 / 0.000	0 / 0.000	0 / 0.000	0 / 0.000	- / -	12 / 0.000	12 / 0.000	- / -	- / -	- / -	24 / 0.000																	
<b>Installation Schedule</b>																															
	<b>PYS</b>	<b>FY 2017</b>				<b>FY 2018</b>				<b>FY 2019</b>				<b>FY 2020</b>				<b>FY 2021</b>				<b>FY 2022</b>				<b>FY 2023</b>				<b>TC</b>	<b>Tot</b>
		<b>Q1</b>	<b>Q2</b>	<b>Q3</b>	<b>Q4</b>	<b>Q1</b>	<b>Q2</b>	<b>Q3</b>	<b>Q4</b>	<b>Q1</b>	<b>Q2</b>	<b>Q3</b>	<b>Q4</b>	<b>Q1</b>	<b>Q2</b>	<b>Q3</b>	<b>Q4</b>	<b>Q1</b>	<b>Q2</b>	<b>Q3</b>	<b>Q4</b>	<b>Q1</b>	<b>Q2</b>	<b>Q3</b>	<b>Q4</b>	<b>Q1</b>	<b>Q2</b>	<b>Q3</b>	<b>Q4</b>		
In	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	12	-	-	-	12	-	-	-	-	-	-	-	24
Out	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	12	-	-	-	12	-	-	-	-	-	-	-	24

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<b>Exhibit P-3a, Individual Modification:</b> PB 2019 Army											<b>Date:</b> February 2018																					
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 2032A / 03 / 10											<b>P-1 Line Item Number / Title:</b> 0962C50700 / Patriot Mods											<b>Modification Number / Title:</b> C50700 / PATRIOT MODS										
<b>ID Code</b> (A=Service Ready, B=Not Service Ready) :											<b>MDAP/MAIS Code:</b>																					
<b>Modification Item 21 of 22:</b> Communications Obsolescence																																
<b>Manufacturer Information</b>																																
Manufacturer Name: Raytheon													Manufacturer Location: Andover, MA																			
Administrative Leadtime (in Months): 3													Production Leadtime (in Months): 5																			
<b>Dates</b>		<b>FY 2017</b>				<b>FY 2018</b>				<b>FY 2019</b>				<b>FY 2020</b>				<b>FY 2021</b>				<b>FY 2022</b>				<b>FY 2023</b>						
Contract Dates																		Jan 2021				Jan 2022				Jan 2023						
Delivery Dates																		Jun 2021				Jun 2022				Jun 2023						
<b>Installation Information</b>																																
<b>Method of Implementation:</b> TBD																																
<b>Installation Cost</b>		<b>Prior Years</b>	<b>FY 2017</b>		<b>FY 2018</b>		<b>FY 2019 Base</b>		<b>FY 2019 OCO</b>		<b>FY 2019 Total</b>		<b>FY 2020</b>		<b>FY 2021</b>		<b>FY 2022</b>		<b>FY 2023</b>		<b>To Complete</b>		<b>Total</b>									
		Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)		Qty (Each) / Total Cost (\$ M)		Qty (Each) / Total Cost (\$ M)		Qty (Each) / Total Cost (\$ M)		Qty (Each) / Total Cost (\$ M)		Qty (Each) / Total Cost (\$ M)		Qty (Each) / Total Cost (\$ M)		Qty (Each) / Total Cost (\$ M)		Qty (Each) / Total Cost (\$ M)		Qty (Each) / Total Cost (\$ M)		Qty (Each) / Total Cost (\$ M)									
Prior Years		- / -	- / -		- / -		0 / 0.000		- / -		0 / 0.000		- / -		- / -		- / -		- / -		- / -		- / -		- / -							
FY 2017		- / -	- / -		- / -		0 / 0.000		- / -		0 / 0.000		- / -		- / -		- / -		- / -		- / -		- / -		- / -							
FY 2018		- / -	- / -		- / -		0 / 0.000		- / -		0 / 0.000		- / -		- / -		- / -		- / -		- / -		- / -		- / -							
FY 2019		- / -	- / -		- / -		0 / 0.000		- / -		0 / 0.000		- / -		- / -		- / -		- / -		- / -		- / -		- / -							
FY 2020		- / -	- / -		- / -		0 / 0.000		- / -		0 / 0.000		- / -		- / -		- / -		- / -		- / -		- / -		- / -							
FY 2021		- / -	- / -		- / -		0 / 0.000		- / -		0 / 0.000		- / -		16 / 0.000		8 / 0.000		- / -		- / -		- / -		24 / 0.000							
FY 2022		- / -	- / -		- / -		0 / 0.000		- / -		0 / 0.000		- / -		- / -		16 / 0.000		8 / 0.000		- / -		- / -		24 / 0.000							
FY 2023		- / -	- / -		- / -		0 / 0.000		- / -		0 / 0.000		- / -		- / -		- / -		16 / 0.000		8 / 0.000		8 / 0.000		24 / 0.000							
To Complete		- / -	- / -		- / -		0 / 0.000		- / -		0 / 0.000		- / -		- / -		- / -		- / -		- / -		- / -		- / -							
Total		0 / 0.000	0 / 0.000		0 / 0.000		0 / 0.000		0 / 0.000		0 / 0.000		- / -		16 / 0.000		24 / 0.000		24 / 0.000		8 / 0.000		8 / 0.000		72 / 0.000							
<b>Installation Schedule</b>																																
	<b>PYS</b>	<b>FY 2017</b>				<b>FY 2018</b>				<b>FY 2019</b>				<b>FY 2020</b>				<b>FY 2021</b>				<b>FY 2022</b>				<b>FY 2023</b>				<b>TC</b>	<b>Tot</b>	
		<b>Q1</b>	<b>Q2</b>	<b>Q3</b>	<b>Q4</b>	<b>Q1</b>	<b>Q2</b>	<b>Q3</b>	<b>Q4</b>	<b>Q1</b>	<b>Q2</b>	<b>Q3</b>	<b>Q4</b>	<b>Q1</b>	<b>Q2</b>	<b>Q3</b>	<b>Q4</b>	<b>Q1</b>	<b>Q2</b>	<b>Q3</b>	<b>Q4</b>	<b>Q1</b>	<b>Q2</b>	<b>Q3</b>	<b>Q4</b>	<b>Q1</b>	<b>Q2</b>	<b>Q3</b>	<b>Q4</b>			
In	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	8	8	8	-	8	8	8	-	8	8	8	72	
Out	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	8	8	8	-	8	8	8	-	8	8	8	72	



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Exhibit P-3a, Individual Modification: PB 2019 Army					Date: February 2018		
Appropriation / Budget Activity / Budget Sub Activity: 2032A / 03 / 10			P-1 Line Item Number / Title: 0962C50700 / Patriot Mods			Modification Number / Title: C50700 / PATRIOT MODS	
ID Code (A=Service Ready, B=Not Service Ready) :				MDAP/MAIS Code:			
Modification Item 22 of 22: Report Rocket Classification							
Manufacturer Information							
Manufacturer Name: Raytheon				Manufacturer Location: Andover, MA			
Administrative Leadtime (in Months): 4				Production Leadtime (in Months): 5			
Dates	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023
Contract Dates				Jan 2020	Jan 2021	Jan 2022	Jan 2023
Delivery Dates				Jun 2020	Jun 2021	Jun 2022	Jun 2023
Installation Information							
Method of Implementation (Organic): PM Fielding Team					Installation Quantity: 0		

**UNCLASSIFIED**

<b>Exhibit P-40, Budget Line Item Justification:</b> PB 2019 Army										<b>Date:</b> February 2018		
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 2032A: Missile Procurement, Army / BA 03: Modification of Missiles / BSA 10: Modifications							<b>P-1 Line Item Number / Title:</b> 1823CA6700 / ATACMS MODS					
<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> 0203802A				
<b>Line Item MDAP/MAIS Code:</b> N/A												
<b>Resource Summary</b>	<b>Prior Years</b>	<b>FY 2017</b>	<b>FY 2018</b>	<b>FY 2019 Base</b>	<b>FY 2019 OCO</b>	<b>FY 2019 Total</b>	<b>FY 2020</b>	<b>FY 2021</b>	<b>FY 2022</b>	<b>FY 2023</b>	<b>To Complete</b>	<b>Total</b>
Procurement Quantity ( <i>Units in Each</i> )	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost ( <i>\$ in Millions</i> )	20.119	165.943	186.040	221.656	225.580	447.236	259.011	332.791	374.310	374.270	-	2,159.720
Less PY Advance Procurement ( <i>\$ in Millions</i> )	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) ( <i>\$ in Millions</i> )	20.119	165.943	186.040	221.656	225.580	447.236	259.011	332.791	374.310	374.270	-	2,159.720
Plus CY Advance Procurement ( <i>\$ in Millions</i> )	-	-	-	-	-	-	-	-	-	-	-	-
<b>Total Obligation Authority</b> ( <i>\$ in Millions</i> )	<b>20.119</b>	<b>165.943</b>	<b>186.040</b>	<b>221.656</b>	<b>225.580</b>	<b>447.236</b>	<b>259.011</b>	<b>332.791</b>	<b>374.310</b>	<b>374.270</b>	<b>-</b>	<b>2,159.720</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> )	-	887.396	1,388.358	1,119.475	1,095.049	1,107.020	1,007.825	981.684	992.865	1,014.282	-	1,044.857
<p><b>Description:</b></p> <p>Army Tactical Missile System (ATACMS) is the United States (U.S.) Army's primary 24/7, all weather, and surface-to-surface artillery precision missile used by current and future Combatant Commanders to shape the battle field with long-range fires against hard and soft stationary targets in open, complex, and urban environments.</p> <p>This is the follow-on procurement to the integration and testing program funded under Program Element (PE) 0203802A.</p> <p>Block (BLK) I/IA missiles currently have warheads (WHs) that are non-compliant with the 2008 Department of Defense (DoD) policy on cluster munitions (CM). The modification will be performed as a Service Life Extension Program (SLEP) and will take expired assets and reset them to a 10 year service life. This effort will replace the existing M74 bomblets with a policy compliant WH, update electronics and propellants. This effort effectively brings the expired inventory back into service, while meeting the DoD CM Policy, to engage targets up to 300 kilometers (km). A Height-of-Burst capability may be introduced under this modification pending test program results under PE 0203802A. New missile builds may be included under this effort if sufficient assets are not available to SLEP.</p> <p>ATACMS modifications will be performed by Lockheed Martin Missiles and Fire Control, Grand Prairie, TX.</p>												
<b>Secondary Distribution</b>		<b>FY 2017</b>	<b>FY 2018</b>	<b>FY 2019 Base</b>	<b>FY 2019 OCO</b>	<b>FY 2019 Total</b>	<b>FY 2020</b>	<b>FY 2021</b>	<b>FY 2022</b>	<b>FY 2023</b>		
Army	Quantity	-	-	-	-	-	-	-	-	-	-	
	Total Obligation Authority	165.943	186.040	221.656	225.580	447.236	259.011	332.791	374.310	374.270		
<b>Total:</b> <b>Secondary Distribution</b>	<b>Quantity</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	
	<b>Total Obligation Authority</b>	<b>165.943</b>	<b>186.040</b>	<b>221.656</b>	<b>225.580</b>	<b>447.236</b>	<b>259.011</b>	<b>332.791</b>	<b>374.310</b>	<b>374.270</b>		

**UNCLASSIFIED**

<b>Exhibit P-40, Budget Line Item Justification:</b> PB 2019 Army								<b>Date:</b> February 2018	
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 2032A: Missile Procurement, Army / BA 03: Modification of Missiles / BSA 10: Modifications						<b>P-1 Line Item Number / Title:</b> 1823CA6700 / ATACMS MODS			
<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> 0203802A		
<b>Line Item MDAP/MAIS Code:</b> N/A									

  

Exhibits Schedule					Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 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	CA6700 / Army Tactical Missile System (ATACMS) Modifications (Unclassified)				- / 20.119	- / 165.943	- / 186.040	- / 221.656	- / 225.580	- / 447.236
<b>P-40</b>	<b>Total Gross/Weapon System Cost</b>				<b>- / 20.119</b>	<b>- / 165.943</b>	<b>- / 186.040</b>	<b>- / 221.656</b>	<b>- / 225.580</b>	<b>- / 447.236</b>

  

Exhibits Schedule					FY 2020	FY 2021	FY 2022	FY 2023	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	CA6700 / Army Tactical Missile System (ATACMS) Modifications (Unclassified)				- / 259.011	- / 332.791	- / 374.310	- / 374.270	- / -	- / 2,159.720
<b>P-40</b>	<b>Total Gross/Weapon System Cost</b>				<b>- / 259.011</b>	<b>- / 332.791</b>	<b>- / 374.310</b>	<b>- / 374.270</b>	<b>- / -</b>	<b>- / 2,159.720</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:**  
 FY19 Base procurement dollars in the amount of \$221.656 million supports the modification of up to 198 expired ATACMS to reset the 10 year service life and/or new missile builds if expired assets are not available.  
 FY19 OCO procurement dollars in the amount of \$225.580 million supports the modification of up to 206 expired ATACMS to reset the 10 year service life and/or new missile builds if expired assets are not available. Additional supporting tasks include bunker storage, Follow-on Production Testing (FPT), Stockpile Reliability Program (SRP), rate tooling, Government System Engineering/Program Management (SEPM), obsolescence, and software.

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.

Modification costs in FY19 include components, installation costs, and checkout in the unit price at the time of contract award.

FY18 reflects a \$70 million increase in MDDE funding. FY18 funding of \$186.040 million supports the modification of 181 expired ATACMS to reset the 10 year service life.

**UNCLASSIFIED**

<b>Exhibit P-3a, Individual Modification:</b> PB 2019 Army						<b>Date:</b> February 2018					
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 2032A / 03 / 10				<b>P-1 Line Item Number / Title:</b> 1823CA6700 / ATACMS MODS				<b>Modification Number / Title:</b> CA6700 / Army Tactical Missile System (ATACMS) Modifications			

ID Code (A=Service Ready, B=Not Service Ready) :						MDAP/MAIS Code:						
Resource Summary	Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	To Complete	Total
Procurement Quantity ( <i>Units in Each</i> )	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost ( <i>\$ in Millions</i> )	20.119	165.943	186.040	221.656	225.580	447.236	259.011	332.791	374.310	374.270	-	2,159.720
Less PY Advance Procurement ( <i>\$ in Millions</i> )	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) ( <i>\$ in Millions</i> )	20.119	165.943	186.040	221.656	225.580	447.236	259.011	332.791	374.310	374.270	-	2,159.720
Plus CY Advance Procurement ( <i>\$ in Millions</i> )	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority ( <i>\$ in Millions</i> )	20.119	165.943	186.040	221.656	225.580	447.236	259.011	332.791	374.310	374.270	-	2,159.720
(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> )	-	887.396	1,388.358	1,119.475	1,095.049	1,107.020	1,007.825	981.684	992.865	1,014.282	-	1,044.857

**Description:**

Block (BLK) I/IA missiles currently have warheads (WHs) that are non-compliant with the 2008 Department of Defense (DoD) policy on cluster munitions (CM). The modification will be performed as a Service Life Extension Program (SLEP) and will take expired assets and reset them to a 10 year service life. This effort will replace the existing M74 bomblets with a policy compliant WH, update electronics and propellants. This effort effectively brings the expired inventory back into service, while meeting the DoD CM Policy, to engage targets up to 300 kilometers (km). A Height-of-Burst capability may be introduced under this modification pending test program results under PE 0203802A. New missile builds may be included under this effort if sufficient assets are not available to SLEP.

ATACMS modifications will be performed by Lockheed Martin Missiles and Fire Control, Grand Prairie, TX.

Modification costs in FY19 include components, installation costs, and checkout in the unit price at the time of contract award.

<b>Secondary Distribution</b>		<b>FY 2017</b>	<b>FY 2018</b>	<b>FY 2019 Base</b>	<b>FY 2019 OCO</b>	<b>FY 2019 Total</b>	<b>FY 2020</b>	<b>FY 2021</b>	<b>FY 2022</b>	<b>FY 2023</b>
Army	Quantity	-	-	-	-	-	-	-	-	-
	Total Obligation Authority	165.943	186.040	221.656	225.580	447.236	259.011	332.791	374.310	374.270
<b>Total:</b> Secondary Distribution	Quantity	-	-	-	-	-	-	-	-	-
	Total Obligation Authority	165.943	186.040	221.656	225.580	447.236	259.011	332.791	374.310	374.270

**UNCLASSIFIED**

<b>Exhibit P-3a, Individual Modification:</b> PB 2019 Army										<b>Date:</b> February 2018			
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 2032A / 03 / 10				<b>P-1 Line Item Number / Title:</b> 1823CA6700 / ATACMS MODS						<b>Modification Number / Title:</b> CA6700 / Army Tactical Missile System (ATACMS) Modifications			
<b>ID Code</b> (A=Service Ready, B=Not Service Ready) :								<b>MDAP/MAIS Code:</b>					
<b>Models of Systems Affected:</b> ATACMS				<b>Modification Type:</b> Unclassified				<b>Related RDT&amp;E PEs:</b>					
<b>Financial Plan</b>	<b>Prior Years</b>	<b>FY 2017</b>	<b>FY 2018</b>	<b>FY 2019 Base</b>	<b>FY 2019 OCO</b>	<b>FY 2019 Total</b>	<b>FY 2020</b>	<b>FY 2021</b>	<b>FY 2022</b>	<b>FY 2023</b>	<b>To Complete</b>	<b>Total</b>	
	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (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 1:</b> CM Compliant Warhead													
A Kits													
Recurring													
Kit Quantity	- / -	187 / 129.510	181 / 131.182	198 / 171.311	206 / 212.692	404 / 384.003	264 / 205.364	339 / 266.701	377 / 301.068	369 / 300.895	- / 0.000	2,121 / 1,718.723	
Project Management Admin	- / 2.427	- / 13.130	- / 15.277	- / 13.865	- / -	- / 13.865	- / 14.142	- / 14.425	- / 14.714	- / 15.008	- / 0.000	- / 102.988	
<b>Subtotal: Recurring</b>	- / 2.427	187 / 142.640	181 / 146.459	198 / 185.176	206 / 212.692	404 / 397.868	264 / 219.506	339 / 281.126	377 / 315.782	369 / 315.903	- / -	2,121 / 1,821.711	
Non-Recurring													
Startup/Tooling/Other Non-Recurring	- / 17.692	- / 4.202	- / 19.887	- / 16.180	- / 0.450	- / 16.630	- / 7.311	- / 9.557	- / 10.822	- / 10.788	- / 0.000	- / 96.889	
<b>Subtotal: Non-Recurring</b>	- / 17.692	- / 4.202	- / 19.887	- / 16.180	- / 0.450	- / 16.630	- / 7.311	- / 9.557	- / 10.822	- / 10.788	- / -	- / 96.889	
<b>Subtotal: CM Compliant Warhead</b>	- / 20.119	187 / 146.842	181 / 166.346	198 / 201.356	206 / 213.142	404 / 414.498	264 / 226.817	339 / 290.683	377 / 326.604	369 / 326.691	- / -	2,121 / 1,918.600	
<b>Subtotal: Procurement, All Modification Items</b>	- / 20.119	187 / 146.842	181 / 166.346	198 / 201.356	206 / 213.142	404 / 414.498	264 / 226.817	339 / 290.683	377 / 326.604	369 / 326.691	- / -	2,121 / 1,918.600	
<b>Installation</b>													
<b>Modification Item 1 of 1:</b> CM Compliant Warhead													
	- / -	187 / 19.101	181 / 19.694	198 / 20.300	206 / 12.438	404 / 32.738	264 / 32.194	339 / 42.108	377 / 47.706	369 / 47.579	- / -	2,121 / 241.120	
<b>Subtotal: Installation</b>	0 / 0.000	187 / 19.101	181 / 19.694	198 / 20.300	206 / 12.438	404 / 32.738	264 / 32.194	339 / 42.108	377 / 47.706	369 / 47.579	- / -	2,121 / 241.120	
<b>Total</b>													
<b>Total Cost (Procurement + Support + Installation)</b>	<b>20.119</b>	<b>165.943</b>	<b>186.040</b>	<b>221.656</b>	<b>225.580</b>	<b>447.236</b>	<b>259.011</b>	<b>332.791</b>	<b>374.310</b>	<b>374.270</b>	<b>-</b>	<b>2,159.720</b>	

