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

February 2018



**Navy**

*Justification Book Volume 1 of 1  
**Procurement, Marine Corps***

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The estimated cost for this report for the Department of the Navy (DON) is \$38,099.

The estimated total cost for supporting the DON budget justification material is approximately \$1,643,653 for the 2018 fiscal year. This includes \$79,753 in supplies and \$1,563,900 in labor.

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## **Department of Defense Appropriations Act, 2019**

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### **Procurement, Marine Corps**

For expenses necessary for the procurement, manufacture, and modification of missiles, armament, military equipment, spare parts, and accessories therefore; plant equipment, appliances, and machine tools, and installation thereof in public and private plants; reserve plant and Government and contractor-owned equipment layaway; vehicles for the Marine Corps, including the purchase of passenger motor vehicles for replacement only; and expansion of public and private plants, including land necessary therefore, and such lands and interests therein, may be acquired, and construction prosecuted thereon prior to approval of title, \$2,918,433,000, to remain available for obligation until September 30, 2021 of which \$142,318,000 shall be available for the Marine Corps Reserve.

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

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
Procurement, Marine Corps	1,659,375	1,298,577	1,298,577	331,219
Total Department of the Navy	1,659,375	1,298,577	1,298,577	331,219

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Department of the Navy  
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Appropriation

Procurement, Marine Corps	331,219
Total Department of the Navy	331,219

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	-----
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Department of the Navy  
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 (Dollars in Thousands)

Appropriation

	FY 2018	FY 2018	FY 2018
	Total	Less Enacted	Remaining Req
	PB Requests*	DIV B	with CR Adj
Procurement, Marine Corps	1,629,796	P.L.115-96***	Base + OCO +
Total Department of the Navy	1,629,796	MDDE + Ship Repairs	Emergency

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Total Obligational Authority  
(Dollars in Thousands)

Appropriation	FY 2019 Base	FY 2019 OCO	FY 2019 Total
Procurement, Marine Corps	2,858,289	60,144	2,918,433
Total Department of the Navy	2,858,289	60,144	2,918,433

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

Appropriation: Procurement, Marine Corps

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. Weapons and combat vehicles	200,063	404,642	404,642	5,360
03. Guided missiles and equipment	128,792	127,269	127,269	7,906
04. Communications And Electronics Equipment	842,974	951,220	951,220	31,008
05. Support Vehicles	213,476	334,634	334,634	
06. Engineer and Other Equipment	244,353	211,420	211,420	21,000
07. Spares and Repair Parts	29,717	35,640	35,640	
20. Undistributed		-766,248	-766,248	265,945
Total Procurement, Marine Corps	1,659,375	1,298,577	1,298,577	331,219

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Department of the Navy  
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Appropriation: Procurement, Marine Corps

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. Weapons and combat vehicles	5,360			
03. Guided missiles and equipment	7,906			
04. Communications And Electronics Equipment	31,008			
05. Support Vehicles				
06. Engineer and Other Equipment	21,000			
07. Spares and Repair Parts				
20. Undistributed	265,945			
Total Procurement, Marine Corps	331,219			

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Appropriation: Procurement, Marine Corps

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. Weapons and combat vehicles	410,002		410,002
03. Guided missiles and equipment	135,175		135,175
04. Communications And Electronics Equipment	982,228		982,228
05. Support Vehicles	334,634		334,634
06. Engineer and Other Equipment	232,420		232,420
07. Spares and Repair Parts	35,640		35,640
20. Undistributed	-500,303		-500,303
Total Procurement, Marine Corps	1,629,796		1,629,796

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Department of the Navy  
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 (Dollars in Thousands)

Appropriation: Procurement, Marine Corps

Budget Activity	FY 2019 Base	FY 2019 OCO	FY 2019 Total
02. Weapons and combat vehicles	612,423		612,423
03. Guided missiles and equipment	94,816		94,816
04. Communications And Electronics Equipment	1,235,484	7,704	1,243,188
05. Support Vehicles	652,777	44,440	697,217
06. Engineer and Other Equipment	236,985	8,000	244,985
07. Spares and Repair Parts	25,804		25,804
20. Undistributed			
Total Procurement, Marine Corps	2,858,289	60,144	2,918,433

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Department of the Navy  
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 Total Obligational Authority  
 (Dollars in Thousands)

Appropriation: 1109N Procurement, Marine Corps

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				
<b>Budget Activity 02: Weapons and combat vehicles</b>														
<b>Tracked Combat Vehicles</b>														
1 AAV7A1 PIP		A		69,785		107,665		107,665			U			
2 Amphibious Combat Vehicle 1.1		A			26	161,511	26	161,511			U			
3 LAV PIP		A		32,575		17,244		17,244			U			
<b>Artillery and Other Weapons</b>														
4 Expeditionary Fire Support System		A		2,688		626		626			U			
5 155mm Lightweight Towed Howitzer		B		17,318		20,259		20,259			U			
6 Artillery Weapons System		A		49,704		59,943		59,943		5,360	U			
7 Weapons and Combat Vehicles Under \$5 Million		A		10,463		19,616		19,616			U			
<b>Other Support</b>														
8 Modification Kits		A		17,530		17,778		17,778			U			
<b>Total Weapons and combat vehicles</b>				200,063		404,642		404,642		5,360				
<b>Budget Activity 03: Guided missiles and equipment</b>														
<b>Guided Missiles</b>														
9 Ground Based Air Defense		A		9,170		9,432		9,432			U			
10 Anti-Armor Missile-Javelin		A	531	79,624	222	41,159	222	41,159	11	2,833	U			
11 Family Anti-Armor Weapon Systems (FOAAWS)		A		22,918		25,125		25,125		49	U			

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Appropriation: 1109N Procurement, Marine Corps

Line No	Item Nomenclature	Ident Code	FY 2018			FY 2018			FY 2018			Remaining Req e	S e	
			Total	PB Requests+ with CR Adj	OCO	Emergency	Requests**	Emergency	Less Enacted Div B	P.L.115-96***	MDDE + Ship Repairs			FY 2018
			Quantity	Cost	-----	-----	-----	-----	Quantity	Cost	Quantity			Cost
-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----		

Budget Activity 02: Weapons and combat vehicles

## Tracked Combat Vehicles

1 AAV7A1 PIP	A											U
2 Amphibious Combat Vehicle 1.1	A											U
3 LAV PIP	A											U
<b>Artillery and Other Weapons</b>												
4 Expeditionary Fire Support System	A											U
5 155mm Lightweight Towed Howitzer	B											U
6 Artillery Weapons System	A		5,360									U
7 Weapons and Combat Vehicles Under \$5 Million	A											U
<b>Other Support</b>												
8 Modification Kits	A											U
<b>Total Weapons and combat vehicles</b>			<b>5,360</b>									

Budget Activity 03: Guided missiles and equipment

## Guided Missiles

9 Ground Based Air Defense	A											U
10 Anti-Armor Missile-Javelin	A	11	2,833									U
11 Family Anti-Armor Weapon Systems (FOAAWS)	A		49									U

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Appropriation: 1109N Procurement, Marine Corps

Line No	Item Nomenclature	FY 2018			FY 2018			FY 2018		
		Total		Less Enacted	Total		Less Enacted	Remaining Req		
		PB Requests*	with CR Adj	DIV B	P.L.115-96***	Base + OCO + Emergency**	MDDE + Ship Repairs	Base + OCO + Emergency	S e	
Ident Code	Quantity	Cost	Quantity	Cost	Quantity	Cost	c			
-----	-----	----	-----	-----	-----	-----	-			

Budget Activity 02: Weapons and combat vehicles

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Tracked Combat Vehicles

1 AAV7A1 PIP	A	107,665		107,665	U	
2 Amphibious Combat Vehicle 1.1	A	26	161,511	26	161,511	U
3 LAV PIP	A		17,244		17,244	U

Artillery and Other Weapons

4 Expeditionary Fire Support System	A	626		626	U
5 155mm Lightweight Towed Howitzer	B	20,259		20,259	U
6 Artillery Weapons System	A	65,303		65,303	U
7 Weapons and Combat Vehicles Under \$5 Million	A	19,616		19,616	U

Other Support

8 Modification Kits	A	17,778		17,778	U
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Total Weapons and combat vehicles

410,002

410,002

Budget Activity 03: Guided missiles and equipment

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Guided Missiles

9 Ground Based Air Defense	A	9,432		9,432	U	
10 Anti-Armor Missile-Javelin	A	233	43,992	233	43,992	U
11 Family Anti-Armor Weapon Systems (FOAAWS)	A		25,174		25,174	U

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Appropriation: 1109N Procurement, Marine Corps

Line No	Item Nomenclature	Ident Code	FY 2019		FY 2019		FY 2019		S e c -			
			Base Quantity	Cost	OCO Quantity	Cost	Total Quantity	Cost				
<hr/>												
<hr/>												
<b>Budget Activity 02: Weapons and combat vehicles</b>												
<hr/>												
<b>Tracked Combat Vehicles</b>												
1 AAV7A1 PIP	A		156,249				156,249	U				
2 Amphibious Combat Vehicle 1.1	A	30	167,478				30	167,478	U			
3 LAV PIP	A		43,701				43,701	U				
<b>Artillery and Other Weapons</b>												
4 Expeditionary Fire Support System	A							U				
5 155mm Lightweight Towed Howitzer	B		47,158				47,158	U				
6 Artillery Weapons System	A		134,246				134,246	U				
7 Weapons and Combat Vehicles Under \$5 Million	A		40,687				40,687	U				
<b>Other Support</b>												
8 Modification Kits	A		22,904				22,904	U				
<b>Total Weapons and combat vehicles</b>			<hr/>	<hr/>	<hr/>	<hr/>	<hr/>	<hr/>	<hr/>			
			612,423				612,423					
<hr/>												
<b>Budget Activity 03: Guided missiles and equipment</b>												
<hr/>												
<b>Guided Missiles</b>												
9 Ground Based Air Defense	A		18,334				18,334	U				
10 Anti-Armor Missile-Javelin	A	5	3,020				5	3,020	U			
11 Family Anti-Armor Weapon Systems (FOAAWS)	A		13,760				13,760	U				

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Appropriation: 1109N Procurement, Marine Corps

Line No	Item Nomenclature	Ident Code	FY 2018				FY 2018				FY 2018			
			FY 2017 (Base + OCO)		PB Request with CR Adj		Total PB Requests* with CR Adj		PB Request with CR Adj		OCO		S e c	
			Quantity	Cost	Base	Cost	Quantity	Cost	Base	Cost	Quantity	Cost	-	
12	Anti-Armor Missile-TOW	A	17,080		51,553		51,553				5,024		U	
	Total Guided missiles and equipment		128,792		127,269		127,269				7,906			
<b>Budget Activity 04: Communications And Electronics Equipment</b>														
Command and Control Systems														
13	Common Aviation Command and Control System (C	A	52,487		44,928		44,928						U	
Repair and Test Equipment														
14	Repair and Test Equipment	A	14,469		33,056		33,056				8,241		U	
Other Support (Tel)														
15	Modification Kits	A	2,080								750		U	
Command and Control System (Non-Tel)														
16	Items Under \$5 Million (Comm & Elec)	A	18,449		17,644		17,644				200		U	
17	Air Operations C2 Systems	A	15,917		18,393		18,393						U	
Radar + Equipment (Non-Tel)														
18	Radar Systems	A	17,327		12,411		12,411						U	
19	Ground/Air Task Oriented Radar (G/ATOR)	A	3	122,563	3	139,167	3	139,167					U	
20	RQ-21 UAS		4	87,177	4	77,841	4	77,841			8,400		U	
Intell/Comm Equipment (Non-Tel)														
21	GCSS-MC	A	871		1,990		1,990						U	
22	Fire Support System	A	13,060		22,260		22,260				50		U	

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Appropriation: 1109N Procurement, Marine Corps

Line No	Item Nomenclature	FY 2018				FY 2018				FY 2018			
		Ident Code	Quantity	Cost	Total	FY 2018 Emergency Requests**	Quantity	Cost	Less Enacted Div B	P.L.115-96***	MDDE + Ship Repairs	Remaining Req Emergency	FY 2018
					PB Requests+ with CR Adj OCO				Quantity				S e c
----	-----	----	-----	----	-----	-----	-----	-----	-----	-----	-----	-----	-----
12	Anti-Armor Missile-TOW	A		5,024									U
	Total Guided missiles and equipment				-----	7,906	-----	-----	-----	-----	-----	-----	-----
Budget Activity 04: Communications And Electronics Equipment													
	Command and Control Systems												
13	Common Aviation Command and Control System (C	A											U
	Repair and Test Equipment												
14	Repair and Test Equipment	A		8,241									U
	Other Support (Tel)												
15	Modification Kits	A		750									U
	Command and Control System (Non-Tel)												
16	Items Under \$5 Million (Comm & Elec)	A		200									U
17	Air Operations C2 Systems	A											U
	Radar + Equipment (Non-Tel)												
18	Radar Systems	A											U
19	Ground/Air Task Oriented Radar (G/ATOR)	A											U
20	RQ-21 UAS			8,400									U
	Intell/Comm Equipment (Non-Tel)												
21	GCSS-MC	A											U
22	Fire Support System	A		50									U

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Appropriation: 1109N Procurement, Marine Corps

Line No	Item Nomenclature	FY 2018			FY 2018			FY 2018			
		Total		Less Enacted	P.L.115-96***		Remaining Req	Base + OCO + S		Base + OCO + S	
		PB Requests*	with CR Adj	DIV B	MDDE + Ship	Repairs	Emergency**	e	Emergency	e	Emergency
Ident	Code	Quantity	Cost	Quantity	Cost	Quantity	Cost	Quantity	Cost	Quantity	Cost
-----	-----	-----	----	-----	-----	-----	-----	-----	-----	-----	-----
12	Anti-Armor Missile-TOW	A	56,577					56,577	U		
	Total Guided missiles and equipment			135,175				135,175			
<hr/>											
Budget Activity 04: Communications And Electronics Equipment											
<hr/>											
Command and Control Systems											
13	Common Aviation Command and Control System (C	A	44,928					44,928	U		
Repair and Test Equipment											
14	Repair and Test Equipment	A	41,297					41,297	U		
Other Support (Tel)											
15	Modification Kits	A	750					750	U		
Command and Control System (Non-Tel)											
16	Items Under \$5 Million (Comm & Elec)	A	17,844					17,844	U		
17	Air Operations C2 Systems	A	18,393					18,393	U		
Radar + Equipment (Non-Tel)											
18	Radar Systems	A	12,411					12,411	U		
19	Ground/Air Task Oriented Radar (G/ATOR)	A	3	139,167				3	139,167	U	
20	RQ-21 UAS		4	86,241				4	86,241	U	
Intell/Comm Equipment (Non-Tel)											
21	GCSS-MC	A	1,990					1,990	U		
22	Fire Support System	A	22,310					22,310	U		

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Department of the Navy  
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Appropriation: 1109N Procurement, Marine Corps

Line No	Item Nomenclature	Ident Code	FY 2019 Base		FY 2019 OCO		FY 2019 Total		S e c -
			Quantity	Cost	Quantity	Cost	Quantity	Cost	
12	Anti-Armor Missile-TOW	A	59,702				59,702	U	
	Total Guided missiles and equipment			94,816			94,816		
<b>Budget Activity 04: Communications And Electronics Equipment</b>									
-----									
Command and Control Systems									
13	Common Aviation Command and Control System (C	A	35,467				35,467	U	
Repair and Test Equipment									
14	Repair and Test Equipment	A	46,081				46,081	U	
Other Support (Tel)									
15	Modification Kits	A	971				971	U	
Command and Control System (Non-Tel)									
16	Items Under \$5 Million (Comm & Elec)	A	69,203				69,203	U	
17	Air Operations C2 Systems	A	14,269				14,269	U	
Radar + Equipment (Non-Tel)									
18	Radar Systems	A	6,694				6,694	U	
19	Ground/Air Task Oriented Radar (G/ATOR)	A	6	224,969			6	224,969	U
20	RQ-21 UAS							U	
Intell/Comm Equipment (Non-Tel)									
21	GCSS-MC	A	1,187				1,187	U	
22	Fire Support System	A	60,189		5,583		65,772	U	

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Department of the Navy  
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 (Dollars in Thousands)

Appropriation: 1109N Procurement, Marine Corps

Line No	Item Nomenclature	Ident Code	FY 2018				FY 2018				FY 2018			
			FY 2017 (Base + OCO)		PB Request with CR Adj Base		Total PB Requests* with CR Adj Base		PB Request with CR Adj OCO		PB Request with CR Adj OCO		PB Request with CR Adj OCO	
			Quantity	Cost	Quantity	Cost	Quantity	Cost	Quantity	Cost	Quantity	Cost	Quantity	Cost
23	Intelligence Support Equipment	B	108,588		55,759		55,759				3,000	U		
25	Unmanned Air Systems (Intel)	A		5,793		10,154		10,154				U		
26	DCGS-MC	A		12,531		13,462		13,462				U		
27	UAS Payloads	A		14,471		14,193		14,193				U		
Other Support (Non-Tel)														
30	Next Generation Enterprise Network (NGEN)	A	90,180		98,511		98,511				U			
31	Common Computer Resources	A	43,903		66,894		66,894				U			
32	Command Post Systems	A	105,153		186,912		186,912				5,777	U		
33	Radio Systems	A	56,471		34,361		34,361				4,590	U		
34	Comm Switching & Control Systems	A	33,417		54,615		54,615				U			
35	Comm & Elec Infrastructure Support	A	25,329		44,455		44,455				U			
999	Classified Programs		2,738		4,214		4,214				U			
Total Communications And Electronics Equipment														
			842,974		951,220		951,220				31,008			

Budget Activity 05: Support Vehicles

## Administrative Vehicles

36	Commercial Cargo Vehicles	A	93,219		66,951		66,951				U	
Tactical Vehicles												
37	Motor Transport Modifications	A	13,336		21,824		21,824				U	
38	Joint Light Tactical Vehicle		212	104,230	527	233,639	527	233,639			U	

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Department of the Navy  
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 (Dollars in Thousands)

Appropriation: 1109N Procurement, Marine Corps

Line No	Item Nomenclature	FY 2018				FY 2018				FY 2018			
		Ident Code	Quantity	Cost	Total	FY 2018 Emergency Requests**	Less Enacted Div B	P.L.115-96***	MDDE + Ship Repairs	Remaining Req Emergency	FY 2018	e	
					PB Requests+ with CR Adj OCO								
----	-----	-----	-----	----	-----	-----	-----	-----	-----	-----	-----	-----	-----
23	Intelligence Support Equipment	B		3,000									U
25	Unmanned Air Systems (Intel)	A											U
26	DCGS-MC	A											U
27	UAS Payloads	A											U
	Other Support (Non-Tel)												
30	Next Generation Enterprise Network (NGEN)	A											U
31	Common Computer Resources	A											U
32	Command Post Systems	A		5,777									U
33	Radio Systems	A		4,590									U
34	Comm Switching & Control Systems	A											U
35	Comm & Elec Infrastructure Support	A											U
999	Classified Programs				-----	-----	-----	-----	-----	-----	-----	-----	U
	Total Communications And Electronics Equipment			31,008	-----	-----	-----	-----	-----	-----	-----	-----	
	Budget Activity 05: Support Vehicles												
	Administrative Vehicles												
36	Commercial Cargo Vehicles	A											U
	Tactical Vehicles												
37	Motor Transport Modifications	A											U
38	Joint Light Tactical Vehicle												U

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Department of the Navy  
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Appropriation: 1109N Procurement, Marine Corps

Line No	Item Nomenclature	FY 2018			FY 2018			FY 2018		
		Total		Less Enacted	Total		Less Enacted	Remaining Req		
		PB Requests*	DIV B	P.L.115-96***	Base + OCO +	MDDE + Ship	Base + OCO +	Emergency	e	
Ident	Code	Quantity	Cost	Quantity	Cost	Quantity	Cost	c		
----	-----	-----	---	-----	-----	-----	-----	-		
23	Intelligence Support Equipment	B	58,759			58,759	U			
25	Unmanned Air Systems (Intel)	A	10,154			10,154	U			
26	DCGS-MC	A	13,462			13,462	U			
27	UAS Payloads	A	14,193			14,193	U			
<b>Other Support (Non-Tel)</b>										
30	Next Generation Enterprise Network (NGEN)	A	98,511			98,511	U			
31	Common Computer Resources	A	66,894			66,894	U			
32	Command Post Systems	A	192,689			192,689	U			
33	Radio Systems	A	38,951			38,951	U			
34	Comm Switching & Control Systems	A	54,615			54,615	U			
35	Comm & Elec Infrastructure Support	A	44,455			44,455	U			
999	Classified Programs		4,214			4,214	U			
<b>Total Communications And Electronics Equipment</b>										
			982,228			982,228				

Budget Activity 05: Support Vehicles

Administrative Vehicles					
36	Commercial Cargo Vehicles	A	66,951		66,951 U
<b>Tactical Vehicles</b>					
37	Motor Transport Modifications	A	21,824		21,824 U
38	Joint Light Tactical Vehicle	527	233,639	527	233,639 U

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Appropriation: 1109N Procurement, Marine Corps

Line No	Item Nomenclature	Ident Code	FY 2019		FY 2019		FY 2019		S e c -
			Base Quantity	Cost	OCO Quantity	Cost	Total Quantity	Cost	
23	Intelligence Support Equipment	B		73,848			73,848	U	
25	Unmanned Air Systems (Intel)	A		3,848			3,848	U	
26	DCGS-MC	A		16,081			16,081	U	
27	UAS Payloads	A						U	
Other Support (Non-Tel)									
30	Next Generation Enterprise Network (NGEN)	A		87,120			87,120	U	
31	Common Computer Resources	A		68,914			68,914	U	
32	Command Post Systems	A		124,838			124,838	U	
33	Radio Systems	A		279,680			279,680	U	
34	Comm Switching & Control Systems	A		36,649			36,649	U	
35	Comm & Elec Infrastructure Support	A		83,971			83,971	U	
999	Classified Programs			1,505		2,121	3,626	U	
Total Communications And Electronics Equipment				----- 1,235,484		----- 7,704	----- 1,243,188		

Budget Activity 05: Support Vehicles

-----  
Administrative Vehicles

36	Commercial Cargo Vehicles	A	25,441		25,441	U
Tactical Vehicles						
37	Motor Transport Modifications	A	11,392	44,440	55,832	U
38	Joint Light Tactical Vehicle		607,011		607,011	U

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Appropriation: 1109N Procurement, Marine Corps

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		
			Quantity	Cost		Quantity	Cost		Quantity	Cost		Quantity	Cost	
			-----	----	---	-----	----	---	-----	----	---	-----	----	---
39	Family of Tactical Trailers	A	2,691			1,938			1,938					U
40	Trailers	A				10,282			10,282					U
	Total Support Vehicles			213,476			334,634			334,634				
	Budget Activity 06: Engineer and Other Equipment													
	Engineer and Other Equipment													
41	Environmental Control Equip Assort	A				1,405			1,405					U
42	Tactical Fuel Systems	A				1,788			1,788					U
43	Power Equipment Assorted	A	19,106			9,910			9,910					U
44	Amphibious Support Equipment	A	7,471			5,830			5,830					U
45	EOD Systems	A	110,224			27,240			27,240			21,000		U
	Materials Handling Equipment													
46	Physical Security Equipment	A	23,495			53,477			53,477					U
	General Property													
47	Field Medical Equipment	A												U
48	Training Devices	B	31,016			76,185			76,185					U
49	Family of Construction Equipment	A	37,318			26,286			26,286					U
50	Family of Internally Transportable Veh (ITV)	A	9,282			1,583			1,583					U
	Other Support													
51	Items Less Than \$5 Million	A	6,383			7,716			7,716					U

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Appropriation: 1109N Procurement, Marine Corps

Line No	Item Nomenclature	FY 2018				FY 2018				FY 2018			
		Total		FY 2018		Less Enacted		Div B		FY 2018		Remaining Req	
		PB Requests+	with CR Adj	Emergency	Requests**	P.L.115-96***	MDDE + Ship	Repairs	Emergency	Emergency	Emergency	e	c
Ident Code	OCO	Quantity	Cost	Quantity	Cost	Quantity	Cost	Quantity	Cost	Quantity	Cost	-----	-----
-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
39 Family of Tactical Trailers	A											U	
40 Trailers	A											U	
Total Support Vehicles													
Budget Activity 06: Engineer and Other Equipment													
Engineer and Other Equipment													
41 Environmental Control Equip Assort	A											U	
42 Tactical Fuel Systems	A											U	
43 Power Equipment Assorted	A											U	
44 Amphibious Support Equipment	A											U	
45 EOD Systems	A		21,000									U	
Materials Handling Equipment													
46 Physical Security Equipment	A											U	
General Property													
47 Field Medical Equipment	A											U	
48 Training Devices	B											U	
49 Family of Construction Equipment	A											U	
50 Family of Internally Transportable Veh (ITV)	A											U	
Other Support													
51 Items Less Than \$5 Million	A											U	

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Appropriation: 1109N Procurement, Marine Corps