## UNCLASSIFIED

<b>Exhibit P-3a, Individual Modification:</b> PB 2019 Army										<b>Date:</b> February 2018																					
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 2032A / 03 / 10					<b>P-1 Line Item Number / Title:</b> 1823CA6700 / ATACMS MODS					<b>Modification Number / Title:</b> CA6700 / Army Tactical Missile System (ATACMS) Modifications																					
<b>ID Code</b> (A=Service Ready, B=Not Service Ready) :										<b>MDAP/MAIS Code:</b>																					
<b>Modification Item 1 of 1:</b> CM Compliant Warhead																															
<b>Manufacturer Information</b>																															
Manufacturer Name: Lockheed Martin										Manufacturer Location: Camden, AR																					
Administrative Leadtime (in Months): 3										Production Leadtime (in Months): 15																					
<b>Dates</b>	<b>FY 2017</b>	<b>FY 2018</b>	<b>FY 2019</b>	<b>FY 2020</b>	<b>FY 2021</b>	<b>FY 2022</b>	<b>FY 2023</b>																								
Contract Dates	Aug 2017	Jun 2018	Mar 2019	Mar 2020	Mar 2021	Mar 2022	Mar 2023																								
Delivery Dates	Feb 2019	Dec 2019	Sep 2020	Sep 2021	Sep 2022	Sep 2023	Sep 2024																								
<b>Installation Information</b>																															
<b>Method of Implementation:</b> TBD																															
<b>Installation Cost</b>	<b>Prior Years</b>	<b>FY 2017</b>	<b>FY 2018</b>	<b>FY 2019 Base</b>	<b>FY 2019 OCO</b>	<b>FY 2019 Total</b>	<b>FY 2020</b>	<b>FY 2021</b>	<b>FY 2022</b>	<b>FY 2023</b>	<b>To Complete</b>	<b>Total</b>																			
	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)																		
Prior Years	- / -	- / -	- / -	0 / 0.000	- / -	0 / 0.000	- / -	- / -	- / -	- / -	- / -	- / -	- / -																		
FY 2017	- / -	187 / 19.101	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	187 / 19.101																		
FY 2018	- / -	- / -	181 / 19.694	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	181 / 19.694																		
FY 2019	- / -	- / -	- / -	198 / 20.300	206 / 12.438	404 / 32.738	- / -	- / -	- / -	- / -	- / -	- / -	404 / 32.738																		
FY 2020	- / -	- / -	- / -	- / -	- / -	- / -	264 / 32.194	- / -	- / -	- / -	- / -	- / -	264 / 32.194																		
FY 2021	- / -	- / -	- / -	- / -	- / -	- / -	- / -	339 / 42.108	- / -	- / -	- / -	- / -	339 / 42.108																		
FY 2022	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	377 / 47.706	- / -	- / -	- / -	377 / 47.706																		
FY 2023	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	369 / 47.579	- / -	- / -	369 / 47.579																		
To Complete	- / -	- / -	- / -	0 / 0.000	- / -	0 / 0.000	- / -	- / -	- / -	- / -	- / -	- / -	- / -																		
Total	0 / 0.000	187 / 19.101	181 / 19.694	198 / 20.300	206 / 12.438	404 / 32.738	264 / 32.194	339 / 42.108	377 / 47.706	369 / 47.579	- / -	2,121 / 241.120																			
<b>Installation Schedule</b>																															
	<b>PYS</b>	<b>FY 2017</b>				<b>FY 2018</b>				<b>FY 2019</b>				<b>FY 2020</b>				<b>FY 2021</b>				<b>FY 2022</b>				<b>FY 2023</b>				<b>TC</b>	<b>Tot</b>
		<b>Q1</b>	<b>Q2</b>	<b>Q3</b>	<b>Q4</b>	<b>Q1</b>	<b>Q2</b>	<b>Q3</b>	<b>Q4</b>	<b>Q1</b>	<b>Q2</b>	<b>Q3</b>	<b>Q4</b>	<b>Q1</b>	<b>Q2</b>	<b>Q3</b>	<b>Q4</b>	<b>Q1</b>	<b>Q2</b>	<b>Q3</b>	<b>Q4</b>	<b>Q1</b>	<b>Q2</b>	<b>Q3</b>	<b>Q4</b>	<b>Q1</b>	<b>Q2</b>	<b>Q3</b>	<b>Q4</b>		
In	-	-	-	-	187	-	-	181	-	-	404	-	-	-	264	-	-	-	339	-	-	-	377	-	-	-	369	-	-	-	2,121
Out	-	-	-	-	-	-	-	-	-	-	46	47	47	93	45	45	146	101	101	101	66	66	66	66	84	85	85	85	94	652	2,121

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<b>Exhibit P-40, Budget Line Item Justification:</b> PB 2019 Army										<b>Date:</b> February 2018		
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 2032A: Missile Procurement, Army / BA 03: Modification of Missiles / BSA 10: Modifications							<b>P-1 Line Item Number / Title:</b> 1824C57701 / GMLRS MOD					
<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												
<b>Resource Summary</b>	<b>Prior Years</b>	<b>FY 2017</b>	<b>FY 2018</b>	<b>FY 2019 Base</b>	<b>FY 2019 OCO</b>	<b>FY 2019 Total</b>	<b>FY 2020</b>	<b>FY 2021</b>	<b>FY 2022</b>	<b>FY 2023</b>	<b>To Complete</b>	<b>Total</b>
Procurement Quantity ( <i>Units in Each</i> )	-	-	-	1	-	1	126	432	828	564	Continuing	Continuing
Gross/Weapon System Cost ( <i>\$ in Millions</i> )	5.321	0.395	0.531	0.266	-	0.266	15.394	52.714	100.958	69.154	Continuing	Continuing
Less PY Advance Procurement ( <i>\$ in Millions</i> )	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) ( <i>\$ in Millions</i> )	5.321	0.395	0.531	0.266	-	0.266	15.394	52.714	100.958	69.154	Continuing	Continuing
Plus CY Advance Procurement ( <i>\$ in Millions</i> )	-	-	-	-	-	-	-	-	-	-	-	-
<b>Total Obligation Authority</b> ( <i>\$ in Millions</i> )	<b>5.321</b>	<b>0.395</b>	<b>0.531</b>	<b>0.266</b>	<b>-</b>	<b>0.266</b>	<b>15.394</b>	<b>52.714</b>	<b>100.958</b>	<b>69.154</b>	<b>Continuing</b>	<b>Continuing</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> )	-	-	-	266.000	-	266.000	122.175	122.023	121.930	122.613	Continuing	Continuing
<p><b>Description:</b></p> <p>This modification effort will execute the inventory requirements established in the Total Army Munitions Requirement (TAMR) and will reset the 10 year rocket service life of Guided Multiple Launch Rocket system (GMLRS) rockets into either GMLRS Unitary or GMLRS Alternative Warhead (AW) configurations. It capitalizes on the 90% commonality between GMLRS Unitary and AW variants. The conversion process will include replacement of obsolete guidance sets, proper warhead configuration, and other critical components.</p> <p>GMLRS rockets are surface-to-surface artillery rockets fired from the Multiple Launch Rocket System (MLRS) and High Mobility Artillery Rocket System (HIMARS) launchers. GMLRS rockets provide 24/7, all-weather precision fires to engage both area and point targets at short, medium, and long ranges.</p> <p>The GMLRS Program consists of three variants. GMLRS Purpose Improved Conventional Munition (DPICM) is a cluster munition that replaced the shorter range MLRS rockets to engage area or imprecisely located targets. GLMRS DPICM Production was terminated in response to the June 2008 Department of Defense (DoD) Cluster Munitions Policy. GMLRS Unitary utilizes a 200 lb high explosive warhead to engage point targets with limited collateral damage. The GMLRS AW rocket is 90% common with the Unitary variant. GMLRS AW is a non- cluster munition developed to replace GMLRS DPICM. The GMLRS AW program entered full rate production in FY15.</p> <p>The U.S. Army manages all three variants as part of the GMLRS Program. This modification program along with all GMLRS rockets are produced on a common production line by Lockheed Martin in Camden, Arkansas.</p>												
<b>Secondary Distribution</b>		<b>FY 2017</b>	<b>FY 2018</b>	<b>FY 2019 Base</b>	<b>FY 2019 OCO</b>	<b>FY 2019 Total</b>	<b>FY 2020</b>	<b>FY 2021</b>	<b>FY 2022</b>	<b>FY 2023</b>		
Army	Quantity	-	0	1	-	1	126	432	828	564		
	Total Obligation Authority	0.395	0.531	0.266	-	0.266	15.394	52.714	100.958	69.154		
<b>Total: Secondary Distribution</b>	<b>Quantity</b>	<b>-</b>	<b>-</b>	<b>1</b>	<b>-</b>	<b>1</b>	<b>126</b>	<b>432</b>	<b>828</b>	<b>564</b>		
	<b>Total Obligation Authority</b>	<b>0.395</b>	<b>0.531</b>	<b>0.266</b>	<b>-</b>	<b>0.266</b>	<b>15.394</b>	<b>52.714</b>	<b>100.958</b>	<b>69.154</b>		

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<b>Exhibit P-40, Budget Line Item Justification:</b> PB 2019 Army		<b>Date:</b> February 2018
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 2032A: Missile Procurement, Army / BA 03: Modification of Missiles / BSA 10: Modifications		<b>P-1 Line Item Number / Title:</b> 1824C57701 / GMLRS MOD
<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><b>Justification:</b> FY 2019 Base procurement dollars in the amount of \$0.266 million supports the continuation of the conversion test effort.</p> <p>Note: FY19 quantity on P-40 is incorrect (should be zero). Will work with ABO and G-8 to correct before PB 19 submission.</p> <p>In accordance with Section 1815 of the FY2008 National Defense Authorization Act (P.L. 110-181), this item is necessary for the 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 2019 Army										<b>Date:</b> February 2018		
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 2032A: Missile Procurement, Army / BA 03: Modification of Missiles / BSA 10: Modifications							<b>P-1 Line Item Number / Title:</b> 2684C20000 / Stinger Mods					
<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> 0203801A				
<b>Line Item MDAP/MAIS Code:</b> N/A												
<b>Resource Summary</b>	<b>Prior Years</b>	<b>FY 2017</b>	<b>FY 2018</b>	<b>FY 2019 Base</b>	<b>FY 2019 OCO</b>	<b>FY 2019 Total</b>	<b>FY 2020</b>	<b>FY 2021</b>	<b>FY 2022</b>	<b>FY 2023</b>	<b>To Complete</b>	<b>Total</b>
Procurement Quantity ( <i>Units in Each</i> )	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost ( <i>\$ in Millions</i> )	205.211	6.578	91.090	94.756	-	94.756	81.615	1.457	3.072	-	-	483.779
Less PY Advance Procurement ( <i>\$ in Millions</i> )	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) ( <i>\$ in Millions</i> )	205.211	6.578	91.090	94.756	-	94.756	81.615	1.457	3.072	-	-	483.779
Plus CY Advance Procurement ( <i>\$ in Millions</i> )	-	-	-	-	-	-	-	-	-	-	-	-
<b>Total Obligation Authority</b> ( <i>\$ in Millions</i> )	<b>205.211</b>	<b>6.578</b>	<b>91.090</b>	<b>94.756</b>	<b>-</b>	<b>94.756</b>	<b>81.615</b>	<b>1.457</b>	<b>3.072</b>	<b>-</b>	<b>-</b>	<b>483.779</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> )	-	55.277	35.361	54.301	-	54.301	61.970	53.963	54.857	-	-	82.839
<b>Description:</b> The Stinger Block I missile is an advanced, fire-and-forget, short-range, man-portable, air defense missile. It provides low-altitude air defense against fixed and rotary wing aircraft, Unmanned Aircraft Systems (UAS) and Cruise Missiles (CM) and is deployable from the shoulder (MANPADS) or from a variety of platforms to include vehicles and helicopters. Stinger missiles are delivered as a certified round and requires no field testing or maintenance. A Service Life Extension Program (SLEP) is ongoing at McAlester Army Ammunition Plant to replace aging key components in existing Block I missiles to extend the current shelf life providing a more viable asset to the Army's inventory. The addition of a Proximity Fuze (PROX) capability in FY19 will also provide improved effectiveness against UAS threats by eliminating the need for hit to kill.												

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<b>Exhibit P-40, Budget Line Item Justification:</b> PB 2019 Army								<b>Date:</b> February 2018		
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 2032A: Missile Procurement, Army / BA 03: Modification of Missiles / BSA 10: Modifications						<b>P-1 Line Item Number / Title:</b> 2684C20000 / Stinger Mods				
<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> 0203801A			
<b>Line Item MDAP/MAIS Code:</b> N/A										
<b>Exhibits Schedule</b>					<b>Prior Years</b>	<b>FY 2017</b>	<b>FY 2018</b>	<b>FY 2019 Base</b>	<b>FY 2019 OCO</b>	<b>FY 2019 Total</b>
<b>Exhibit Type</b>	<b>Title*</b>	<b>Subexhibits</b>	<b>ID CD</b>	<b>MDAP/MAIS Code</b>	<b>Quantity / Total Cost (Each) / (\$ M)</b>	<b>Quantity / Total Cost (Each) / (\$ M)</b>	<b>Quantity / Total Cost (Each) / (\$ M)</b>	<b>Quantity / Total Cost (Each) / (\$ M)</b>	<b>Quantity / Total Cost (Each) / (\$ M)</b>	<b>Quantity / Total Cost (Each) / (\$ M)</b>
P-3a	C21300 / Stinger Service Life Extension Program (SLEP) (Service Life Extension)		A		- / 205.211	- / 6.578	- / 91.090	- / 94.756	- / -	- / 94.756
<b>P-40</b>	<b>Total Gross/Weapon System Cost</b>				<b>- / 205.211</b>	<b>- / 6.578</b>	<b>- / 91.090</b>	<b>- / 94.756</b>	<b>- / -</b>	<b>- / 94.756</b>
<b>Exhibits Schedule</b>					<b>FY 2020</b>	<b>FY 2021</b>	<b>FY 2022</b>	<b>FY 2023</b>	<b>To Complete</b>	<b>Total</b>
<b>Exhibit Type</b>	<b>Title*</b>	<b>Subexhibits</b>	<b>ID CD</b>	<b>MDAP/MAIS Code</b>	<b>Quantity / Total Cost (Each) / (\$ M)</b>	<b>Quantity / Total Cost (Each) / (\$ M)</b>	<b>Quantity / Total Cost (Each) / (\$ M)</b>	<b>Quantity / Total Cost (Each) / (\$ M)</b>	<b>Quantity / Total Cost (Each) / (\$ M)</b>	<b>Quantity / Total Cost (Each) / (\$ M)</b>
P-3a	C21300 / Stinger Service Life Extension Program (SLEP) (Service Life Extension)		A		- / 81.615	- / 1.457	- / 3.072	- / -	- / -	- / 483.779
<b>P-40</b>	<b>Total Gross/Weapon System Cost</b>				<b>- / 81.615</b>	<b>- / 1.457</b>	<b>- / 3.072</b>	<b>- / -</b>	<b>- / -</b>	<b>- / 483.779</b>
<p>*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.</p> <p>Note: Totals in this Exhibit P-40 set may not be exact or sum exactly due to rounding.</p>										
<p><b>Justification:</b> FY19 Base funding in the amount of \$94.756 million procures 1,745 Service Life Extension Program (SLEP) missiles.</p> <p>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.</p>										

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<b>Exhibit P-3a, Individual Modification:</b> PB 2019 Army										<b>Date:</b> February 2018		
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 2032A / 03 / 10				<b>P-1 Line Item Number / Title:</b> 2684C20000 / Stinger Mods						<b>Modification Number / Title:</b> C21300 / Stinger Service Life Extension Program (SLEP)		
<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 2017</b>	<b>FY 2018</b>	<b>FY 2019 Base</b>	<b>FY 2019 OCO</b>	<b>FY 2019 Total</b>	<b>FY 2020</b>	<b>FY 2021</b>	<b>FY 2022</b>	<b>FY 2023</b>	<b>To Complete</b>	<b>Total</b>
Procurement Quantity ( <i>Units in Each</i> )	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost ( <i>\$ in Millions</i> )	205.211	6.578	91.090	94.756	-	94.756	81.615	1.457	3.072	-	-	483.779
Less PY Advance Procurement ( <i>\$ in Millions</i> )	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) ( <i>\$ in Millions</i> )	205.211	6.578	91.090	94.756	-	94.756	81.615	1.457	3.072	-	-	483.779
Plus CY Advance Procurement ( <i>\$ in Millions</i> )	-	-	-	-	-	-	-	-	-	-	-	-
<b>Total Obligation Authority</b> ( <i>\$ in Millions</i> )	<b>205.211</b>	<b>6.578</b>	<b>91.090</b>	<b>94.756</b>	<b>-</b>	<b>94.756</b>	<b>81.615</b>	<b>1.457</b>	<b>3.072</b>	<b>-</b>	<b>-</b>	<b>483.779</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> )	-	55.277	35.361	54.301	-	54.301	61.970	53.963	54.857	-	-	82.839
<b>Description:</b> The Stinger Block I missile is an advanced, fire-and-forget, short-range, man-portable, air defense missile. It provides low-altitude air defense against fixed and rotary wing aircraft, Unmanned Aircraft Systems (UAS) and Cruise Missiles (CM) and is deployable from the shoulder (MANPADS) or from a variety of platforms to include vehicles and helicopters. Stinger missiles are delivered as a certified round and requires no field testing or maintenance. A Service Life Extension Program (SLEP) is ongoing at McAlester Army Ammunition Plant to replace aging key components in existing Block I missiles to extend the current shelf life providing a more viable asset to the Army's inventory. The addition of a Proximity Fuze (PROX) capability in FY19 will also provide improved effectiveness against UAS threats by eliminating the need for hit to kill.												

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<b>Exhibit P-3a, Individual Modification:</b> PB 2019 Army										<b>Date:</b> February 2018			
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 2032A / 03 / 10				<b>P-1 Line Item Number / Title:</b> 2684C20000 / Stinger Mods						<b>Modification Number / Title:</b> C21300 / Stinger Service Life Extension Program (SLEP)			
<b>ID Code</b> (A=Service Ready, B=Not Service Ready) : A								<b>MDAP/MAIS Code:</b>					
<b>Models of Systems Affected:</b> FIM-92E Stinger Block I Missile				<b>Modification Type:</b> Service Life Extension				<b>Related RDT&amp;E PEs:</b>					
<b>Financial Plan</b>	<b>Prior Years</b>	<b>FY 2017</b>	<b>FY 2018</b>	<b>FY 2019 Base</b>	<b>FY 2019 OCO</b>	<b>FY 2019 Total</b>	<b>FY 2020</b>	<b>FY 2021</b>	<b>FY 2022</b>	<b>FY 2023</b>	<b>To Complete</b>	<b>Total</b>	
	<i>Qty (Each) / Total Cost (\$ M)</i>	<i>Qty (Each) / Total Cost (\$ M)</i>	<i>Qty (Each) / Total Cost (\$ M)</i>	<i>Qty (Each) / Total Cost (\$ M)</i>	<i>Qty (Each) / Total Cost (\$ M)</i>	<i>Qty (Each) / Total Cost (\$ M)</i>	<i>Qty (Each) / Total Cost (\$ M)</i>	<i>Qty (Each) / Total Cost (\$ M)</i>	<i>Qty (Each) / Total Cost (\$ M)</i>	<i>Qty (Each) / Total Cost (\$ M)</i>	<i>Qty (Each) / Total Cost (\$ M)</i>	<i>Qty (Each) / Total Cost (\$ M)</i>	
<b>Procurement</b>													
<i>Modification Item 1 of 1:</i> Stinger Service Life Extension Program (SLEP)													
A Kits													
Recurring													
Hardware	850 / 196.085	119 / 5.863	1,656 / 81.177	1,745 / 83.490	- / -	1,745 / 83.490	1,439 / 71.910	27 / 1.327	56 / 2.881	- / -	- / 0.000	5,892 / 442.733	
Engineering Services	- / 1.251	- / 0.132	- / 2.370	- / 1.185	- / -	- / 1.185	- / 1.095	- / -	- / -	- / -	- / 0.000	- / 6.033	
System Engineering/Program Management	- / 2.032	- / 0.197	- / 2.724	- / 1.356	- / -	- / 1.356	- / 1.415	- / -	- / -	- / -	- / 0.000	- / 7.724	
Other Flyaway Support	- / 5.843	- / 0.386	- / 4.819	- / 8.725	- / -	- / 8.725	- / 7.195	- / 0.130	- / 0.191	- / -	- / 0.000	- / 27.289	
<i>Subtotal: Recurring</i>	<i>850 / 205.211</i>	<i>119 / 6.578</i>	<i>1,656 / 91.090</i>	<i>1,745 / 94.756</i>	<i>- / -</i>	<i>1,745 / 94.756</i>	<i>1,439 / 81.615</i>	<i>27 / 1.457</i>	<i>56 / 3.072</i>	<i>- / -</i>	<i>- / -</i>	<i>5,892 / 483.779</i>	
<i>Subtotal: Stinger Service Life Extension Program (SLEP)</i>	<i>850 / 205.211</i>	<i>119 / 6.578</i>	<i>1,656 / 91.090</i>	<i>1,745 / 94.756</i>	<i>- / -</i>	<i>1,745 / 94.756</i>	<i>1,439 / 81.615</i>	<i>27 / 1.457</i>	<i>56 / 3.072</i>	<i>- / -</i>	<i>- / -</i>	<i>5,892 / 483.779</i>	
<i>Subtotal: Procurement, All Modification Items</i>	<i>850 / 205.211</i>	<i>119 / 6.578</i>	<i>1,656 / 91.090</i>	<i>1,745 / 94.756</i>	<i>- / -</i>	<i>1,745 / 94.756</i>	<i>1,439 / 81.615</i>	<i>27 / 1.457</i>	<i>56 / 3.072</i>	<i>- / -</i>	<i>- / -</i>	<i>5,892 / 483.779</i>	
<b>Installation</b>													
<i>Subtotal: Installation</i>	<i>- / -</i>	<i>- / -</i>	<i>- / -</i>	<i>- / -</i>	<i>- / -</i>	<i>- / -</i>	<i>- / -</i>	<i>- / -</i>	<i>- / -</i>	<i>- / -</i>	<i>- / -</i>	<i>- / -</i>	
<b>Total</b>													
<b>Total Cost (Procurement + Support + Installation)</b>	<b>205.211</b>	<b>6.578</b>	<b>91.090</b>	<b>94.756</b>	<b>-</b>	<b>94.756</b>	<b>81.615</b>	<b>1.457</b>	<b>3.072</b>	<b>-</b>	<b>-</b>	<b>483.779</b>	

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Exhibit P-3a, Individual Modification: PB 2019 Army					Date: February 2018		
Appropriation / Budget Activity / Budget Sub Activity: 2032A / 03 / 10			P-1 Line Item Number / Title: 2684C20000 / Stinger Mods			Modification Number / Title: C21300 / Stinger Service Life Extension Program (SLEP)	
ID Code (A=Service Ready, B=Not Service Ready) : A				MDAP/MAIS Code:			
Modification Item 1 of 1: Stinger Service Life Extension Program (SLEP)							
Manufacturer Information							
Manufacturer Name: McAlester Army Ammunition Plant				Manufacturer Location: McAlester, OK			
Administrative Leadtime (in Months): 3				Production Leadtime (in Months): 21			
Dates	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023
Contract Dates	Apr 2017	Apr 2018	Apr 2019	Apr 2020	Apr 2021	Apr 2022	
Delivery Dates	Jan 2019	Jan 2020	Jan 2021	Jan 2022	Jan 2023	Jan 2024	
Installation Information							
Method of Implementation (Organic): Depot Upgrade					Installation Quantity: 5695		

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<b>Exhibit P-40, Budget Line Item Justification:</b> PB 2019 Army										<b>Date:</b> February 2018		
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 2032A: Missile Procurement, Army / BA 03: Modification of Missiles / BSA 10: Modifications							<b>P-1 Line Item Number / Title:</b> 2690CE8710 / AVENGER MODS					
<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> 0203801A				
<b>Line Item MDAP/MAIS Code:</b> N/A												
<b>Resource Summary</b>	<b>Prior Years</b>	<b>FY 2017</b>	<b>FY 2018</b>	<b>FY 2019 Base</b>	<b>FY 2019 OCO</b>	<b>FY 2019 Total</b>	<b>FY 2020</b>	<b>FY 2021</b>	<b>FY 2022</b>	<b>FY 2023</b>	<b>To Complete</b>	<b>Total</b>
Procurement Quantity ( <i>Units in Each</i> )	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost ( <i>\$ in Millions</i> )	62.505	35.979	62.931	48.670	-	48.670	86.807	165.928	454.994	291.600	-	1,209.414
Less PY Advance Procurement ( <i>\$ in Millions</i> )	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) ( <i>\$ in Millions</i> )	62.505	35.979	62.931	48.670	-	48.670	86.807	165.928	454.994	291.600	-	1,209.414
Plus CY Advance Procurement ( <i>\$ in Millions</i> )	-	-	-	-	-	-	-	-	-	-	-	-
<b>Total Obligation Authority</b> ( <i>\$ in Millions</i> )	<b>62.505</b>	<b>35.979</b>	<b>62.931</b>	<b>48.670</b>	<b>-</b>	<b>48.670</b>	<b>86.807</b>	<b>165.928</b>	<b>454.994</b>	<b>291.600</b>	<b>-</b>	<b>1,209.414</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> )	242.267	274.649	81.517	105.346	-	105.346	1,009.384	3,318.560	5,055.489	5,027.586	-	634.197
<p><b>Description:</b></p> <p>Avenger is a lightweight, ground-to-air missile and gun weapon system mounted on a High Mobility Multi-purpose Wheeled Vehicle which protects against unmanned aircraft systems, cruise missiles, and fixed and rotary wing threats. Avenger provides day/night adverse weather operations, shoot on the move capability, rapid target engagement, and remote firing capability. Avenger can be air dropped, lifted by helicopter and is air transportable. The system employs up to eight Stinger missiles to counter aerial threats and a M3P gun for close-in ground and air threats. An Identification Friend or Foe (IFF) system aids in the identification of friendly aircraft in order to minimize the potential for fratricide. The Avenger fleet of 457 systems includes 170 systems that are equipped with a digital Slew-to-Cue (STC) capability to speed target detection and engagement.</p> <p>The Vehicle Internal Communications System is a required subsystem that allows communication between the gunner and driver. It also interfaces with the IFF and missile electronics resulting in improved IFF capabilities. The digital VIC-5 replaces the analog VIC-I that is currently fielded with the Avenger.</p> <p>The Avenger Fire Control Computer (AFCC) is a required subsystem of the Avenger Slew-to-Cue system that processes and displays air tracks data to the gunner. The current AFCC is not supportable through FY31. The Avenger Fire Control Computer-Revised (AFCC-R) will replace the current AFCC. The AFCC-R will undergo software and hardware upgrades that will enable the system to handle increased targeting capability realized with the latest version of the FAAD early warning system, ensure the system meets the latest Information Assurance (IA) requirements, and allow for future growth in areas such as improved fire control/longer range engagements.</p> <p>The Mode 5 IFF is required to replace the Mode 4 which will no longer be supported beyond 2020. Incorporation of Mode 5 IFF into Avenger is critical to retaining the cooperative target identification capability, allowing Avenger to remain relevant and effective in Air Defense and Homeland Defense missions.</p> <p>The Environmental Control Unit/Prime Power Unit (ECU/PPU) is a required subsystem that provides turret air conditioning/heating and provides a separate backup power source in lieu of vehicle battery power. This modification addresses the ECU/PPU governor and starter.</p> <p>The Avenger MODS program addressed the Targeting Console (TC), M3P .50 CAL machine gun and Slew to Cue Upgrades prior to FY17.</p>												

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<b>Exhibit P-40, Budget Line Item Justification:</b> PB 2019 Army							<b>Date:</b> February 2018			
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 2032A: Missile Procurement, Army / BA 03: Modification of Missiles / BSA 10: Modifications						<b>P-1 Line Item Number / Title:</b> 2690CE8710 / AVENGER MODS				
<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> 0203801A				
<b>Line Item MDAP/MAIS Code:</b> N/A										
<p>Interim Maneuver-Short Range Air Defense (IM-SHORAD): The IM-SHORAD is intended to provide a short-term capability to fill the lack of air defense capability in current maneuver formations. Maneuvering formations require air defense capabilities to counter a wide range of air threats: Unmanned Aircraft Systems (UAS), Rotary Wing (RW), Fixed Wing (FW), and Rockets Artillery &amp; Mortar (RAM). The US Army Training and Doctrine Command (TRADOC) FY16 Capability Needs Analysis (CNA) validated the extremely high risk capability gap for a SHORAD capability in maneuver formations: Brigade Combat Teams lack the ability to detect, identify, and engage threat UAS, rotary wing, and fixed wing aircraft while conducting combined arms maneuver leaving forces vulnerable to surveillance and attack from air threats.</p>										
<b>Secondary Distribution</b>		<b>FY 2017</b>	<b>FY 2018</b>	<b>FY 2019 Base</b>	<b>FY 2019 OCO</b>	<b>FY 2019 Total</b>	<b>FY 2020</b>	<b>FY 2021</b>	<b>FY 2022</b>	<b>FY 2023</b>
Army	Quantity	-	-	-	-	-	-	-	-	-
	Total Obligation Authority	23.859	18.824	20.361	-	20.361	81.304	165.928	454.994	291.600
ANG	Quantity	-	-	-	-	-	-	-	-	-
	Total Obligation Authority	12.120	44.107	28.309	-	28.309	5.503	-	-	-
<b>Total: Secondary Distribution</b>	<b>Quantity</b>	-	-	-	-	-	-	-	-	-
	<b>Total Obligation Authority</b>	<b>35.979</b>	<b>62.931</b>	<b>48.670</b>	-	<b>48.670</b>	<b>86.807</b>	<b>165.928</b>	<b>454.994</b>	<b>291.600</b>

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<b>Exhibit P-40, Budget Line Item Justification:</b> PB 2019 Army								<b>Date:</b> February 2018	
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 2032A: Missile Procurement, Army / BA 03: Modification of Missiles / BSA 10: Modifications						<b>P-1 Line Item Number / Title:</b> 2690CE8710 / AVENGER MODS			
<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> 0203801A		
<b>Line Item MDAP/MAIS Code:</b> N/A									

  

Exhibits Schedule					Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 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	CE8710 / Avenger Modification (Operational)		A		- / 62.505	- / 35.979	- / 62.931	- / 48.670	- / -	- / 48.670
<b>P-40</b>	<b>Total Gross/Weapon System Cost</b>				<b>- / 62.505</b>	<b>- / 35.979</b>	<b>- / 62.931</b>	<b>- / 48.670</b>	<b>- / -</b>	<b>- / 48.670</b>

  

Exhibits Schedule					FY 2020	FY 2021	FY 2022	FY 2023	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	CE8710 / Avenger Modification (Operational)		A		- / 86.807	- / 165.928	- / 454.994	- / 291.600	- / -	- / 1,209.414
<b>P-40</b>	<b>Total Gross/Weapon System Cost</b>				<b>- / 86.807</b>	<b>- / 165.928</b>	<b>- / 454.994</b>	<b>- / 291.600</b>	<b>- / -</b>	<b>- / 1,209.414</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 2019 procurement dollars in the amount of \$31.093 million support the procurement of the Avenger Modification - Service Life Extension Program (MOD-SLEP) Line Replaceable Units (LRUs), to ensure that Avenger is viable and sustainable through the Fiscal Year (FY) 2031 timeframe when Avenger leaves the force.

FY 2019 procurement dollars in the amount of \$17.577 million support Non-Recurring Engineering requirements associated with IM-SHORAD requirements as well as the associated technical manuals.

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-3a, Individual Modification:</b> PB 2019 Army							<b>Date:</b> February 2018				
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 2032A / 03 / 10				<b>P-1 Line Item Number / Title:</b> 2690CE8710 / AVENGER MODS				<b>Modification Number / Title:</b> CE8710 / Avenger Modification			

ID Code (A=Service Ready, B=Not Service Ready) : A						MDAP/MAIS Code:						
Resource Summary	Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	To Complete	Total
Procurement Quantity <i>(Units in Each)</i>	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost <i>(\$ in Millions)</i>	62.505	35.979	62.931	48.670	-	48.670	86.807	165.928	454.994	291.600	-	1,209.414
Less PY Advance Procurement <i>(\$ in Millions)</i>	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) <i>(\$ in Millions)</i>	62.505	35.979	62.931	48.670	-	48.670	86.807	165.928	454.994	291.600	-	1,209.414
Plus CY Advance Procurement <i>(\$ in Millions)</i>	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority <i>(\$ in Millions)</i>	62.505	35.979	62.931	48.670	-	48.670	86.807	165.928	454.994	291.600	-	1,209.414
<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>	242.267	274.649	81.517	105.346	-	105.346	1,009.384	3,318.560	5,055.489	5,027.586	-	634.197

**Description:**

The ongoing Avenger Modification - Service Life Extension Program (MOD-SLEP) addresses obsolescence of six key Line Replaceable Units (LRUs) to ensure Avenger maintains operational capability through FY31. These Funds are provided to procure the MOD-SLEP LRUs: Targeting Console (TC), .50 Caliber Machine Gun (M3P), Avenger Fire Control Computer - Revised (AFCC-R), Mode 5 Identification Friend or Foe (IFF), Vehicle Internal Communications (VIC-5) and the Environmental Control Unit/Prime Power Unit (ECU/PPU) governor and starter. Avenger will provide capability until the Indirect Fire Protection Capability Increment 2 - Intercept system is fielded.

The Avenger MOD-SLEP is fielded in two phases. Phase I fields the TC. Phase II fields the AFCC-R, Mode 5 IFF and the ECU/PPU starter kit. The M3P and ECU/PPU governor will be fielded through attrition.

Interim Maneuver-Short Range Air Defense (IM-SHORAD): The IM-SHORAD is intended to provide a short-term capability to fill the lack of air defense capability in current maneuver formations. Maneuvering formations require air defense capabilities to counter a wide range of air threats: Unmanned Aircraft Systems (UAS), Rotary Wing (RW), Fixed Wing (FW), and Rockets Artillery & Mortar (RAM). The US Army Training and Doctrine Command (TRADOC) FY16 Capability Needs Analysis (CNA) validated the extremely high risk capability gap for a SHORAD capability in maneuver formations: Brigade Combat Teams lack the ability to detect, identify, and engage threat UAS, rotary wing, and fixed wing aircraft while conducting combined arms maneuver leaving forces vulnerable to surveillance and attack from air threats.