Line No	Item Nomenclature	FY 2018			FY 2018			FY 2018			
		Total		Less Enacted	P.L.115-96***		Remaining Req	with CR Adj		with CR Adj	
		PB Requests*	with CR Adj	DIV B	Base + OCO +	MDDE + Ship	with CR Adj	Base + OCO +	S	Emergency	e
Ident Code	Code	Quantity	Cost	Quantity	Repairs	Cost	Quantity	Cost	c	Quantity	Cost
-----	-----	-----	----	-----	-----	----	-----	-----	-	-----	-----
39 Family of Tactical Trailers	A		1,938					1,938	U		
40 Trailers	A		10,282					10,282	U		
Total Support Vehicles				334,634				334,634			
Budget Activity 06: Engineer and Other Equipment											
Engineer and Other Equipment											
41 Environmental Control Equip Assort	A		1,405					1,405	U		
42 Tactical Fuel Systems	A		1,788					1,788	U		
43 Power Equipment Assorted	A		9,910					9,910	U		
44 Amphibious Support Equipment	A		5,830					5,830	U		
45 EOD Systems	A		48,240					48,240	U		
Materials Handling Equipment											
46 Physical Security Equipment	A		53,477					53,477	U		
General Property											
47 Field Medical Equipment	A								U		
48 Training Devices	B		76,185					76,185	U		
49 Family of Construction Equipment	A		26,286					26,286	U		
50 Family of Internally Transportable Veh (ITV)	A		1,583					1,583	U		
Other Support											
51 Items Less Than \$5 Million	A		7,716					7,716	U		

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Line No	Item Nomenclature	Ident Code	FY 2019 Base		FY 2019 OCO		FY 2019 Total		S e c -
			Quantity	Cost	Quantity	Cost	Quantity	Cost	
39 Family of Tactical Trailers	A		2,393				2,393	U	
40 Trailers	A		6,540				6,540	U	
Total Support Vehicles			652,777		44,440		697,217		
<hr/> Budget Activity 06: Engineer and Other Equipment <hr/>									
Engineer and Other Equipment									
41 Environmental Control Equip Assort	A		496				496	U	
42 Tactical Fuel Systems	A		54				54	U	
43 Power Equipment Assorted	A		21,062				21,062	U	
44 Amphibious Support Equipment	A		5,290				5,290	U	
45 EOD Systems	A		47,854		8,000		55,854	U	
Materials Handling Equipment									
46 Physical Security Equipment	A		28,306				28,306	U	
General Property									
47 Field Medical Equipment	A		33,513				33,513	U	
48 Training Devices	B		52,040				52,040	U	
49 Family of Construction Equipment	A		36,156				36,156	U	
50 Family of Internally Transportable Veh (ITV)	A		606				606	U	
Other Support									
51 Items Less Than \$5 Million	A		11,608				11,608	U	

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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		
			Quantity	Cost		Quantity	Cost		Quantity	Cost		Quantity	Cost	
			-----	-----	---	-----	-----	---	-----	-----	---	-----	-----	---
	52 Cancelled Account Adjustment (M)	A	58											U
	Total Engineer and Other Equipment			244,353			211,420			211,420			21,000	
	Budget Activity 07: Spares and Repair Parts													
	Spares and Repair Parts													
	53 Spares and Repair Parts	A	29,717			35,640			35,640					U
	Total Spares and Repair Parts			29,717			35,640			35,640				
	Budget Activity 20: Undistributed													
	Undistributed													
	54 Adj to Match Continuing Resolution	A				-766,248			-766,248			265,945		U
	Total Undistributed					-766,248			-766,248			265,945		
	Total Procurement, Marine Corps			1,659,375			1,298,577			1,298,577			331,219	

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Line No	Item Nomenclature	FY 2018				FY 2018				FY 2018			
		Ident Code	Quantity	Cost	Total	FY 2018 Emergency Requests**	Less Enacted Div B P.L.115-96***	MDDE + Ship Repairs	Remaining Req Emergency	FY 2018	S e		
					PB Requests+ with CR Adj OCO					Quantity		Cost	Quantity
	52 Cancelled Account Adjustment (M)	A	-----	-----	-----	-----	-----	-----	-----	U			
	Total Engineer and Other Equipment			21,000									
	Budget Activity 07: Spares and Repair Parts												
	Spares and Repair Parts												
	53 Spares and Repair Parts	A	-----	-----	-----	-----	-----	-----	-----	U			
	Total Spares and Repair Parts												
	Budget Activity 20: Undistributed												
	Undistributed												
	54 Adj to Match Continuing Resolution	A	265,945	-----	-----	-----	-----	-----	-----	U			
	Total Undistributed		265,945	-----	-----	-----	-----	-----	-----				
	Total Procurement, Marine Corps		331,219	-----	-----	-----	-----	-----	-----				

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Appropriation: 1109N Procurement, Marine Corps

Line No	Item Nomenclature	FY 2018			FY 2018			FY 2018			
		Total	Less Enacted	PB Requests*	DIV B	P.L.115-96***	Remaining Req	with CR Adj	Base + OCO + S	Emergency** e	Base + OCO + S
		Ident	with CR Adj	Base + OCO +	MDDE + Ship	Repairs	Quantity	Cost	Quantity	Cost	Quantity
Code	Quantity	Cost	-----	-----	-----	-----	-----	-----	-----	-----	
	52 Cancelled Account Adjustment (M)	A	-----	-----	-----	-----	-----	-----	-----	U	
	Total Engineer and Other Equipment			232,420				232,420			
	Budget Activity 07: Spares and Repair Parts										
	Spares and Repair Parts										
	53 Spares and Repair Parts	A	35,640	-----	-----	-----	-----	35,640	U		
	Total Spares and Repair Parts		35,640					35,640			
	Budget Activity 20: Undistributed										
	Undistributed										
	54 Adj to Match Continuing Resolution	A	-500,303	-----	-----	-----	-----	-500,303	U		
	Total Undistributed		-500,303					-500,303			
	Total Procurement, Marine Corps		1,629,796					1,629,796			

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Line No	Item Nomenclature	FY 2019			FY 2019			FY 2019			S e c -
		Ident Code	Base Quantity	Cost	OCO Quantity	Cost	Total Quantity	Cost			
----	-----	----	-----	----	-----	----	----	-----	-----	-----	
52	Cancelled Account Adjustment (M)	A									U
	Total Engineer and Other Equipment			236,985			8,000			244,985	
	Budget Activity 07: Spares and Repair Parts										
	Spares and Repair Parts										
53	Spares and Repair Parts	A		25,804						25,804	U
	Total Spares and Repair Parts			25,804						25,804	
	Budget Activity 20: Undistributed										
	Undistributed										
54	Adj to Match Continuing Resolution	A									U
	Total Undistributed										
	Total Procurement, Marine Corps			2,858,289			60,144			2,918,433	

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4	02	02	2064	Expeditionary Fire Supt Sys.....	Volume 1 - 29
5	02	02	2185	155MM Lwt Towed Howitzer.....	Volume 1 - 33
6	02	02	2212	Artillery Weapons System.....	Volume 1 - 37
7	02	02	2220	Wpns & Cmbt Vehs under \$5 million.....	Volume 1 - 49
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16	04	14	4620	Items under \$5 million (Comm & Elec).....	Volume 1 - 137
17	04	14	4640	Air Operations C2 Systems.....	Volume 1 - 151
18	04	15	4650	Radar Systems.....	Volume 1 - 159
19	04	15	4655	Ground/Air Task Oriented Radar (G/ATOR).....	Volume 1 - 165
20	04	15	4737	RQ-21 UAS.....	Volume 1 - 177
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30	04	19	4625	Next Generation Enterprise Service.....	Volume 1 - 241
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32	04	19	4631	Command Post Systems.....	Volume 1 - 267
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34	04	19	4634	Comm Switching & Control Systems.....	Volume 1 - 293
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38	05	02	5095	Joint Light Tactical Vehicle.....	Volume 1 - 325
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43	06	01	6366	Power Equipment Assorted.....	Volume 1 - 357
44	06	01	6518	Amphibious Support Equipment.....	Volume 1 - 363
45	06	01	6520	EOD Systems.....	Volume 1 - 367
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47	06	03	6522	Field Medical Equipment.....	Volume 1 - 379
48	06	03	6532	Training Devices.....	Volume 1 - 383
49	06	03	6544	Family of Construction Equipment.....	Volume 1 - 393
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Air Operations C2 Systems	4640	17	04	14.....	Volume 1 - 151
Amphibious Combat Vehicle 1.1	2025	2	02	01.....	Volume 1 - 11
Amphibious Support Equipment	6518	44	06	01.....	Volume 1 - 363
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Anti-Armor Missile-TOW	3017	12	03	01.....	Volume 1 - 99
Artillery Weapons System	2212	6	02	02.....	Volume 1 - 37
Comm & Elec Infrastructure Supt	4635	35	04	19.....	Volume 1 - 299
Comm Switching & Control Systems	4634	34	04	19.....	Volume 1 - 293
Command Post Systems	4631	32	04	19.....	Volume 1 - 267
Commercial Cargo Vehicles	5006	36	05	01.....	Volume 1 - 307
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Common Computer Resources	4630	31	04	19.....	Volume 1 - 251
Distributed Common Ground System (DCGS-MC)	4767	26	04	16.....	Volume 1 - 231
EOD Systems	6520	45	06	01.....	Volume 1 - 367
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Family of Internally Trans Veh (ITV)	6545	50	06	03.....	Volume 1 - 401
Family of Tactical Trailers	5097	39	05	02.....	Volume 1 - 339
Field Medical Equipment	6522	47	06	03.....	Volume 1 - 379
Fire Support System	4733	22	04	16.....	Volume 1 - 191
GCSS-MC	4616	21	04	16.....	Volume 1 - 187
Ground Based Air Defense (GBAD)	3006	9	03	01.....	Volume 1 - 69
Ground/Air Task Oriented Radar (G/ATOR)	4655	19	04	15.....	Volume 1 - 165
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Radio Systems	4633	33	04	19.....	Volume 1 - 279
Repair and Test Equipment	4181	14	04	07.....	Volume 1 - 119
Spares and Repair Parts	7000	53	07	01.....	Volume 1 - 417
Tactical Fuel Systems	6277	42	06	01.....	Volume 1 - 353
Trailers	5132	40	05	02.....	Volume 1 - 343
Training Devices	6532	48	06	03.....	Volume 1 - 383
UAS Payloads	4787	27	04	16.....	Volume 1 - 235
Unmanned Air Systems	4757	25	04	16.....	Volume 1 - 221
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Family of Tactical Trailers	5097	39	05	02.....	Volume 1 - 339
Field Medical Equipment	6522	47	06	03.....	Volume 1 - 379
Fire Support System	4733	22	04	16.....	Volume 1 - 191
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<b>Exhibit P-40, Budget Line Item Justification: PB 2019 Navy</b>								<b>Date:</b> February 2018				
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 1109N: Procurement, Marine Corps / BA 02: Weapons and combat vehicles / BSA 1: Tracked Combat Vehicles				<b>P-1 Line Item Number / Title:</b> 2021 / AAV7A1 PIP								
ID Code (A=Service Ready, B=Not Service Ready): A			Program Elements for Code B Items: N/A					Other Related Program Elements: 0206623M, 0206629M				
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 (\$ in Millions)	995.683	69.785	107.665	156.249	0.000	156.249	186.723	211.228	222.061	37.943	22.296	2,009.633
Less PY Advance Procurement (\$ in Millions)	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) (\$ in Millions)	995.683	69.785	107.665	156.249	0.000	156.249	186.723	211.228	222.061	37.943	22.296	2,009.633
Plus CY Advance Procurement (\$ in Millions)	-	-	-	-	-	-	-	-	-	-	-	-
<b>Total Obligation Authority (\$ in Millions)</b>	<b>995.683</b>	<b>69.785</b>	<b>107.665</b>	<b>156.249</b>	<b>0.000</b>	<b>156.249</b>	<b>186.723</b>	<b>211.228</b>	<b>222.061</b>	<b>37.943</b>	<b>22.296</b>	<b>2,009.633</b>
(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)												
Initial Spares (\$ in Millions)	-	-	-	-	-	-	-	-	-	-	-	-
Flyaway Unit Cost (\$ in Millions)	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost (\$ in Millions)	-	-	-	-	-	-	-	-	-	-	-	-
<b>Description:</b> The Assault Amphibious Vehicle (AAV) modification program includes life-cycle support to ensure cost-effective combat readiness for the AAV Family of Vehicles (FOV). This is accomplished through continuous review of sub-systems to maintain system supportability and safety, nonrecurring engineering, procurement, and fielding of Engineering Change Proposals (ECP) for capability based improvements of fleet assets, reduced total ownership cost initiatives, and improved AAV sustainment initiatives. AAV modification funding will procure modernized components and subsystems that impact safe and reliable use of AAV such as Electrical Modernization, Intercom Modernization, and technical refresh of servers and laptops for C-Variant, and associated production support for the AAV FOV.												
The AAV Survivability Upgrade is a capability based upgrade program centered on material upgrades in survivability such as, but not limited to, blast mitigating seats, belly/sponson armor, spall liner, deck liner and external fuel tanks.												
Secondary Distribution	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023			
Navy	Quantity	-	-	-	-	-	-	-	-	-	-	-
	Total Obligation Authority	69.471	107.344	155.927	-	155.927	186.394	210.893	221.719	37.604		
NR	Quantity	-	-	-	-	-	-	-	-	-	-	-
	Total Obligation Authority	0.314	0.321	0.322	-	0.322	0.329	0.335	0.342	0.339		
Total: Secondary Distribution	Quantity	-	-	-	-	-	-	-	-	-	-	-
	Total Obligation Authority	69.785	107.665	156.249	-	156.249	186.723	211.228	222.061	37.943		

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Exhibit P-40, Budget Line Item Justification: PB 2019 Navy							Date: February 2018			
Appropriation / Budget Activity / Budget Sub Activity:				P-1 Line Item Number / Title:						
1109N: Procurement, Marine Corps / BA 02: Weapons and combat vehicles / BSA 1: Tracked Combat Vehicles				2021 / AAV7A1 PIP						
ID Code (A=Service Ready, B=Not Service Ready): A		Program Elements for Code B Items: N/A				Other Related Program Elements: 0206623M, 0206629M				
Line Item MDAP/MAIS Code: 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)	
P-5	1 / AAV7A1 PIP	P-5a, P-21			- / 995.683	- / 69.785	- / 107.665	- / 156.249	- / 0.000	- / 156.249
P-40	Total Gross/Weapon System Cost				- / 995.683	- / 69.785	- / 107.665	- / 156.249	- / 0.000	- / 156.249

\*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 2018 Base Appropriation Request: \$107.665M (\$107.344M Active; \$0.321M Reserve). The AAV program will procure 30 Survivability Upgraded AAVs; procure fleet-wide Vehicle Modifications including Electrical Modernization, Recovery-variant corrosion improvements, hardware/software technical refresh and Cybersecurity for Command-variants; procurements for intercom, aluminum road wheels, and the Automatic Fire Suppression Support System (AFSSS); plus related Engineering Change Orders (ECO), Integrated Logistics Support (ILS), Production Engineering Support, Support Equipment, and Technical Publications for the AAV family of vehicles.

The FY 2019 funding request was reduced by (\$.918) million to reflect the Department of Navy's effort to support the Office of Management and Budget directed reforms for Efficiency and Effectiveness that include a lean, accountable, more efficient government.

FY 2019 Base Appropriation Request: \$156.249M (\$155.927M Active; \$0.322M Reserve) the AAV program will procure 71 Survivability Upgraded AAVs and achieve Full Rate Production (FRP); procure fleet-wide Vehicle Modifications including Electrical Modernization, Intercom Modernization and continued hardware/software technical refresh for the Command-variants; plus related Engineering Change Orders (ECO), Integrated Logistics Support (ILS), Production Engineering Support, Support Equipment, and Technical Publications for the AAV family of vehicles. The net increase of \$48.584M between FY 2018 and FY 2019 is primarily due to the increased quantity (41) of SU vehicles in FY 2019 in support of Full Rate Production.

**OCO:**

FY 2019 OCO Appropriation Request: N/A

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<b>Exhibit P-5, Cost Analysis:</b> PB 2019 Navy													<b>Date:</b> February 2018					
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 1109N / 02 / 1			<b>P-1 Line Item Number / Title:</b> 2021 / AAV7A1 PIP										<b>Item Number / Title [DODIC]:</b> 1 / AAV7A1 PIP					
<b>ID Code</b> (A=Service Ready, B=Not Service Ready) :													<b>MDAP/MAIS Code:</b>					
<b>Resource Summary</b>				<b>Prior Years</b>			<b>FY 2017</b>		<b>FY 2018</b>		<b>FY 2019 Base</b>		<b>FY 2019 OCO</b>		<b>FY 2019 Total</b>			
Procurement Quantity ( <i>Units in Each</i> )				-			-		-		-		-		-			
Gross/Weapon System Cost (\$ in Millions)				995.683			69.785		107.665		156.249		0.000		156.249			
Less PY Advance Procurement (\$ in Millions)				-			-		-		-		-		-			
Net Procurement (P-1) (\$ in Millions)				995.683			69.785		107.665		156.249		0.000		156.249			
Plus CY Advance Procurement (\$ in Millions)				-			-		-		-		-		-			
<b>Total Obligation Authority</b> (\$ in Millions)				995.683			69.785		107.665		156.249		0.000		156.249			
(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)																		
Initial Spares (\$ in Millions)				-			-		-		-		-		-			
Gross/Weapon System Unit Cost (\$ in Millions)				-			-		-		-		-		-			
Note: Subtotals or Totals in this Exhibit P-5 may not be exact or sum exactly due to rounding.																		
<b>Cost Elements</b>	<b>Prior Years</b>			<b>FY 2017</b>			<b>FY 2018</b>			<b>FY 2019 Base</b>			<b>FY 2019 OCO</b>			<b>FY 2019 Total</b>		
	Unit Cost (\$ M)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ M)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ M)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ M)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ M)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ M)	Qty (Each)	Total Cost (\$ M)
Flyaway Cost																		
Recurring Cost																		
1.1.1) Surface Vehicle	-	-	856.947	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1.1.2) Vehicle Modifications <sup>(1)</sup>	-	-	91.425	-	-	13.677	-	-	25.700	-	-	2.451	-	-	-	-	-	2.451
1.1.3) Reserve Vehicle Modifications	-	-	1.290	-	-	0.314	-	-	0.321	-	-	0.322	-	-	-	-	-	0.322
1.1.4) Survivability Upgrade <sup>(†)(2)</sup>	-	-	-	2.556	18	46.008	2.401	30	72.030	2.054	71	145.834	-	-	-	2.054	71	145.834
1.1.5) Engineering Change Orders (ECO)	-	-	4.501	-	-	-	-	-	0.805	-	-	0.800	-	-	-	-	-	0.800
<i>Subtotal: Recurring Cost</i>	-	-	954.163	-	-	59.999	-	-	98.856	-	-	149.407	-	-	-	-	-	149.407
Non Recurring Cost																		
1.2.1) Nonrecurring Engineering and Tooling	-	-	7.059	-	-	-	-	-	0.256	-	-	0.254	-	-	-	-	-	0.254
<i>Subtotal: Non Recurring Cost</i>	-	-	7.059	-	-	-	-	-	0.256	-	-	0.254	-	-	-	-	-	0.254
<i>Subtotal: Flyaway Cost</i>	-	-	961.222	-	-	59.999	-	-	99.112	-	-	149.661	-	-	-	-	-	149.661
Support Cost																		
2.1) Peculiar Training Equipment & Simulators	-	-	1.893	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2.2) Integrated Logistics Support <sup>(3)</sup>	-	-	2.949	-	-	2.881	-	-	2.841	-	-	2.852	-	-	-	-	-	2.852

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<b>Exhibit P-5, Cost Analysis:</b> PB 2019 Navy												<b>Date:</b> February 2018											
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 1109N / 02 / 1				<b>P-1 Line Item Number / Title:</b> 2021 / AAV7A1 PIP								<b>Item Number / Title [DODIC]:</b> 1 / AAV7A1 PIP											
<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.																							
<b>Cost Elements</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>Unit Cost (\$ M)</b>	<b>Qty (Each)</b>	<b>Total Cost (\$ M)</b>	<b>Unit Cost (\$ M)</b>	<b>Qty (Each)</b>	<b>Total Cost (\$ M)</b>	<b>Unit Cost (\$ M)</b>	<b>Qty (Each)</b>	<b>Total Cost (\$ M)</b>	<b>Unit Cost (\$ M)</b>	<b>Qty (Each)</b>	<b>Total Cost (\$ M)</b>	<b>Unit Cost (\$ M)</b>	<b>Qty (Each)</b>	<b>Total Cost (\$ M)</b>	<b>Unit Cost (\$ M)</b>	<b>Qty (Each)</b>	<b>Total Cost (\$ M)</b>					
2.3) Production Engineering Support <sup>(4)</sup>	-	-	21.434	-	-	5.214	-	-	3.621	-	-	2.909	-	-	-	-	-	2.909					
2.4) Acceptance Testing	-	-	0.116	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-					
2.5) Support Equipment <sup>(5)</sup>	-	-	6.739	-	-	0.767	-	-	0.832	-	-	-	-	-	-	-	-	-					
2.6) Pubs & Tech Data	-	-	1.330	-	-	0.924	-	-	1.259	-	-	0.827	-	-	-	-	-	0.827					
<i>Subtotal: Support Cost</i>	-	-	<b>34.461</b>	-	-	<b>9.786</b>	-	-	<b>8.553</b>	-	-	<b>6.588</b>	-	-	-	-	-	<b>6.588</b>					
<b>Gross/Weapon System Cost</b>	-	-	<b>995.683</b>	-	-	<b>69.785</b>	-	-	<b>107.665</b>	-	-	<b>156.249</b>	-	-	-	-	-	<b>156.249</b>					

(†) indicates the presence of a P-5a

**Footnotes:**

- (1) Decrease in Vehicle Modifications from FY 2018 to FY 2019 (\$23.249) due to completion of Emergency Egress Lighting System (EELS) and EELS Power Unit Modification in FY 2018, first increment of Aluminum Road Wheels procured in FY 2018, and completion of nonrecurring integration efforts for the Joint Battle Command-Platform (JBC-P) and Mounted Family of Computer Systems (MFOCS) in FY 2018.
- (2) Increase in Survivability Upgrade from FY 2018 to FY 2019 (\$73.804) due to Full Rate Production (FRP); quantity increase of 41 kits.
- (3) In order to correctly capture ILS costs that were previously reported under Production Support (CE 2.3), the program has updated the P5 to include an Integrated Logistics Support cost element (CE 2.2) in FY18. ILS provides for reliability and maintainability engineering, supply support, GFE management, training, technical data/publications support, and packaging, handling, storage, and transportation.
- (4) Decrease in Production Engineering Support from FY 2018 to FY 2019 (\$0.711) due to reduction in program office support.
- (5) Decrease in Support Equipment from FY 2018 to FY 2019 (\$0.832) due to full requirement being procured in FY 2018.

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Exhibit P-5a, Procurement History and Planning: PB 2019 Navy								<b>Date:</b> February 2018				
Appropriation / Budget Activity / Budget Sub Activity: 1109N / 02 / 1			P-1 Line Item Number / Title: 2021 / AAV7A1 PIP					Item Number / Title [DODIC]: 1 / AAV7A1 PIP				
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 (\$ M)	Specs Avail Now?	Date Revision Available	RFP Issue Date
1.1.4) Survivability Upgrade <sup>(†)</sup>		2017 <sup>(6)</sup>	SAIC / Charleston, SC	C / FFP	MCSC	Aug 2017	Jun 2018	18	2.556	Y		
1.1.4) Survivability Upgrade <sup>(†)</sup>		2018 <sup>(7)</sup>	SAIC / Charleston, SC	C / FFP	MCSC	Jun 2018	May 2019	30	2.401	Y		
1.1.4) Survivability Upgrade <sup>(†)</sup>		2019	SAIC / Charleston, SC	C / TBD	MCSC	Jun 2019	May 2020	71	2.054	Y		Oct 2018

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

**Footnotes:**

<sup>(6)</sup> AAV Survivability Upgrade Low Rate Initial Production award (Lot 1, FY2017 ) is a pre-negotiated firm-fixed priced option on current EMD contract.

<sup>(7)</sup> AAV Survivability Upgrade Low Rate Initial Production award (Lot 2, FY2018 ) is a pre-negotiated firm-fixed priced option on current EMD contract.