Secondary Distribution		FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023
Army	Quantity	-	-	-	-	-	-	-	-	-
	Total Obligation Authority	23.859	18.824	20.361	-	20.361	81.304	165.928	454.994	291.600
ANG	Quantity	-	-	-	-	-	-	-	-	-
	Total Obligation Authority	12.120	44.107	28.309	-	28.309	5.503	-	-	-
<b>Total:</b> <b>Secondary Distribution</b>	<b>Quantity</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>
	<b>Total Obligation Authority</b>	<b>35.979</b>	<b>62.931</b>	<b>48.670</b>	<b>-</b>	<b>48.670</b>	<b>86.807</b>	<b>165.928</b>	<b>454.994</b>	<b>291.600</b>

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<b>Exhibit P-3a, Individual Modification:</b> PB 2019 Army										<b>Date:</b> February 2018			
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 2032A / 03 / 10					<b>P-1 Line Item Number / Title:</b> 2690CE8710 / AVENGER MODS					<b>Modification Number / Title:</b> CE8710 / Avenger Modification			
<b>ID Code</b> (A=Service Ready, B=Not Service Ready) : A								<b>MDAP/MAIS Code:</b>					
<b>Models of Systems Affected:</b> Avenger Basic and Slew-to-Cue Systems					<b>Modification Type:</b> Operational					<b>Related RDT&amp;E PEs:</b>			
<b>Financial Plan</b>	<b>Prior Years</b>	<b>FY 2017</b>	<b>FY 2018</b>	<b>FY 2019 Base</b>	<b>FY 2019 OCO</b>	<b>FY 2019 Total</b>	<b>FY 2020</b>	<b>FY 2021</b>	<b>FY 2022</b>	<b>FY 2023</b>	<b>To Complete</b>	<b>Total</b>	
	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (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 7:</b> Prior Modifications													
A Kits													
Recurring													
Prior Year Modifications	466 / 62.505	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.000	466 / 62.505	
<b>Subtotal: Recurring</b>	466 / 62.505	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	466 / 62.505	
<b>Subtotal: Prior Modifications</b>	466 / 62.505	- / -	- / -	- / 0.000	- / -	- / 0.000	- / -	- / -	- / -	- / -	- / -	466 / 62.505	
<b>Modification Item 2 of 7:</b> Vehicle Internal Communication (VIC-5)													
A Kits													
Recurring													
Equipment	- / -	261 / 5.820	196 / 4.371	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.000	457 / 10.191	
Spares/Repair Parts	- / -	- / 1.210	- / 0.907	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.000	- / 2.117	
Engineering Services	- / -	- / 1.540	- / 1.155	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.000	- / 2.695	
System Engineering/Program Management	- / -	- / 1.320	- / 0.990	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.000	- / 2.310	
Fielding	- / -	- / 1.166	- / 1.741	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.000	- / 2.907	
<b>Subtotal: Recurring</b>	- / -	261 / 11.056	196 / 9.164	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	457 / 20.220	
<b>Subtotal: Vehicle Internal Communication (VIC-5)</b>	- / -	261 / 11.056	196 / 9.164	- / 0.000	- / -	- / 0.000	- / -	- / -	- / -	- / -	- / -	457 / 20.220	
<b>Modification Item 3 of 7:</b> Mode 5/Identification Friend or Foe													
A Kits													
Recurring													
Equipment	- / -	131 / 16.849	161 / 16.849	131 / 17.354	- / -	131 / 17.354	64 / 6.398	- / -	- / -	- / -	- / 0.000	487 / 57.450	
Spares/Repair Parts	- / -	- / 1.675	- / 0.789	- / 1.675	- / -	- / 1.675	- / 0.955	- / -	- / -	- / -	- / 0.000	- / 5.094	
Engineering Services	- / -	- / 2.051	- / 1.047	- / 1.778	- / -	- / 1.778	- / 0.875	- / -	- / -	- / -	- / 0.000	- / 5.751	
System Engineering/Program Management	- / -	- / 3.508	- / 3.508	- / 3.300	- / -	- / 3.300	- / 0.349	- / -	- / -	- / -	- / 0.000	- / 10.665	
Fielding	- / -	- / 0.840	- / 2.892	- / 1.836	- / -	- / 1.836	- / 0.885	- / -	- / -	- / -	- / 0.000	- / 6.453	
<b>Subtotal: Recurring</b>	- / -	131 / 24.923	161 / 25.085	131 / 25.943	- / -	131 / 25.943	64 / 9.462	- / -	- / -	- / -	- / -	487 / 85.413	
<b>Subtotal: Mode 5/Identification Friend or Foe</b>	- / -	131 / 24.923	161 / 25.085	131 / 25.943	- / -	131 / 25.943	64 / 9.462	- / -	- / -	- / -	- / -	487 / 85.413	
<b>Modification Item 4 of 7:</b> Avenger Fire Control Computer - Revised													
A Kits													

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Exhibit P-3a, Individual Modification: PB 2019 Army								Date: February 2018					
Appropriation / Budget Activity / Budget Sub Activity: 2032A / 03 / 10				P-1 Line Item Number / Title: 2690CE8710 / AVENGER MODS				Modification Number / Title: CE8710 / Avenger Modification					
ID Code (A=Service Ready, B=Not Service Ready) : A							MDAP/MAIS Code:						
Models of Systems Affected: Avenger Basic and Slew-to-Cue Systems				Modification Type: Operational				Related RDT&E PEs:					
Financial Plan	Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	To Complete	Total	
	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	
Recurring													
Equipment	- / -	- / -	170 / 15.851	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.000	170 / 15.851	
Spares/Repair Parts	- / -	- / -	- / 2.033	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.000	- / 2.033	
Engineering Services	- / -	- / -	- / 3.512	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.000	- / 3.512	
System Engineering/Program Management	- / -	- / -	- / 1.674	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.000	- / 1.674	
Fielding	- / -	- / -	- / 3.244	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.000	- / 3.244	
Subtotal: Recurring	- / -	- / -	170 / 26.314	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	170 / 26.314	
Subtotal: Avenger Fire Control Computer - Revised	- / -	- / -	170 / 26.314	- / 0.000	- / -	- / 0.000	- / -	- / -	- / -	- / -	- / -	170 / 26.314	
Modification Item 5 of 7: ECU/PPU Governor and Starter													
A Kits													
Recurring													
Equipment	- / -	- / -	126 / 1.043	331 / 2.989	- / -	331 / 2.989	- / -	- / -	- / -	- / -	- / 0.000	457 / 4.032	
Spares/Repair Parts	- / -	- / -	- / 0.168	- / 0.398	- / -	- / 0.398	- / -	- / -	- / -	- / -	- / 0.000	- / 0.566	
Engineering Services	- / -	- / -	- / 0.021	- / 0.172	- / -	- / 0.172	- / -	- / -	- / -	- / -	- / 0.000	- / 0.193	
System Engineering/Program Management	- / -	- / -	- / 0.387	- / 0.365	- / -	- / 0.365	- / -	- / -	- / -	- / -	- / 0.000	- / 0.752	
Fielding	- / -	- / -	- / 0.749	- / 1.226	- / -	- / 1.226	- / -	- / -	- / -	- / -	- / 0.000	- / 1.975	
Subtotal: Recurring	- / -	- / -	126 / 2.368	331 / 5.150	- / -	331 / 5.150	- / -	- / -	- / -	- / -	- / -	457 / 7.518	
Subtotal: ECU/PPU Governor and Starter	- / -	- / -	126 / 2.368	331 / 5.150	- / -	331 / 5.150	- / -	- / -	- / -	- / -	- / -	457 / 7.518	
Modification Item 6 of 7: Other Modifications													
A Kits													
Recurring													
Other Modifications	- / -	- / -	- / -	- / -	- / -	- / -	70 / 4.568	213 / 13.950	174 / 11.394	- / -	- / 0.000	457 / 29.912	
Subtotal: Recurring	- / -	- / -	- / -	- / -	- / -	- / -	70 / 4.568	213 / 13.950	174 / 11.394	- / -	- / -	457 / 29.912	
Subtotal: Other Modifications	- / -	- / -	- / -	- / 0.000	- / -	- / 0.000	70 / 4.568	213 / 13.950	174 / 11.394	- / -	- / -	457 / 29.912	
Modification Item 7 of 7: IM-SHORAD													
A Kits													
Recurring													
IM SHORAD	- / -	- / -	- / -	- / 17.577	- / -	- / 17.577	- / 72.777	- / 151.978	- / 443.600	- / 291.600	- / 0.000	- / 977.532	
Subtotal: Recurring	- / -	- / -	- / -	- / 17.577	- / -	- / 17.577	- / 72.777	- / 151.978	- / 443.600	- / 291.600	- / -	- / 977.532	
Subtotal: IM-SHORAD	- / -	- / -	- / -	- / 17.577	- / -	- / 17.577	- / 72.777	- / 151.978	- / 443.600	- / 291.600	- / -	- / 977.532	

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Exhibit P-3a, Individual Modification: PB 2019 Army					Date: February 2018		
Appropriation / Budget Activity / Budget Sub Activity: 2032A / 03 / 10			P-1 Line Item Number / Title: 2690CE8710 / AVENGER MODS			Modification Number / Title: CE8710 / Avenger Modification	
ID Code (A=Service Ready, B=Not Service Ready) : A				MDAP/MAIS Code:			
Modification Item 1 of 7: Prior Modifications							
Manufacturer Information							
Manufacturer Name: Not Applicable				Manufacturer Location: Not Applicable			
Administrative Leadtime (in Months):				Production Leadtime (in Months):			
Dates	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023
Contract Dates							
Delivery Dates							
Installation Information							
Method of Implementation (Organic): Completed at Depot					Installation Quantity: 466		

**UNCLASSIFIED**

<b>Exhibit P-3a, Individual Modification:</b> PB 2019 Army					<b>Date:</b> February 2018		
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 2032A / 03 / 10			<b>P-1 Line Item Number / Title:</b> 2690CE8710 / AVENGER MODS			<b>Modification Number / Title:</b> CE8710 / Avenger Modification	
<b>ID Code</b> (A=Service Ready, B=Not Service Ready) : A					<b>MDAP/MAIS Code:</b>		
<b>Modification Item 2 of 7:</b> Vehicle Internal Communication (VIC-5)							
<b>Manufacturer Information</b>							
Manufacturer Name: Northrop Grumman				Manufacturer Location: Tobyhanna, PA			
Administrative Leadtime ( <i>in Months</i> ): 1				Production Leadtime ( <i>in Months</i> ): 9			
<b>Dates</b>	<b>FY 2017</b>	<b>FY 2018</b>	<b>FY 2019</b>	<b>FY 2020</b>	<b>FY 2021</b>	<b>FY 2022</b>	<b>FY 2023</b>
Contract Dates	Aug 2017						
Delivery Dates		Aug 2018					
<b>Installation Information</b>							
<b>Method of Implementation (Organic):</b> Fielded by Depot with Phase II kit					<b>Installation Quantity:</b> 457		

# UNCLASSIFIED

<b>Exhibit P-3a, Individual Modification:</b> PB 2019 Army					<b>Date:</b> February 2018		
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 2032A / 03 / 10			<b>P-1 Line Item Number / Title:</b> 2690CE8710 / AVENGER MODS			<b>Modification Number / Title:</b> CE8710 / Avenger Modification	
<b>ID Code</b> (A=Service Ready, B=Not Service Ready) : A					<b>MDAP/MAIS Code:</b>		
<b>Modification Item 3 of 7:</b> Mode 5/Identification Friend or Foe							
<b>Manufacturer Information</b>							
Manufacturer Name: Raytheon				Manufacturer Location: Thales, France			
Administrative Leadtime ( <i>in Months</i> ): 1				Production Leadtime ( <i>in Months</i> ): 5			
<b>Dates</b>	<b>FY 2017</b>	<b>FY 2018</b>	<b>FY 2019</b>	<b>FY 2020</b>	<b>FY 2021</b>	<b>FY 2022</b>	<b>FY 2023</b>
Contract Dates	Sep 2017	Jun 2018	Jun 2019	Jun 2020			
Delivery Dates							
<b>Installation Information</b>							
<b>Method of Implementation (Organic):</b> Fieled by Depot with Phase II kit					<b>Installation Quantity:</b> 457		

**UNCLASSIFIED**

<b>Exhibit P-3a, Individual Modification:</b> PB 2019 Army						<b>Date:</b> February 2018	
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 2032A / 03 / 10			<b>P-1 Line Item Number / Title:</b> 2690CE8710 / AVENGER MODS			<b>Modification Number / Title:</b> CE8710 / Avenger Modification	
<b>ID Code</b> (A=Service Ready, B=Not Service Ready) : A					<b>MDAP/MAIS Code:</b>		
<b>Modification Item 4 of 7:</b> Avenger Fire Control Computer - Revised							
<b>Manufacturer Information</b>							
Manufacturer Name: Boeing				Manufacturer Location: Huntsville, AL			
Administrative Leadtime <i>(in Months)</i> : 1				Production Leadtime <i>(in Months)</i> : 9			
<b>Dates</b>	<b>FY 2017</b>	<b>FY 2018</b>	<b>FY 2019</b>	<b>FY 2020</b>	<b>FY 2021</b>	<b>FY 2022</b>	<b>FY 2023</b>
Contract Dates		Apr 2018					
Delivery Dates			Apr 2019				
<b>Installation Information</b>							
<b>Method of Implementation (Organic):</b> Fielded by Depot with Phase II kit						<b>Installation Quantity:</b> 170	



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<b>Exhibit P-3a, Individual Modification:</b> PB 2019 Army					<b>Date:</b> February 2018		
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 2032A / 03 / 10			<b>P-1 Line Item Number / Title:</b> 2690CE8710 / AVENGER MODS			<b>Modification Number / Title:</b> CE8710 / Avenger Modification	
<b>ID Code</b> (A=Service Ready, B=Not Service Ready) : A					<b>MDAP/MAIS Code:</b>		
<b>Modification Item 5 of 7:</b> ECU/PPU Governor and Starter							
<b>Manufacturer Information</b>							
Manufacturer Name: AWCf Managed Item- Marvin Land Systems					Manufacturer Location: Inglewood, CA		
Administrative Leadtime (in Months): 4					Production Leadtime (in Months): 5		
<b>Dates</b>	<b>FY 2017</b>	<b>FY 2018</b>	<b>FY 2019</b>	<b>FY 2020</b>	<b>FY 2021</b>	<b>FY 2022</b>	<b>FY 2023</b>
Contract Dates		Jun 2018	Jun 2019				
Delivery Dates							
<b>Installation Information</b>							
<b>Method of Implementation (Organic):</b> Governor fielded by attrition and starter fielded by Depot with Phase II kit						<b>Installation Quantity:</b> 457	

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<b>Exhibit P-3a, Individual Modification:</b> PB 2019 Army					<b>Date:</b> February 2018		
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 2032A / 03 / 10			<b>P-1 Line Item Number / Title:</b> 2690CE8710 / AVENGER MODS			<b>Modification Number / Title:</b> CE8710 / Avenger Modification	
<b>ID Code</b> (A=Service Ready, B=Not Service Ready) : A					<b>MDAP/MAIS Code:</b>		
<b>Modification Item 6 of 7:</b> Other Modifications							
<b>Manufacturer Information</b>							
Manufacturer Name: TBD				Manufacturer Location: TBD			
Administrative Leadtime ( <i>in Months</i> ):				Production Leadtime ( <i>in Months</i> ):			
<b>Dates</b>	<b>FY 2017</b>	<b>FY 2018</b>	<b>FY 2019</b>	<b>FY 2020</b>	<b>FY 2021</b>	<b>FY 2022</b>	<b>FY 2023</b>
Contract Dates				Nov 2019			
Delivery Dates					Nov 2021		
<b>Installation Information</b>							
<b>Method of Implementation (Organic):</b> Field Installation					<b>Installation Quantity:</b> 457		

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Exhibit P-3a, Individual Modification: PB 2019 Army					Date: February 2018		
Appropriation / Budget Activity / Budget Sub Activity: 2032A / 03 / 10			P-1 Line Item Number / Title: 2690CE8710 / AVENGER MODS			Modification Number / Title: CE8710 / Avenger Modification	
ID Code (A=Service Ready, B=Not Service Ready) : A				MDAP/MAIS Code:			
Modification Item 7 of 7: IM-SHORAD							
Manufacturer Information							
Manufacturer Name: TBD				Manufacturer Location: TBD			
Administrative Leadtime (in Months):				Production Leadtime (in Months):			
Dates	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023
Contract Dates							
Delivery Dates							
Installation Information							
Method of Implementation (Organic): TBD					Installation Quantity: 0		

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<b>Exhibit P-40, Budget Line Item Justification:</b> PB 2019 Army									<b>Date:</b> February 2018			
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 2032A: Missile Procurement, Army / BA 03: Modification of Missiles / BSA 10: Modifications						<b>P-1 Line Item Number / Title:</b> 3972C61700 / ITAS/TOW Mods						
<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												
<b>Resource Summary</b>	<b>Prior Years</b>	<b>FY 2017</b>	<b>FY 2018</b>	<b>FY 2019 Base</b>	<b>FY 2019 OCO</b>	<b>FY 2019 Total</b>	<b>FY 2020</b>	<b>FY 2021</b>	<b>FY 2022</b>	<b>FY 2023</b>	<b>To Complete</b>	<b>Total</b>
Procurement Quantity ( <i>Units in Each</i> )	612	0	26	24	-	24	25	22	15	-	-	724
Gross/Weapon System Cost ( <i>\$ in Millions</i> )	1,788.951	0.383	3.500	3.173	-	3.173	3.469	3.172	2.379	-	-	1,805.027
Less PY Advance Procurement ( <i>\$ in Millions</i> )	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) ( <i>\$ in Millions</i> )	1,788.951	0.383	3.500	3.173	-	3.173	3.469	3.172	2.379	-	-	1,805.027
Plus CY Advance Procurement ( <i>\$ in Millions</i> )	-	-	-	-	-	-	-	-	-	-	-	-
<b>Total Obligation Authority</b> ( <i>\$ in Millions</i> )	<b>1,788.951</b>	<b>0.383</b>	<b>3.500</b>	<b>3.173</b>	<b>-</b>	<b>3.173</b>	<b>3.469</b>	<b>3.172</b>	<b>2.379</b>	<b>-</b>	<b>-</b>	<b>1,805.027</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> )	2,923.123	-	134.615	132.208	-	132.208	138.760	144.182	158.600	-	-	2,493.131
<b>Description:</b> The Improved Target Acquisition System (ITAS) with Far Target Location (FTL) is a combat proven system that provides long-range, lethal anti-armor and precision assault fires capability for Active Component and Army National Guard Infantry Brigade Combat Teams (IBCT) and Stryker Brigade Combat Teams (SBCT) equipped with Modified ITAS (MITAS) across the spectrum of contemporary operational environments. ITAS with the TOW Missile provides the capability to defeat armored vehicles, bunkers, and buildings at extended ranges in all battlefield conditions. ITAS's superior surveillance capability also enables the Soldier to shape the battlefield by detecting targets at long range and either engaging with TOW missiles or other weapon systems to destroy those targets with its ability to generate a 10 digit grid coordinate of a target location. The ITAS completed fielding to the total Army in December 2012. The ITAS Image Enhancement (IE) Modification Kit reduces operator workload by optimizing the image presented to the gunner through electronic processing. Electronic focus, image stabilization, and other processing techniques ensure that the image presented is optimized for the environment without manual manipulation of the various adjustment settings. This reduces the operations required by the gunner to achieve a consistent high quality image, reduces the time required to identify and engage targets on the battlefield. ITAS continues to be the weapon of choice in precision combat engagements.												
<b>Secondary Distribution</b>		<b>FY 2017</b>	<b>FY 2018</b>	<b>FY 2019 Base</b>	<b>FY 2019 OCO</b>	<b>FY 2019 Total</b>	<b>FY 2020</b>	<b>FY 2021</b>	<b>FY 2022</b>	<b>FY 2023</b>		
Army	Quantity	-	26	24	-	24	20	22	-	-		
	Total Obligation Authority	0.383	3.500	3.173	-	3.173	2.775	3.172	-	-		
ANG	Quantity	-	-	-	-	-	5	-	15	-		
	Total Obligation Authority	-	-	-	-	-	0.694	-	2.379	-		
<b>Total: Secondary Distribution</b>	<b>Quantity</b>	<b>-</b>	<b>26</b>	<b>24</b>	<b>-</b>	<b>24</b>	<b>25</b>	<b>22</b>	<b>15</b>	<b>-</b>		
	<b>Total Obligation Authority</b>	<b>0.383</b>	<b>3.500</b>	<b>3.173</b>	<b>-</b>	<b>3.173</b>	<b>3.469</b>	<b>3.172</b>	<b>2.379</b>	<b>-</b>		
<b>Justification:</b> FY2019 Base Procurement dollars in the amount of \$3.173 million supports procurement of 24 Common Processor Kits, required subcomponents, the fielding of the kits and subcomponents, and program management support for the Modified ITAS (MITAS) in the Stryker Anti-Tank Guided Missile (Stryker ATGM) vehicle. This procurement will field a single configuration across the US Army ITAS and MITAS fleets.												