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Exhibit P-21, Production Schedule: PB 2019 Navy																				Date: February 2018																				
Appropriation / Budget Activity / Budget Sub Activity: 1109N / 02 / 1										P-1 Line Item Number / Title: 2021 / AAV7A1 PIP										Item Number / Title [DODIC]: 1 / AAV7A1 PIP																				
Cost Elements (Units in Each)							Fiscal Year 2017												Fiscal Year 2018																					
O C R O #	M F #	FY	SERVICE	PROC QTY	ACCEPT PRIOR TO 1 OCT 2016	BAL DUE AS OF 1 OCT	O C T	N O V	D E C	J A N	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	B A L A N C E									
1.1.4) Survivability Upgrade <sup>(2)</sup>																				A -	-	-	-	-	-	-	-	-	-	6	2	4	-	6						
1	2017	NAVY		18	0	18																								A -	-	-	-	30						
1	2018	NAVY		30	0	30																								71										
							O C T	N O V	D E C	J A N	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 Navy																				Date: February 2018											
Appropriation / Budget Activity / Budget Sub Activity:										P-1 Line Item Number / Title:										Item Number / Title [DODIC]:											
1109N / 02 / 1										2021 / AAV7A1 PIP										1 / AAV7A1 PIP											
Cost Elements (Units in Each)										Fiscal Year 2019										Fiscal Year 2020											
O C R O #	M F R Y	SERVICE	PROC QTY	ACCEPT PRIOR TO 1 OCT 2018	BAL DUE AS OF 1 OCT	O C T	N O V	D E C	J A N	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	B A L A N C E	
1.1.4) Survivability Upgrade <sup>(2)</sup>																													0		
1	2017	NAVY	18	12	6	6																									0
1	2018	NAVY	30	0	30	-	-	-	-	-	-	-	6	8	8	8														0	
1	2019	NAVY	71	0	71								A	-	-	-	-	-	-	-	-	-	-	-	-	12	12	12	12	11	
O C T	N O V	D E C	J A N	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 Navy																			Date: February 2018																				
Appropriation / Budget Activity / Budget Sub Activity: 1109N / 02 / 1										P-1 Line Item Number / Title: 2021 / AAV7A1 PIP										Item Number / Title [DODIC]: 1 / AAV7A1 PIP																			
Cost Elements (Units in Each)							Fiscal Year 2021												Fiscal Year 2022											B A L A N C E									
O C R O #	M F R Y	SERVICE	PROC QTY	ACCEPT PRIOR TO 1 OCT 2020	BAL DUE AS OF 1 OCT	O C T	N O V	D E C	J A N	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										
1	2017	NAVY	18	18	0																									0									
1	2018	NAVY	30	30	0																								0										
1	2019	NAVY	71	60	11	-	11	O C T	N O V	D E C	J A N	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	0							

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Exhibit P-21, Production Schedule: PB 2019 Navy								Date: February 2018				
Appropriation / Budget Activity / Budget Sub Activity: 1109N / 02 / 1			P-1 Line Item Number / Title: 2021 / AAV7A1 PIP					Item Number / Title [DODIC]: 1 / AAV7A1 PIP				
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	SAIC - Charleston, SC	18	71	96	0	0	10	10	0	0	11	11

"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: PB 2019 Navy</b>										<b>Date:</b> February 2018							
<b>Appropriation / Budget Activity / Budget Sub Activity:</b>							<b>P-1 Line Item Number / Title:</b>										
1109N: Procurement, Marine Corps / BA 02: Weapons and combat vehicles / BSA 1: Tracked Combat Vehicles							2025 / Amphibious Combat Vehicle 1.1										
<b>ID Code</b> (A=Service Ready, B=Not Service Ready): A			<b>Program Elements for Code B Items:</b> N/A					<b>Other Related Program Elements:</b> N/A									
<b>Line Item MDAP/MAIS Code:</b> 472																	
<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> )	-	-	26	30	-	30	52	96	-	-	-	204					
Gross/Weapon System Cost (\$ in Millions)	0.000	0.000	161.511	167.478	0.000	167.478	286.098	507.400	0.000	0.000	-	1,122.487					
Less PY Advance Procurement (\$ in Millions)	-	-	-	-	-	-	-	-	-	-	-	-					
Net Procurement (P-1) (\$ in Millions)	0.000	0.000	161.511	167.478	0.000	167.478	286.098	507.400	0.000	0.000	-	1,122.487					
Plus CY Advance Procurement (\$ in Millions)	-	-	-	-	-	-	-	-	-	-	-	-					
<b>Total Obligation Authority (\$ in Millions)</b>	<b>0.000</b>	<b>0.000</b>	<b>161.511</b>	<b>167.478</b>	<b>0.000</b>	<b>167.478</b>	<b>286.098</b>	<b>507.400</b>	<b>0.000</b>	<b>0.000</b>	<b>-</b>	<b>1,122.487</b>					
<i>(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)</i>																	
Initial Spares (\$ in Millions)	-	-	5.569	6.145	-	6.145	13.960	13.643	-	-	-	39.317					
Flyaway Unit Cost (\$ in Dollars)	-	-	5,290K	4,709K	-	4,709K	4,749K	4,604K	-	-	-	4,744K					
Gross/Weapon System Unit Cost (\$ in Dollars)	-	-	6,212K	5,583K	-	5,583K	5,502K	5,285K	-	-	-	5,502K					
<b>Description:</b>																	
The Amphibious Combat Vehicle (ACV) will be a partial and complementary replacement for the legacy Assault Amphibious Vehicle (AAV) in the Assault Amphibious (AA) battalions within the Marine Divisions. ACV-equipped AA companies will provide protected mobility and general support lift to elements of Marine Infantry battalions. The ACV, an advanced generation, eight-wheeled armored personnel carrier, will mitigate current and projected capability gaps by providing improved lethality against dismounted enemy troops, more effective land and water tactical mobility, and increased force protection and survivability from blasts, fragmentation, and kinetic energy threats. The ACV program is structured to be executed in multiple phases, with the first phase designed to provide an initial operational capability of personnel carriers. Subsequent phases are planned to expand the personnel carrier capacity and to develop additional command and control and tactical recovery capabilities.																	
The ACV phased approach allows the Marine Corps to procure a modernized assault amphibian to serve as a complimentary platform for forcible entry operations. The ACV Increment 1.1 variant will deliver combat ready Marines from ship-to-shore connector craft in order to mass forces at littoral penetration points and continue to maneuver onward to inland objectives. The estimated Approved Acquisition Objective (AAO) is 204 vehicles (ACV 1.1).																	

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Exhibit P-40, Budget Line Item Justification: PB 2019 Navy							Date: February 2018			
Appropriation / Budget Activity / Budget Sub Activity:				P-1 Line Item Number / Title:						
1109N: Procurement, Marine Corps / BA 02: Weapons and combat vehicles / BSA 1: Tracked Combat Vehicles				2025 / Amphibious Combat Vehicle 1.1						
ID Code (A=Service Ready, B=Not Service Ready): A		Program Elements for Code B Items: N/A				Other Related Program Elements: N/A				
Line Item MDAP/MAIS Code: 472										
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)	
P-5	1 / Amphibious Combat Vehicle	P-5a, P-21			- / 0.000	- / 0.000	26 / 161.511	30 / 167.478	- / 0.000	30 / 167.478
P-40	Total Gross/Weapon System Cost				- / 0.000	- / 0.000	26 / 161.511	30 / 167.478	- / 0.000	30 / 167.478

\*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 2018 Baseline Appropriation Request: \$161.511M

Funds used for Low Rate Initial Production (LRIP) Lot 1 of 26 vehicles, plus procurement of related items such as production support, systems engineering/program management, Engineering Change Orders (ECOs), Government Furnished Equipment (GFE), and integrated logistics support.

FY 2019 Baseline Appropriation Request: \$167.478M

Funds used for LRIP Lot 2 of 30 vehicles, plus procurement of related items such as production support, systems engineering/program management, Engineering Change Orders (ECOs), Government Furnished Equipment (GFE), and integrated logistics support. Net increase between FY 2018 and FY 2019 of \$5.967M primarily due to the procurement of 4 additional vehicles in FY 2019.

FY 2019 OCO: N/A

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<b>Exhibit P-5, Cost Analysis:</b> PB 2019 Navy													<b>Date:</b> February 2018					
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 1109N / 02 / 1			<b>P-1 Line Item Number / Title:</b> 2025 / Amphibious Combat Vehicle 1.1										<b>Item Number / Title [DODIC]:</b> 1 / Amphibious Combat Vehicle					
<b>ID Code</b> (A=Service Ready, B=Not Service Ready) :													<b>MDAP/MAIS Code:</b>					
<b>Resource Summary</b>				<b>Prior Years</b>			<b>FY 2017</b>		<b>FY 2018</b>		<b>FY 2019 Base</b>		<b>FY 2019 OCO</b>		<b>FY 2019 Total</b>			
Procurement Quantity ( <i>Units in Each</i> )				-			-		26		30		-		30			
Gross/Weapon System Cost (\$ in Millions)				0.000			0.000		161.511		167.478		0.000		167.478			
Less PY Advance Procurement (\$ in Millions)				-			-		-		-		-		-			
Net Procurement (P-1) (\$ in Millions)				0.000			0.000		161.511		167.478		0.000		167.478			
Plus CY Advance Procurement (\$ in Millions)				-			-		-		-		-		-			
<b>Total Obligation Authority</b> (\$ in Millions)				0.000			0.000		161.511		167.478		0.000		167.478			
(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)																		
Initial Spares (\$ in Millions)				-			-		5.569		6.145		-		6.145			
Gross/Weapon System Unit Cost (\$ in Dollars)				-			-		6,212K		5,583K		-		5,583K			
Note: Subtotals or Totals in this Exhibit P-5 may not be exact or sum exactly due to rounding.																		
<b>Cost Elements</b>	<b>Prior Years</b>			<b>FY 2017</b>			<b>FY 2018</b>			<b>FY 2019 Base</b>			<b>FY 2019 OCO</b>			<b>FY 2019 Total</b>		
	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)
Flyaway Cost																		
Recurring Cost																		
1.1.1) Surface Vehicle(†) (1)	-	-	-	-	-	-	3,071K	26	79.846	3,032K	30	90.960	-	-	-	3,032K	30	90.960
1.1.2) Government Furnished Equipment (2)	-	-	-	-	-	-	-	-	17.353	-	-	20.265	-	-	-	-	-	20.265
1.1.3) System Engineering Program Management (3)	-	-	-	-	-	-	-	-	27.169	-	-	24.080	-	-	-	-	-	24.080
<i>Subtotal: Recurring Cost</i>	-	-	-	-	-	-	-	-	124.368	-	-	135.305	-	-	-	-	-	135.305
<i>Subtotal: Flyaway Cost</i>	-	-	-	-	-	-	-	-	124.368	-	-	135.305	-	-	-	-	-	135.305
Flyaway - Cost																		
Non Recurring Cost																		
2.1.2) Engineering Change Order (4)	-	-	-	-	-	-	-	-	1.597	-	-	2.729	-	-	-	-	-	2.729
2.1.3) Nonrecurring Engineering & Industrial Tooling (5)	-	-	-	-	-	-	-	-	11.587	-	-	3.246	-	-	-	-	-	3.246
<i>Subtotal: Non Recurring Cost</i>	-	-	-	-	-	-	-	-	13.184	-	-	5.975	-	-	-	-	-	5.975
<i>Subtotal: Flyaway - Cost</i>	-	-	-	-	-	-	-	-	13.184	-	-	5.975	-	-	-	-	-	5.975
Support Cost																		
3.1) Production Support	-	-	-	-	-	-	-	-	7.444	-	-	6.578	-	-	-	-	-	6.578

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<b>Exhibit P-5, Cost Analysis:</b> PB 2019 Navy													<b>Date:</b> February 2018															
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 1109N / 02 / 1				<b>P-1 Line Item Number / Title:</b> 2025 / Amphibious Combat Vehicle 1.1									<b>Item Number / Title [DODIC]:</b> 1 / Amphibious Combat Vehicle															
<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.																												
<b>Cost Elements</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>Unit Cost</b> (\$)	<b>Qty</b> ( <i>Each</i> )	<b>Total Cost</b> (\$ M)	<b>Unit Cost</b> (\$)	<b>Qty</b> ( <i>Each</i> )	<b>Total Cost</b> (\$ M)	<b>Unit Cost</b> (\$)	<b>Qty</b> ( <i>Each</i> )	<b>Total Cost</b> (\$ M)	<b>Unit Cost</b> (\$)	<b>Qty</b> ( <i>Each</i> )	<b>Total Cost</b> (\$ M)	<b>Unit Cost</b> (\$)	<b>Qty</b> ( <i>Each</i> )	<b>Total Cost</b> (\$ M)	<b>Unit Cost</b> (\$)	<b>Qty</b> ( <i>Each</i> )	<b>Total Cost</b> (\$ M)										
3.2) Acceptance Testing <sup>(6)</sup>	-	-	-	-	-	-	-	-	2.151	-	-	2.235	-	-	-	-	-	2.235										
3.3) Peculiar Training Equipment and Simulators <sup>(7)</sup>	-	-	-	-	-	-	-	-	1.633	-	-	4.155	-	-	-	-	-	4.155										
3.4) Pubs & Tech Data	-	-	-	-	-	-	-	-	2.987	-	-	3.421	-	-	-	-	-	3.421										
3.5) Support Equipment <sup>(8)</sup>	-	-	-	-	-	-	-	-	1.972	-	-	2.161	-	-	-	-	-	2.161										
3.6) Integrated Logistics Support (ILS) <sup>(9)</sup>	-	-	-	-	-	-	-	-	7.772	-	-	7.648	-	-	-	-	-	7.648										
<i>Subtotal: Support Cost</i>	-	-	-	-	-	-	-	-	<b>23.959</b>	-	-	<b>26.198</b>	-	-	-	-	-	<b>26.198</b>										
<b>Gross/Weapon System Cost</b>	-	-	<b>0.000</b>	-	-	<b>0.000</b>	<b>6,212K</b>	<b>26</b>	<b>161.511</b>	<b>5,583K</b>	<b>30</b>	<b>167.478</b>	-	-	<b>0.000</b>	<b>5,583K</b>	<b>30</b>	<b>167.478</b>										

(†) indicates the presence of a P-5a

### Footnotes:

- (1) The increase in Surface Vehicle between FY 2018 and FY 2019 (\$11.114) is attributed to the increase of four (4) vehicles in FY 2019 as part of manufacturing ramp-up prior to Full Rate Production.
- (2) GFE includes communication suites, Driver's Vision Enhancer, exportable power, Joint Battle Command-Platform (JBC-P), and the Amphibious Remote Weapon Stations (ARWS). The increase in GFE between FY 2018 and FY 2019 (\$2.912) is attributed to the increase of four (4) vehicles in FY 2019.
- (3) Systems Engineering/Program Management (SE/PM) is a recurring charge from the Prime Contractor. Recurring systems engineering includes the costs of maintainability/reliability engineering, maintenance engineering, value engineering, production engineering costs associated with the system, periodic system redesign/evaluation, and analysis of test results during production. Recurring program management includes the overall planning, direction, and control of the definition, development, and production of the system/program, including the functions of business management.
- (4) Engineering Change Orders (ECOs) address fact of life changes to vehicle configuration such as performance, safety, or reliability. The increase in ECO between FY 2018 and FY2019 (\$1.132) is attributed to the increase of four (4) vehicles in FY 2019.
- (5) Nonrecurring Engineering & Industrial Tooling decrease from FY 2018 to FY 2019 (\$8.341) is attributed to the majority of tooling procured in first year of production.
- (6) Acceptance Testing is funded in the fiscal year in which the item is procured as part of the full funding policy.
- (7) The increase in Peculiar Training Equipment and Simulators between FY 2018 & FY 2019 (\$2.522) is attributed to the initial procurement of operator and maintenance trainers in FY 2019.
- (8) The increase in Support Equipment between FY 2018 and FY 2019 (\$0.189) is due to the purchase of tire changing kits and Portable Maintenance Devices (PMDs).
- (9) ILS includes Logistics Management Information (LMI) procurement and platform support products necessary for the planning and preparation to support the fielded system until organic support capability established.

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Exhibit P-5a, Procurement History and Planning: PB 2019 Navy								Date: February 2018				
Appropriation / Budget Activity / Budget Sub Activity: 1109N / 02 / 1			P-1 Line Item Number / Title: 2025 / Amphibious Combat Vehicle 1.1					Item Number / Title [DODIC]: 1 / Amphibious Combat Vehicle				
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 (\$)	Specs Avail Now?	Date Revision Available	RFP Issue Date
1.1.1) Surface Vehicle <sup>(†)</sup>		2018	Down-Select Contractor / TBD	C / FPIF	MCSC	Jun 2018	May 2019	26	3,071K	Y		Dec 2017
1.1.1) Surface Vehicle <sup>(†)</sup>		2019	Down-Select Contractor / TBD	C / FPIF	MCSC	Jan 2019	Aug 2019	30	3,032K	Y		Dec 2017

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

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Exhibit P-21, Production Schedule: PB 2019 Navy																					Date: February 2018																
Appropriation / Budget Activity / Budget Sub Activity:														P-1 Line Item Number / Title:														Item Number / Title [DODIC]:									
1109N / 02 / 1														2025 / Amphibious Combat Vehicle 1.1														1 / Amphibious Combat Vehicle									
Cost Elements (Units in Each)														Fiscal Year 2018														Fiscal Year 2019									
O C R O #	M F R Y	SERVICE	PROC QTY	ACCEPT PRIOR TO 1 OCT 2017	BAL DUE AS OF 1 OCT	O C T	N O V	D E C	J A N	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	B A L A N C E							
1.1.1) Surface Vehicle <sup>(1)</sup>																																					
1	2018	NAVY	26	0	26																						4	9	10	3	0						
1	2019	NAVY	30	0	30																						A -	-	-	-	27						
						O C T	N O V	D E C	J A N	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 Navy																			Date: February 2018												
Appropriation / Budget Activity / Budget Sub Activity: 1109N / 02 / 1										P-1 Line Item Number / Title: 2025 / Amphibious Combat Vehicle 1.1										Item Number / Title [DODIC]: 1 / Amphibious Combat Vehicle											
Cost Elements (Units in Each)							Fiscal Year 2020												Fiscal Year 2021												
O C R O #	M F R Y	SERVICE	PROC QTY	ACCEPT PRIOR TO 1 OCT 2019	BAL DUE AS OF 1 OCT	O C T	N O V	D E C	J A N	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	B A L A N C E	
1.1.1) Surface Vehicle <sup>(1)</sup>																													0		
1	2018	NAVY	26	26	0	2	3	3	3	3	3	2	3	3	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
1	2019	NAVY	30	3	27	2	3	3	3	3	3	2	3	3	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

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Exhibit P-21, Production Schedule: PB 2019 Navy								Date: February 2018				
Appropriation / Budget Activity / Budget Sub Activity: 1109N / 02 / 1			P-1 Line Item Number / Title: 2025 / Amphibious Combat Vehicle 1.1					Item Number / Title [DODIC]: 1 / Amphibious Combat Vehicle				
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	Down-Select Contractor - TBD			96	0	9	11	20	0	4	7	11

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

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

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Exhibit P-40, Budget Line Item Justification: PB 2019 Navy										Date: February 2018					
Appropriation / Budget Activity / Budget Sub Activity:					P-1 Line Item Number / Title:										
1109N: Procurement, Marine Corps / BA 02: Weapons and combat vehicles / BSA 1: Tracked Combat Vehicles					2038 / LAV PIP										
ID Code (A=Service Ready, B=Not Service Ready): A			Program Elements for Code B Items: N/A					Other Related Program Elements: 0206623M							
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 (\$ in Millions)	1,740.011	32.575	17.244	43.701	0.000	43.701	61.185	64.837	56.240	60.174	Continuing	Continuing			
Less PY Advance Procurement (\$ in Millions)	-	-	-	-	-	-	-	-	-	-	-	-			
Net Procurement (P-1) (\$ in Millions)	1,740.011	32.575	17.244	43.701	0.000	43.701	61.185	64.837	56.240	60.174	Continuing	Continuing			
Plus CY Advance Procurement (\$ in Millions)	-	-	-	-	-	-	-	-	-	-	-	-			
<b>Total Obligation Authority (\$ in Millions)</b>	<b>1,740.011</b>	<b>32.575</b>	<b>17.244</b>	<b>43.701</b>	<b>0.000</b>	<b>43.701</b>	<b>61.185</b>	<b>64.837</b>	<b>56.240</b>	<b>60.174</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 (\$ in Millions)	-	0.628	1.006	5.735	-	5.735	5.884	6.043	6.171	12.604	Continuing	Continuing			
Flyaway Unit Cost (\$ in Dollars)	-	-	-	-	-	-	-	-	-	-	-	-			
Gross/Weapon System Unit Cost (\$ in Dollars)	-	-	-	-	-	-	-	-	-	-	-	-			
<b>Description:</b>															
The LAV Anti-Tank Modernization (LAV-ATM) Program will modernize the legacy turret and Tube-launched, Optically-tracked, Wire-guided (TOW) system in order to sustain the capability, improve readiness, ensure a high degree of commonality with USMC and U.S. Army systems, and enable the Light Armored Reconnaissance (LAR) Battalion to employ the full range of current and emerging TOW munitions. The program will counter two converging obsolescence issues on the LAV-ATM platform: (1) the M901 Emerson turret is no longer in production and has been retired from the U.S. Army inventory, and (2) the M2203A3 TOW system is being replaced by the M41 SABER system in the USMC infantry and tank battalions leaving the LAR Battalion as the only unit using the legacy TOW system.															
The LAV Modification & Sustainment program funds important vehicle modifications, support equipment and tools and other projects that increase LAV reliability and readiness while simultaneously reducing operations and support costs. The Marine Corps Program Management LAV Modification Team uses multi-disciplined integrated project teams consisting of engineering, logistical, contracting and financial personnel to manage Modification projects.															
The LAV Obsolescence (OB) is an ACAT IV(M) program. The OB program will address the Family of Light Armored Vehicles (FOLAV) automotive system obsolescence and reduced performance due to increased Gross Vehicle Weight (GVW). The OB program will improve fleet reliability and availability by addressing the three sub-systems (power pack, driveline and steering) that specifically account for 95% of total system downtime. Also, fields a modern driver's instrument panel and LAV-25 Slip Ring. The contract for the Obsolescence project was awarded as a Sole Source contract to the Original Equipment Manufacturer (OEM). This effort will require delivery of 8 kits (7 installed on vehicles, 1 stand-alone kit) during the Engineering & Manufacturing Development (EMD) phase to support Developmental Testing (DT), fielding, Integrated Logistics Support (ILS) products, Modification Instructions (MI) and Engineering Change Proposals (ECP).															

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<b>Exhibit P-40, Budget Line Item Justification: PB 2019 Navy</b>							<b>Date:</b> February 2018		
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 1109N: Procurement, Marine Corps / BA 02: Weapons and combat vehicles / BSA 1: Tracked Combat Vehicles				<b>P-1 Line Item Number / Title:</b> 2038 / LAV PIP					
<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> 0206623M		
<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>
P-40a	LAV PIP	P-5a, P-21			- / 1,740.011	- / 32.575	- / 17.244	- / 43.701	- / -
<b>P-40</b>	<b>Total Gross/Weapon System Cost</b>				<b>- / 1,740.011</b>	<b>- / 32.575</b>	<b>- / 17.244</b>	<b>- / 43.701</b>	<b>- / 0.000</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. Title represents the P-40a Title when only the P-40a Summary/Total is shown.									
Note: Totals in this Exhibit P-40 set may not be exact or sum exactly due to rounding.									
<b>Justification:</b> FY 2018 Baseline Appropriation: \$17.244M LAV Anti-Tank Modernization (ATM): \$13.876M Funds the fielding of the Anti-Tank Weapon Systems (ATWS) and supporting efforts such as all required logistics support, installation, and required government and contractor support. LAV Modification and Sustainment (MOD): \$3.368M Funds the Safety related pneumatic valve and locking pin on the drivers seat modification.  The FY 2019 funding request was reduced by (\$.606) million to reflect the Department of Navy's effort to support the Office of Management and Budget directed reforms for Efficiency and Effectiveness that include a lean, accountable, more efficient government.  FY 2019 Baseline Appropriation: \$43.701M LAV Obsolescence(OB): \$41.690M Funds the procurement and fielding of 60 Obsolescence Kits (OB) and supporting efforts such as all required logistics support, installation, and required government and contractor support.  LAV Modification and Sustainment (MOD): \$2.011M Funds cover the reverse engineering efforts to manage real time Family of Light Armored Vehicles (FOLAV) obsolescence issues and other low cost, on demand field requirements to include a high-amperage alternator upgrade to facilitate the integration of new equipment that draws increased power.  The funding increase from FY18 to FY19 of \$26.457M reflects the beginning production of the OB kits.									

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Exhibit P-40a, Budget Item Justification For Aggregated Items: PB 2019 Navy														Date: February 2018						
Appropriation / Budget Activity / Budget Sub Activity: 1109N / 02 / 1					P-1 Line Item Number / Title: 2038 / LAV PIP									Aggregated Items Title: LAV PIP						
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 (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)
<b>1) LAV ANTI-TANK MODERNIZATION</b>																				
1.1) Systems Eng/ Prog Mgmt(Reserves)	A		-	-	0.955	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1.2) Hardware-ATWS Kits(Reserves) <sup>(†)</sup>	A		1,502K	24	36.045	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1.3) Training Devices	A		-	-	0.903	-	-	5.563	-	-	-	-	-	-	-	-	-	-	-	-
1.4) Refurbishment/ Installations <sup>(1)</sup>	A		-	-	-	-	-	9.670	-	-	10.751	-	-	-	-	-	-	-	-	-
1.5) New Equipment Training	A		-	-	0.866	-	-	0.800	-	-	-	-	-	-	-	-	-	-	-	-
1.6) Support Equipment	A		-	-	7.154	-	-	0.244	-	-	-	-	-	-	-	-	-	-	-	-
1.7) ECO	A		-	-	1.521	-	-	0.508	-	-	-	-	-	-	-	-	-	-	-	-
1.8) PVT/FAT	A		-	-	-	-	-	3.745	-	-	-	-	-	-	-	-	-	-	-	-
1.9) Hardware-ATWS Systems <sup>(2)(†)</sup>	A		1,567K	74	115.924	1,505K	4	6.021	-	-	-	-	-	-	-	-	-	-	-	-
1.10) Systems Eng/ Program Mgmt Support	A		-	-	2.602	-	-	1.896	-	-	3.125	-	-	-	-	-	-	-	-	-
1.11) ILS	A		-	-	0.498	-	-	4.128	-	-	-	-	-	-	-	-	-	-	-	-
<i><b>Subtotal: 1) LAV ANTI-TANK MODERNIZATION</b></i>			-	-	<b>166.468</b>	-	-	<b>32.575</b>	-	-	<b>13.876</b>	-	-	-	-	-	-	-	-	-
<b>2) LAV Obsolescence (OB)</b>																				
2.1) Gen Purpose Trng Devices	A		-	-	-	-	-	-	-	-	-	-	-	0.007	-	-	-	-	-	0.007
2.2) Special Tools & Support Equipment	A		-	-	-	-	-	-	-	-	-	-	-	1.060	-	-	-	-	-	1.060
2.4) ECO	A		-	-	-	-	-	-	-	-	-	-	-	1.185	-	-	-	-	-	1.185
2.5) OB Kits <sup>(†)</sup>	A		-	-	-	-	-	-	-	-	-	505,866.67	60	30.352	-	-	-	505,866.67	60	30.352
2.6) ILS	A		-	-	-	-	-	-	-	-	-	8.378	-	-	-	-	-	-	-	8.378
2.7) Systems Eng/ Program Mgmt Support	A		-	-	-	-	-	-	-	-	-	-	-	1.314	-	-	-	-	-	1.314
<i><b>Subtotal: 2) LAV Obsolescence (OB)</b></i>			-	-	<b>0.000</b>	-	-	-	-	-	-	-	-	<b>42.296</b>	-	-	-	-	-	<b>42.296</b>
<b>3) Prior Years Cumulative Funding</b>																				
3.1) Prior Years Cumulative Funding	A		-	-	1,573.543	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
<i><b>Subtotal: 3) Prior Years Cumulative Funding</b></i>			-	-	<b>1,573.543</b>	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
<b>4) LAV Modification and Sustainment</b>																				
4.1) M & S Kits <sup>(3)(†)</sup>	A		-	-	-	-	-	-	4,513.32	713	3,218	1,760.17	713	1.255	-	-	-	1,760.17	713	1.255

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Exhibit P-40a, Budget Item Justification For Aggregated Items: PB 2019 Navy														Date: February 2018						
Appropriation / Budget Activity / Budget Sub Activity: 1109N / 02 / 1					P-1 Line Item Number / Title: 2038 / LAV PIP									Aggregated Items Title: LAV PIP						
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 (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)
4.2) Systems Eng/ Program Mgmt Support	A		-	-	-	-	-	-	-	-	0.150	-	-	0.150	-	-	-	-	-	0.150
<i>Subtotal: 4) LAV Modification and Sustainment</i>			-	-	0.000	-	-	-	-	-	3.368	-	-	1.405	-	-	-	-	-	1.405
Total			-	-	1,740.011	-	-	32.575	-	-	17.244	-	-	43.701	-	-	-	-	-	43.701

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

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

**Footnotes:**

- (1) This funding supports the installation of the ATWS kits at the depots (Albany and Barstow) as special project lines.
- (2) The higher unit cost is attributed to the startup costs for the first production option. Unit costs and quantities have changed from PB17 due to change in procuring the kits in 3 years vice 4 years. The unit costs are adjusted based on combining options which have different prices.
- (3) FY18 purchasing driver's seat safety modification kits; FY19 purchasing reverse engineering efforts.

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Exhibit P-5a, Procurement History and Planning: PB 2019 Navy									Date: February 2018			
Appropriation / Budget Activity / Budget Sub Activity: 1109N / 02 / 1			P-1 Line Item Number / Title: 2038 / LAV PIP					Aggregated Items: LAV PIP				
Item Number / Title [DODIC]	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 (\$)	Specs Avail Now?	Date Revision Available	RFP Issue Date
<b>1) LAV ANTI-TANK MODERNIZATION</b>												
1.2) Hardware-ATWS Kits(Reserves)( <sup>†</sup> )		2016 <sup>(4)</sup>	Raytheon @McKinney, TX / McKinney, TX	C / FFP	TACOM, Warren, MI	Jul 2016	Nov 2018	24	1,502K	Y		
1.9) Hardware-ATWS Systems (2)( <sup>†</sup> )		2015	Raytheon / McKinney, TX	C / FFP	TACOM, Warren, MI	Jun 2015	May 2017	44	1,607K	Y		Mar 2011
1.9) Hardware-ATWS Systems (2)( <sup>†</sup> )		2016	Raytheon / McKinney, TX	C / FFP	TACOM, Warren, MI	Dec 2015	Apr 2018	27	1,491K	Y		Mar 2011
1.9) Hardware-ATWS Systems (2)( <sup>†</sup> )		2017	Raytheon / McKinney, TX	C / FFP	TACOM, Warren, MI	Nov 2016	Oct 2018	4	1,505K	Y		Mar 2011
<b>2) LAV Obsolescence (OB)</b>												
2.5) OB Kits( <sup>†</sup> )		2019	GDLS / London, Ontario Canada	C / FFP	TACOM, Warren, MI	Mar 2019	Mar 2020	60	505,866.67	N	Dec 2018	
<b>4) LAV Modification and Sustainment</b>												
4.1) M & S Kits <sup>(3)</sup>		2018	TBD / TBD	C / FFP	TACOM, Warren, MI	Jan 2018	Jul 2018	713	4,513.32	N	Aug 2017	Aug 2017
4.1) M & S Kits <sup>(3)</sup>		2019	TBD / TBD	C / FFP	SYSCOM, Quantico, VA	Jan 2019	Jan 2020	713	1,760.17	N	Oct 2018	Oct 2018

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

**Footnotes:**

<sup>(4)</sup> Option 2 awarded Jul 2016 (4) and Option 3 award Aug 2016 (20)

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Exhibit P-21, Production Schedule: PB 2019 Navy																					Date: February 2018																											
Appropriation / Budget Activity / Budget Sub Activity: 1109N / 02 / 1										P-1 Line Item Number / Title: 2038 / LAV PIP											Aggregated Items: LAV PIP																											
Items (Units in Each)						Fiscal Year 2015												Fiscal Year 2016																														
O C R O #	M F R Y	SERVICE	PROC QTY	ACCEPT PRIOR TO 1 OCT 2014	BAL DUE AS OF 1 OCT	O C T	N O V	D E C	J A N	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	B A L A N C E																		
1) LAV ANTI-TANK MODERNIZATION																																																
1.2) Hardware-ATWS Kits(Reserves)																																																
1.9) Hardware-ATWS Systems <sup>(2)</sup>																																																
Prior Years Deliveries: 3																																																
2	2015	NAVY	44	<sup>(5)</sup>	0	44													A -	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	44												
2	2016	NAVY	27	0	27													A -	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	27														
2	2017	NAVY	4	0	4													A -	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4														
2) LAV Obsolescence (OB)																																																
2.5) OB Kits																																					60											
						O C T	N O V	D E C	J A N	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 Navy																					Date: February 2018															
Appropriation / Budget Activity / Budget Sub Activity: 1109N / 02 / 1										P-1 Line Item Number / Title: 2038 / LAV PIP											Aggregated Items: LAV PIP															
Items (Units in Each)						Fiscal Year 2017												Fiscal Year 2018																		
O C R O #	M F R Y	SERVICE	PROC QTY	ACCEPT PRIOR TO 1 OCT 2016	BAL DUE AS OF 1 OCT	O C T	N O V	D E C	J A N	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	B A L A N C E						
1) LAV ANTI-TANK MODERNIZATION						Fiscal Year 2017												Fiscal Year 2018																		
1.2) Hardware-ATWS Kits(Reserves)						1	2016	NAVY	24	0	24	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	24			
1.9) Hardware-ATWS Systems <sup>(2)</sup>						Calendar Year 2017												Calendar Year 2018																		
Prior Years Deliveries: 3						2	2015	NAVY	44	(5)	0	44	-	-	-	-	-	-	1	3	4	4	4	4	4	4	4	5	5	2						
2) LAV Obsolescence (OB)						2	2016	NAVY	27	0	27	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	5	5	5	5	1			
2.5) OB Kits						2	2017	NAVY	4	0	4	A	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4			
3) 2019 NAVY						3	2019	NAVY	60	0	60	Fiscal Year 2017												Fiscal Year 2018												60
						O C T	N O V	D E C	J A N	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 Navy																					Date: February 2018																	
Appropriation / Budget Activity / Budget Sub Activity: 1109N / 02 / 1										P-1 Line Item Number / Title: 2038 / LAV PIP											Aggregated Items: LAV PIP																	
Items (Units in Each)						Fiscal Year 2019												Fiscal Year 2020																				
O C R O #	M F R Y	SERVICE	PROC QTY	ACCEPT PRIOR TO 1 OCT 2018	BAL DUE AS OF 1 OCT	O C T	N O V	D E C	J A N	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	B A L A N C E								
1) LAV ANTI-TANK MODERNIZATION																																						
1.2) Hardware-ATWS Kits(Reserves)																																			0			
1.9) Hardware-ATWS Systems <sup>(2)</sup>																																						
Prior Years Deliveries: 3																																				0		
2	2015	NAVY		44 <sup>(5)</sup>	44	0																																0
2	2016	NAVY		27	26	1	1																															0
2	2017	NAVY		4	0	4	4																															0
2) LAV Obsolescence (OB)																																						
2.5) OB Kits																																					19	
						O C T	N O V	D E C	J A N	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: PB 2019 Navy</b>								<b>Date:</b> February 2018			
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 1109N / 02 / 1			<b>P-1 Line Item Number / Title:</b> 2038 / LAV PIP						<b>Aggregated Items:</b> LAV PIP		

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 @McKinney, TX - McKinney, TX	60	60	84	0	8	19	27	0	1	19	20
2	Raytheon - McKinney, TX	60	60	84	0	8	19	27	0	1	19	20
3	GDLS - London, Ontario Canada	30	60	120	0	6	12	18	0	3	12	15

"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).

**Footnotes:**

(5) Delivery schedule is based on contract mod signed Jun 2017.

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<b>Exhibit P-40, Budget Line Item Justification: PB 2019 Navy</b>										<b>Date:</b> February 2018			
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 1109N: Procurement, Marine Corps / BA 02: Weapons and combat vehicles / BSA 2: Artillery and Other Weapons										<b>P-1 Line Item Number / Title:</b> 2064 / Expeditionary Fire Supt Sys			
<b>ID Code</b> (A=Service Ready, B=Not Service Ready): A										<b>Program Elements for Code B Items:</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 (\$ in Millions)	90.062	2.688	0.626	0.000	0.000	0.000	0.000	0.000	0.000	0.000	-	93.376	
Less PY Advance Procurement (\$ in Millions)	-	-	-	-	-	-	-	-	-	-	-	-	
Net Procurement (P-1) (\$ in Millions)	90.062	2.688	0.626	0.000	0.000	0.000	0.000	0.000	0.000	0.000	-	93.376	
Plus CY Advance Procurement (\$ in Millions)	-	-	-	-	-	-	-	-	-	-	-	-	
<b>Total Obligation Authority (\$ in Millions)</b>	<b>90.062</b>	<b>2.688</b>	<b>0.626</b>	<b>0.000</b>	<b>0.000</b>	<b>0.000</b>	<b>0.000</b>	<b>0.000</b>	<b>0.000</b>	<b>0.000</b>	-	<b>93.376</b>	
<i>(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)</i>													
Initial Spares (\$ in Millions)	-	-	-	-	-	-	-	-	-	-	-	-	
Flyaway Unit Cost (\$ in Dollars)	-	-	-	-	-	-	-	-	-	-	-	-	
Gross/Weapon System Unit Cost (\$ in Dollars)	-	-	-	-	-	-	-	-	-	-	-	-	
<b>Description:</b> Marine Corps Requirements Oversight Council (MROC) EFSS Decision Memorandum dated 28 November 2017 approved removal of the EFSS from the Marine Corps Inventory. Expeditionary Fire Support System (EFSS) is an all-weather, ground based indirect fire system designed to support the vertical assault element of a Ship-To-Objective Maneuver (STOM) force. EFSS is defined as a Launcher, Mobility Platform (prime mover), Ammunition, Ammunition Supply Vehicle, and Technical Fire Direction and Control equipment necessary for orienting weapons to an azimuth of fire. EFSS supports irregular warfare and distributed operations.													

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<b>Exhibit P-40, Budget Line Item Justification: PB 2019 Navy</b>							<b>Date:</b> February 2018			
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 1109N: Procurement, Marine Corps / BA 02: Weapons and combat vehicles / BSA 2: Artillery and Other Weapons				<b>P-1 Line Item Number / Title:</b> 2064 / Expeditionary Fire Supt Sys						
<b>ID Code</b> (A=Service Ready, B=Not Service Ready): A				<b>Program Elements for Code B Items:</b> N/A						
<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>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	1 / Expeditionary Fire Supt Sys				- / 90.062	- / 2.688	- / 0.626	- / 0.000	- / 0.000	- / 0.000
P-40	<b>Total Gross/Weapon System Cost</b>				<b>- / 90.062</b>	<b>- / 2.688</b>	<b>- / 0.626</b>	<b>- / 0.000</b>	<b>- / 0.000</b>	<b>- / 0.000</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:**

Marine Corps Requirements Oversight Council (MROC) Decision Memorandum dtd 28 Nov 17 states "MROC approves the removal of the EFSS from the Marine Corps inventory".

FY18 Baseline Appropriation Request: \$0.626M

Baseline appropriation funds will be used to support the closeout process of the Raytheon Contract. Funds will also support close-out efforts at government facilities (NSWC DD, LOGCOM).

FY19 Baseline Appropriation Request: \$0.000M

Decrease of \$0.626M due to removal of EFSS from USMC inventory and termination of PERM development. MROC Decision Memorandum dated 28 November 2017 states "MROC approves the removal of the EFSS from the Marine Corps inventory."

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<b>Exhibit P-5, Cost Analysis:</b> PB 2019 Navy													<b>Date:</b> February 2018					
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 1109N / 02 / 2			<b>P-1 Line Item Number / Title:</b> 2064 / Expeditionary Fire Supt Sys										<b>Item Number / Title [DODIC]:</b> 1 / Expeditionary Fire Supt Sys					
<b>ID Code</b> (A=Service Ready, B=Not Service Ready) :													<b>MDAP/MAIS Code:</b>					
<b>Resource Summary</b>				<b>Prior Years</b>			<b>FY 2017</b>		<b>FY 2018</b>		<b>FY 2019 Base</b>		<b>FY 2019 OCO</b>		<b>FY 2019 Total</b>			
Procurement Quantity ( <i>Units in Each</i> )				-			-		-		-		-		-			
Gross/Weapon System Cost (\$ in Millions)				90.062			2.688		0.626		0.000		0.000		0.000			
Less PY Advance Procurement (\$ in Millions)				-			-		-		-		-		-			
Net Procurement (P-1) (\$ in Millions)				90.062			2.688		0.626		0.000		0.000		0.000			
Plus CY Advance Procurement (\$ in Millions)				-			-		-		-		-		-			
<b>Total Obligation Authority</b> (\$ in Millions)				90.062			2.688		0.626		0.000		0.000		0.000			
(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)																		
Initial Spares (\$ in Millions)				-			-		-		-		-		-			
Gross/Weapon System Unit Cost (\$ in Dollars)				-			-		-		-		-		-			
Note: Subtotals or Totals in this Exhibit P-5 may not be exact or sum exactly due to rounding.																		
<b>Cost Elements</b>	<b>Prior Years</b>			<b>FY 2017</b>			<b>FY 2018</b>			<b>FY 2019 Base</b>			<b>FY 2019 OCO</b>			<b>FY 2019 Total</b>		
	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)
Flyaway Cost																		
Recurring Cost																		
1.1.1) Program Management and Engineering (PM&E)	-	-	4.790	-	-	0.558	-	-	0.626	-	-	-	-	-	-	-	-	
<i>Subtotal: Recurring Cost</i>	-	-	4.790	-	-	0.558	-	-	0.626	-	-	-	-	-	-	-	-	
Non Recurring Cost																		
1.2.1) Digital Communication	-	-	-	-	-	1.878	-	-	-	-	-	-	-	-	-	-	-	
<i>Subtotal: Non Recurring Cost</i>	-	-	-	-	-	1.878	-	-	-	-	-	-	-	-	-	-	-	
<i>Subtotal: Flyaway Cost</i>	-	-	4.790	-	-	2.436	-	-	0.626	-	-	-	-	-	-	-	-	
Hardware - EFSS Cost																		
Recurring Cost																		
2.1.1) Prior Year Cum Funding	-	-	71.759	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
<i>Subtotal: Recurring Cost</i>	-	-	71.759	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
<i>Subtotal: Hardware - EFSS Cost</i>	-	-	71.759	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Support - Support Cost																		
3.1) FSS Shared Costs	-	-	0.444	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
3.2) Safety Support	-	-	0.050	-	-	0.252	-	-	-	-	-	-	-	-	-	-	-	
3.3) Travel	-	-	0.020	-	-	-	-	-	-	-	-	-	-	-	-	-	-	

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Exhibit P-5, Cost Analysis: PB 2019 Navy												Date: February 2018												
Appropriation / Budget Activity / Budget Sub Activity: 1109N / 02 / 2				P-1 Line Item Number / Title: 2064 / Expeditionary Fire Supt Sys								Item Number / Title [DODIC]: 1 / Expeditionary Fire Supt Sys												
ID Code (A=Service Ready, B=Not Service Ready) :												MDAP/MAIS Code:												
Note: Subtotals or Totals in this Exhibit P-5 may not be exact or sum exactly due to rounding.																								
Cost Elements	Prior Years			FY 2017			FY 2018			FY 2019 Base			FY 2019 OCO			FY 2019 Total								
	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)						
3.4) Prior Year Cum Funding	-	-	12.999	-	-	-	-	-	-	-	-	-	-	-	-	-	-							
<i>Subtotal: Support - Support Cost</i>	-	-	<b>13.513</b>	-	-	<b>0.252</b>	-	-	-	-	-	-	-	-	-	-	-							
Gross/Weapon System Cost	-	-	<b>90.062</b>	-	-	<b>2.688</b>	-	-	<b>0.626</b>	-	-	<b>0.000</b>	-	-	<b>0.000</b>	-	<b>0.000</b>							

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<b>Exhibit P-40, Budget Line Item Justification: PB 2019 Navy</b>										<b>Date:</b> February 2018			
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 1109N: Procurement, Marine Corps / BA 02: Weapons and combat vehicles / BSA 2: Artillery and Other Weapons										<b>P-1 Line Item Number / Title:</b> 2185 / 155MM Ltwt Towed Howitzer			
<b>ID Code (A=Service Ready, B=Not Service Ready): A</b>										<b>Program Elements for Code B Items: N/A</b>			
<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 (\$ in Millions)	1,329.261	17.318	20.259	47.158	0.000	47.158	25.065	0.072	0.074	0.075	-	1,439.282	
Less PY Advance Procurement (\$ in Millions)	-	-	-	-	-	-	-	-	-	-	-	-	
Net Procurement (P-1) (\$ in Millions)	1,329.261	17.318	20.259	47.158	0.000	47.158	25.065	0.072	0.074	0.075	-	1,439.282	
Plus CY Advance Procurement (\$ in Millions)	-	-	-	-	-	-	-	-	-	-	-	-	
<b>Total Obligation Authority (\$ in Millions)</b>	<b>1,329.261</b>	<b>17.318</b>	<b>20.259</b>	<b>47.158</b>	<b>0.000</b>	<b>47.158</b>	<b>25.065</b>	<b>0.072</b>	<b>0.074</b>	<b>0.075</b>	<b>-</b>	<b>1,439.282</b>	
(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)													
Initial Spares (\$ in Millions)	-	-	-	-	-	-	-	-	-	-	-	-	
Flyaway Unit Cost (\$ in Dollars)	-	-	-	-	-	-	-	-	-	-	-	-	
Gross/Weapon System Unit Cost (\$ in Dollars)	-	-	-	-	-	-	-	-	-	-	-	-	
<b>Description:</b>													
LW155 (also known as the M777A2 howitzer) provides direct, reinforcing, and general support fires to maneuver forces as well as direct support artillery. It is a joint program between the Marine Corps and Army, which is additionally supporting various foreign military purchases of the weapon system. The LW155 was first fielded by the Marine Corps in April 2005 and since then the 10th, 11th, 12th, and 14th Marines and the schoolhouses have been fielded. The Army has fielded the system to its Stryker Brigades and Fires Brigades and is currently fielding to its Infantry Brigades. The LW155 is being significantly utilized in Afghanistan operations.													
<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>				
Navy	Quantity	-	-	-	-	-	-	-	-	-	-	-	-
	Total Obligation Authority	16.185	20.250	47.152	-	47.152	25.059	0.066	0.068	0.069			
NR	Quantity	-	-	-	-	-	-	-	-	-	-	-	-
	Total Obligation Authority	1.133	0.009	0.006	-	0.006	0.006	0.006	0.006	0.006	0.006	0.006	0.006
<b>Total: Secondary Distribution</b>	Quantity	-	-	-	-	-	-	-	-	-	-	-	-
	<b>Total Obligation Authority</b>	<b>17.318</b>	<b>20.259</b>	<b>47.158</b>	<b>-</b>	<b>47.158</b>	<b>25.065</b>	<b>0.072</b>	<b>0.074</b>	<b>0.075</b>			

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<b>Exhibit P-40, Budget Line Item Justification: PB 2019 Navy</b>							<b>Date:</b> February 2018			
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 1109N: Procurement, Marine Corps / BA 02: Weapons and combat vehicles / BSA 2: Artillery and Other Weapons				<b>P-1 Line Item Number / Title:</b> 2185 / 155MM Ltwt Towed Howitzer						
<b>ID Code</b> (A=Service Ready, B=Not Service Ready): A				<b>Program Elements for Code B Items:</b> N/A						
<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>	
Exhibit Type	Title*	Subexhibits	ID CD	MDAP/MAIS Code	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	
P-5	1 / 155MM Ltwt Towed Howitzer - Active				- / 1,329.261	- / 17.318	- / 20.259	- / 47.158	- / 0.000	- / 47.158
P-40	<b>Total Gross/Weapon System Cost</b>				<b>- / 1,329.261</b>	<b>- / 17.318</b>	<b>- / 20.259</b>	<b>- / 47.158</b>	<b>- / 0.000</b>	<b>- / 47.158</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 2018 Base Appropriation Request: \$20.259M (\$20.250M Active; \$0.009M Reserve)

This budget line item provides funding for various modification and sustainment efforts such as Digital Fire Control System (DFCS) component refresh, integration of upgraded components, and interoperability issues including M-Code satellite signal in support of the M777A2 program. Specifically, FY18 funding will continue to support installations of modification kits such as the Improved Power Conditioning Control Module (I-PCCM), Electronic Thermal Warning Device (ETWD), Hydraulic Power Assist Kit (HyPAK), Mission Computer (MSC-R), Chief of Section Display (CSD-R), Improved Platform Integration Kit (iPIK) and Primer Feed Mechanism (PFM) Components. The PFM and ETWD procurements are critical efforts to address current field restrictions for firing the Modular Artillery Charge System (MACS) at higher elevations. Additionally, funding supports the procurement of Chrome Cannon Tubes for the M777A2 howitzer. Chrome Cannon Tubes increase safety, accuracy, and longevity of the howitzer by eliminating propellant residue inside the cannon tubes. Propellant residue causes spiral wear which reduces the muzzle velocity of the howitzer and fuze malfunctions of projectiles. Reduced muzzle velocity leads to projectiles impacting short of their intended targets. Funding also supports the procurement of software defined radios, cables and brackets, and integration onto the M777A2 howitzer.

FY 2019 Base Appropriation Request: \$47.158M (\$47.152M Active; \$0.006M Reserve)

FY19 Funding supports the procurement of Chrome Cannon tubes; Software Defined Radios, cables and brackets; and Inertial Navigation Unit (INU) Recapitalization. Chrome cannon tubes will increase the durability of the howitzer by replacing existing steel cannons. Software Defined Radio modification will enable more secure radio communication, and INU recapitalization will extend the useful life of the system. Additionally, Software Defined Radio facilitates new encryption protocol interoperability between artillery and supported forces. INU recapitalization maintains the howitzers ability to navigate and aim accurately to safely provide fire support.

FY19 funding will continue to support the installation of modification kits; such as the Improved Power Conditioning Control Module (I-PCCM), Hydraulic Power Assist Kit (HyPAK), Mission Computer (MSC-R), and Chief of Section Display (CSD-R) (\$2.211M). Additionally, funding supports the procurement of Chrome Cannon tubes (\$3.710M); Software Defined Radios, cables, and brackets (\$20.747M); and Inertial Navigation Unit (INU) Recapitalization (\$22.490M).

Net funding increase of \$26.899M from FY18 to FY19 reflects the increase of procurement quantities of Software Defined Radios and commencement of INU recapitalization for the fleet as well as reduced quantities of Chrome Cannon tubes.