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<b>Exhibit P-40, Budget Line Item Justification:</b> PB 2019 Army		<b>Date:</b> February 2018
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 2032A: Missile Procurement, Army / BA 03: Modification of Missiles / BSA 10: Modifications		<b>P-1 Line Item Number / Title:</b> 3972C61700 / ITAS/TOW Mods
<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**

<b>Exhibit P-40, Budget Line Item Justification:</b> PB 2019 Army										<b>Date:</b> February 2018		
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 2032A: Missile Procurement, Army / BA 03: Modification of Missiles / BSA 10: Modifications							<b>P-1 Line Item Number / Title:</b> 6552C67500 / MLRS Mods					
<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> 0603778A				
<b>Line Item MDAP/MAIS Code:</b> N/A												
<b>Resource Summary</b>	<b>Prior Years</b>	<b>FY 2017</b>	<b>FY 2018</b>	<b>FY 2019 Base</b>	<b>FY 2019 OCO</b>	<b>FY 2019 Total</b>	<b>FY 2020</b>	<b>FY 2021</b>	<b>FY 2022</b>	<b>FY 2023</b>	<b>To Complete</b>	<b>Total</b>
Procurement Quantity ( <i>Units in Each</i> )	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost ( <i>\$ in Millions</i> )	443.751	25.052	138.235	383.216	122.000	505.216	290.039	412.452	216.428	208.888	Continuing	Continuing
Less PY Advance Procurement ( <i>\$ in Millions</i> )	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) ( <i>\$ in Millions</i> )	443.751	25.052	138.235	383.216	122.000	505.216	290.039	412.452	216.428	208.888	Continuing	Continuing
Plus CY Advance Procurement ( <i>\$ in Millions</i> )	-	-	-	-	-	-	-	-	-	-	-	-
<b>Total Obligation Authority</b> ( <i>\$ in Millions</i> )	<b>443.751</b>	<b>25.052</b>	<b>138.235</b>	<b>383.216</b>	<b>122.000</b>	<b>505.216</b>	<b>290.039</b>	<b>412.452</b>	<b>216.428</b>	<b>208.888</b>	<b>Continuing</b>	<b>Continuing</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> )	19,293.522	2,277.455	7,679.722	4,211.165	-	5,551.824	7,632.605	8,249.040	8,324.154	9,082.087	Continuing	Continuing
<b>Description:</b>												
<p>The Multiple Launch Rocket System (MLRS) launcher (M270A1) is a full spectrum, combat proven, all weather, 24/7 lethal and responsive, precision strike weapon system. MLRS provides critical missile precision strike, operational shaping fires, counterfire, and close support destructive and suppressive fires. MLRS is a tracked, indirect fire, rocket/missile launcher capable of firing two pods of precision rockets/missiles from the Multiple Launch Rocket System (MLRS) Family of Munitions (MFOM), to include the Guided Multiple Launch Rocket System (GMLRS) and the Army Tactical Missile System (ATACMS). These munitions are capable of engaging targets with precision at ranges up to 300 kilometers.</p> <p>In FY2017, an initiative called Grow the Army identified the need to add additional launcher platforms, via Fleet Expansion, to its current fleet in order to counter peer and near peer threats. In March 2017, the Chief of Staff of the Army approved a Strategic Portfolio Analysis Review (SPAR) 19 recommendation to modernize 160 obsolete, unserviceable MLRS launchers and to procure 56 additional HIMARS launchers. In addition to Fleet Expansion, the Army decided to extend the operational life of the MLRS and HIMARS fleet until FY2050 or beyond.</p> <p>The Fleet Expansion effort will divide the work between the prime contractor and RRAD as a subcontractor in a Public Private Partnership. The prime contractor will manage the overall effort and provide production parts supply support to RRAD. A M270 Launcher consists of a M993 Carrier and a M269 Launcher Loader Module (LLM). RRAD will recapitalize M993A0 Carriers and install IAC to build M993A2 Carriers. RRAD has the skilled personnel and facilities to break-down, perform modifications, and convert the M993A0s to M993A2 configuration. The prime contractor will provide the expertise and experience to upgrade the M269 LLM, provide the next generation Fire Control System, and integrate both onto the M993A2 Carrier resulting in an M270A2 Launcher.</p> <p>The Improved Armored Cab (IAC) Modification Kit provides crew survivability against Improvised Explosive Devices (IEDs) and small arms fire greater than or equal to the High Mobility Artillery Rocket System (HIMARS) Increased Crew Protection Cab (ICP). Additionally, IAC standardizes crew drill requirements between HIMARS and MLRS operators. Upon application of the IAC Modification Kit to a M270A1, the launcher permanently becomes a M270A2. First Unit Equipped (FUE) for M270A2 is projected for FY2021.</p> <p>Army Acquisition Objective is 225 MLRS launchers. 222 physical MLRS launchers remain within the fleet.</p>												
<b>Secondary Distribution</b>		<b>FY 2017</b>	<b>FY 2018</b>	<b>FY 2019 Base</b>	<b>FY 2019 OCO</b>	<b>FY 2019 Total</b>	<b>FY 2020</b>	<b>FY 2021</b>	<b>FY 2022</b>	<b>FY 2023</b>		
Army	Quantity	-	-	-	-	-	-	-	-	-	-	
	Total Obligation Authority	25.052	138.235	383.216	122.000	505.216	271.648	393.088	205.342	208.888		

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Exhibit P-40, Budget Line Item Justification: PB 2019 Army							Date: February 2018			
Appropriation / Budget Activity / Budget Sub Activity: 2032A: Missile Procurement, Army / BA 03: Modification of Missiles / BSA 10: Modifications					P-1 Line Item Number / Title: 6552C67500 / MLRS Mods					
ID Code (A=Service Ready, B=Not Service Ready):			Program Elements for Code B Items: N/A				Other Related Program Elements: 0603778A			
Line Item MDAP/MAIS Code: N/A										
Secondary Distribution		FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023
ANG	Quantity	-	-	-	-	-	-	-	-	-
	Total Obligation Authority	-	-	-	-	-	18.391	19.364	11.086	-
Total: Secondary Distribution	Quantity	-	-	-	-	-	-	-	-	-
	Total Obligation Authority	25.052	138.235	383.216	122.000	505.216	290.039	412.452	216.428	208.888

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<b>Exhibit P-40, Budget Line Item Justification:</b> PB 2019 Army								<b>Date:</b> February 2018	
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 2032A: Missile Procurement, Army / BA 03: Modification of Missiles / BSA 10: Modifications						<b>P-1 Line Item Number / Title:</b> 6552C67500 / MLRS Mods			
<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> 0603778A			
<b>Line Item MDAP/MAIS Code:</b> N/A									

  

Exhibits Schedule					Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 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	C67500 / Multiple Launch Rocket System (MLRS) Modifications (-)				- / 443.751	- / 25.052	- / 138.235	- / 383.216	- / 122.000	- / 505.216
<b>P-40</b>	<b>Total Gross/Weapon System Cost</b>				<b>- / 443.751</b>	<b>- / 25.052</b>	<b>- / 138.235</b>	<b>- / 383.216</b>	<b>- / 122.000</b>	<b>- / 505.216</b>

  

Exhibits Schedule					FY 2020	FY 2021	FY 2022	FY 2023	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	C67500 / Multiple Launch Rocket System (MLRS) Modifications (-)				- / 290.039	- / 412.452	- / 216.428	- / 208.888	Continuing	Continuing
<b>P-40</b>	<b>Total Gross/Weapon System Cost</b>				<b>- / 290.039</b>	<b>- / 412.452</b>	<b>- / 216.428</b>	<b>- / 208.888</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:**

FY2019 Base procurement dollars in the amount of \$383.216 million support recapitalization of 46 MLRS launchers from M270A0 configuration to M270A2, including production of 55 Improved Armored Cabs (IAC) for the Fleet Expansion Effort. The FY2019 Base procurement dollars also provide non-recurring engineering in support of MLRS Fleet Expansion, and routine obsolescence mitigation of the M270A1 Multiple Launch Rocket System (MLRS) launcher design to retain the ability for long-term sustainment of the MLRS launcher fleet.

FY2019 OCO procurement dollars in the amount of \$122.000 million support recapitalization of 15 M270A0 to M270A2 MLRS launcher configuration, including production of 15 Improved Armored Cabs (IAC) for the Fleet Expansion effort.

Non-recurring engineering efforts for the M993 carrier addresses numerous obsolescence issues within the M993 carrier power train and suspension used on the MLRS system. The mitigation will increase commonality with the Bradley platform (configuration manager of the M993 carrier) and retain the ability to sustain the MLRS fleet. These obsolescence efforts are critical to address prior to execution of a recapitalization program for the current MLRS fleet.

Base contract award is anticipated in 3QFY19 for MLRS Fleet Expansion. Fleet Expansion conducts carrier modifications to existing M270A0s and integrates the IAC to build a M270A2 configured launcher.

MLRS Mods address obsolescence mitigation and installation of IAC via design, production, and implementation of Modification Kits to the MLRS fleet. MLRS Mods also supports Fleet Expansion and long term sustainment of the MLRS Fleet through commonality with the Bradley platform.

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-3a, Individual Modification:</b> PB 2019 Army						<b>Date:</b> February 2018					
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 2032A / 03 / 10				<b>P-1 Line Item Number / Title:</b> 6552C67500 / MLRS Mods				<b>Modification Number / Title:</b> C67500 / Multiple Launch Rocket System (MLRS) Modifications			

ID Code (A=Service Ready, B=Not Service Ready) :						MDAP/MAIS Code:						
Resource Summary	Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	To Complete	Total
Procurement Quantity ( <i>Units in Each</i> )	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost ( <i>\$ in Millions</i> )	443.751	25.052	138.235	383.216	122.000	505.216	290.039	412.452	216.428	208.888	Continuing	Continuing
Less PY Advance Procurement ( <i>\$ in Millions</i> )	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) ( <i>\$ in Millions</i> )	443.751	25.052	138.235	383.216	122.000	505.216	290.039	412.452	216.428	208.888	Continuing	Continuing
Plus CY Advance Procurement ( <i>\$ in Millions</i> )	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority ( <i>\$ in Millions</i> )	443.751	25.052	138.235	383.216	122.000	505.216	290.039	412.452	216.428	208.888	Continuing	Continuing
(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> )	19,293.522	2,277.455	7,679.722	4,211.165	-	5,551.824	7,632.605	8,249.040	8,324.154	9,082.087	Continuing	Continuing

**Description:**

The Multiple Launch Rocket System (MLRS) launcher (M270A1) is a full spectrum, combat proven, all weather, 24/7 lethal and responsive, precision strike weapon system. MLRS provides critical missile precision strike, operational shaping fires, counterfire, and close support destructive and suppressive fires. MLRS is a tracked, indirect fire, rocket/missile launcher capable of firing two pods of precision rockets/missiles from the Multiple Launch Rocket System (MLRS) Family of Munitions (MFOM), to include the Guided Multiple Launch Rocket System (GMLRS) and the Army Tactical Missile System (ATACMS). These munitions are capable of engaging targets with precision at ranges up to 300 kilometers.

In FY2017, an initiative called Grow the Army identified the need to add additional launcher platforms, via Fleet Expansion, to its current fleet in order to counter peer and near peer threats. In March 2017, the Chief of Staff of the Army approved a Strategic Portfolio Analysis Review (SPAR) 19 recommendation to modernize 160 obsolete, unserviceable MLRS launchers and to procure 56 additional HIMARS launchers. In addition to Fleet Expansion, the Army decided to extend the operational life of the MLRS and HIMARS fleet until FY2050 or beyond.

The Fleet Expansion effort will divide the work between the prime contractor and RRAD as a subcontractor in a Public Private Partnership. The prime contractor will manage the overall effort and provide production parts supply support to RRAD. A M270 Launcher consists of a M993 Carrier and a M269 Launcher Loader Module (LLM). RRAD will recapitalize M993A0 Carriers and install IAC to build M993A2 Carriers. RRAD has the skilled personnel and facilities to break-down, perform modifications, and convert the M993A0s to M993A2 configuration. The prime contractor will provide the expertise and experience to upgrade the M269 LLM, provide the next generation Fire Control System, and integrate both onto the M993A2 Carrier resulting in an M270A2 Launcher.

The Improved Armored Cab (IAC) Modification Kit provides crew survivability against Improvised Explosive Devices (IEDs) and small arms fire greater than or equal to the High Mobility Artillery Rocket System (HIMARS) Increased Crew Protection Cab (ICP). Additionally, IAC standardizes crew drill requirements between HIMARS and MLRS operators. Upon application of the IAC Modification Kit to a M270A1, the launcher permanently becomes a M270A2. First Unit Equipped (FUE) for M270A2 is projected for FY2021.

Army Acquisition Objective is 225 MLRS launchers. 222 physical MLRS launchers remain within the fleet.

Secondary Distribution		FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023
Army	Quantity	-	-	-	-	-	-	-	-	-
	Total Obligation Authority	25.052	138.235	383.216	122.000	505.216	271.648	393.088	205.342	208.888
ANG	Quantity	-	-	-	-	-	-	-	-	-

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Exhibit P-3a, Individual Modification: PB 2019 Army							Date: February 2018			
Appropriation / Budget Activity / Budget Sub Activity: 2032A / 03 / 10			P-1 Line Item Number / Title: 6552C67500 / MLRS Mods				Modification Number / Title: C67500 / Multiple Launch Rocket System (MLRS) Modifications			
ID Code (A=Service Ready, B=Not Service Ready) :					MDAP/MAIS Code:					
Secondary Distribution		FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023
	Total Obligation Authority	-	-	-	-	-	18.391	19.364	11.086	-
Total: Secondary Distribution	Quantity	-	-	-	-	-	-	-	-	-
	Total Obligation Authority	25.052	138.235	383.216	122.000	505.216	290.039	412.452	216.428	208.888

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<b>Exhibit P-3a, Individual Modification:</b> PB 2019 Army										<b>Date:</b> February 2018			
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 2032A / 03 / 10				<b>P-1 Line Item Number / Title:</b> 6552C67500 / MLRS Mods						<b>Modification Number / Title:</b> C67500 / Multiple Launch Rocket System (MLRS) Modifications			
<b>ID Code</b> (A=Service Ready, B=Not Service Ready) :								<b>MDAP/MAIS Code:</b>					
<b>Models of Systems Affected:</b> M270A1				<b>Modification Type:</b> .				<b>Related RDT&amp;E PEs:</b>					
<b>Financial Plan</b>	<b>Prior Years</b>	<b>FY 2017</b>	<b>FY 2018</b>	<b>FY 2019 Base</b>	<b>FY 2019 OCO</b>	<b>FY 2019 Total</b>	<b>FY 2020</b>	<b>FY 2021</b>	<b>FY 2022</b>	<b>FY 2023</b>	<b>To Complete</b>	<b>Total</b>	
	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (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 2:</b> M270A1 Mods													
A Kits													
Recurring													
Obsolescence Mitigation	- / 443.751	- / 25.052	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.000	- / 468.803	
Obsolescence Mitigation Fire Control Sys	- / -	- / -	- / 7.850	- / 35.337	- / -	- / 35.337	- / 36.043	- / 36.763	- / 37.498	- / 38.247	- / 0.000	- / 191.738	
System Engineering Program Management	- / -	- / -	- / 11.100	- / 16.520	- / -	- / 16.520	- / 16.850	- / 17.187	- / 17.530	- / 17.880	- / 0.000	- / 97.067	
Test & Evaluation	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.460	- / 1.260	- / 1.025	- / 1.260	- / 0.000	- / 4.005	
RRAD M270A0 Hull Preparation	- / -	- / -	- / -	- / 26.700	- / -	- / 26.700	- / -	- / -	- / -	- / -	- / 0.000	- / 26.700	
Transmissions and Engines	- / -	- / -	- / 10.300	- / 60.844	- / 10.906	- / 71.750	- / 21.812	- / -	- / -	- / -	- / 0.000	- / 103.862	
Common Fire Control System	- / -	- / -	- / -	- / -	- / -	- / -	- / 63.473	- / 108.110	- / 58.320	- / 32.400	- / 0.000	- / 262.303	
Fleet Expansion OEM	- / -	- / -	- / -	- / 145.569	- / 84.736	- / 230.305	- / 87.702	- / 172.373	- / 99.475	- / 117.581	Continuing	Continuing	
Training	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 2.580	- / 1.520	- / 0.000	- / 4.100	
<b>Subtotal: Recurring</b>	<b>- / 443.751</b>	<b>- / 25.052</b>	<b>- / 29.250</b>	<b>- / 284.970</b>	<b>- / 95.642</b>	<b>- / 380.612</b>	<b>- / 226.340</b>	<b>- / 335.693</b>	<b>- / 216.428</b>	<b>- / 208.888</b>	<b>Continuing</b>	<b>Continuing</b>	
Non-Recurring													
Obsolescence Mitigation Bradley Chassis	- / -	- / -	- / 32.115	- / 38.200	- / -	- / 38.200	- / -	- / 4.230	- / -	- / -	- / 0.000	- / 74.545	
Launcher Risk Reduction	- / -	- / -	- / 7.000	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.000	- / 7.000	
<b>Subtotal: Non-Recurring</b>	<b>- / -</b>	<b>- / -</b>	<b>- / 39.115</b>	<b>- / 38.200</b>	<b>- / -</b>	<b>- / 38.200</b>	<b>- / -</b>	<b>- / 4.230</b>	<b>- / -</b>	<b>- / -</b>	<b>- / -</b>	<b>- / 81.545</b>	
<b>Subtotal: M270A1 Mods</b>	<b>- / 443.751</b>	<b>- / 25.052</b>	<b>- / 68.365</b>	<b>- / 323.170</b>	<b>- / 95.642</b>	<b>- / 418.812</b>	<b>- / 226.340</b>	<b>- / 339.923</b>	<b>- / 216.428</b>	<b>- / 208.888</b>	<b>Continuing</b>	<b>Continuing</b>	
<b>Modification Item 2 of 2:</b> Improved Armored Cab (IAC)													
A Kits													
Recurring													
Production	- / -	- / -	42 / 66.335	55 / 45.900	15 / 22.500	70 / 68.400	57 / 48.234	61 / 54.900	- / -	- / -	- / 0.000	230 / 237.869	
<b>Subtotal: Recurring</b>	<b>- / -</b>	<b>- / -</b>	<b>42 / 66.335</b>	<b>55 / 45.900</b>	<b>15 / 22.500</b>	<b>70 / 68.400</b>	<b>57 / 48.234</b>	<b>61 / 54.900</b>	<b>- / -</b>	<b>- / -</b>	<b>- / -</b>	<b>230 / 237.869</b>	
<b>Subtotal: Improved Armored Cab (IAC)</b>	<b>- / -</b>	<b>- / -</b>	<b>42 / 66.335</b>	<b>55 / 45.900</b>	<b>15 / 22.500</b>	<b>70 / 68.400</b>	<b>57 / 48.234</b>	<b>61 / 54.900</b>	<b>- / -</b>	<b>- / -</b>	<b>- / -</b>	<b>230 / 237.869</b>	
<b>Subtotal: Procurement, All Modification Items</b>	<b>- / 443.751</b>	<b>- / 25.052</b>	<b>42 / 134.700</b>	<b>55 / 369.070</b>	<b>15 / 118.142</b>	<b>70 / 487.212</b>	<b>57 / 274.574</b>	<b>61 / 394.823</b>	<b>- / 216.428</b>	<b>- / 208.888</b>	<b>Continuing</b>	<b>Continuing</b>	
<b>Installation</b>													
<b>Modification Item 2 of 2:</b> Improved Armored Cab (IAC)	- / -	- / -	18 / 3.535	55 / 14.146	15 / 3.858	70 / 18.004	57 / 15.465	61 / 17.629	- / -	- / -	- / -	206 / 54.633	
<b>Subtotal: Installation</b>	<b>0 / 0.000</b>	<b>0 / 0.000</b>	<b>18 / 3.535</b>	<b>55 / 14.146</b>	<b>15 / 3.858</b>	<b>70 / 18.004</b>	<b>57 / 15.465</b>	<b>61 / 17.629</b>	<b>- / -</b>	<b>- / -</b>	<b>- / -</b>	<b>206 / 54.633</b>	
<b>Total</b>													