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<b>Exhibit P-5, Cost Analysis:</b> PB 2019 Navy												<b>Date:</b> February 2018						
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 1109N / 02 / 2			<b>P-1 Line Item Number / Title:</b> 2185 / 155MM Ltwt Towed Howitzer												<b>Item Number / Title [DODIC]:</b> 1 / 155MM Ltwt Towed Howitzer - Active			
<b>ID Code</b> (A=Service Ready, B=Not Service Ready) :												<b>MDAP/MAIS Code:</b>						
<b>Resource Summary</b>				<b>Prior Years</b>		<b>FY 2017</b>		<b>FY 2018</b>		<b>FY 2019 Base</b>		<b>FY 2019 OCO</b>		<b>FY 2019 Total</b>				
Procurement Quantity ( <i>Units in Each</i> )				-		-		-		-		-		-				
Gross/Weapon System Cost (\$ in Millions)				1,329.261		17.318		20.259		47.158		0.000		47.158				
Less PY Advance Procurement (\$ in Millions)				-		-		-		-		-		-				
Net Procurement (P-1) (\$ in Millions)				1,329.261		17.318		20.259		47.158		0.000		47.158				
Plus CY Advance Procurement (\$ in Millions)				-		-		-		-		-		-				
<b>Total Obligation Authority</b> (\$ in Millions)				1,329.261		17.318		20.259		47.158		0.000		47.158				
(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 Dollars)				-		-		-		-		-		-				
Note: Subtotals or Totals in this Exhibit P-5 may not be exact or sum exactly due to rounding.																		
<b>Cost Elements</b>	<b>Prior Years</b>			<b>FY 2017</b>			<b>FY 2018</b>			<b>FY 2019 Base</b>			<b>FY 2019 OCO</b>			<b>FY 2019 Total</b>		
	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)
Support - Active Cost																		
1.1) Hardware/electronic obsolescence and improvement ECP Retrofits	-	-	12.467	-	-	2.185	-	-	0.467	-	-	0.205	-	-	-	-	-	0.205
1.2) Software Defined Radio <sup>(1)</sup>	-	-	-	-	-	-	-	-	5.135	-	-	20.747	-	-	-	-	-	20.747
1.3) Inertial Navigation Unit Recapitalization <sup>(2)</sup>	-	-	-	-	-	-	-	-	-	-	-	22.490	-	-	-	-	-	22.490
1.4) Chrome Cannon Tubes <sup>(3)</sup>	-	-	-	-	-	14.000	-	-	14.648	-	-	3.710	-	-	-	-	-	3.710
<b>Subtotal: Support - Active Cost</b>	<b>-</b>	<b>-</b>	<b>12.467</b>	<b>-</b>	<b>-</b>	<b>16.185</b>	<b>-</b>	<b>-</b>	<b>20.250</b>	<b>-</b>	<b>-</b>	<b>47.152</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>47.152</b>
Support - Reserves - 155MM Ltwt Towed Howitzer Cost																		
2.1) Systems Engineering/Program Management	-	-	0.445	-	-	0.132	-	-	-	-	-	-	-	-	-	-	-	-
2.2) Hardware/electronic obsolescence and improvement ECP retrofits	-	-	1.108	-	-	1.001	-	-	0.009	-	-	0.006	-	-	-	-	-	0.006
<b>Subtotal: Support - Reserves - 155MM Ltwt Towed Howitzer Cost</b>	<b>-</b>	<b>-</b>	<b>1.553</b>	<b>-</b>	<b>-</b>	<b>1.133</b>	<b>-</b>	<b>-</b>	<b>0.009</b>	<b>-</b>	<b>-</b>	<b>0.006</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>0.006</b>
Support - Prior Years Cost																		

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Exhibit P-5, Cost Analysis: PB 2019 Navy													Date: February 2018														
Appropriation / Budget Activity / Budget Sub Activity: 1109N / 02 / 2			P-1 Line Item Number / Title: 2185 / 155MM Ltwt Towed Howitzer										Item Number / Title [DODIC]: 1 / 155MM Ltwt Towed Howitzer - Active														
ID Code (A=Service Ready, B=Not Service Ready) :													MDAP/MAIS Code:														
Note: Subtotals or Totals in this Exhibit P-5 may not be exact or sum exactly due to rounding.																											
Cost Elements	Prior Years			FY 2017			FY 2018			FY 2019 Base			FY 2019 OCO			FY 2019 Total											
	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)									
3.1) Prior Years Cumulative Funding	-	-	1,315.241	-	-	-	-	-	-	-	-	-	-	-	-	-	-										
<i>Subtotal: Support - Prior Years Cost</i>	-	-	<b>1,315.241</b>	-	-	-	-	-	-	-	-	-	-	-	-	-	-										
Gross/Weapon System Cost	-	-	<b>1,329.261</b>	-	-	<b>17.318</b>	-	-	<b>20.259</b>	-	-	<b>47.158</b>	-	-	<b>0.000</b>	-	<b>47.158</b>										

**Footnotes:**

- (1) FY18 & FY19 supports the fleet procurement of Software Defined Radios and associated brackets and cables. Radios will be procured using an existing Navy contract. The new Software Defined Radio will provide the ability to perform voice and data functions, which increases operational flexibility for firing, artillery unit.
- (2) FY19 reflects the Inertial Navigation Unit (INU) recapitalization effort, for the fleet. By recapitalizing the INU, the USMC is saving \$70K a unit (Recapitalization = \$30K/Unit vs. New = \$100K/unit). Recapitalization involves the contractor replacing obsolete parts within the INU to extend the service life for another 20 years.
- (3) Unit Cost is approximately \$151K per tube. Funding from FY17-FY20 will outfit the fleet.

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<b>Exhibit P-40, Budget Line Item Justification: PB 2019 Navy</b>										<b>Date:</b> February 2018			
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 1109N: Procurement, Marine Corps / BA 02: Weapons and combat vehicles / BSA 2: Artillery and Other Weapons										<b>P-1 Line Item Number / Title:</b> 2212 / Artillery Weapons System			
<b>ID Code (A=Service Ready, B=Not Service Ready): A</b>										<b>Program Elements for Code B Items: N/A</b>			
<b>Line Item MDAP/MAIS Code: N/A</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 (\$ in Millions)	565.999	49.704	65.303	134.246	0.000	134.246	146.038	150.306	68.255	119.365	-	1,299.216	
Less PY Advance Procurement (\$ in Millions)	-	-	-	-	-	-	-	-	-	-	-	-	
Net Procurement (P-1) (\$ in Millions)	565.999	49.704	65.303	134.246	0.000	134.246	146.038	150.306	68.255	119.365	-	1,299.216	
Plus CY Advance Procurement (\$ in Millions)	-	-	-	-	-	-	-	-	-	-	-	-	
<b>Total Obligation Authority (\$ in Millions)</b>	<b>565.999</b>	<b>49.704</b>	<b>65.303</b>	<b>134.246</b>	<b>0.000</b>	<b>134.246</b>	<b>146.038</b>	<b>150.306</b>	<b>68.255</b>	<b>119.365</b>	<b>-</b>	<b>1,299.216</b>	
<i>(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)</i>													
Initial Spares (\$ in Millions)	-	-	-	-	-	-	-	-	-	-	-	-	
Flyaway Unit Cost (\$ in Dollars)	-	-	-	-	-	-	-	-	-	-	-	-	
Gross/Weapon System Unit Cost (\$ in Dollars)	-	-	-	-	-	-	-	-	-	-	-	-	
<b>Description:</b> This line is used to procure required items resulting in Engineering Change Proposals (ECP) and upgrades to address known and future reliability, sustainability, maintainability and obsolescence issues to ensure mission readiness and capability on the battlefield.													
HIMARS is a C-130 transportable, wheeled, indirect fire, rocket/missile system capable of firing all rockets and missiles in the current and future Multiple Launch Rocket System (MLRS) Family of Munitions (MFOM). As a system HIMARS includes one launcher, two Re-Supply Systems (RSS), and the MFOM. HIMARS provides the Marine Air-Ground Task Force (MAGTF) with 24 hour ground-based, responsive General Support/General Support Reinforcing (GS/GSR) indirect fires which accurately engage targets at long range, (60+km), with high volumes of lethal fire under all weather conditions throughout all phases of combat operations ashore, to include irregular warfare and distributed operations. The Guided Multiple Launch Rocket System (GMLRS) is the primary munition fired by HIMARS. GMLRS integrates guidance and control packages and an improved rocket motor achieving greater range and precision, in two variants; GMLRS Unitary (U), and GMLRS Alternative Warhead (AW). HIMARS is also capable of firing the Reduced Range Practice Rocket (RRPR) for tactical training, classroom training and handling exercises.													
<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>			
Navy	Quantity	-	-	-	-	-	-	-	-	-	-	-	
	Total Obligation Authority	46.541	62.113	131.178	-	131.178	142.910	147.112	65.017	116.039			
NR	Quantity	-	-	-	-	-	-	-	-	-	-	-	
	Total Obligation Authority	3.163	3.190	3.068	-	3.068	3.128	3.194	3.238	3.326			
<b>Total: Secondary Distribution</b>	Quantity	-	-	-	-	-	-	-	-	-	-	-	
	<b>Total Obligation Authority</b>	<b>49.704</b>	<b>65.303</b>	<b>134.246</b>	<b>-</b>	<b>134.246</b>	<b>146.038</b>	<b>150.306</b>	<b>68.255</b>	<b>119.365</b>			

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Exhibit P-40, Budget Line Item Justification: PB 2019 Navy							Date: February 2018			
Appropriation / Budget Activity / Budget Sub Activity:				P-1 Line Item Number / Title:						
1109N: Procurement, Marine Corps / BA 02: Weapons and combat vehicles / BSA 2: Artillery and Other Weapons				2212 / Artillery Weapons System						
ID Code (A=Service Ready, B=Not Service Ready): A		Program Elements for Code B Items: N/A				Other Related Program Elements: 0206623M				
Line Item MDAP/MAIS Code: 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)	
P-5	1 / HIMARS	P-5a, P-21			- / 565.999	- / 49.704	- / 65.303	- / 134.246	- / 0.000	- / 134.246
P-40	Total Gross/Weapon System Cost				- / 565.999	- / 49.704	- / 65.303	- / 134.246	- / 0.000	- / 134.246

\*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 2018 Baseline Appropriation Request: \$59.943M

Funding will procure the GMLRS Alternative Warhead (AW) and RRPRs. In addition, funds will provide program management and engineering support for HIMARS, GMLRS and RRPRs. These systems are fielded to both the active (\$56.753M) and reserve (\$3.190M) components.

The FY 2019 funding request was reduced by (\$.588) million to reflect the Department of Navy's effort to support the Office of Management and Budget directed reforms for Efficiency and Effectiveness that include a lean, accountable, more efficient government.

FY 2019 Baseline Appropriation Request: \$134.246M

FY19 baseline increase of \$68.943M supports the re-activation of 5th Battalion 10th Marine Regiment as a HIMARS Battalion. Funding is required for the procurement of HIMARS systems and support equipment for the new battalion and an associated increase in the total munitions requirement for rockets. Support equipment includes items such as HIMARS maintenance vehicles, tool kits, training pods, test equipment, modification kits, shelters, install kits, spares and initial issue provisioning. HIMARS are fielded to both the active (\$131.178M) and reserve (\$3.068M) components.

**OCO:**

FY 2018 OCO Request: \$5.360M

Funds procure Guided Multiple Launch Rocket System (GMLRS) to replenish rockets used in theater.

FY 2019 OCO Appropriation Request: N/A

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<b>Exhibit P-5, Cost Analysis: PB 2019 Navy</b>													<b>Date: February 2018</b>							
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 1109N / 02 / 2			<b>P-1 Line Item Number / Title:</b> 2212 / Artillery Weapons System										<b>Item Number / Title [DODIC]:</b> 1 / HIMARS							
<b>ID Code</b> (A=Service Ready, B=Not Service Ready) :													<b>MDAP/MAIS Code:</b>							
<b>Resource Summary</b>			<b>Prior Years</b>			<b>FY 2017</b>		<b>FY 2018</b>		<b>FY 2019 Base</b>		<b>FY 2019 OCO</b>		<b>FY 2019 Total</b>						
Procurement Quantity ( <i>Units in Each</i> )			-			-		-		-		-		-						
Gross/Weapon System Cost (\$ in Millions)			565.999			49.704		65.303		134.246		0.000		134.246						
Less PY Advance Procurement (\$ in Millions)			-			-		-		-		-		-						
Net Procurement (P-1) (\$ in Millions)			565.999			49.704		65.303		134.246		0.000		134.246						
Plus CY Advance Procurement (\$ in Millions)			-			-		-		-		-		-						
<b>Total Obligation Authority</b> (\$ in Millions)			<b>565.999</b>			<b>49.704</b>		<b>65.303</b>		<b>134.246</b>		<b>0.000</b>		<b>134.246</b>						
(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)																				
Initial Spares (\$ in Millions)			-			-		-		-		-		-						
Gross/Weapon System Unit Cost (\$ in Dollars)			-			-		-		-		-		-						
Note: Subtotals or Totals in this Exhibit P-5 may not be exact or sum exactly due to rounding.																				
<b>Cost Elements</b>	<b>Prior Years</b>			<b>FY 2017</b>			<b>FY 2018</b>			<b>FY 2019 Base</b>			<b>FY 2019 OCO</b>			<b>FY 2019 Total</b>				
	<b>Unit Cost</b> (\$)	<b>Qty</b> ( <i>Each</i> )	<b>Total Cost</b> (\$ M)	<b>Unit Cost</b> (\$)	<b>Qty</b> ( <i>Each</i> )	<b>Total Cost</b> (\$ M)	<b>Unit Cost</b> (\$)	<b>Qty</b> ( <i>Each</i> )	<b>Total Cost</b> (\$ M)	<b>Unit Cost</b> (\$)	<b>Qty</b> ( <i>Each</i> )	<b>Total Cost</b> (\$ M)	<b>Unit Cost</b> (\$)	<b>Qty</b> ( <i>Each</i> )	<b>Total Cost</b> (\$ M)	<b>Unit Cost</b> (\$)	<b>Qty</b> ( <i>Each</i> )	<b>Total Cost</b> (\$ M)		
Flyaway Cost																				
Recurring Cost																				
1.1.1) HIMARS ECPs	-	-	1.481	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
1.1.2) USMC HIMARS PMO	-	-	18.137	-	-	0.528	-	-	0.500	-	-	0.580	-	-	-	-	-	0.580		
1.1.3) Prior Year Cumulative Funding	-	-	16.146	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
<i>Subtotal: Recurring Cost</i>	-	-	35.764	-	-	0.528	-	-	0.500	-	-	0.580	-	-	-	-	-	0.580		
<i>Subtotal: Flyaway Cost</i>	-	-	35.764	-	-	0.528	-	-	0.500	-	-	0.580	-	-	-	-	-	0.580		
Hardware Cost																				
Recurring Cost																				
2.1.1) GMLRS Active <sup>(†) (1)</sup>	114,776.98	139	15.954	122,634.00	335	41.082	124,528.00	449	55.912	104,139.00	255	26.555	-	-	-	104,139.00	255	26.555		
2.1.2) GMLRS Reserves <sup>(†) (2)</sup>	114,764.71	51	5.853	122,634.00	25	3.065	124,528.00	25	3.113	104,139.00	28	2.916	-	-	-	104,139.00	28	2.916		
2.1.3) Reduced Range Practice Rocket <sup>(†) (3)</sup>	6,099.69	1,956	11.931	5,771.00	648	3.739	6,812.00	648	4.414	9,469.00	648	6.136	-	-	-	9,469.00	648	6.136		
2.1.4) HIMARS Launchers <sup>(†) (4)</sup>	-	-	-	-	-	-	-	-	-	7,160K	10	71.600	-	-	-	7,160K	10	71.600		
2.1.5) Re-Supply Systems <sup>(†) (5)</sup>	-	-	-	-	-	-	-	-	-	170,500.00	36	6.138	-	-	-	170,500.00	36	6.138		
2.1.6) HIMARS Support Equipment <sup>(6)</sup>	-	-	-	-	-	-	-	-	-	-	-	19.324	-	-	-	-	-	19.324		

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Exhibit P-5, Cost Analysis: PB 2019 Navy												Date: February 2018												
Appropriation / Budget Activity / Budget Sub Activity: 1109N / 02 / 2				P-1 Line Item Number / Title: 2212 / Artillery Weapons System								Item Number / Title [DODIC]: 1 / HIMARS												
ID Code (A=Service Ready, B=Not Service Ready) :												MDAP/MAIS Code:												
Note: Subtotals or Totals in this Exhibit P-5 may not be exact or sum exactly due to rounding.																								
Cost Elements	Prior Years			FY 2017			FY 2018			FY 2019 Base			FY 2019 OCO			FY 2019 Total								
	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)						
2.1.7) M31 Guided Multiple Launch Rocket Systems	201,038.61	2,020	406.098	-	-	-	-	-	-	-	-	-	-	-	-	-	-							
2.1.8) M31 GMLRS (DODIC HA51) OCO	-	-	77.033	-	-	-	-	-	-	-	-	-	-	-	-	-	-							
2.1.9) ATACMS Procurement	1,700K	1	1.700	-	-	-	-	-	-	-	-	-	-	-	-	-	-							
<i>Subtotal: Recurring Cost</i>	-	-	<b>518.569</b>	-	-	<b>47.886</b>	-	-	<b>63.439</b>	-	-	<b>132.669</b>	-	-	-	-	<b>132.669</b>							
<i>Subtotal: Hardware Cost</i>	-	-	<b>518.569</b>	-	-	<b>47.886</b>	-	-	<b>63.439</b>	-	-	<b>132.669</b>	-	-	-	-	<b>132.669</b>							
Support Cost																								
3.1) Rocket Procurement Support Reserves	-	-	0.141	-	-	0.098	-	-	0.077	-	-	0.152	-	-	-	-	0.152							
3.2) Engineering Services for Rockets (GMLRS and AWP)	-	-	4.883	-	-	0.335	-	-	0.554	-	-	-	-	-	-	-	-							
3.3) Engineering Services for RRPRs	-	-	3.581	-	-	0.134	-	-	0.147	-	-	-	-	-	-	-	-							
3.4) Travel	-	-	0.100	-	-	0.050	-	-	0.050	-	-	0.050	-	-	-	-	0.050							
3.5) First Destination Transportation	-	-	-	-	-	-	-	-	-	-	-	0.060	-	-	-	-	0.060							
3.6) FSS Shared Costs	-	-	2.329	-	-	-	-	-	-	-	-	-	-	-	-	-	-							
3.7) Logistics	-	-	0.352	-	-	0.388	-	-	0.240	-	-	-	-	-	-	-	-							
3.8) HIMARS Engineering Support NSWC DD	-	-	0.280	-	-	0.285	-	-	0.296	-	-	0.735	-	-	-	-	0.735							
<i>Subtotal: Support Cost</i>	-	-	<b>11.666</b>	-	-	<b>1.290</b>	-	-	<b>1.364</b>	-	-	<b>0.997</b>	-	-	-	-	<b>0.997</b>							
<b>Gross/Weapon System Cost</b>	-	-	<b>565.999</b>	-	-	<b>49.704</b>	-	-	<b>65.303</b>	-	-	<b>134.246</b>	-	-	<b>0.000</b>	-	<b>134.246</b>							

(†) indicates the presence of a P-5a

**Footnotes:**

(1) AWP unit costs are dependent on total quantities procured amongst the Army, Marine Corps and Foreign Military Sales (FMS) organizations that participate in the contract award. The Marine Corps quantities procured are only a small portion of the total buy. Marine Corps GMLRS unit cost does not include GMLRS Training Devices. Unit costs updated to match the Army. FY19 unit cost decrease due to planned high quantity buy by the Army that year.

(2) AWP unit costs are dependent on total quantities procured amongst the multiple service organizations that participate in the contract award. The Marine Corps quantities procured are only a small portion of the total buy. Unit costs updated to match the Army.

(3) RRPR unit costs are dependent on total quantities procured amongst the multiple service organizations that participate in the contract award. The Marine Corps quantities procured are only a small portion of the total buy.

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<b>Exhibit P-5, Cost Analysis:</b> PB 2019 Navy		<b>Date:</b> February 2018
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 1109N / 02 / 2	<b>P-1 Line Item Number / Title:</b> 2212 / Artillery Weapons System	<b>Item Number / Title [DODIC]:</b> 1 / HIMARS
<b>ID Code</b> (A=Service Ready, B=Not Service Ready) :	<b>MDAP/MAIS Code:</b>	
(4) FY19 increase procures 10 of the 27 required HIMARS Launchers to support 5th Battalion 10th Marines IOC in FY21. (5) FY19 increase procures 36 Re-Supply Systems to support 5th Battalion 10th Marines IOC in FY21. (6) FY19 increase procures support equipment which includes items such as HIMARS maintenance vehicles, tool kits, training pods, test equipment, modification kits (long range communications, blue force tracker), shelters, install kits, spares and initial issue provisioning in various quantities to support 5th Battalion 10th Marines IOC in FY21.		

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Exhibit P-5a, Procurement History and Planning: PB 2019 Navy								Date: February 2018				
Appropriation / Budget Activity / Budget Sub Activity: 1109N / 02 / 2			P-1 Line Item Number / Title: 2212 / Artillery Weapons System					Item Number / Title [DODIC]: 1 / HIMARS				
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 (\$)	Specs Avail Now?	Date Revision Available	RFP Issue Date
2.1.1) GMLRS Active <sup>(†)</sup>		2016	Lockheed Martin / Dallas, TX	C / FPIF	Huntsville, AL	Mar 2016	Jul 2017	63	114,635.00	Y		
2.1.1) GMLRS Active <sup>(†)</sup>		2017	Lockheed Martin / Dallas, TX	C / FPIF	Huntsville, AL	Jun 2017	Oct 2018	335	122,634.00	N		
2.1.1) GMLRS Active <sup>(†)</sup>		2018	Lockheed Martin / Dallas, TX	C / FPIF	Huntsville, AL	Jul 2018	Nov 2019	406	124,528.00	N		
2.1.1) GMLRS Active <sup>(†)</sup>	✓	2018	Lockheed Martin / Dallas, TX	C / FPIF	Huntsville, AL	Jul 2018	Nov 2019	43	124,528.00	N		
2.1.1) GMLRS Active <sup>(†)</sup>		2019	Lockheed Martin / Dallas, TX	C / FPIF	Huntsville, AL	Feb 2019	Jun 2020	255	104,139.00	N		
2.1.2) GMLRS Reserves <sup>(†)</sup>		2016	Lockheed Martin / Dallas, TX	C / FPIF	Huntsville, AL	Mar 2016	Jul 2017	24	114,635.00	N	Oct 2016	
2.1.2) GMLRS Reserves <sup>(†)</sup>		2017	Lockheed Martin / Dallas, TX	C / FPIF	Huntsville, AL	Jun 2017	Oct 2018	25	122,634.00	N	Oct 2017	
2.1.2) GMLRS Reserves <sup>(†)</sup>		2018	Lockheed Martin / Dallas, TX	C / FPIF	Huntsville, AL	Jul 2018	Nov 2019	25	124,528.00	N	Nov 2018	
2.1.2) GMLRS Reserves <sup>(†)</sup>		2019	Lockheed Martin / Dallas, TX	C / FPIF	Huntsville, AL	Feb 2019	Jun 2020	28	104,139.00	N	Jul 2020	
2.1.3) Reduced Range Practice Rocket <sup>(†)</sup>		2016	LetterKenny Munitions Center / Chambersburg, PA	MIPR	Letterkenny, PA	Mar 2016	Jul 2017	648	7,018.00	N	Sep 2017	
2.1.3) Reduced Range Practice Rocket <sup>(†)</sup>		2017	LetterKenny Munitions Center / Chambersburg, PA	MIPR	Letterkenny, PA	Jun 2017	Oct 2018	648	5,771.00	N	Sep 2018	
2.1.3) Reduced Range Practice Rocket <sup>(†)</sup>		2018	LetterKenny Munitions Center / Chambersburg, PA	MIPR	Letterkenny, PA	Jul 2018	Nov 2019	648	6,812.00	N	Sep 2019	
2.1.3) Reduced Range Practice Rocket <sup>(†)</sup>		2019	LetterKenny Munitions Center / Chambersburg, PA	MIPR	Letterkenny, PA	Feb 2019	Jun 2020	648	9,469.00	N	Apr 2021	
2.1.4) HIMARS Launchers <sup>(†)</sup>		2019	Lockheed / Dallas, Tx	SS / FFP	Huntsville, AL	Feb 2019	Feb 2021	10	7,160K	N	Dec 2019	
2.1.5) Re-Supply Systems <sup>(†)</sup>		2019	Oshkosh Corp LLC / Oshkosh WI	SS / FFP	Huntsville, AL	Feb 2019	Feb 2021	36	170,500.00	N	Dec 2019	

(†) indicates the presence of a P-21

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Exhibit P-21, Production Schedule: PB 2019 Navy																			Date: February 2018																		
Appropriation / Budget Activity / Budget Sub Activity:										P-1 Line Item Number / Title:										Item Number / Title [DODIC]:																	
1109N / 02 / 2										2212 / Artillery Weapons System										1 / HIMARS																	
Cost Elements (Units in Each)										Fiscal Year 2016										Fiscal Year 2017										BALANCE							
O C O #	M F R	F Y	SERVICE	PROC QTY	ACCEPT PRIOR TO 1 OCT 2015	BAL DUE AS OF 1 OCT	O C T	N O V	D E C	J A N	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							
2.1.1) GMLRS Active <sup>(1)</sup>																																					
Prior Years Deliveries: 76																																					
1 2016 NAVY 63 0 63																																					45
1 2017 NAVY 335 0 335																																				335	
1 2018 NAVY 406 0 406																																				406	
✓ 1 2018 NAVY 43 0 43																																				43	
1 2019 NAVY 255 0 255																																				255	
2.1.2) GMLRS Reserves <sup>(2)</sup>																																					28
Prior Years Deliveries: 27																																				18	
2 2016 NAVY 24 0 24																																				25	
2 2017 NAVY 25 0 25																																				25	
2 2018 NAVY 25 0 25																																				28	
2.1.3) Reduced Range Practice Rocket <sup>(3)</sup>																																				18	
Prior Years Deliveries: 1308																																				486	
3 2016 NAVY 648 0 648																																				648	
3 2017 NAVY 648 0 648																																				648	
3 2018 NAVY 648 0 648																																				648	
2.1.4) HIMARS Launchers <sup>(4)</sup>																																					10
4 2019 NAVY 10 0 10																																					36
2.1.5) Re-Supply Systems <sup>(5)</sup>																																					36
	O C T	N O V	D E C	J A N	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	B A L A N C E												

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Exhibit P-21, Production Schedule: PB 2019 Navy																					Date: February 2018																																																																																																																																																																																																																																	
Appropriation / Budget Activity / Budget Sub Activity:																					Item Number / Title [DODIC]:																																																																																																																																																																																																																																	
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2.1.1) GMLRS Active <sup>(1)</sup>																																																							
Prior Years Deliveries: 76																																																							
1	2016	NAVY		63	63	0																					0																												
1	2017	NAVY		335	335	0	0																																																
1	2018	NAVY		406	406	0	0																																																
✓ 1	2018	NAVY		43	43	0	0																																																
1	2019	NAVY		255	255	0	0																																																
2.1.2) GMLRS Reserves <sup>(2)</sup>																																																							
Prior Years Deliveries: 27																																																							
2	2016	NAVY		24	24	0																					0																												
2	2017	NAVY		25	25	0	0																																																
2	2018	NAVY		25	25	0	0																																																
2	2019	NAVY		28	28	0	0																																																
2.1.3) Reduced Range Practice Rocket <sup>(3)</sup>																																																							
Prior Years Deliveries: 1308																																																							
3	2016	NAVY		648	648	0																					0																												
3	2017	NAVY		648	648	0	0																																																
3	2018	NAVY		648	648	0	0																																																
3	2019	NAVY		648	648	0	0																																																
2.1.4) HIMARS Launchers <sup>(4)</sup>																																																							
4	2019	NAVY		10	6	4					2	-	2																					0																					
5	2019	NAVY		36	24	12					3	3	3																					0																					

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Exhibit P-21, Production Schedule: PB 2019 Navy								Date: February 2018				
Appropriation / Budget Activity / Budget Sub Activity: 1109N / 02 / 2			P-1 Line Item Number / Title: 2212 / Artillery Weapons System					Item Number / Title [DODIC]: 1 / HIMARS				
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	1,080	3,000	6,000	0	2	15	17	0	2	16	18
2	Lockheed Martin - Dallas, TX	1,848	3,000	6,000	8	2	16	18	2	2	16	18
3	LetterKenny Munitions Center - Chambersburg, PA	540	864	1,440	0	2	15	17	0	2	16	18
4	Lockheed - Dallas, Tx				0	0	0	0	0	0	0	0
5	Oshkosh Corp LLC - Oshkosh WI				0	0	0	0	0	0	0	0

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

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

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<b>Exhibit P-40, Budget Line Item Justification: PB 2019 Navy</b>										<b>Date:</b> February 2018							
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 1109N: Procurement, Marine Corps / BA 02: Weapons and combat vehicles / BSA 2: Artillery and Other Weapons					<b>P-1 Line Item Number / Title:</b> 2220 / Wpns & Cmbt Vehs under \$5 million												
ID Code (A=Service Ready, B=Not Service Ready): A			Program Elements for Code B Items: N/A					Other Related Program Elements: 0206623M									
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 (\$ in Millions)	99.795	10.463	19.616	40.687	0.000	40.687	42.878	28.311	38.838	35.345	Continuing	Continuing					
Less PY Advance Procurement (\$ in Millions)	-	-	-	-	-	-	-	-	-	-	-	-					
Net Procurement (P-1) (\$ in Millions)	99.795	10.463	19.616	40.687	0.000	40.687	42.878	28.311	38.838	35.345	Continuing	Continuing					
Plus CY Advance Procurement (\$ in Millions)	-	-	-	-	-	-	-	-	-	-	-	-					
<b>Total Obligation Authority (\$ in Millions)</b>	<b>99.795</b>	<b>10.463</b>	<b>19.616</b>	<b>40.687</b>	<b>0.000</b>	<b>40.687</b>	<b>42.878</b>	<b>28.311</b>	<b>38.838</b>	<b>35.345</b>	<b>Continuing</b>	<b>Continuing</b>					
(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)																	
Initial Spares (\$ in Millions)	-	-	-	-	-	-	-	-	-	-	-	-					
Flyaway Unit Cost (\$ in Dollars)	-	-	-	-	-	-	-	-	-	-	-	-					
Gross/Weapon System Unit Cost (\$ in Dollars)	-	-	-	-	-	-	-	-	-	-	-	-					
<b>Description:</b>																	
Family of Infantry Weapons Systems (FIWS) provides for continuous monitoring, assessment of and implementation of Joint Service and USMC unique system modifications for individual and crew-served weapons. This includes efforts such as: improving weapon capability, operation, maintainability, supportability, service life, ergonomics, and safety enhancements. FIWS also supports replacement of principle end items (PEI) due to combat losses, wash-outs, and increases in AAO, as well as continuing product improvement and modernization of various weapon systems and their support equipment. Gunner Protection Kit (GPK) for mounted weapons systems procurement is also funded in FIWS.																	
Company and Battalion Mortars provides procurement, modification, and sustainment of mortars and mortar fire control systems to enable access to immediate indirect fires in support of mounted and dismounted forces to the company and battalion level. This initiative sustains the new lightweight company and battalion mortar capability and more than 50 mortar components, incorporates component product improvements and modifications such as improved sights and aiming devices, and hardware/software refresh/upgrades for the Lightweight Hand-held Mortar Ballistic Computer (LHMBC) capability.																	
Escalation of Force - Equipment (EoF-E) funding supports type-classification, testing and procurement of new advancements and technologies to provide an increased capability over existing or outdated equipment currently or associated in the Escalation of Force-Mission Modules (EoF-MMs). EoF-MMs provide commanders with an improved ability to respond to situations with varying levels of non-lethal force by way of modular capability sets that can be tailored and scaled to fit missions down to the platoon and squad level.																	
Ocular Interruption (OI) is the replacement of the 'Dazzling Laser' program for the LA-9/P and the Non Glare Mount 532P-M (Mini Green) laser. OI is a "Non-damaging" dazzling system that will be used in Escalation of Force-Missions to provide a non-lethal, force protection capability to warn and visually suppress targeted personnel at ranges from 10 to 500 meters.																	
FIRS supports Countering Weapons of Mass Destruction (CWMD) and Chemical, Biological, Radiological and Nuclear (CBRN) mission areas by providing first response protection, detection, identification, and decontamination equipment to the Marine Air-Ground Task Force (MAGTF) and the Chemical Biological Incident Response Force (CBIRF).																	

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<b>Exhibit P-40, Budget Line Item Justification: PB 2019 Navy</b>							<b>Date:</b> February 2018			
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 1109N: Procurement, Marine Corps / BA 02: Weapons and combat vehicles / BSA 2: Artillery and Other Weapons				<b>P-1 Line Item Number / Title:</b> 2220 / Wpns & Cmbt Vehs under \$5 million						
<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> 0206623M				
<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>	
Exhibit Type	Title*	Subexhibits	ID CD	MDAP/ MAIS Code	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	
P-40a	Wpns & Cmbt Vehs under \$5 million	P-5a			- / 99.795	- / 10.463	- / 19.616	- / 40.687	- / -	- / 40.687
<b>P-40</b>	<b>Total Gross/Weapon System Cost</b>				<b>- / 99.795</b>	<b>- / 10.463</b>	<b>- / 19.616</b>	<b>- / 40.687</b>	<b>- / 0.000</b>	<b>- / 40.687</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. Title represents the P-40a Title when only the P-40a Summary/Total is shown.

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

**Justification:**

FY 2018 Base Appropriation: \$19.616M

Family of Infantry Weapons Systems - \$5.331M will provide for continuous monitoring, assessment of and implementation of Joint Service and USMC unique system modifications. This includes efforts such as: improve weapon capability, operation, maintainability, supportability, service life, ergonomics, and safety enhancements. Funding supports the MK 13 Rifle with associated optic, and principle end items (PEI) due to combat losses, wash-outs, and increases in AAO, as well as continuing product improvement and modernization of sniper and special purpose weapons, and support equipment. Funding also supports various program/acquisition support activities, such as ammunition costs related to those production verification activities.

Family of Incident Response Systems (FIRS) - \$0.806M will facilitate procurement of two Prime Movers needed for CBIRF's Common Analytical Laboratory System (CALS) and the modernization of CBIRF's legacy Unified Command Suite (UCS), which is facing obsolescence in FY18.

Company and Battalion Mortars - \$0.810M will support the capability of indirect fire systems to the Marine Corps inventory of 60mm and 81mm mortar systems and incorporate component product improvements, ammunition costs related to mortar production verification activities, as well as procurement of hardware for integration with the Lightweight Handheld Mortar Ballistic Computer (LHMBC) upgrade.

Escalation of Force Equipment (EoF-E) - \$1.748M will be used to procure Escalation of Force Mission Module upgraded components such as the Improved Voice Translation Device or dazzling lasers.

Ocular Interruption (OI) - \$10.921M will be used to procure OI Systems.

The FY 2019 funding request was reduced by (\$.406) million to reflect the Department of Navy's effort to support the Office of Management and Budget directed reforms for Efficiency and Effectiveness that include a lean, accountable, more efficient government.

FY 2019 Base Appropriation: \$40.687M

Family of Infantry Weapons Systems - \$28.292M will support the continuous monitoring, assessment of and implementation of Joint Service and USMC unique system modifications. This includes efforts such as: improve weapon capability, operation, maintainability, supportability, service life, ergonomics, and safety enhancements. Specifically, the funding increase from FY18 to FY19 of \$22.961M supports the first year of procurement and fielding of M27 Infantry Automatic Rifles (IAR), Modular Handgun Systems (MHS), Compact Semi-Automatic Sniper System (CSASS), M320 Grenade Launchers, and Tow Objective Gunner Protection Kit 2.0 (TOGPK 2.0). The procurement of additional M27s is to increase the lethality of Marine Corps' ground combat element conducting a range of military operations. The M27 is currently used by Marine infantry units and has proven to be highly reliable, giving Marine ground forces the ability to provide firepower superiority and effective suppression as needed. The Modular Handgun System will be purchased to replace the legacy M9, M9A1, M45A1, and M007 pistols with a more affordable and efficient pistol for maintenance. The MHS also provides modularity and greater shooter ergonomics over the current models which will allow for more accurate fire for military personnel of different sizes. The Compact Semi-Automatic Sniper System (CSASS) will replace the M110 with enhanced shooter ergonomics and increased operational availability time. The lighter, more capable rifle will improve the sniper's ability to rapidly engage multiple, moving targets. The M320 Grenade Launcher will replace the M203 in Marine Infantry and Infantry-like units. Due to its side breach, the M320 will allow for the use of more capable 40mm grenades for counter-defilade, breaching and non-lethal applications. The TOGPK 2.0 increases the

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<b>Exhibit P-40, Budget Line Item Justification: PB 2019 Navy</b>		<b>Date:</b> February 2018
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 1109N: Procurement, Marine Corps / BA 02: Weapons and combat vehicles / BSA 2: Artillery and Other Weapons	<b>P-1 Line Item Number / Title:</b> 2220 / Wpns & Cmbt Vehs under \$5 million	
<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> 0206623M
<b>Line Item MDAP/MAIS Code:</b> N/A		
protection level (survivability), and increases the traverse capability (lethality) of mounted weapons systems over legacy GPKs for gunners in Marine Corps vehicles. Funding also supports principle end items (PEI) due to increases in AAO, as well as continuing product improvement and modernization of sniper and special purpose weapons, and support equipment. Additionally funding also supports various program/acquisition support activities, such as ammunition costs related to those production verification activities.		
Family of Incident Response Systems (FIRS) - \$0.476M will be used to support the annual modernization of the Unified Command Suite (UCS). The legacy UCS, which is CBIRF's primary command and control vehicle, will face obsolescence if scheduled modernizations of its satellite communications and land mobile radio systems are not applied in FY19. The decrease of \$0.330M from FY18 to FY19 is a result of the FY18 request to fund two prime movers associated with the CALS program not being carried over into FY19. The entire FY19 PMC request for FIRS represents the UCS modernization costs only.		
Company and Battalion Mortars - \$2.666M will be used to procure items in support of the bipod component part replacement, new baseplate replacements, an advanced video borescope and the planned purchase of hardware and peripherals in kind of the M32 Lightweight Handheld Mortar Ballistic Computer (LHMBC). The hardware will be integrated with Mortar Fire Control Application software to provide accurate ballistic calculations for 60mm and 81mm mortar weapons systems. The replacement in kind will be conducted as a multi-year effort to maintain the current capability against projected loss of M32 LHMBC hardware due to end of service obsolescence and diminishing on-hand sustainment stock until a common Marine Corps hardware solution for software applications is identified. If projected M32 LHMBC hardware losses are not realized, funds will be used to procure company and battalion mortar system principal end item replacements, component product improvements and replacements, assess and implement system modifications in order to improve system operation and performance. The increase in FY19 is a direct result of the M32 LHMBC replacement in kind necessitated by warranty expiration, diminishing on-hand sustainment stock, hardware end of service obsolescence and operating software technical obsolescence, and divestment of the current system for transition to an Android based operating system for ballistic calculations setting the condition for a common Marine Corps hardware solution incorporating company and battalion mortar fire control applications.		
Escalation of Force Equipment (EoF-E) - \$1.099M will be used to procure Escalation of Force Mission Module upgraded components such as the Improved Voice Translation Device and the dazzling laser capability. The decrease of \$0.649M from FY18 to FY19 is based on projected requirements for upgraded components in FY19.		
Ocular Interruption (OI) - \$8.154M will be used to procure 597 OI systems which completes the procurement of the Approved Acquisition Objective (AAO) of 1,758 systems. This ensures that the program will achieve Full Operational Capability (FOC) at the completion of fielding. These new laser dazzling systems are "non-damaging" systems to be used in Escalation of Force Missions to provide a non-lethal, force protection capability to warn and visually suppress targeted personnel out to 500 meters. These systems are replacing the legacy LA-9/P and Non-Glare Mount 532P-M (Mini Green) systems, which have been deemed inherently dangerous by the Navy Laser Safety Review Board. In addition, parts kits will be procured to complete the initial provisioning for these systems in accordance with the Depot Maintenance Float Activity (DMFA) support strategy. The decrease of \$2.767M from FY18 to FY19 is due to reaching the AAO in FY19.		

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Exhibit P-40a, Budget Item Justification For Aggregated Items: PB 2019 Navy														Date: February 2018						
Appropriation / Budget Activity / Budget Sub Activity: 1109N / 02 / 2					P-1 Line Item Number / Title: 2220 / Wpns & Cmbt Vehs under \$5 million									Aggregated Items Title: Wpns & Cmbt Vehs under \$5 million						
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 (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)
<b>1) Company and Battalion Mortars <sup>(1)</sup></b>																				
1.1) Company and Battalion Mortars	A		-	-	11.109	-	-	0.911	-	-	0.810	-	-	2.666	-	-	-	-	-	2.666
1.2) Company and Battalion Mortars - Reserves	A		-	-	0.304	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
<i>Subtotal: 1) Company and Battalion Mortars</i>			-	-	<b>11.413</b>	-	-	<b>0.911</b>	-	-	<b>0.810</b>	-	-	<b>2.666</b>	-	-	-	-	-	<b>2.666</b>
<b>2) Family of Infantry Weapons Systems <sup>(2)</sup></b>																				
2.1) Production Support <sup>(3)</sup>	A		-	-	4.332	-	-	1.593	-	-	1.044	-	-	1.046	-	-	-	-	-	1.046
2.2) Lightweight Machine Gun Tripod	A		-	-	2.076	-	-	0.046	-	-	-	-	-	-	-	-	-	-	-	-
2.3) M2A1 QCB Kits Family	A		-	-	0.796	-	-	0.348	-	-	-	-	-	-	-	-	-	-	-	-
2.4) Squad Designated Marksman Rifle	A		-	-	-	-	-	1.399	-	-	-	-	-	-	-	-	-	-	-	-
2.5) Infantry Automatic Rifle (IAR) <sup>(4)(†)</sup>	A		-	-	-	1,150.00	1,428	1.642	-	-	-	1,150.00	6,567	7.552	-	-	-	1,150.00	6,567	7.552
2.6) IAR Accessories <sup>(5)</sup>	A		-	-	-	-	-	1.008	-	-	-	-	-	4.597	-	-	-	-	-	4.597
2.7) MK 13 Sniper Rifle <sup>(†)</sup>	A		-	-	-	-	-	-	12,042.13	356	4.287	-	-	-	-	-	-	-	-	-
2.8) M320 Grenade Launcher <sup>(†)</sup>	A		-	-	-	-	-	-	-	-	-	1,300.00	623	0.810	-	-	-	1,300.00	623	0.810
2.9) Compact Semi Auto Sniper System (CSASS) <sup>(†)</sup>	A		-	-	-	-	-	-	-	-	-	8,594.83	116	0.997	-	-	-	8,594.83	116	0.997
2.11) Modular Handgun System (MHS) Pistol <sup>(†)</sup>	A		-	-	-	-	-	-	-	-	-	180.00	35,000	6.300	-	-	-	180.00	35,000	6.300
2.12) MHS Accessories <sup>(6)</sup>	A		-	-	-	-	-	-	-	-	-	-	-	4.070	-	-	-	-	-	4.070
2.14) TOGPK 2.0 <sup>(7)(†)</sup>	A		-	-	-	-	-	-	-	-	-	40,000.00	73	2.920	-	-	-	40,000.00	73	2.920
<i>Subtotal: 2) Family of Infantry Weapons Systems</i>			-	-	<b>7.204</b>	-	-	<b>6.036</b>	-	-	<b>5.331</b>	-	-	<b>28.292</b>	-	-	-	-	-	<b>28.292</b>
<b>3) Escalation of Force/Mission Modules</b>																				
3.1) EoF Various Equipment (Various)	A		-	-	-	-	-	2.898	-	-	1.748	-	-	1.099	-	-	-	-	-	1.099

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Exhibit P-40a, Budget Item Justification For Aggregated Items: PB 2019 Navy														Date: February 2018							
Appropriation / Budget Activity / Budget Sub Activity: 1109N / 02 / 2					P-1 Line Item Number / Title: 2220 / Wpns & Cmbt Vehs under \$5 million									Aggregated Items Title: Wpns & Cmbt Vehs under \$5 million							
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 (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	
<i>Subtotal: 3) Escalation of Force/ Mission Modules</i>			-	-	0.000	-	-	2.898	-	-	1.748	-	-	1.099	-	-	-	-	-	1.099	
<b>4) Ocular Interruption</b>																					
4.1) Procurement of OI Systems <sup>(8)(†)</sup>	A		-	-	-	14,950.00	40	0.598	10,295.00	1,056	10.872	10,895.00	597	6.504	-	-	-	10,895.00	597	6.504	
4.2) Parts Kits	A		-	-	-	-	-	-	-	-	-	-	-	1.600	-	-	-	-	-	1.600	
4.3) Production Support	A		-	-	-	-	-	0.020	-	-	0.049	-	-	0.050	-	-	-	-	-	0.050	
<i>Subtotal: 4) Ocular Interruption</i>			-	-	0.000	-	-	0.618	-	-	10.921	-	-	8.154	-	-	-	-	-	8.154	
<b>5) Family of Incident Response Systems</b>																					
5.1) Family of Incident Response Systems	A		-	-	-	-	-	-	-	-	-	0.806	-	-	0.476	-	-	-	-	-	0.476
<i>Subtotal: 5) Family of Incident Response Systems</i>			-	-	0.000	-	-	-	-	-	-	0.806	-	-	0.476	-	-	-	-	-	0.476
<b>7) Prior Years Cumulative Funding</b>																					
7.1) Prior Years Cumulative Funding	A		-	-	81.178	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
<i>Subtotal: 7) Prior Years Cumulative Funding</i>			-	-	81.178	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
<b>Total</b>			-	-	99.795	-	-	10.463	-	-	19.616	-	-	40.687	-	-	-	-	-	40.687	

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

(†) indicates the presence of a P-5a

**Footnotes:**

- (1) The FY19 increase in funding for Company and Battalion Mortars procures the second year of a planned multi-year procurement of hardware and peripherals for a replacement in kind of the M32 Lightweight Handheld Mortar Ballistic Computer (LHMBC).
- (2) The FY19 increase for Family of Infantry Weapons supports the procurement and fielding of M27 Infantry Automatic Rifles (IAR), Modular Handgun Systems (MHS), Compact Semi-Automatic Sniper System (CSASS), and M320 Grenade Launchers.
- (3) Family of Infantry Weapons Systems Production Support provides funding for various elements related to the entire Infantry Weapons portfolio, including acquisition support, in-house travel in support of the Procurement phase of acquisition, and small purchases.
- (4) IAR unit price is an estimate based on market research.
- (5) IAR Accessories include SL-3, ancillary equipment, and spare parts
- (6) MHS accessories includes items such as customized holster, lights, etc.
- (7) Tow Objective Gunner Protection Kit 2.0 (TOGPK 2.0)
- (8) The OI unit price in each FY reflects the contract's step ladder pricing based on quantity in each order period.

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Exhibit P-5a, Procurement History and Planning: PB 2019 Navy									Date: February 2018			
Appropriation / Budget Activity / Budget Sub Activity: 1109N / 02 / 2				P-1 Line Item Number / Title: 2220 / Wpns & Cmbt Vehs under \$5 million					Aggregated Items: Wpns & Cmbt Vehs under \$5 million			
Item Number / Title [DODIC]	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 (\$)	Specs Avail Now?	Date Revision Available	RFP Issue Date
<b>2) Family of Infantry Weapons Systems</b>												
2.5) Infantry Automatic Rifle (IAR) (4)		2017	TBD @MARCORSYSCOM, Quantico, VA / MARCORSYSCOM	C / IDIQ	MARCORSYSCOM, Quantico, VA	Jun 2018	Mar 2019	1,428	1,150.00	Y		Mar 2018
2.5) Infantry Automatic Rifle (IAR) (4)		2019	TBD @MARCORSYSCOM, Quantico, VA / MARCORSYSCOM	C / IDIQ	MARCORSYSCOM, Quantico, VA	Nov 2018	Apr 2019	6,567	1,150.00	Y		Oct 2018
2.7) MK 13 Sniper Rifle		2018	NSWC, Crane / Crane, IN	WR	Crane, IN	Feb 2018	May 2018	356	12,042.13	Y		
2.8) M320 Grenade Launcher		2019	Capco LLC / Grand Junction, CO	C / FFP	Picatinny, NJ	Feb 2019	Aug 2019	623	1,300.00	Y		
2.9) Compact Semi Auto Sniper System (CSASS)		2019	Heckler & Koch@Ashburn, VA / Ashburn, VA	C / FFP	Special Operations Command, Tampa, FL	Feb 2019	May 2019	116	8,594.83	Y		
2.11) Modular Handgun System (MHS) Pistol		2019	Sig Sauer / Newington, NH	C / FFP	Picatinny, NJ	Jan 2019	Feb 2019	35,000	180.00	Y		
2.14) TOGPK 2.0 <sup>(7)</sup>		2019	Rock Island Arsenal / Rock Island, IL	MIPR	Rock Island, IL	Feb 2019	Jun 2019	73	40,000.00	Y		
<b>4) Ocular Interruption</b>												
4.1) Procurement of OI Systems <sup>(8)</sup>		2017	B.E. Meyers / Redmond, WA	C / IDIQ	Quantico, VA	Jul 2017	Nov 2017	40	14,950.00	Y		
4.1) Procurement of OI Systems <sup>(8)</sup>		2018	B.E. Meyers / Redmond, WA	C / IDIQ	Quantico, VA	Dec 2017	Feb 2018	1,056	10,295.00	Y		
4.1) Procurement of OI Systems <sup>(8)</sup>		2019	B.E. Meyers / Redmond, WA	C / IDIQ	Quantico, VA	Dec 2018	Feb 2019	597	10,895.00	Y		

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<b>Exhibit P-40, Budget Line Item Justification: PB 2019 Navy</b>								<b>Date:</b> February 2018				
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 1109N: Procurement, Marine Corps / BA 02: Weapons and combat vehicles / BSA 4: Other Support					<b>P-1 Line Item Number / Title:</b> 2061 / Modification Kits							
<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> 0206624M			
<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 (\$ in Millions)	736.439	17.530	17.778	22.904	0.000	22.904	23.321	38.138	45.748	57.346	-	959.204
Less PY Advance Procurement (\$ in Millions)	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) (\$ in Millions)	736.439	17.530	17.778	22.904	0.000	22.904	23.321	38.138	45.748	57.346	-	959.204
Plus CY Advance Procurement (\$ in Millions)	-	-	-	-	-	-	-	-	-	-	-	-
<b>Total Obligation Authority (\$ in Millions)</b>	<b>736.439</b>	<b>17.530</b>	<b>17.778</b>	<b>22.904</b>	<b>0.000</b>	<b>22.904</b>	<b>23.321</b>	<b>38.138</b>	<b>45.748</b>	<b>57.346</b>	<b>-</b>	<b>959.204</b>
<i>(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)</i>												
Initial Spares (\$ in Millions)	-	2.100	0.362	-	-	-	-	-	-	-	-	2.462
Flyaway Unit Cost (\$ in Thousands)	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost (\$ in Thousands)	-	-	-	-	-	-	-	-	-	-	-	-
<b>Description:</b>												
Weapons and combat vehicles includes improvements in the areas of survivability, lethality, mobility, command and control for the M1A1 tank and Improved Recovery Vehicle (IRV). Additionally, Engineering Change Proposals (ECPs) and upgrades address current and future reliability, sustainability, maintainability, and obsolescence issues to ensure mission readiness and effectiveness on the battlefield.												
M1A1 MOD KIT: The M1A1 Mod Kit line sustains and improves the technology of the M1A1 tank and Armored Vehicle Launched Bridge (AVLB). Funding supports the procurement, fielding, and testing of critical operational and safety related modifications used to enhance and maintain platform characteristics, such as reliability-availability-maintainability (RAM) and in operationally relevant attributes relating to survivability, lethality, mobility, and command and control. Additionally, funding also supports items such as miscellaneous tools and test items that support these platforms.												
Assault Bridging Modernization Program: Replaces the legacy M60 armored vehicle and launching system of the current AVLB with the chassis of an M1A1 main battle tank, configured with a modern launching system, to support the launch and recovery of assault bridging in support of MAGTF maneuver. This program will establish commonality across the DoD fleet, eliminates obsolescence and diminishing manufacturing sources and materiel shortfall issues, while increasing the operational effectiveness and readiness of the MAGTF.												
IRV: The Improved Recovery Vehicle (also known as the M88A2 Hercules) is the Marine Air-Ground Task Force's heavy lift, recovery, and battlefield maintenance asset. This line is designed to sustain and improve the technology of the IRV. Funding supports the procurement, fielding, and testing of critical operational and safety related modifications used to enhance and maintain platform characteristics, such as reliability-availability-maintainability (RAM) and in operationally relevant attributes relating to survivability, lethality, mobility, and command and control. Additionally, funding also supports items such as miscellaneous tools and test items that support the IRV.												
<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>			
Navy	Quantity	-	-	-	-	-	-	-	-	-	-	-
	Total Obligation Authority	17.037	15.270	20.392	-	20.392	20.752	35.504	43.056	54.598		
NR	Quantity	-	-	-	-	-	-	-	-	-	-	-
	Total Obligation Authority	0.493	2.508	2.512	-	2.512	2.569	2.634	2.692	2.748		
<b>Total:</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>-</b>

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<b>Exhibit P-40, Budget Line Item Justification: PB 2019 Navy</b>							<b>Date:</b> February 2018			
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 1109N: Procurement, Marine Corps / BA 02: Weapons and combat vehicles / BSA 4: Other Support				<b>P-1 Line Item Number / Title:</b> 2061 / Modification Kits						
<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> 0206624M	
<b>Line Item MDAP/MAIS Code:</b> 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	
Secondary Distribution	Total Obligation Authority	17.530	17.778	22.904	-	22.904	23.321	38.138	45.748	57.346

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Exhibit P-40, Budget Line Item Justification: PB 2019 Navy							Date: February 2018			
Appropriation / Budget Activity / Budget Sub Activity:				P-1 Line Item Number / Title:						
1109N: Procurement, Marine Corps / BA 02: Weapons and combat vehicles / BSA 4: Other Support				2061 / Modification Kits						
ID Code (A=Service Ready, B=Not Service Ready): A		Program Elements for Code B Items: N/A				Other Related Program Elements: 0206624M				
Line Item MDAP/MAIS Code: 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)	
P-40a	Modification Kits	P-5a, P-21			- / 645.520	- / 14.857	- / 14.883	- / 20.581	- / -	- / 20.581
P-5	1 / M88A2 Hercules				13 / 90.919	- / 2.673	- / 2.895	- / 2.323	- / 0.000	- / 2.323
P-40	Total Gross/Weapon System Cost				- / 736.439	- / 17.530	- / 17.778	- / 22.904	- / 0.000	- / 22.904

\*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. Title represents the P-40a Title when only the P-40a Summary/Total is shown.