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Exhibit P-3a, Individual Modification: PB 2019 Army										Date: February 2018			
Appropriation / Budget Activity / Budget Sub Activity: 2032A / 03 / 10				P-1 Line Item Number / Title: 6552C67500 / MLRS Mods						Modification Number / Title: C67500 / Multiple Launch Rocket System (MLRS) Modifications			
ID Code (A=Service Ready, B=Not Service Ready) :								MDAP/MAIS Code:					
Models of Systems Affected: M270A1				Modification Type: .				Related RDT&E PEs:					
Financial Plan	Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	To Complete	Total	
	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	
Total Cost (Procurement + Support + Installation)	443.751	25.052	138.235	383.216	122.000	505.216	290.039	412.452	216.428	208.888	Continuing	Continuing	

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<b>Exhibit P-3a, Individual Modification:</b> PB 2019 Army										<b>Date:</b> February 2018																					
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 2032A / 03 / 10										<b>P-1 Line Item Number / Title:</b> 6552C67500 / MLRS Mods										<b>Modification Number / Title:</b> C67500 / Multiple Launch Rocket System (MLRS) Modifications											
<b>ID Code</b> (A=Service Ready, B=Not Service Ready) :															<b>MDAP/MAIS Code:</b>																
<b>Modification Item 1 of 2:</b> M270A1 Mods																															
<b>Manufacturer Information</b>																															
Manufacturer Name: Precision Fires Rocket & Missile Systems Project Office															Manufacturer Location: Redstone Arsenal, AL																
Administrative Leadtime (in Months):															Production Leadtime (in Months):																
<b>Dates</b>		<b>FY 2017</b>				<b>FY 2018</b>				<b>FY 2019</b>				<b>FY 2020</b>				<b>FY 2021</b>				<b>FY 2022</b>				<b>FY 2023</b>					
Contract Dates																															
Delivery Dates																															
<b>Installation Information</b>																															
<b>Method of Implementation:</b> Field Artillery Launchers Product Office																															
<b>Installation Cost</b>		<b>Prior Years</b>		<b>FY 2017</b>		<b>FY 2018</b>		<b>FY 2019 Base</b>		<b>FY 2019 OCO</b>		<b>FY 2019 Total</b>		<b>FY 2020</b>		<b>FY 2021</b>		<b>FY 2022</b>		<b>FY 2023</b>		<b>To Complete</b>		<b>Total</b>							
		Qty (Each) / Total Cost (\$ M)		Qty (Each) / Total Cost (\$ M)		Qty (Each) / Total Cost (\$ M)		Qty (Each) / Total Cost (\$ M)		Qty (Each) / Total Cost (\$ M)		Qty (Each) / Total Cost (\$ M)		Qty (Each) / Total Cost (\$ M)		Qty (Each) / Total Cost (\$ M)		Qty (Each) / Total Cost (\$ M)		Qty (Each) / Total Cost (\$ M)		Qty (Each) / Total Cost (\$ M)		Qty (Each) / Total Cost (\$ M)							
Prior Years		- / -		- / -		- / -		0 / 0.000		- / -		0 / 0.000		- / -		- / -		- / -		- / -		- / -		- / -		- / -					
FY 2017		- / -		- / -		- / -		0 / 0.000		- / -		0 / 0.000		- / -		- / -		- / -		- / -		- / -		- / -		- / -					
FY 2018		- / -		- / -		- / -		0 / 0.000		- / -		0 / 0.000		- / -		- / -		- / -		- / -		- / -		- / -		- / -					
FY 2019		- / -		- / -		- / -		0 / 0.000		- / -		0 / 0.000		- / -		- / -		- / -		- / -		- / -		- / -		- / -					
FY 2020		- / -		- / -		- / -		0 / 0.000		- / -		0 / 0.000		- / -		- / -		- / -		- / -		- / -		- / -		- / -					
FY 2021		- / -		- / -		- / -		0 / 0.000		- / -		0 / 0.000		- / -		- / -		- / -		- / -		- / -		- / -		- / -					
FY 2022		- / -		- / -		- / -		0 / 0.000		- / -		0 / 0.000		- / -		- / -		- / -		- / -		- / -		- / -		- / -					
FY 2023		- / -		- / -		- / -		0 / 0.000		- / -		0 / 0.000		- / -		- / -		- / -		- / -		- / -		- / -		- / -					
To Complete		- / -		- / -		- / -		0 / 0.000		- / -		0 / 0.000		- / -		- / -		- / -		- / -		- / -		- / -		- / -					
Total		0 / 0.000		0 / 0.000		0 / 0.000		0 / 0.000		0 / 0.000		0 / 0.000		- / -		- / -		- / -		- / -		- / -		- / -		0 / 0.000					
<b>Installation Schedule</b>																															
	<b>PYS</b>	<b>FY 2017</b>				<b>FY 2018</b>				<b>FY 2019</b>				<b>FY 2020</b>				<b>FY 2021</b>				<b>FY 2022</b>				<b>FY 2023</b>				<b>TC</b>	<b>Tot</b>
		<b>Q1</b>	<b>Q2</b>	<b>Q3</b>	<b>Q4</b>	<b>Q1</b>	<b>Q2</b>	<b>Q3</b>	<b>Q4</b>	<b>Q1</b>	<b>Q2</b>	<b>Q3</b>	<b>Q4</b>	<b>Q1</b>	<b>Q2</b>	<b>Q3</b>	<b>Q4</b>	<b>Q1</b>	<b>Q2</b>	<b>Q3</b>	<b>Q4</b>	<b>Q1</b>	<b>Q2</b>	<b>Q3</b>	<b>Q4</b>	<b>Q1</b>	<b>Q2</b>	<b>Q3</b>	<b>Q4</b>		
In	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1
Out	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1

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<b>Exhibit P-3a, Individual Modification:</b> PB 2019 Army										<b>Date:</b> February 2018																					
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 2032A / 03 / 10										<b>P-1 Line Item Number / Title:</b> 6552C67500 / MLRS Mods										<b>Modification Number / Title:</b> C67500 / Multiple Launch Rocket System (MLRS) Modifications											
<b>ID Code</b> (A=Service Ready, B=Not Service Ready) :															<b>MDAP/MAIS Code:</b>																
<b>Modification Item 2 of 2:</b> Improved Armored Cab (IAC)																															
<b>Manufacturer Information</b>																															
Manufacturer Name: TBD															Manufacturer Location: TBD																
Administrative Leadtime (in Months): 3															Production Leadtime (in Months): 12																
<b>Dates</b>		<b>FY 2017</b>				<b>FY 2018</b>				<b>FY 2019</b>				<b>FY 2020</b>				<b>FY 2021</b>				<b>FY 2022</b>				<b>FY 2023</b>					
Contract Dates						Jul 2018				Mar 2019				Mar 2020				Mar 2021													
Delivery Dates						Oct 2019				Jan 2021				Mar 2022				Oct 2022													
<b>Installation Information</b>																															
<b>Method of Implementation:</b> Depot																															
<b>Installation Cost</b>		<b>Prior Years</b>		<b>FY 2017</b>		<b>FY 2018</b>		<b>FY 2019 Base</b>		<b>FY 2019 OCO</b>		<b>FY 2019 Total</b>		<b>FY 2020</b>		<b>FY 2021</b>		<b>FY 2022</b>		<b>FY 2023</b>		<b>To Complete</b>		<b>Total</b>							
		Qty (Each) / Total Cost (\$ M)		Qty (Each) / Total Cost (\$ M)		Qty (Each) / Total Cost (\$ M)		Qty (Each) / Total Cost (\$ M)		Qty (Each) / Total Cost (\$ M)		Qty (Each) / Total Cost (\$ M)		Qty (Each) / Total Cost (\$ M)		Qty (Each) / Total Cost (\$ M)		Qty (Each) / Total Cost (\$ M)		Qty (Each) / Total Cost (\$ M)		Qty (Each) / Total Cost (\$ M)		Qty (Each) / Total Cost (\$ M)							
Prior Years		- / -		- / -		- / -		0 / 0.000		- / -		0 / 0.000		- / -		- / -		- / -		- / -		- / -		- / -		- / -					
FY 2017		- / -		- / -		- / -		0 / 0.000		- / -		0 / 0.000		- / -		- / -		- / -		- / -		- / -		- / -		- / -					
FY 2018		- / -		- / -		- / -		0 / 0.000		- / -		0 / 0.000		- / -		- / -		- / -		- / -		- / -		- / -		- / -					
FY 2019		- / -		- / -		- / -		0 / 0.000		- / -		0 / 0.000		- / -		- / -		- / -		- / -		- / -		- / -		- / -					
FY 2020		- / -		- / -		18 / 3.535		- / -		- / -		- / -		- / -		- / -		- / -		- / -		- / -		- / -		18 / 3.535					
FY 2021		- / -		- / -		- / -		31 / 7.642		15 / 3.858		46 / 11.500		- / -		- / -		- / -		- / -		- / -		- / -		46 / 11.500					
FY 2022		- / -		- / -		- / -		24 / 6.504		- / -		24 / 6.504		56 / 15.176		- / -		- / -		- / -		- / -		- / -		80 / 21.680					
FY 2023		- / -		- / -		- / -		- / -		- / -		- / -		1 / 0.289		61 / 17.629		- / -		- / -		- / -		- / -		62 / 17.918					
To Complete		- / -		- / -		- / -		0 / 0.000		- / -		0 / 0.000		- / -		- / -		- / -		- / -		- / -		- / -		- / -					
Total		0 / 0.000		0 / 0.000		18 / 3.535		55 / 14.146		15 / 3.858		70 / 18.004		57 / 15.465		61 / 17.629		- / -		- / -		- / -		- / -		206 / 54.633					
<b>Installation Schedule</b>																															
	<b>PYS</b>	<b>FY 2017</b>				<b>FY 2018</b>				<b>FY 2019</b>				<b>FY 2020</b>				<b>FY 2021</b>				<b>FY 2022</b>				<b>FY 2023</b>				<b>TC</b>	<b>Tot</b>
		<b>Q1</b>	<b>Q2</b>	<b>Q3</b>	<b>Q4</b>	<b>Q1</b>	<b>Q2</b>	<b>Q3</b>	<b>Q4</b>	<b>Q1</b>	<b>Q2</b>	<b>Q3</b>	<b>Q4</b>	<b>Q1</b>	<b>Q2</b>	<b>Q3</b>	<b>Q4</b>	<b>Q1</b>	<b>Q2</b>	<b>Q3</b>	<b>Q4</b>	<b>Q1</b>	<b>Q2</b>	<b>Q3</b>	<b>Q4</b>	<b>Q1</b>	<b>Q2</b>	<b>Q3</b>	<b>Q4</b>		
In	-	-	-	-	-	-	-	42	-	-	-	70	-	-	57	-	-	-	61	-	-	-	-	-	-	-	-	-	-	-	230
Out	-	-	-	-	-	-	-	-	-	-	-	-	-	2	5	8	11	12	14	18	18	20	20	20	20	20	20	20	2	-	230

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<b>Exhibit P-40, Budget Line Item Justification:</b> PB 2019 Army										<b>Date:</b> February 2018		
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 2032A: Missile Procurement, Army / BA 03: Modification of Missiles / BSA 10: Modifications						<b>P-1 Line Item Number / Title:</b> 6580C67501 / HIMARS Modifications						
<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> 0210600A, 0603778A, 0210602A					
<b>Line Item MDAP/MAIS Code:</b> N/A												
<b>Resource Summary</b>	<b>Prior Years</b>	<b>FY 2017</b>	<b>FY 2018</b>	<b>FY 2019 Base</b>	<b>FY 2019 OCO</b>	<b>FY 2019 Total</b>	<b>FY 2020</b>	<b>FY 2021</b>	<b>FY 2022</b>	<b>FY 2023</b>	<b>To Complete</b>	<b>Total</b>
Procurement Quantity ( <i>Units in Each</i> )	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost ( <i>\$ in Millions</i> )	223.658	1.847	9.566	10.196	-	10.196	12.483	6.089	7.300	9.711	Continuing	Continuing
Less PY Advance Procurement ( <i>\$ in Millions</i> )	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) ( <i>\$ in Millions</i> )	223.658	1.847	9.566	10.196	-	10.196	12.483	6.089	7.300	9.711	Continuing	Continuing
Plus CY Advance Procurement ( <i>\$ in Millions</i> )	-	-	-	-	-	-	-	-	-	-	-	-
<b>Total Obligation Authority</b> ( <i>\$ in Millions</i> )	<b>223.658</b>	<b>1.847</b>	<b>9.566</b>	<b>10.196</b>	<b>-</b>	<b>10.196</b>	<b>12.483</b>	<b>6.089</b>	<b>7.300</b>	<b>9.711</b>	<b>Continuing</b>	<b>Continuing</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> )	2,457.780	73.880	281.353	291.314	-	291.314	312.075	276.773	331.818	323.700	Continuing	Continuing
<b>Description:</b>												
The M142 High Mobility Artillery Rocket System (HIMARS) launcher is a full spectrum, combat proven, all weather, 24/7 lethal and responsive, precision strike weapon system. HIMARS provides critical missile precision strike, operational shaping fires, counter-fire, and close support destructive and suppressive fires. HIMARS is a C-130 or C-17 transportable, wheeled, indirect fire, rocket/missile launcher capable of firing one pod of precision rockets/missiles from the Multiple Launch Rocket System (MLRS) Family of Munitions (MFOM), to include the Guided Multiple Launch Rocket System (GMLRS) and the Army Tactical Missile System (ATACMS). These munitions are capable of engaging targets with precision at ranges up to 300 kilometers.												
In FY2017, the Army decided to extend the operational life of the HIMARS fleet until FY2050 or beyond. This decision to increase the fleet's life by more than 20 years drives numerous obsolescence mitigation, technology refresh, and future recapitalization activities of the launcher fleet. Army Acquisition Objective is 363 HIMARS launchers.												
<b>Secondary Distribution</b>		<b>FY 2017</b>	<b>FY 2018</b>	<b>FY 2019 Base</b>	<b>FY 2019 OCO</b>	<b>FY 2019 Total</b>	<b>FY 2020</b>	<b>FY 2021</b>	<b>FY 2022</b>	<b>FY 2023</b>		
Army	Quantity	-	-	-	-	-	-	-	-	-		
	Total Obligation Authority	0.347	4.256	4.444	-	4.444	6.879	3.875	4.553	9.711		
ANG	Quantity	-	-	-	-	-	-	-	-	-		
	Total Obligation Authority	1.500	5.310	5.752	-	5.752	5.604	2.214	2.747	-		
<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>-</b>		
	<b>Total Obligation Authority</b>	<b>1.847</b>	<b>9.566</b>	<b>10.196</b>	<b>-</b>	<b>10.196</b>	<b>12.483</b>	<b>6.089</b>	<b>7.300</b>	<b>9.711</b>		

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<b>Exhibit P-40, Budget Line Item Justification:</b> PB 2019 Army							<b>Date:</b> February 2018		
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 2032A: Missile Procurement, Army / BA 03: Modification of Missiles / BSA 10: Modifications						<b>P-1 Line Item Number / Title:</b> 6580C67501 / HIMARS Modifications			
<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> 0210600A, 0603778A, 0210602A			
<b>Line Item MDAP/MAIS Code:</b> N/A									

  

Exhibits Schedule					Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 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	C67501 / HIMARS Modifications (Operational, Reliability, Safety, Crew Survivability)				- / 223.658	- / 1.847	- / 9.566	- / 10.196	- / -	- / 10.196
<b>P-40</b>	<b>Total Gross/Weapon System Cost</b>				<b>- / 223.658</b>	<b>- / 1.847</b>	<b>- / 9.566</b>	<b>- / 10.196</b>	<b>- / -</b>	<b>- / 10.196</b>

  

Exhibits Schedule					FY 2020	FY 2021	FY 2022	FY 2023	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	C67501 / HIMARS Modifications (Operational, Reliability, Safety, Crew Survivability)				- / 12.483	- / 6.089	- / 7.300	- / 9.711	Continuing	Continuing
<b>P-40</b>	<b>Total Gross/Weapon System Cost</b>				<b>- / 12.483</b>	<b>- / 6.089</b>	<b>- / 7.300</b>	<b>- / 9.711</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:**

FY2019 Base procurement dollars in the amount of \$10.196 million support obsolescence mitigation of the M142 High Mobility Artillery Rocket System (HIMARS) launcher design and long-term sustainment of the HIMARS launcher fleet via design, production, and implementation of Modification Kits.