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

**Justification:**

FY18 Base Appropriation Request: \$17.778M

FY 2018 M1A1 MOD KIT \$14.883M: Active \$12.582M; Reserves \$2.301M:

This funds modifications to the M1A1 Abrams tank (active and reserve components) to increase capabilities in survivability and lethality, specifically, to procure the Abrams Integrated Display and Targeting System (AIDATS) which will complete Full Rate Production (FRP). The increase in FY18 of \$2.306M will fund the procurement of Improved Side Armor (ISA), upgrades to the Gunner's Primary Sight Lower Panel, and transportability modifications to the Track Width Mine Plow (TWMP).

FY 2018 IRV \$2.895M: Active \$2.688M; Reserves \$0.207M:

Funds will continue the procurement of modifications kits and associated Systems Technical Support addressing modernization and mitigating obsolescence for the M88A2. They will also support modification of tools and test equipment unique to the product office's portfolio of combat vehicles such as Direct Support Electrical Systems Test Set (DSESTS) and echeloned tool kits. The increase of \$0.222M is Marine Corps Hardware Suites (MCHS) funding for the procurement of computer assets.

The FY 2019 funding request was reduced by (\$.199) million to reflect the Department of Navy's effort to support the Office of Management and Budget directed reforms for Efficiency and Effectiveness that include a lean, accountable, more efficient government.

FY19 Base Appropriation Request: \$22.904M

FY 2019 M1A1 MOD KIT \$14.881: Active \$12.580M; Reserves \$2.301M:

These funds will be used to support modifications to the M1A1 Abrams tank (active and reserve components) to increase capabilities in the operational attributes of survivability, lethality, mobility, and command and control. Funds support the procurement of efforts such as, Improved Side Armor (ISA), Gunner's Primary Sight Lower Panel (GPSLP), and Tactical Communications Modernization (TCM). ISA is a modification that significantly increases the survivability of the M1A1 tank. GPSLP is a modification to the tank's fire control system that enables the tank to fire two new types of ammunition being developed by the U.S. Army, increasing the lethality of the vehicle. TCM supports the procurement of new tactical radios to replace the obsolete AN/PRC 119 that is currently fielded, in order to meet the new capability requirement of a multi-band radio for the M1A1 tank by FY24.

FY 2019 Assault Bridging Modernization \$5.7M:

These funds will support the procurement of 1 Assault Bridge which replaces the legacy M60 armored vehicle and launching system of the current AVLB with the chassis of an M1A1 main battle tank, configured with a modern launching system, to support the launch and recovery of assault bridging in support of MAGTF maneuver. The increase in funds from FY18 to FY19 supports the procurement of an Assault Bridge.

FY 2019 IRV \$2.323M: Active \$2.112M; Reserves \$0.211M:

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<b>Exhibit P-40, Budget Line Item Justification:</b> PB 2019 Navy		<b>Date:</b> February 2018
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 1109N: Procurement, Marine Corps / BA 02: Weapons and combat vehicles / BSA 4: Other Support		<b>P-1 Line Item Number / Title:</b> 2061 / Modification Kits
<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> 0206624M
<b>Line Item MDAP/MAIS Code:</b> N/A		
These funds will support the continued procurement of modification kits and associated systems technical support addressing modernization, sustainment, and obsolescence mitigation for the IRV platform. Additionally, this funding will support modifications to tools and test equipment unique to the product office's portfolio of combat vehicles, such as the Direct Support Electrical Systems Test Set (DSESTS) and echeloned tool kits. The decrease of \$0.572M from FY18 to FY19 reduces the amount of DSESTS support the program office can provide.		
OCO: N/A		

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Exhibit P-40a, Budget Item Justification For Aggregated Items: PB 2019 Navy													Date: February 2018							
Appropriation / Budget Activity / Budget Sub Activity: 1109N / 02 / 4					P-1 Line Item Number / Title: 2061 / Modification Kits								Aggregated Items Title: Modification Kits							
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)			
<b>1) M1A1 Modification Kits</b>																				
1.1) Abrams Integrated Display and Targeting System <sup>(1)(t)</sup>	A		173.250	40	6.930	58.976	144	8.493	61.280	91	5.576	-	-	-	-	-	-			
1.2) Ammunition Racks	A		-	-	25.773	-	-	-	-	-	-	-	-	-	-	-	-			
1.3) Survivability - ISA <sup>(2)(t)</sup>	A		-	-	-	-	-	-	70.000	26	1.820	82.000	15	1.230	-	-	82.000	15	1.230	
1.4) Survivability Reserve - ISA <sup>(3)(t)</sup>	A		-	-	-	-	-	-	70.000	6	0.420	82.000	11	0.902	-	-	82.000	11	0.902	
1.5) Program Management Support			-	-	8.665	-	-	1.229	-	-	1.254	-	-	1.280	-	-	-	-	1.280	
1.6) Engineering Change Proposal	A		-	-	8.851	-	-	-	-	-	-	-	-	-	-	-	-	-		
1.7) Engineering Support	A		-	-	2.414	-	-	0.396	-	-	0.381	-	-	0.349	-	-	-	-	0.349	
1.8) Tank Commander's Single Handle <sup>(4)(t)</sup>	A		5.857	14	0.082	5.761	43	0.248	-	-	-	-	-	-	-	-	-	-		
1.9) Installation Kits <sup>(5)</sup>	A		-	-	-	-	-	2.517	-	-	2.446	-	-	0.896	-	-	-	-	0.896	
1.10) Installation Kits - Reserve <sup>(6)</sup>	A		-	-	-	-	-	0.300	-	-	0.186	-	-	-	-	-	-	-		
1.11) Production Spt <sup>(7)</sup>	A		-	-	0.009	-	-	1.674	-	-	-	-	-	-	-	-	-	-		
1.14) Lethality <sup>(8)</sup>	A		-	-	-	-	-	-	-	-	0.545	-	-	2.089	-	-	-	-	2.089	
1.15) Lethality - Reserve <sup>(9)</sup>	A		-	-	-	-	-	-	-	-	0.775	-	-	0.096	-	-	-	-	0.096	
1.16) Specialized Equipment <sup>(10)</sup>	A		-	-	-	-	-	-	-	-	0.560	-	-	1.100	-	-	-	-	1.100	
1.17) Specialized Equipment - Reserve <sup>(11)</sup>	A		-	-	-	-	-	-	-	-	0.920	-	-	-	-	-	-	-		
1.18) Communication Modernization <sup>(12)</sup>	A		-	-	-	-	-	-	-	-	-	-	-	5.636	-	-	-	-	5.636	
1.19) Communication Modernization - Reserve <sup>(13)</sup>	A		-	-	-	-	-	-	-	-	-	-	-	1.303	-	-	-	-	1.303	
<b>Subtotal: 1) M1A1 Modification Kits</b>	-	-	<b>52.724</b>	-	-	<b>14.857</b>	-	-	<b>14.883</b>	-	-	<b>14.881</b>	-	-	-	-	-	<b>14.881</b>		
<b>2) Prior Year Cumulative Funding</b>																				
2.1) Other Prior Year	A		-	-	592.796	-	-	-	-	-	-	-	-	-	-	-	-	-		

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Exhibit P-40a, Budget Item Justification For Aggregated Items: PB 2019 Navy														Date: February 2018						
Appropriation / Budget Activity / Budget Sub Activity: 1109N / 02 / 4						P-1 Line Item Number / Title: 2061 / Modification Kits								Aggregated Items Title: Modification Kits						
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)
<i>Subtotal: 2) Prior Year Cumulative Funding</i>			-	-	592.796	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
<b>3) Assault Bridging Modernization</b>																				
3.1) Assault Bridging Modernization	A		-	-	-	-	-	-	-	-	-	-	-	-	5.700	-	-	-	-	5.700
<i>Subtotal: 3) Assault Bridging Modernization</i>			-	-	0.000	-	-	-	-	-	-	-	-	-	5.700	-	-	-	-	5.700
<b>Total</b>			-	-	645.520	-	-	14.857	-	-	14.883	-	-	20.581	-	-	-	-	-	20.581
Note: Subtotals or Totals in this Exhibit P-40a may not be exact or sum exactly, due to rounding.																				
(t) indicates the presence of a P-5a																				
<b>Footnotes:</b>																				
(1) Program received 14NGREA funding in FY16 to procure 84 AIDATS units for the reserves. FY17 and FY18 were updated to reflect this change in acquisition strategy.																				
(2) ISA quantities & installation will vary annually based on depot level maintenance throughout at LOGCOM. FY19 ISA unit price increase is due to required (reusable) shipping containers.																				
(3) ISA quantities & installation will vary annually based on depot level maintenance throughput at LOGCOM																				
(4) Program received 14NGREA funds and bought out the reserve requirement for Tank Commander's Single Handle (TCSH) in FY16. The program bought out the active requirement in FY16 and FY17 at a lower unit price.																				
(5) Consolidated cost category for installation kits (AIDATS, ISA, and THS).																				
(6) Adjustment made to account for AIDATS, ISA, and THS installation kits. No Reserve Installation kits needed in FY19 for ISA. Installation will vary annually based on depot level maintenance throughput at LOGCOM																				
(7) Production support cost incorporated into unit price for ISA and Comm Modernization																				
(8) Funding supports upgrade modifications to the Gunners Primary Sight Lower Panel in the FEP System which is part of the implementation of ADL II, and to improve proficiency of the Advanced Gunnery Training System in the Tanks.																				
(9) Funding supports upgrade modifications to the Gunners Primary Sight Lower Panel in the FEP System which is part of the implementation of ADL II, and to improve proficiency of the Advanced Gunnery Training System in the Tanks. No Reserve units for GPS LP in FY19																				
(10) AIDATS and TCSH Cables and Brackets, TWMP Tie Down, Rear View Mirror Sensor, Cables, Driver Viewing Enhancement (DVE)																				
(11) AIDATS and TCSH Cables and Brackets, TWMP Tie Down, Rear View Mirror Sensor, Cables, Driver Viewing Enhancement (DVE)																				
(12) FY19/20 Increase of TCM is due to the acceleration of procurement to meet NSA Crypto Mandate by FY24.																				
(13) FY19/20 Increase of TCM is due to acceleration of procurement to meet NSA Crypto Mandate by FY24.																				

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Exhibit P-5a, Procurement History and Planning: PB 2019 Navy									Date: February 2018			
Appropriation / Budget Activity / Budget Sub Activity: 1109N / 02 / 4			P-1 Line Item Number / Title: 2061 / Modification Kits					Aggregated Items: Modification Kits				
Item Number / Title [DODIC]	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
<b>1) M1A1 Modification Kits</b>												
1.1) Abrams Integrated Display and Targeting System <sup>(1)(t)</sup>		2016	Raytheon / McKinney, TX	C / FFP	MCSC, Quantico, VA	Aug 2016	May 2017	40	173.250	N	Jan 2014	Mar 2014
1.1) Abrams Integrated Display and Targeting System <sup>(1)(t)</sup>		2017	Raytheon / McKinney, TX	C / FFP	MCSC, Quantico, VA	Aug 2017	May 2018	144	58.976	N	Jan 2014	Mar 2014
1.1) Abrams Integrated Display and Targeting System <sup>(1)(t)</sup>		2018	Raytheon / McKinney, TX	C / FFP	MCSC, Quantico, VA	Aug 2018	May 2019	91	61.280	N	Jan 2014	Mar 2014
1.3) Survivability - ISA <sup>(2)</sup>		2018	TACOM@Warren, MI / Warren, MI	MIPR	TACOM, Warren, MITACOM, Warren, MI	Dec 2017	Sep 2018	26	70.000	N	Jun 2017	Jul 2017
1.3) Survivability - ISA <sup>(2)</sup>		2019	TACOM@Warren, MI / Warren, MI	MIPR	TACOM, Warren, MITACOM, Warren, MI	Dec 2018	Sep 2019	15	82.000	N		Jul 2017
1.4) Survivability Reserve - ISA <sup>(3)</sup>		2018	TACOM, Warren, MI@Warren, MI / Warren, MI	MIPR	TACOM, Warren MITACOM, Warren MI	Dec 2017	Sep 2018	6	70.000	N	Jun 2017	Jul 2017
1.4) Survivability Reserve - ISA <sup>(3)</sup>		2019	TACOM, Warren, MI@Warren, MI / Warren, MI	MIPR	TACOM, Warren MI	Dec 2018	Sep 2019	11	82.000	N		
1.8) Tank Commander's Single Handle <sup>(4)</sup>		2016	Real Time Labs / Boca Raton, FL	C / FFP	MCSC, Quantico, VA	Sep 2016	Jun 2017	14	5.857	N	Feb 2016	Mar 2015
1.8) Tank Commander's Single Handle <sup>(4)</sup>		2017	Real Time Labs / Boca Raton, FL	C / FFP	MCSC, Quantico, VA	Apr 2017	Jan 2018	43	5.761	N	Feb 2016	Mar 2015

(†) indicates the presence of a P-21

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Exhibit P-21, Production Schedule: PB 2019 Navy																				Date: February 2018																								
Appropriation / Budget Activity / Budget Sub Activity: 1109N / 02 / 4										P-1 Line Item Number / Title: 2061 / Modification Kits										Aggregated Items: Modification Kits																								
Items (Units in Each)							Fiscal Year 2016												Fiscal Year 2017											B A L A N C E														
O C R O #	M F R Y	SERVICE	PROC QTY	ACCEPT PRIOR TO 1 OCT 2015	BAL DUE AS OF 1 OCT	O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P	O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P															
O C R O #	FY					O C T	N O V	D E C	J A N	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															
1) M1A1 Modification Kits																																												
1.1) Abrams Integrated Display and Targeting System <sup>(1)</sup>																																												
4	2016	NAVY	40	0	40															A -	-	-	-	-	-	-	-	-	3	3	3	3	25											
4	2017	NAVY	144	0	144																														A -	-	144							
4	2018	NAVY	91	0	91															O C T	N O V	D E C	J A N	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 Navy**

Date: February 2018

**Appropriation / Budget Activity / Budget Sub Activity:**  
1109N / 02 / 4

**P-1 Line Item Number / Title:**

## **Aggregated Items: Modification Kits**

Items (Units in Each)					Fiscal Year 2018												Fiscal Year 2019												Balance			
O C O #	M F R #	FY	Service	Proc Qty	Accept Prior to 1 Oct 2017	Bal Due as of 1 Oct	Calendar Year 2018												Calendar Year 2019												Balance	
							OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP		
1) M1A1 Modification Kits																																
1.1) Abrams Integrated Display and Targeting System																																
4	2016	NAVY	40	15	25	3	3	3	4	4	4	4	4																	0		
4	2017	NAVY	144	0	144	-	-	-	-	-	-	-	-	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	0			
4	2018	NAVY	91	0	91																									40		
						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 Navy																			Date: February 2018													
Appropriation / Budget Activity / Budget Sub Activity: 1109N / 02 / 4										P-1 Line Item Number / Title: 2061 / Modification Kits										Aggregated Items: Modification Kits												
Items (Units in Each)							Fiscal Year 2020												Fiscal Year 2021												B A L A N C E	
O C R O #	M F R Y	SERVICE	PROC QTY	ACCEPT PRIOR TO 1 OCT 2019	BAL DUE AS OF 1 OCT	O C T	N O V	D E C	J A N	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			
4	2016	NAVY	40	40	0																										0	
4	2017	NAVY	144	144	0																										0	
4	2018	NAVY	91	51	40	10	10	10	10																					0		
							O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P	O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P		
1) M1A1 Modification Kits																																
1.1) Abrams Integrated Display and Targeting System <sup>(1)</sup>																															0	
																																0
																																0

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<b>Exhibit P-21, Production Schedule: PB 2019 Navy</b>								<b>Date:</b> February 2018				
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 1109N / 02 / 4			<b>P-1 Line Item Number / Title:</b> 2061 / Modification Kits					<b>Aggregated Items:</b> Modification Kits				
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 - McKinney, TX	12	108	400	0	0	9	9	0	0	9	9

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

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

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<b>Exhibit P-5, Cost Analysis:</b> PB 2019 Navy													<b>Date:</b> February 2018					
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 1109N / 02 / 4			<b>P-1 Line Item Number / Title:</b> 2061 / Modification Kits										<b>Item Number / Title [DODIC]:</b> 1 / M88A2 Hercules					
<b>ID Code</b> (A=Service Ready, B=Not Service Ready) :													<b>MDAP/MAIS Code:</b>					
<b>Resource Summary</b>				<b>Prior Years</b>			<b>FY 2017</b>		<b>FY 2018</b>		<b>FY 2019 Base</b>		<b>FY 2019 OCO</b>		<b>FY 2019 Total</b>			
Procurement Quantity ( <i>Units in Each</i> )							13		-		-		-		-			
Gross/Weapon System Cost (\$ in Millions)							90.919		2.673		2.895		2.323		0.000		2.323	
Less PY Advance Procurement (\$ in Millions)							-		-		-		-		-		-	
Net Procurement (P-1) (\$ in Millions)							90.919		2.673		2.895		2.323		0.000		2.323	
Plus CY Advance Procurement (\$ in Millions)							-		-		-		-		-		-	
<b>Total Obligation Authority</b> (\$ in Millions)							90.919		2.673		2.895		2.323		0.000		2.323	
(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)																		
Initial Spares (\$ in Millions)							-		-		-		-		-		-	
Gross/Weapon System Unit Cost (\$ in Thousands)							6,993.769		-		-		-		-		-	
Note: Subtotals or Totals in this Exhibit P-5 may not be exact or sum exactly due to rounding.																		
<b>Cost Elements</b>	<b>Prior Years</b>			<b>FY 2017</b>			<b>FY 2018</b>			<b>FY 2019 Base</b>			<b>FY 2019 OCO</b>			<b>FY 2019 Total</b>		
	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)
Hardware Cost																		
Recurring Cost																		
1.1.1) M88A2 Hercules	5,791.615	13	75.291	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000
1.1.2) Mod Kits (Various Types of Kits)	-	-	6.532	-	-	0.612	-	-	0.631	-	-	0.644	-	-	0.000	-	-	0.644
1.1.3) Mod Kits (Various Types of Kits) - Reserve	-	-	0.635	-	-	0.193	-	-	0.197	-	-	0.201	-	-	0.000	-	-	0.201
1.1.4) Computer Refresh <sup>(14)</sup>	-	-	0.000	-	-	0.000	-	-	0.157	-	-	0.160	-	-	0.000	-	-	0.160
1.1.5) Computer Refresh - Reserve <sup>(15)</sup>	-	-	0.000	-	-	0.000	-	-	0.010	-	-	0.010	-	-	0.000	-	-	0.010
<i>Subtotal: Recurring Cost</i>	-	-	<b>82.458</b>	-	-	<b>0.805</b>	-	-	<b>0.995</b>	-	-	<b>1.015</b>	-	-	<b>0.000</b>	-	-	<b>1.015</b>
<i>Subtotal: Hardware Cost</i>	-	-	<b>82.458</b>	-	-	<b>0.805</b>	-	-	<b>0.995</b>	-	-	<b>1.015</b>	-	-	<b>0.000</b>	-	-	<b>1.015</b>
Support Cost																		
2.1) M88A2 Hercules System Technical Support Contract	-	-	3.834	-	-	1.214	-	-	1.254	-	-	1.188	-	-	0.000	-	-	1.188
2.2) M88A2 Hercules System Technical Support Contract - Reserve	-	-	0.153	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000
2.3) DSESTS	-	-	4.474	-	-	0.654	-	-	0.646	-	-	0.120	-	-	0.000	-	-	0.120
<i>Subtotal: Support Cost</i>	-	-	<b>8.461</b>	-	-	<b>1.868</b>	-	-	<b>1.900</b>	-	-	<b>1.308</b>	-	-	<b>0.000</b>	-	-	<b>1.308</b>

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Exhibit P-5, Cost Analysis: PB 2019 Navy													Date: February 2018													
Appropriation / Budget Activity / Budget Sub Activity: 1109N / 02 / 4				P-1 Line Item Number / Title: 2061 / Modification Kits									Item Number / Title [DODIC]: 1 / M88A2 Hercules													
ID Code (A=Service Ready, B=Not Service Ready) :													MDAP/MAIS Code:													
Note: Subtotals or Totals in this Exhibit P-5 may not be exact or sum exactly due to rounding.																										
Cost Elements	Prior Years			FY 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	6,993.769	13	90.919	-	-	2.673	-	-	2.895	-	-	2.323	-	-	0.000	-	-	2.323								

**Footnotes:**

(14) MCHS

(15) MCHS

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<b>Exhibit P-40, Budget Line Item Justification: PB 2019 Navy</b>										<b>Date:</b> February 2018			
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 1109N: Procurement, Marine Corps / BA 03: Guided missiles and equipment / BSA 1: Guided Missiles										<b>P-1 Line Item Number / Title:</b> 3006 / Ground Based Air Defense (GBAD)			
<b>ID Code</b> (A=Service Ready, B=Not Service Ready): A										<b>Program Elements for Code B Items:</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 (\$ in Millions)	84.426	9.170	9.432	18.334	0.000	18.334	176.521	197.877	226.815	219.396	21.675	963.646	
Less PY Advance Procurement (\$ in Millions)	-	-	-	-	-	-	-	-	-	-	-	-	
Net Procurement (P-1) (\$ in Millions)	84.426	9.170	9.432	18.334	0.000	18.334	176.521	197.877	226.815	219.396	21.675	963.646	
Plus CY Advance Procurement (\$ in Millions)	-	-	-	-	-	-	-	-	-	-	-	-	
<b>Total Obligation Authority (\$ in Millions)</b>	<b>84.426</b>	<b>9.170</b>	<b>9.432</b>	<b>18.334</b>	<b>0.000</b>	<b>18.334</b>	<b>176.521</b>	<b>197.877</b>	<b>226.815</b>	<b>219.396</b>	<b>21.675</b>	<b>963.646</b>	
(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)													
Initial Spares (\$ in Millions)	-	-	-	-	-	-	-	-	-	-	-	-	
Flyaway Unit Cost (\$ in Dollars)	-	-	-	-	-	-	-	-	-	-	-	-	
Gross/Weapon System Unit Cost (\$ in Dollars)	-	-	-	-	-	-	-	-	-	-	-	-	
<b>Description:</b> Ground Based Air Defense-Transformation/Stinger Sustainment (GBAD-T/GBAD-SS) supports the Low Altitude Air Defense (LAAD) Battalion's missions of Short Range Air Defense (SHORAD) and provides the Marine Air Ground Task Force (MAGTF), to include, Bases, Posts and Stations, the necessary Force Protection to defeat the full spectrum of threats associated with the Marine Corps Low-Altitude Air Defense mission, to include hostile aerial threats from Unmanned Aerial Systems (UAS). The Advanced Man-Portable Air Defense System (A-MANPADS) Fire Unit is a mobile, Stinger missile-based low altitude surface-to-air weapons system designed to provide close-in short range air defense. A-MANPADS assets are organic to the Low Altitude Air-Defense (LAAD) Battalion of the Marine Air Control Group (MACG). LAAD Battalions support the Marine Air Ground Task Force by defending forward combat areas, maneuver forces, vital areas and installations, and units engaged in special or independent operations. The LAAD Battalion consists of a headquarters and two A-MANPADS firing batteries. Each firing battery, in turn, consists of a battery headquarters and two A-MANPADS firing platoons. Firing platoons include a platoon headquarters and three firing sections, the smallest tactical units of the LAAD Battalion. The A-MANPADS Section is comprised of a Section Leader and five Fire Units. The Section Leader oversees the deployment of the Fire Units and directs their fires in support of the overall air defense plan. With the GBAD Program rapidly approaching the out of production phase for the A-MANPADS Increment I and the end of life for the Stinger missile, a major service-life extension was conducted in order to mitigate the potential gap between the current and follow-on weapon system. Additionally, GBAD requires a replacement of the Identification Friend or Foe (IFF) Belt Pack (AN/PPX-3B) that will be procured beginning in FY19. In order to field a more survivable On-the-Move (OTM) command and control (C2) and kinetic/non-kinetic capability, that will keep pace with supported operational forces, the Marine Corps will transition from the HMMWV vehicular platform with an AMANPADS capability, to a JLTV platform providing a Maneuver-Short Range Air Defense (M-SHORAD) capability called the Marine Air Defense Integrated System (MADIS). MADIS will be accomplished with the procurement and installation of Government Furnished C-UAS Equipment on a Joint Lightweight Tactical Vehicle (JLTV) beginning in FY20. Last of all, the Marine Corps will procure and install a C-UAS/GBAD capability at a Base, Post or Station every year beginning in FY20. With the proliferation of both military and commercial UAS platforms, the program anticipates pursuing and acquiring GBAD Future Weapons System platforms with Counter-UAS capability now and for the foreseeable future.													