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



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<b>Exhibit P-3a, Individual Modification:</b> PB 2019 Army							<b>Date:</b> February 2018				
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 2032A / 03 / 10				<b>P-1 Line Item Number / Title:</b> 6580C67501 / HIMARS Modifications				<b>Modification Number / Title:</b> C67501 / HIMARS Modifications			

ID Code (A=Service Ready, B=Not Service Ready) :						MDAP/MAIS Code:						
Resource Summary	Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	To Complete	Total
Procurement Quantity (Units in Each)	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost (\$ in Millions)	223.658	1.847	9.566	10.196	-	10.196	12.483	6.089	7.300	9.711	Continuing	Continuing
Less PY Advance Procurement (\$ in Millions)	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) (\$ in Millions)	223.658	1.847	9.566	10.196	-	10.196	12.483	6.089	7.300	9.711	Continuing	Continuing
Plus CY Advance Procurement (\$ in Millions)	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority (\$ in Millions)	223.658	1.847	9.566	10.196	-	10.196	12.483	6.089	7.300	9.711	Continuing	Continuing
(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)												
Initial Spares (\$ in Millions)	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost (\$ in Thousands)	2,457.780	73.880	281.353	291.314	-	291.314	312.075	276.773	331.818	323.700	Continuing	Continuing

**Description:**

The M142 High Mobility Artillery Rocket System (HIMARS) launcher is a full spectrum, combat proven, all weather, 24/7 lethal and responsive, precision strike weapon system. HIMARS provides critical missile precision strike, operational shaping fires, counter-fire, and close support destructive and suppressive fires. HIMARS is a C-130 or C-17 transportable, wheeled, indirect fire, rocket/missile launcher capable of firing one pod of precision rockets/missiles from the Multiple Launch Rocket System (MLRS) Family of Munitions (MFOM), to include the Guided Multiple Launch Rocket System (GMLRS) and the Army Tactical Missile System (ATACMS). These munitions are capable of engaging targets with precision at ranges up to 300 kilometers.

In 2QFY2017, the Army decided to extend the operational life of the HIMARS fleet until FY2050 or beyond. This decision to increase the fleet?s life by more than 20 years drives numerous obsolescence mitigation, technology refresh, and future recapitalization activities of the launcher fleet. Army Acquisition Objective is 363 HIMARS launchers.

<b>Secondary Distribution</b>		<b>FY 2017</b>	<b>FY 2018</b>	<b>FY 2019 Base</b>	<b>FY 2019 OCO</b>	<b>FY 2019 Total</b>	<b>FY 2020</b>	<b>FY 2021</b>	<b>FY 2022</b>	<b>FY 2023</b>
Army	Quantity	-	-	-	-	-	-	-	-	-
	Total Obligation Authority	0.347	4.256	4.444	-	4.444	6.879	3.875	4.553	9.711
ANG	Quantity	-	-	-	-	-	-	-	-	-
	Total Obligation Authority	1.500	5.310	5.752	-	5.752	5.604	2.214	2.747	-
<b>Total:</b> <b>Secondary Distribution</b>	<b>Quantity</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>
	<b>Total Obligation Authority</b>	<b>1.847</b>	<b>9.566</b>	<b>10.196</b>	<b>-</b>	<b>10.196</b>	<b>12.483</b>	<b>6.089</b>	<b>7.300</b>	<b>9.711</b>

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<b>Exhibit P-3a, Individual Modification:</b> PB 2019 Army										<b>Date:</b> February 2018			
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 2032A / 03 / 10				<b>P-1 Line Item Number / Title:</b> 6580C67501 / HIMARS Modifications						<b>Modification Number / Title:</b> C67501 / HIMARS Modifications			
<b>ID Code</b> (A=Service Ready, B=Not Service Ready) :								<b>MDAP/MAIS Code:</b>					
<b>Models of Systems Affected:</b> M142 High Mobility Artillery Rocket System				<b>Modification Type:</b> Operational, Reliability, Safety, Crew Survivability				<b>Related RDT&amp;E PEs:</b>					
<b>Financial Plan</b>	<b>Prior Years</b>	<b>FY 2017</b>	<b>FY 2018</b>	<b>FY 2019 Base</b>	<b>FY 2019 OCO</b>	<b>FY 2019 Total</b>	<b>FY 2020</b>	<b>FY 2021</b>	<b>FY 2022</b>	<b>FY 2023</b>	<b>To Complete</b>	<b>Total</b>	
	<i>Qty (Each) / Total Cost (\$ M)</i>	<i>Qty (Each) / Total Cost (\$ M)</i>	<i>Qty (Each) / Total Cost (\$ M)</i>	<i>Qty (Each) / Total Cost (\$ M)</i>	<i>Qty (Each) / Total Cost (\$ M)</i>	<i>Qty (Each) / Total Cost (\$ M)</i>	<i>Qty (Each) / Total Cost (\$ M)</i>	<i>Qty (Each) / Total Cost (\$ M)</i>	<i>Qty (Each) / Total Cost (\$ M)</i>	<i>Qty (Each) / Total Cost (\$ M)</i>	<i>Qty (Each) / Total Cost (\$ M)</i>	<i>Qty (Each) / Total Cost (\$ M)</i>	
<b>Procurement</b>													
<i>Modification Item 1 of 1:</i> M142 Mods													
A Kits													
Non-Recurring													
Program Management	- / -	- / -	- / 1.300	- / 1.326	- / -	- / 1.326	- / 1.353	- / 1.381	- / 1.409	- / 1.437	Continuing	Continuing	
Systems Engineering	- / -	- / -	- / 2.425	- / 2.474	- / -	- / 2.474	- / 2.350	- / 1.800	- / 2.446	- / 2.495	Continuing	Continuing	
Test & Evaluation	- / -	- / -	- / 1.200	- / 1.224	- / -	- / 1.224	- / 1.249	- / 1.274	- / 1.300	- / 1.326	Continuing	Continuing	
Training	- / -	- / -	- / 0.661	- / 0.675	- / -	- / 0.675	- / 0.689	- / 0.703	- / 0.718	- / 0.732	Continuing	Continuing	
Peculiar Support Equipment	- / -	- / -	- / 0.175	- / 0.179	- / -	- / 0.179	- / 0.183	- / 0.187	- / 0.191	- / 0.195	Continuing	Continuing	
Industrial Facilities	- / -	- / -	- / 0.700	- / 0.714	- / -	- / 0.714	- / 0.729	- / 0.744	- / 0.759	- / 0.774	Continuing	Continuing	
Obsolescence Mitigation	- / 223.658	- / 1.847	- / 3.105	- / 3.604	- / -	- / 3.604	- / 5.930	- / -	- / 0.477	- / 2.752	Continuing	Continuing	
<i>Subtotal: Non-Recurring</i>	- / 223.658	- / 1.847	- / 9.566	- / 10.196	- / -	- / 10.196	- / 12.483	- / 6.089	- / 7.300	- / 9.711	Continuing	Continuing	
<i>Subtotal: M142 Mods</i>	- / 223.658	- / 1.847	- / 9.566	- / 10.196	- / -	- / 10.196	- / 12.483	- / 6.089	- / 7.300	- / 9.711	Continuing	Continuing	
<i>Subtotal: Procurement, All Modification Items</i>	- / 223.658	- / 1.847	- / 9.566	- / 10.196	- / -	- / 10.196	- / 12.483	- / 6.089	- / 7.300	- / 9.711	Continuing	Continuing	
<b>Installation</b>													
<i>Subtotal: Installation</i>	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	
<b>Total</b>													
<b>Total Cost (Procurement + Support + Installation)</b>	<b>223.658</b>	<b>1.847</b>	<b>9.566</b>	<b>10.196</b>	<b>-</b>	<b>10.196</b>	<b>12.483</b>	<b>6.089</b>	<b>7.300</b>	<b>9.711</b>	Continuing	Continuing	

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Exhibit P-3a, Individual Modification: PB 2019 Army					Date: February 2018		
Appropriation / Budget Activity / Budget Sub Activity: 2032A / 03 / 10			P-1 Line Item Number / Title: 6580C67501 / HIMARS Modifications			Modification Number / Title: C67501 / HIMARS Modifications	
ID Code (A=Service Ready, B=Not Service Ready) :				MDAP/MAIS Code:			
Modification Item 1 of 1: M142 Mods							
Manufacturer Information							
Manufacturer Name: Precision Fires Rocket & Missile Systems Project Office				Manufacturer Location: Redstone Arsenal, AL			
Administrative Leadtime (in Months):				Production Leadtime (in Months):			
Dates	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023
Contract Dates							
Delivery Dates							
Installation Information							
Method of Implementation (Organic): Field Artillery Launchers Product Office					Installation Quantity: 0		

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<b>Exhibit P-40, Budget Line Item Justification:</b> PB 2019 Army										<b>Date:</b> February 2018		
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 2032A: Missile Procurement, Army / BA 04: Spares and Repair Parts / BSA 10: Spares And Repair Parts							<b>P-1 Line Item Number / Title:</b> 1242CA0250 / Spares And Repair Parts					
<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												
<b>Resource Summary</b>	<b>Prior Years</b>	<b>FY 2017</b>	<b>FY 2018</b>	<b>FY 2019 Base</b>	<b>FY 2019 OCO</b>	<b>FY 2019 Total</b>	<b>FY 2020</b>	<b>FY 2021</b>	<b>FY 2022</b>	<b>FY 2023</b>	<b>To Complete</b>	<b>Total</b>
Procurement Quantity ( <i>Units in Each</i> )	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost ( <i>\$ in Millions</i> )	304.688	34.487	18.915	27.737	-	27.737	26.444	5.096	16.185	6.387	Continuing	Continuing
Less PY Advance Procurement ( <i>\$ in Millions</i> )	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) ( <i>\$ in Millions</i> )	304.688	34.487	18.915	27.737	-	27.737	26.444	5.096	16.185	6.387	Continuing	Continuing
Plus CY Advance Procurement ( <i>\$ in Millions</i> )	-	-	-	-	-	-	-	-	-	-	-	-
<b>Total Obligation Authority</b> ( <i>\$ in Millions</i> )	<b>304.688</b>	<b>34.487</b>	<b>18.915</b>	<b>27.737</b>	<b>-</b>	<b>27.737</b>	<b>26.444</b>	<b>5.096</b>	<b>16.185</b>	<b>6.387</b>	<b>Continuing</b>	<b>Continuing</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> )	-	-	-	-	-	-	-	-	-	-	-	-
<b>Description:</b> Provides for the procurement of spares to support initial fielding of new or modified end items.												
<b>Secondary Distribution</b>		<b>FY 2017</b>	<b>FY 2018</b>	<b>FY 2019 Base</b>	<b>FY 2019 OCO</b>	<b>FY 2019 Total</b>	<b>FY 2020</b>	<b>FY 2021</b>	<b>FY 2022</b>	<b>FY 2023</b>		
Army	Quantity	-	-	-	-	-	-	-	-	-	-	
	Total Obligation Authority	34.361	18.915	27.737	-	27.737	26.444	5.096	16.185	6.387		
ANG	Quantity	-	-	-	-	-	-	-	-	-	-	
	Total Obligation Authority	0.126	-	-	-	-	-	-	-	-	-	
<b>Total: Secondary Distribution</b>	<b>Quantity</b>	-	-	-	-	-	-	-	-	-	-	
	<b>Total Obligation Authority</b>	<b>34.487</b>	<b>18.915</b>	<b>27.737</b>	<b>-</b>	<b>27.737</b>	<b>26.444</b>	<b>5.096</b>	<b>16.185</b>	<b>6.387</b>		

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<b>Exhibit P-40, Budget Line Item Justification:</b> PB 2019 Army							<b>Date:</b> February 2018			
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 2032A: Missile Procurement, Army / BA 04: Spares and Repair Parts / BSA 10: Spares And Repair Parts						<b>P-1 Line Item Number / Title:</b> 1242CA0250 / Spares And Repair Parts				
<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										
Exhibits Schedule					Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 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	CA0265 / MLRS MODIFICATION INITIAL SPARES				- / 26.972	- / 0.476	- / -	- / -	- / -	- / -
P-40a	CA0267 / PATRIOT MODIFICATION INITIAL SPARES				- / 277.716	- / 34.011	- / 18.915	- / 27.737	- / -	- / 27.737
<b>P-40</b>	<b>Total Gross/Weapon System Cost</b>				<b>- / 304.688</b>	<b>- / 34.487</b>	<b>- / 18.915</b>	<b>- / 27.737</b>	<b>- / -</b>	<b>- / 27.737</b>
<p>*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.</p> <p>Note: Totals in this Exhibit P-40 set may not be exact or sum exactly due to rounding.</p>										
<p><b>Justification:</b>  FY2019 base procurement dollars in the amount of \$27.737 million support the continuing acquisition of Patriot Modification Initial Spares. The funds in this account procure depot level repairable (DLR) secondary items from Supply Management, Army activities of the Army Working Capital Fund and commercial life cycle support vendors. To provide initial support, funds are required in the same year that end items are fielded.</p> <p>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.</p>										

**UNCLASSIFIED**

Exhibit P-40a, Budget Item Justification For Aggregated Items: PB 2019 Army																Date: February 2018							
Appropriation / Budget Activity / Budget Sub Activity: 2032A / 04 / 10									P-1 Line Item Number / Title: 1242CA0250 / Spares And Repair Parts									Aggregated Items Title: Various					
Item Number / Title [DODIC]	ID CD	MDAP/MAIS Code	Prior Years			FY 2017			FY 2018			FY 2019 Base			FY 2019 OCO			FY 2019 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)			
Various Items																							
CA0265 / MLRS MODIFICATION INITIAL SPARES			-	-	26.972	-	-	0.476	-	-	-	-	-	-	-	-	-	-	-	-			
Secondary Distribution																							
Army				-	-		-	0.350		-	-		-	-		-	-		-	-			
ANG				-	-		-	0.126		-	-		-	-		-	-		-	-			
CA0267 / PATRIOT MODIFICATION INITIAL SPARES			-	-	277.716	-	-	34.011	-	-	18.915	-	-	27.737	-	-	-	-	-	27.737			
Secondary Distribution																							
Army				-	-		-	34.011		-	18.915		-	27.737		-	-		-	27.737			
Subtotal: Various Items			-	-	304.688	-	-	34.487	-	-	18.915	-	-	27.737	-	-	-	-	-	27.737			
Total			-	-	304.688	-	-	34.487	-	-	18.915	-	-	27.737	-	-	-	-	-	27.737			

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

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<b>Exhibit P-40, Budget Line Item Justification:</b> PB 2019 Army										<b>Date:</b> February 2018		
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 2032A: Missile Procurement, Army / BA 05: Support Equipment and Facilities / BSA 10: Support Equipment & Facilities						<b>P-1 Line Item Number / Title:</b> 1242C93000 / Air Defense Targets						
<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												
<b>Resource Summary</b>	<b>Prior Years</b>	<b>FY 2017</b>	<b>FY 2018</b>	<b>FY 2019 Base</b>	<b>FY 2019 OCO</b>	<b>FY 2019 Total</b>	<b>FY 2020</b>	<b>FY 2021</b>	<b>FY 2022</b>	<b>FY 2023</b>	<b>To Complete</b>	<b>Total</b>
Procurement Quantity ( <i>Units in Each</i> )	518	394	-	394	-	394	394	394	394	394	-	2,882
Gross/Weapon System Cost ( <i>\$ in Millions</i> )	430.443	4.915	5.728	6.417	-	6.417	6.608	6.807	6.749	6.884	-	474.551
Less PY Advance Procurement ( <i>\$ in Millions</i> )	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) ( <i>\$ in Millions</i> )	430.443	4.915	5.728	6.417	-	6.417	6.608	6.807	6.749	6.884	-	474.551
Plus CY Advance Procurement ( <i>\$ in Millions</i> )	-	-	-	-	-	-	-	-	-	-	-	-
<b>Total Obligation Authority</b> ( <i>\$ in Millions</i> )	<b>430.443</b>	<b>4.915</b>	<b>5.728</b>	<b>6.417</b>	<b>-</b>	<b>6.417</b>	<b>6.608</b>	<b>6.807</b>	<b>6.749</b>	<b>6.884</b>	<b>-</b>	<b>474.551</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> )	830.971	12.475	-	16.287	-	16.287	16.772	17.277	17.129	17.472	-	164.660
<b>Description:</b> Air Defense Artillery (ADA) Targets program procures target hardware and associated training services to include scoring, payload, and ground support equipment to enable Air Defense Artillery Soldiers and units to conduct required training. This training consists of Department of the Army Pamphlet (DA PAM) 350-38 (Standards in Training Commission) required gunnery tables and aerial target tracking, training, and scoring. Target systems are also available to support collective training exercises and Force Development Testing and Experimentation (FDT&E) investigations of engagement techniques for small unmanned aircraft systems.												
<b>Secondary Distribution</b>		<b>FY 2017</b>	<b>FY 2018</b>	<b>FY 2019 Base</b>	<b>FY 2019 OCO</b>	<b>FY 2019 Total</b>	<b>FY 2020</b>	<b>FY 2021</b>	<b>FY 2022</b>	<b>FY 2023</b>		
Army	Quantity	394	0	394	-	394	394	394	394	394	394	
	Total Obligation Authority	4.915	5.728	6.417	-	6.417	6.608	6.807	6.749	6.884		
<b>Total: Secondary Distribution</b>	<b>Quantity</b>	<b>394</b>	<b>-</b>	<b>394</b>	<b>-</b>	<b>394</b>	<b>394</b>	<b>394</b>	<b>394</b>	<b>394</b>		
	<b>Total Obligation Authority</b>	<b>4.915</b>	<b>5.728</b>	<b>6.417</b>	<b>-</b>	<b>6.417</b>	<b>6.608</b>	<b>6.807</b>	<b>6.749</b>	<b>6.884</b>		

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<b>Exhibit P-40, Budget Line Item Justification:</b> PB 2019 Army								<b>Date:</b> February 2018		
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 2032A: Missile Procurement, Army / BA 05: Support Equipment and Facilities / BSA 10: Support Equipment & Facilities						<b>P-1 Line Item Number / Title:</b> 1242C93000 / Air Defense Targets				
<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										
Exhibits Schedule					Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 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	C93000 / Air Defense Targets	P-5a			518 / 430.443	394 / 4.915	- / 5.728	394 / 6.417	- / -	394 / 6.417
<b>P-40</b>	<b>Total Gross/Weapon System Cost</b>				<b>518 / 430.443</b>	<b>394 / 4.915</b>	<b>- / 5.728</b>	<b>394 / 6.417</b>	<b>- / -</b>	<b>394 / 6.417</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 2019 Base procurement dollars in the amount of \$6.417 million supports Air Defense Artillery Targets and scoring, payload, and ground support equipment for training required in DA PAM 350-38, Standards in Training Commission (STRAC). These items support gunnery tables, aerial target tracking (Captive Flight Trainer (CFT), and Tracking Head Trainer (THT)5.56) training, Missile Live Fire training when missiles are allocated in accordance with (IAW) the Missile Distribution Plan), and U.S. Army Avenger systems worldwide. Training requirements are generated by Department of the Army Major Field Commands, Training Centers, Division Level Commands, and real world mission rehearsals. These field requirements have been reviewed and validated against ongoing force restructuring and are consistent with the approved training doctrine. These targets are necessary to meet Army Regulation 220-1 (Unit Status Reporting) training requirements, training strategies and gunnery standards, and soldier qualification in support of unit readiness.

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



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Exhibit P-5, Cost Analysis: PB 2019 Army													Date: February 2018								
Appropriation / Budget Activity / Budget Sub Activity: 2032A / 05 / 10							P-1 Line Item Number / Title: 1242C93000 / Air Defense Targets						Item Number / Title [DODIC]: C93000 / Air Defense Targets								
ID Code (A=Service Ready, B=Not Service Ready) :										MDAP/MAIS Code:											
Resource Summary				Prior Years			FY 2017			FY 2018			FY 2019 Base			FY 2019 OCO			FY 2019 Total		
Procurement Quantity <i>(Units in Each)</i>				518			394			-			394			-			394		
Gross/Weapon System Cost <i>(\$ in Millions)</i>				430.443			4.915			5.728			6.417			-			6.417		
Less PY Advance Procurement <i>(\$ in Millions)</i>				-			-			-			-			-			-		
Net Procurement (P-1) <i>(\$ in Millions)</i>				430.443			4.915			5.728			6.417			-			6.417		
Plus CY Advance Procurement <i>(\$ in Millions)</i>				-			-			-			-			-			-		
Total Obligation Authority <i>(\$ in Millions)</i>				430.443			4.915			5.728			6.417			-			6.417		
(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>				830.971			12.475			-			16.287			-			16.287		
Note: Subtotals or Totals in this Exhibit P-5 may not be exact or sum exactly due to rounding.																					
Cost Elements	Prior Years			FY 2017			FY 2018			FY 2019 Base			FY 2019 OCO			FY 2019 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																					
Remotely Piloted Vehicle Target (RPVT) <sup>(†)</sup>	430,443.000	1	430.443	5.673	394	2.235	5.992	394	2.361	6.756	394	2.662	-	-	-	6.756	394	2.662			
Infrared Kit Payload <sup>(†)</sup>	-	-	-	0.270	394	0.106	0.284	394	0.112	0.321	394	0.127	-	-	-	0.321	394	0.127			
Launcher <sup>(†)</sup>	-	-	-	27.195	3	0.082	27.250	4	0.109	29.915	4	0.120	-	-	-	29.915	4	0.120			
Manual Navigation GCS <sup>(†)</sup>	-	-	-	-	-	-	10.429	14	0.146	11.855	14	0.166	-	-	-	11.855	14	0.166			
BVR Navigation GCS <sup>(†)</sup>	-	-	-	-	-	-	27.000	4	0.108	30.838	4	0.123	-	-	-	30.838	4	0.123			
BVR Payload <sup>(†)</sup>	-	-	-	12.054	32	0.386	12.063	16	0.193	13.711	20	0.274	-	-	-	13.711	20	0.274			
Acoustic Scoring Payload <sup>(†)</sup>	-	-	-	13.375	26	0.348	13.792	24	0.331	13.393	28	0.375	-	-	-	13.393	28	0.375			
Acoustic Scoring GCS <sup>(†)</sup>	-	-	-	-	-	-	43.000	8	0.344	47.845	9	0.430	-	-	-	47.845	9	0.430			
Radar Scoring Payload <sup>(†)</sup>	-	-	-	-	-	-	16.900	20	0.338	18.751	20	0.375	-	-	-	18.751	20	0.375			
Radar Scoring GCS <sup>(†)</sup>	-	-	-	-	-	-	-	-	-	17.000	1	0.017	-	-	-	17.000	1	0.017			
RPVT Lighting Kit Payload <sup>(†)</sup>	-	-	-	0.292	34	0.010	0.273	22	0.006	0.317	31	0.010	-	-	-	0.317	31	0.010			
Program Management Support	-	-	-	1,579.000	1	1.579	1,597.000	1	1.597	1,646.000	1	1.646	-	-	-	1,646.000	1	1.646			

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<b>Exhibit P-5, Cost Analysis:</b> PB 2019 Army														<b>Date:</b> February 2018				
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 2032A / 05 / 10						<b>P-1 Line Item Number / Title:</b> 1242C93000 / Air Defense Targets						<b>Item Number / Title [DODIC]:</b> C93000 / Air Defense Targets						
<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 2017			FY 2018			FY 2019 Base			FY 2019 OCO			FY 2019 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)
Smoke Generator Payload <sup>(†)</sup>	-	-	-	0.408	15	0.006	0.421	19	0.008	0.458	19	0.009	-	-	-	0.458	19	0.009
Over the Horizon BVR Payload <sup>(†)</sup>	-	-	-	27.112	6	0.163	19.000	4	0.076	20.788	4	0.083	-	-	-	20.788	4	0.083
<i>Subtotal: Recurring Cost</i>	-	-	430.443	-	-	4.914	-	-	5.729	-	-	6.417	-	-	-	-	-	6.417
<i>Subtotal: Flyaway Cost</i>	-	-	430.443	-	-	4.914	-	-	5.729	-	-	6.417	-	-	-	-	-	6.417
<b>Gross/Weapon System Cost</b>	<b>830.971</b>	<b>518</b>	<b>430.443</b>	<b>12.475</b>	<b>394</b>	<b>4.915</b>	<b>-</b>	<b>-</b>	<b>5.728</b>	<b>16.287</b>	<b>394</b>	<b>6.417</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>16.287</b>	<b>394</b>	<b>6.417</b>

  

Secondary Distribution		FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total
Army	Quantity	394	0	394	-	394
	Total Obligation Authority	4.915	5.728	6.417	-	6.417
<b>Total: Secondary Distribution</b>	<b>Quantity</b>	<b>394</b>	<b>-</b>	<b>394</b>	<b>-</b>	<b>394</b>
	<b>Total Obligation Authority</b>	<b>4.915</b>	<b>5.728</b>	<b>6.417</b>	<b>-</b>	<b>6.417</b>

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

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Exhibit P-5a, Procurement History and Planning: PB 2019 Army								Date: February 2018				
Appropriation / Budget Activity / Budget Sub Activity: 2032A / 05 / 10				P-1 Line Item Number / Title: 1242C93000 / Air Defense Targets				Item Number / Title [DODIC]: C93000 / Air Defense Targets				
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
Remotely Piloted Vehicle Target (RPVT)		2017	Griffon Aerospace Inc. / Madison, AL	C / FFP	AMCOM	Mar 2017	Jun 2017	394	5.670	Y		
Remotely Piloted Vehicle Target (RPVT)		2018	Griffon Aerospace Inc. / Madison, AL	C / FFP	AMCOM	Mar 2018	Jun 2018	394	5.990	Y		
Remotely Piloted Vehicle Target (RPVT)		2019	Griffon Aerospace Inc. / Madison, AL	C / FFP	AMCOM	Mar 2019	Jun 2019	394	6.760	Y		
Infrared Kit Payload		2017	Griffon Aerospace Inc. / Madison, AL	C / FFP	AMCOM	Mar 2017	Jun 2017	394	0.270	Y		
Infrared Kit Payload		2018	Griffon Aerospace Inc. / Madison, AL	C / FFP	AMCOM	Mar 2018	Jun 2018	394	0.280	Y		
Infrared Kit Payload		2019	Griffon Aerospace Inc. / Madison, AL	C / FFP	AMCOM	Mar 2019	Jun 2019	394	0.320	Y		
Launcher		2017	Griffon Aerospace Inc. / Madison, AL	C / FFP	AMCOM	Mar 2017	Jun 2017	3	27.200	Y		
Launcher		2018	Griffon Aerospace Inc. / Madison, AL	C / FFP	AMCOM	Mar 2018	Jun 2018	4	27.250	Y		
Launcher		2019	Griffon Aerospace Inc. / Madison, AL	C / FFP	AMCOM	Mar 2019	Jun 2019	4	30.000	Y		
Manual Navigation GCS		2017	Griffon Aerospace Inc. / Madison, AL	C / FFP	AMCOM	Mar 2017	Jun 2017	0	0.000	Y		
Manual Navigation GCS		2018	Griffon Aerospace Inc. / Madison, AL	C / FFP	AMCOM	Mar 2018	Jun 2018	14	10.430	Y		
Manual Navigation GCS		2019	Griffon Aerospace Inc. / Madison, AL	C / FFP	AMCOM	Mar 2019	Jun 2019	14	11.860	Y		
BVR Navigation GCS		2017	Griffon Aerospace Inc. / Madison, AL	C / FFP	AMCOM	Mar 2017	Jun 2017	0	0.000	Y		
BVR Navigation GCS		2018	Griffon Aerospace Inc. / Madison, AL	C / FFP	AMCOM	Mar 2018	Jun 2018	4	27.000	Y		
BVR Navigation GCS		2019	Griffon Aerospace Inc. / Madison, AL	C / FFP	AMCOM	Mar 2019	Jun 2019	4	30.750	Y		
BVR Payload		2017	Griffon Aerospace Inc. / Madison, AL	C / FFP	AMCOM	Mar 2017	Jun 2017	32	12.050	Y		
BVR Payload		2018	Griffon Aerospace Inc. / Madison, AL	C / FFP	AMCOM	Mar 2018	Jun 2018	16	12.060	Y		
BVR Payload		2019	Griffon Aerospace Inc. / Madison, AL	C / FFP	AMCOM	Mar 2019	Jun 2019	20	13.700	Y		
Acoustic Scoring Payload		2017	Griffon Aerospace Inc. / Madison, AL	C / FFP	AMCOM	Mar 2017	Jun 2017	26	13.380	Y		
Acoustic Scoring Payload		2018	Griffon Aerospace Inc. / Madison, AL	C / FFP	AMCOM	Mar 2018	Jun 2018	24	13.790	Y		
Acoustic Scoring Payload		2019	Griffon Aerospace Inc. / Madison, AL	C / FFP	AMCOM	Mar 2019	Jun 2019	28	13.390	Y		
Acoustic Scoring GCS		2017	Griffon Aerospace Inc. / Madison, AL	C / FFP	AMCOM	Mar 2017	Jun 2017	0	0.000	Y		
Acoustic Scoring GCS		2018	Griffon Aerospace Inc. / Madison, AL	C / FFP	AMCOM	Mar 2018	Jun 2018	8	43.000	Y		
Acoustic Scoring GCS		2019	Griffon Aerospace Inc. / Madison, AL	C / FFP	AMCOM	Mar 2019	Jun 2019	9	47.780	Y		
Radar Scoring Payload		2017	Griffon Aerospace Inc. / Madison, AL	C / FFP	AMCOM	Mar 2017	Jun 2017	0	0.000	Y		
Radar Scoring Payload		2018	Griffon Aerospace Inc. / Madison, AL	C / FFP	AMCOM	Mar 2018	Jun 2018	20	16.900	Y		
Radar Scoring Payload		2019	Griffon Aerospace Inc. / Madison, AL	C / FFP	AMCOM	Mar 2019	Jun 2019	20	18.750	Y		
Radar Scoring GCS		2017	Griffon Aerospace Inc. / Madison, AL	C / FFP	AMCOM	Mar 2017	Jun 2017	0	0.000	Y		
RPVT Lighting Kit Payload		2017	Griffon Aerospace Inc. / Madison, AL	C / FFP	AMCOM	Mar 2017	Jun 2017	34	0.290	Y		
RPVT Lighting Kit Payload		2018	Griffon Aerospace Inc. / Madison, AL	C / FFP	AMCOM	Mar 2018	Jun 2018	22	0.270	Y		
RPVT Lighting Kit Payload		2019	Griffon Aerospace Inc. / Madison, AL	C / FFP	AMCOM	Mar 2019	Jun 2019	31	0.320	Y		
Smoke Generator Payload		2018	Griffon Aerospace Inc. / Madison, AL	C / FFP	AMCOM	Mar 2018	Jun 2018	19	0.420	Y		

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<b>Exhibit P-5a, Procurement History and Planning:</b> PB 2019 Army		<b>Date:</b> February 2018
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 2032A / 05 / 10	<b>P-1 Line Item Number / Title:</b> 1242C93000 / Air Defense Targets	<b>Item Number / Title [DODIC]:</b> C93000 / Air Defense Targets

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
Smoke Generator Payload		2019	Griffon Aerospace Inc. / Madison, AL	C / FFP	AMCOM	Mar 2019	Jun 2019	19	0.470	Y		
Over the Horizon BVR Payload		2018	Griffon Aerospace Inc. / Madison, AL	C / FFP	AMCOM	Mar 2018	Jun 2018	4	19.000	Y		
Over the Horizon BVR Payload		2019	Griffon Aerospace Inc. / Madison, AL	C / FFP	AMCOM	Mar 2019	Jun 2019	4	20.750	Y		

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<b>Exhibit P-40, Budget Line Item Justification:</b> PB 2019 Army										<b>Date:</b> February 2018		
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 2032A: Missile Procurement, Army / BA 05: Support Equipment and Facilities / BSA 10: Support Equipment & Facilities							<b>P-1 Line Item Number / Title:</b> 4662CA0100 / Production Base Support					
<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												
<b>Resource Summary</b>	<b>Prior Years</b>	<b>FY 2017</b>	<b>FY 2018</b>	<b>FY 2019 Base</b>	<b>FY 2019 OCO</b>	<b>FY 2019 Total</b>	<b>FY 2020</b>	<b>FY 2021</b>	<b>FY 2022</b>	<b>FY 2023</b>	<b>To Complete</b>	<b>Total</b>
Procurement Quantity ( <i>Units in Each</i> )	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost ( <i>\$ in Millions</i> )	368.873	1.154	1.189	1.202	-	1.202	1.078	1.037	1.839	2.184	-	378.556
Less PY Advance Procurement ( <i>\$ in Millions</i> )	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) ( <i>\$ in Millions</i> )	368.873	1.154	1.189	1.202	-	1.202	1.078	1.037	1.839	2.184	-	378.556
Plus CY Advance Procurement ( <i>\$ in Millions</i> )	-	-	-	-	-	-	-	-	-	-	-	-
<b>Total Obligation Authority</b> ( <i>\$ in Millions</i> )	<b>368.873</b>	<b>1.154</b>	<b>1.189</b>	<b>1.202</b>	<b>-</b>	<b>1.202</b>	<b>1.078</b>	<b>1.037</b>	<b>1.839</b>	<b>2.184</b>	<b>-</b>	<b>378.556</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> )	-	-	-	-	-	-	-	-	-	-	-	-
<b>Description:</b>												
<p>This program provides funding to the Army Test and Evaluation Command (ATEC) to establish, modernize, expand or replace test facilities used in production testing of missiles and missile components. It sustains Army production test capabilities through upgrade and replacement of instrumentation and equipment that is technologically and/or economically obsolete. Modernization of test instrumentation and equipment provides increased automation and efficiencies, improved data quality and quantity and cost avoidances to Army Program Managers. Programmed funding will be used to upgrade or replace production test instrumentation and equipment at the White Sands Test Center (WSTC), White Sands Missile Range, NM and Redstone Test Center (RTC), Huntsville, AL.</p>												
<b>Secondary Distribution</b>		<b>FY 2017</b>	<b>FY 2018</b>	<b>FY 2019 Base</b>	<b>FY 2019 OCO</b>	<b>FY 2019 Total</b>	<b>FY 2020</b>	<b>FY 2021</b>	<b>FY 2022</b>	<b>FY 2023</b>		
Army	Quantity	-	-	-	-	-	-	-	-	-	-	
	Total Obligation Authority	1.154	1.189	1.202	-	1.202	1.078	1.037	1.839	2.184		
<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>-</b>	<b>-</b>	
	<b>Total Obligation Authority</b>	<b>1.154</b>	<b>1.189</b>	<b>1.202</b>	<b>-</b>	<b>1.202</b>	<b>1.078</b>	<b>1.037</b>	<b>1.839</b>	<b>2.184</b>		
<b>Justification:</b>												
<p>ATEC: FY 2019 Base procurement dollars support the following: At WSTC, provides lifecycle replacement of optical systems (high definition digital cameras, video recorders, video streamers, tracking and support cameras) to provide a reliable test capability for the collection of Time, Space and Position Information (TSPI) data as well as surveillance of all open air missile testing conducted at the test range. At RTC, replaces obsolete and failing vertical shock machines used to perform missile shock tests by producing shock pulses within tolerances of MIL-STD-810; maintains the capability to evaluate hardware under anticipated shock environments in an efficient manner; also upgrades telemetry ground stations to reliably communicate with and track missiles in flight. The current vibration table has been in service for over 20 years, and deterioration of the table has been associated with test incidents that have resulted in damage to test items. The majority of the instrumentation being upgraded or replaced is obsolete and has met or exceeded its economic life. This instrumentation is required to ensure complete and accurate test data are collected and safety and environmental hazards are minimized. Benefits of this project include increased test efficiencies and decreased costs and risks to Army Program Managers.</p>												

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<b>Exhibit P-40, Budget Line Item Justification:</b> PB 2019 Army										<b>Date:</b> February 2018		
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 2032A: Missile Procurement, Army / BA 05: Support Equipment and Facilities / BSA 10: Support Equipment & Facilities							<b>P-1 Line Item Number / Title:</b> 9900CX9999 / CLOSED ACCOUNT ADJUSTMENTS					
<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												
<b>Resource Summary</b>	<b>Prior Years</b>	<b>FY 2017</b>	<b>FY 2018</b>	<b>FY 2019 Base</b>	<b>FY 2019 OCO</b>	<b>FY 2019 Total</b>	<b>FY 2020</b>	<b>FY 2021</b>	<b>FY 2022</b>	<b>FY 2023</b>	<b>To Complete</b>	<b>Total</b>
Procurement Quantity ( <i>Units in Each</i> )	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost ( <i>\$ in Millions</i> )	15.450	0.092	-	-	-	-	-	-	-	-	-	15.542
Less PY Advance Procurement ( <i>\$ in Millions</i> )	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) ( <i>\$ in Millions</i> )	15.450	0.092	-	-	-	-	-	-	-	-	-	15.542
Plus CY Advance Procurement ( <i>\$ in Millions</i> )	-	-	-	-	-	-	-	-	-	-	-	-
<b>Total Obligation Authority</b> ( <i>\$ in Millions</i> )	<b>15.450</b>	<b>0.092</b>	-	-	-	-	-	-	-	-	-	<b>15.542</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> )	-	-	-	-	-	-	-	-	-	-	-	-
<b>Description:</b> Closed Account Adjustments												
<b>Secondary Distribution</b>		<b>FY 2017</b>	<b>FY 2018</b>	<b>FY 2019 Base</b>	<b>FY 2019 OCO</b>	<b>FY 2019 Total</b>	<b>FY 2020</b>	<b>FY 2021</b>	<b>FY 2022</b>	<b>FY 2023</b>		
Army	Quantity	-	-	-	-	-	-	-	-	-	-	
	Total Obligation Authority	0.092	-	-	-	-	-	-	-	-	-	
<b>Total:</b> <b>Secondary Distribution</b>	<b>Quantity</b>	-	-	-	-	-	-	-	-	-	-	
	<b>Total Obligation Authority</b>	<b>0.092</b>	-	-	-	-	-	-	-	-	-	