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Exhibit P-40, Budget Line Item Justification: PB 2019 Navy							Date: February 2018		
Appropriation / Budget Activity / Budget Sub Activity:				P-1 Line Item Number / Title:					
1109N: Procurement, Marine Corps / BA 03: Guided missiles and equipment / BSA 1: Guided Missiles				3006 / Ground Based Air Defense (GBAD)					
ID Code (A=Service Ready, B=Not Service Ready): A			Program Elements for Code B Items: N/A				Other Related Program Elements: 0206313M		
Line Item MDAP/MAIS Code: 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)
P-5	1 / Ground Based Air Defense (GBAD)	P-5a, P-21			- / 84.426	- / 9.170	- / 9.432	- / 18.334	- / 0.000
P-40	Total Gross/Weapon System Cost				- / 84.426	- / 9.170	- / 9.432	- / 18.334	- / 0.000
*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.									
<b>Justification:</b>									
FY2018 Baseline Appropriation Request:									
Ground Based Air Defense-Transformation (GBAD-T) \$9.432M - FY18 active funding will support continued A-MANPADS upgrade and fielding of the Fire Unit Vehicle (FUV). The increase in funding of \$.262M from FY17 to FY18 is to initiate the upgrade and fielding of Section Leader Vehicle (SLV) procurement which provides the Low Altitude Air Defense (LAAD) Battalions with an armored vehicle variant that enables the LAAD Gunners to deploy in support of all Operational Forces.									
FY2019 Baseline Appropriation Request:									
Ground Based Air Defense-Stinger Sustainment (GBAD-SS) \$18.334M - FY19 funding will support the initial procurement of Identification Friend or Foe (IFF) Mode V belt packs. The increase from FY18 to FY19 of \$8.902M, provides for the initial procurement of 157 Identification Friend or Foe (IFF) Mode V Belt Packs and associated support.									
OCO:									
FY2019 Overseas Contingency Operations Request (OCO): N/A									

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<b>Exhibit P-5, Cost Analysis:</b> PB 2019 Navy													<b>Date:</b> February 2018						
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 1109N / 03 / 1			<b>P-1 Line Item Number / Title:</b> 3006 / Ground Based Air Defense (GBAD)										<b>Item Number / Title [DODIC]:</b> 1 / Ground Based Air Defense (GBAD)						
<b>ID Code</b> (A=Service Ready, B=Not Service Ready) :													<b>MDAP/MAIS Code:</b>						
<b>Resource Summary</b>				<b>Prior Years</b>			<b>FY 2017</b>		<b>FY 2018</b>		<b>FY 2019 Base</b>		<b>FY 2019 OCO</b>		<b>FY 2019 Total</b>				
Procurement Quantity ( <i>Units in Each</i> )				-			-		-		-		-		-				
Gross/Weapon System Cost (\$ in Millions)				84.426			9.170		9.432		18.334		0.000		18.334				
Less PY Advance Procurement (\$ in Millions)				-			-		-		-		-		-				
Net Procurement (P-1) (\$ in Millions)				84.426			9.170		9.432		18.334		0.000		18.334				
Plus CY Advance Procurement (\$ in Millions)				-			-		-		-		-		-				
<b>Total Obligation Authority</b> (\$ in Millions)				84.426			9.170		9.432		18.334		0.000		18.334				
(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 Dollars)				-			-		-		-		-		-				
Note: Subtotals or Totals in this Exhibit P-5 may not be exact or sum exactly due to rounding.																			
<b>Cost Elements</b>	<b>Prior Years</b>			<b>FY 2017</b>			<b>FY 2018</b>			<b>FY 2019 Base</b>			<b>FY 2019 OCO</b>			<b>FY 2019 Total</b>			
	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	
Flyaway Cost																			
Recurring Cost																			
1.1.1) Advanced ManPads Integration (A-MANPADS) FUV Recurring <sup>(1)</sup>	149,117.65	17	2.535	147,917.00	60	8.875	150,858.00	16	2.414	-	-	-	-	-	-	-	-		
1.1.2) Advanced ManPads Integration (A-MANPADS) SLV Recurring <sup>(2)</sup>	-	-	-	-	-	-	494,587.00	14	6.924	-	-	-	-	-	-	-	-		
1.1.3) Advanced ManPads (A-MANPADS) Prior Years Cumulative Funding	-	-	16.270	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
1.1.4) Stinger Service Life Extension Program (SLEP) Recurring <sup>(4)</sup>	45,621.15	1,135	51.780	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
1.1.6) Identification Friend or Foe (IFF) Recurring <sup>(3)</sup>	-	-	-	-	-	-	-	-	114,590.43	157	17.991	-	-	-	114,590.43	157	17.991		
<i>Subtotal: Recurring Cost</i>	-	-	70.585	-	-	8.875	-	-	9.338	-	-	17.991	-	-	-	-	17.991		
Non Recurring Cost																			
1.2.1) Advanced ManPads Integration	-	-	0.192	-	-	0.116	-	-	0.094	-	-	-	-	-	-	-	-		

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Exhibit P-5, Cost Analysis: PB 2019 Navy													Date: February 2018														
Appropriation / Budget Activity / Budget Sub Activity: 1109N / 03 / 1			P-1 Line Item Number / Title: 3006 / Ground Based Air Defense (GBAD)										Item Number / Title [DODIC]: 1 / Ground Based Air Defense (GBAD)														
ID Code (A=Service Ready, B=Not Service Ready) :													MDAP/MAIS Code:														
Note: Subtotals or Totals in this Exhibit P-5 may not be exact or sum exactly due to rounding.																											
Cost Elements	Prior Years			FY 2017			FY 2018			FY 2019 Base			FY 2019 OCO			FY 2019 Total											
	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)									
(A-MANPADS) Non-Recurring <sup>(4)</sup>	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-									
1.2.6) GBAD Prior Years Flyaway/Non Recurring Cumulative Funding	-	-	9.532	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-									
<i>Subtotal: Non Recurring Cost</i>	-	-	9.724	-	-	0.116	-	-	0.094	-	-	-	-	-	-	-	-	-									
<i>Subtotal: Flyaway Cost</i>	-	-	80.309	-	-	8.991	-	-	9.432	-	-	17.991	-	-	-	-	-	17.991									
Support Cost																											
2.1) Support Elements	-	-	1.795	-	-	0.179	-	-	-	-	-	-	-	-	-	-	-	-									
2.2) Program Management	-	-	1.528	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-									
2.3) Identification Friend or Foe (IFF) Support	-	-	-	-	-	-	-	-	-	-	-	0.343	-	-	-	-	-	0.343									
2.4) GBAD Prior Years Cumulative Support Funding	-	-	0.794	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-									
<i>Subtotal: Support Cost</i>	-	-	4.117	-	-	0.179	-	-	-	-	-	0.343	-	-	-	-	-	0.343									
<b>Gross/Weapon System Cost</b>	-	-	84.426	-	-	9.170	-	-	9.432	-	-	18.334	-	-	-	0.000	-	18.334									

(†) indicates the presence of a P-5a

**Footnotes:**

- (1) In CE 1.1.1, FY18 unit cost increase is due to reduced quantities compared to FY17.
- (2) SLV production will be completed in FY18.
- (3) The procurement of IFF Mode V belt packs has been accelerated based on guidance provided in JROCM 047-07.
- (4) SLV production will be completed in FY18.

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Exhibit P-5a, Procurement History and Planning: PB 2019 Navy								Date: February 2018				
Appropriation / Budget Activity / Budget Sub Activity: 1109N / 03 / 1			P-1 Line Item Number / Title: 3006 / Ground Based Air Defense (GBAD)					Item Number / Title [DODIC]: 1 / Ground Based Air Defense (GBAD)				
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 (\$)	Specs Avail Now?	Date Revision Available	RFP Issue Date
1.1.1) Advanced ManPads Integration (A-MANPADS) FUV Recurring <sup>(†)</sup>		2016	NSWC, Crane / Crane, IN	SS / FFP	US Navy, Crane, IN	Jan 2016	Jul 2016	17	149,118.00	Y		Oct 2015
1.1.1) Advanced ManPads Integration (A-MANPADS) FUV Recurring <sup>(†)</sup>		2017	NSWC, Crane / Crane, IN	SS / FFP	US Navy, Crane, IN	Jan 2017	Jul 2017	60	147,917.00	Y		Oct 2015
1.1.1) Advanced ManPads Integration (A-MANPADS) FUV Recurring <sup>(†)</sup>		2018	NSWC, Crane / Crane, IN	SS / FFP	US Navy, Crane, IN	Jan 2018	Jul 2018	16	150,858.00	Y		Oct 2015
1.1.2) Advanced ManPads Integration (A-MANPADS) SLV Recurring <sup>(†)</sup>		2018	NSWC, Crane / Crane, IN	SS / FFP	Navy/Crane, IN	Jan 2018	Jul 2018	14	494,587.00	Y		Oct 2015
1.1.4) Stinger Service Life Extension Program (SLEP) Recurring <sup>(†)</sup>		2014	Raytheon, Tuscon, AZ / USARMY Huntsville, AL	SS / FFPLOE	US Army, Huntsville, AL	Sep 2014	Sep 2016	420	44,314.29	Y		Feb 2012
1.1.4) Stinger Service Life Extension Program (SLEP) Recurring <sup>(†)</sup>		2015	Raytheon, Tuscon, AZ / USARMY Huntsville, AL	SS / FFPLOE	US Army, Huntsville, AL	Apr 2015	Jan 2017	631	46,387.79	Y		Feb 2012
1.1.4) Stinger Service Life Extension Program (SLEP) Recurring <sup>(†)</sup>		2016	Raytheon, Tuscon, AZ / USARMY Huntsville, AL	SS / FFPLOE	US Army, Huntsville, AL	Dec 2015	Sep 2017	84	46,387.79	Y		Feb 2012
1.1.6) Identification Friend or Foe (IFF) Recurring <sup>(†)</sup>		2019	USARMY <sup>(5)</sup> / Aberdeen Proving Ground, MD	C / FFP	Aberdeen Proving Ground, MD	Mar 2019	Mar 2020	157	114,590.43	Y		Mar 2017

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

**Footnotes:**

<sup>(5)</sup> Date of FY19 First Delivery is based on the Army/DLA Contract anticipated award date of March 2019.

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Exhibit P-21, Production Schedule: PB 2019 Navy																					Date: February 2018																							
Appropriation / Budget Activity / Budget Sub Activity: 1109N / 03 / 1										P-1 Line Item Number / Title: 3006 / Ground Based Air Defense (GBAD)										Item Number / Title [DODIC]: 1 / Ground Based Air Defense (GBAD)																								
Cost Elements (Units in Each)							Fiscal Year 2014												Fiscal Year 2015																									
O C R O #	M F R Y	SERVICE	PROC QTY	ACCEPT PRIOR TO 1 OCT 2013	BAL DUE AS OF 1 OCT	FY	O C T	N O V	D E C	J A N	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	B A L A N C E													
1.1.1) Advanced ManPads Integration (A-MANPADS) FUV Recurring <sup>(1)</sup>							Calendar Year 2014												Calendar Year 2015																									
1	2016	NAVY	17	0	17																														17									
1	2017	NAVY	60	0	60																														60									
1	2018	NAVY	16	0	16																															16								
1.1.2) Advanced ManPads Integration (A-MANPADS) SLV Recurring <sup>(2)</sup>																																												
2	2018	NAVY	14	0	14																															14								
1.1.4) Stinger Service Life Extension Program (SLEP) Recurring																																												
3	2014	NAVY	420	0	420															A -	-	-	-	-	-	-	-	-	-	-	-	-	-	420										
3	2015	NAVY	631	0	631															A -	-	-	-	-	-	-	-	-	-	-	-	-	-	631										
3	2016	NAVY	84	0	84																															84								
1.1.6) Identification Friend or Foe (IFF) Recurring <sup>(3)</sup>																																												
4	2019	NAVY	157	0	157															O C T	N O V	D E C	J A N	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	157

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Exhibit P-21, Production Schedule: PB 2019 Navy																			Date: February 2018																				
Appropriation / Budget Activity / Budget Sub Activity:									P-1 Line Item Number / Title:										Item Number / Title [DODIC]:																				
1109N / 03 / 1									3006 / Ground Based Air Defense (GBAD)										1 / Ground Based Air Defense (GBAD)																				
Cost Elements (Units in Each)												Fiscal Year 2016												Fiscal Year 2017															
O C O #	M F R	FY	SERVICE	PROC QTY	ACCEPT PRIOR TO 1 OCT 2015	BAL DUE AS OF 1 OCT	O C T	N O V	D E C	J A N	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	B A L A N C E								
Calendar Year 2016												Calendar Year 2017												Calendar Year 2017															
1.1.1) Advanced ManPads Integration (A-MANPADS) FUV Recurring <sup>(1)</sup>																																							
1	2016	NAVY	17	0	17		A -	-	-	-	-	-	-	-	-	17																				0			
1	2017	NAVY	60	0	60																																	0	
1	2018	NAVY	16	0	16																																	16	
1.1.2) Advanced ManPads Integration (A-MANPADS) SLV Recurring <sup>(2)</sup>																																							
1.1.4) Stinger Service Life Extension Program (SLEP) Recurring																																							14
1.1.6) Identification Friend or Foe (IFF) Recurring <sup>(3)</sup>																																							
4	2019	NAVY	157	0	157																																	157	
							O C T	N O V	D E C	J A N	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 Navy																				Date: February 2018																																																																																																																																																													
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3	2015	NAVY	631	525	106	85	21																								0																																																																																																																																																		
3	2016	NAVY	84	5	79	5	64	10																							0																																																																																																																																																		
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**UNCLASSIFIED**

Exhibit P-21, Production Schedule: PB 2019 Navy																					Date: February 2018																						
Appropriation / Budget Activity / Budget Sub Activity: 1109N / 03 / 1										P-1 Line Item Number / Title: 3006 / Ground Based Air Defense (GBAD)										Item Number / Title [DODIC]: 1 / Ground Based Air Defense (GBAD)																							
Cost Elements (Units in Each)							Fiscal Year 2020												Fiscal Year 2021																								
O C R O #	M F R Y	SERVICE	PROC QTY	ACCEPT PRIOR TO 1 OCT 2019	BAL DUE AS OF 1 OCT	O C T	N O V	D E C	J A N	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	B A L A N C E													
1.1.1) Advanced ManPads Integration (A-MANPADS) FUV Recurring <sup>(1)</sup>							Calendar Year 2020												Calendar Year 2021																								
1	2016	NAVY	17	17	0																									0													
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4	2019	NAVY	157	0	157	-	-	-	-	-	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	7												0			
							O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P	O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P													

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Exhibit P-21, Production Schedule: PB 2019 Navy										Date: February 2018		
Appropriation / Budget Activity / Budget Sub Activity: 1109N / 03 / 1			P-1 Line Item Number / Title: 3006 / Ground Based Air Defense (GBAD)					Item Number / Title [DODIC]: 1 / Ground Based Air Defense (GBAD)				
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	NSWC, Crane - Crane, IN				0	4	6	10	0	3	6	9
2	NSWC, Crane - Crane, IN				0	4	6	10	0	3	6	9
3	Raytheon, Tuscon, AZ - USARMY Huntsville, AL				0	4	24	28	0	3	21	24
4	USARMY <sup>(5)</sup> - Aberdeen Proving Ground, MD	100	180	360	0	6	12	18	0	6	12	18

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

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

**Footnotes:**

<sup>(5)</sup> Date of FY19 First Delivery is based on the Army/DLA Contract anticipated award date of March 2019.

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<b>Exhibit P-40, Budget Line Item Justification: PB 2019 Navy</b>										<b>Date:</b> February 2018			
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 1109N: Procurement, Marine Corps / BA 03: Guided missiles and equipment / BSA 1: Guided Missiles										<b>P-1 Line Item Number / Title:</b> 3011 / Anti-Armor Missile-Javelin			
<b>ID Code (A=Service Ready, B=Not Service Ready): A</b>										<b>Program Elements for Code B Items: N/A</b>			
<b>Line Item MDAP/MAIS Code: N/A</b>										<b>Other Related Program Elements: N/A</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> )	1,257	531	233	5	-	5	97	114	1	3	Continuing	Continuing	
Gross/Weapon System Cost (\$ in Millions)	208.234	79.624	43.992	3.020	0.000	3.020	20.222	19.892	1.058	2.441	Continuing	Continuing	
Less PY Advance Procurement (\$ in Millions)	-	-	-	-	-	-	-	-	-	-	-	-	
Net Procurement (P-1) (\$ in Millions)	208.234	79.624	43.992	3.020	0.000	3.020	20.222	19.892	1.058	2.441	Continuing	Continuing	
Plus CY Advance Procurement (\$ in Millions)	-	-	-	-	-	-	-	-	-	-	-	-	
<b>Total Obligation Authority (\$ in Millions)</b>	<b>208.234</b>	<b>79.624</b>	<b>43.992</b>	<b>3.020</b>	<b>0.000</b>	<b>3.020</b>	<b>20.222</b>	<b>19.892</b>	<b>1.058</b>	<b>2.441</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 (\$ in Millions)	-	-	-	-	-	-	-	-	-	-	-	-	-
Flyaway Unit Cost (\$ in Thousands)	165.660	149.951	188.807	604.000	-	604.000	208.474	174.491	1,058.000	813.667	-	-	-
Gross/Weapon System Unit Cost (\$ in Thousands)	165.660	149.951	188.807	604.000	-	604.000	208.474	174.491	1,058.000	813.667	Continuing	Continuing	
<b>Description:</b>													
Javelin provides the US Army and 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 full spectrum 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 again without the need to track targets. The Javelin provides enhanced lethality through the use of a tandem warhead which will defeat all current armor threats. It is effective against both stationary and moving targets. This system also provides defensive capability against attacking/hovering helicopters. The performance improvements in current production Javelin Block I CLUs are: increased target identification range, increased surveillance time with new battery and software management and external RS-170 interface for video output. The performance improvements in current production Javelin Block I missiles are: increased probability of hit/kill at 2500m, improved warhead lethality, and reduced time of flight. 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>			
Navy	Quantity	531	233	5	-	5	97	114	1	3			
	Total Obligation Authority	79.459	43.818	2.853	-	2.853	20.040	19.707	0.907	2.266			
NR	Quantity	-	-	-	-	-	-	-	-	-			
	Total Obligation Authority	0.165	0.174	0.167	-	0.167	0.182	0.185	0.151	0.175			
<b>Total: Secondary Distribution</b>	<b>Quantity</b>	-	-	-	-	-	-	-	-	-			
	<b>Total Obligation Authority</b>	<b>79.624</b>	<b>43.992</b>	<b>3.020</b>	<b>-</b>	<b>3.020</b>	<b>20.222</b>	<b>19.892</b>	<b>1.058</b>	<b>2.441</b>			

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Exhibit P-40, Budget Line Item Justification: PB 2019 Navy							Date: February 2018		
Appropriation / Budget Activity / Budget Sub Activity:				P-1 Line Item Number / Title:					
1109N: Procurement, Marine Corps / BA 03: Guided missiles and equipment / BSA 1: Guided Missiles				3011 / Anti-Armor Missile-Javelin					
ID Code (A=Service Ready, B=Not Service Ready): A			Program Elements for Code B Items: N/A				Other Related Program Elements: N/A		
Line Item MDAP/MAIS Code: N/A									
Exhibits Schedule				Prior Years	FY 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)
P-5	1 / JAVELIN	P-5a, P-21			1,257 / 208.234	531 / 79.624	233 / 43.992	5 / 3.020	- / 0.000
P-40	Total Gross/Weapon System Cost				1,257 / 208.234	531 / 79.624	233 / 43.992	5 / 3.020	- / 0.000
*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.									
<b>Justification:</b> FY 2018 Base Appropriation Request: \$43.992M (active \$43.818M, reserve \$0.174M) Guided Missiles - Javelin - Funding supports the procurement of 233 Javelin missiles to replenish inventory due to end of life service conditions. Funding also provides for engineering and logistics support of the Javelin system, updating of reserve equipment, and program management support.									
FY 2019 Base Appropriation Request: \$3.020M (active \$2.853M, reserve \$0.167M) -Guided Missiles - Javelin - Funding supports the procurement of 5 Javelin missiles to replenish inventory due to end of life service conditions. Funding also provides for engineering and logistics support of the Javelin system, updating of reserve equipment, and program management support.									
The funding decrease of \$40.972M from FY18 to FY19 reflects the decreased procurement of 229 missiles. Also, government engineering services are reduced.									
<b>OCO:</b> FY 2018 Overseas Contingency Operations (OCO) Request: \$2.833M Guided Missiles - Javelin - Funding supports replenishment of 11 Javelin missiles used in combat operations in theater as well as training specific ammunition for units in direct support of operations. Funding will also provide for engineering, logistics and program management required to place Javelin missiles in service.									

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<b>Exhibit P-5, Cost Analysis:</b> PB 2019 Navy													<b>Date:</b> February 2018						
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 1109N / 03 / 1				<b>P-1 Line Item Number / Title:</b> 3011 / Anti-Armor Missile-Javelin									<b>Item Number / Title [DODIC]:</b> 1 / JAVELIN						
<b>ID Code</b> (A=Service Ready, B=Not Service Ready) :													<b>MDAP/MAIS Code:</b>						
<b>Resource Summary</b>				<b>Prior Years</b>		<b>FY 2017</b>		<b>FY 2018</b>		<b>FY 2019 Base</b>		<b>FY 2019 OCO</b>		<b>FY 2019 Total</b>					
Procurement Quantity ( <i>Units in Each</i> )						1,257		531		233		5		-			5		
Gross/Weapon System Cost (\$ in Millions)						208.234		79.624		43.992		3.020		0.000			3.020		
Less PY Advance Procurement (\$ in Millions)						-		-		-		-		-			-		
Net Procurement (P-1) (\$ in Millions)						208.234		79.624		43.992		3.020		0.000			3.020		
Plus CY Advance Procurement (\$ in Millions)						-		-		-		-		-			-		
<b>Total Obligation Authority</b> (\$ in Millions)						<b>208.234</b>		<b>79.624</b>		<b>43.992</b>		<b>3.020</b>		<b>0.000</b>			<b>3.020</b>		
(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)																			
Initial Spares (\$ in Millions)						-		-		-		-		-			-		
Gross/Weapon System Unit Cost (\$ in Thousands)						165.660		149.951		188.807		604.000		-			604.000		
Note: Subtotals or Totals in this Exhibit P-5 may not be exact or sum exactly due to rounding.																			
<b>Cost Elements</b>	<b>Prior Years</b>			<b>FY 2017</b>			<b>FY 2018</b>			<b>FY 2019 Base</b>			<b>FY 2019 OCO</b>			<b>FY 2019 Total</b>			
	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)	
Flyaway Cost																			
Recurring Cost																			
1.1.1) Guided Missiles <sup>(†)</sup> (1)	150.107	1,326	199.042	143.915	531	76.419	170.667	234	39.936	199.333	5	0.997	-	-	-	199.333	5	0.997	
1.1.2) Recurring Missile Surcharge	-	-	-	-	-	1.637	-	-	1.669	-	-	0.055	-	-	-	-	-	0.055	
1.1.3) Government Engineering Services	-	-	6.184	-	-	0.647	-	-	0.185	-	-	0.180	-	-	-	-	-	0.180	
1.1.4) Government Program Management (2)	-	-	2.748	-	-	0.756	-	-	0.945	-	-	0.659	-	-	-	-	-	0.659	
1.1.5) Reserves-Training Equipment	-	-	0.260	-	-	0.165	-	-	0.174	-	-	0.200	-	-	-	-	-	0.200	
1.1.6) In-Service Management Support	-	-	-	-	-	-	-	-	1.083	-	-	0.929	-	-	-	-	-	0.929	
<i>Subtotal: Recurring Cost</i>	-	-	<b>208.234</b>	-	-	<b>79.624</b>	-	-	<b>43.992</b>	-	-	<b>3.020</b>	-	-	-	-	-	<b>3.020</b>	
<i>Subtotal: Flyaway Cost</i>	-	-	<b>208.234</b>	-	-	<b>79.624</b>	-	-	<b>43.992</b>	-	-	<b>3.020</b>	-	-	-	-	-	<b>3.020</b>	
<b>Gross/Weapon System Cost</b>	<b>165.660</b>	<b>1,257</b>	<b>208.234</b>	<b>149.951</b>	<b>531</b>	<b>79.624</b>	<b>188.807</b>	<b>233</b>	<b>43.992</b>	<b>604.000</b>	<b>5</b>	<b>3.020</b>	-	-	<b>0.000</b>	<b>604.000</b>	<b>5</b>	<b>3.020</b>	
(†) indicates the presence of a P-5a																			
<b>Footnotes:</b>																			

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<b>Exhibit P-5, Cost Analysis:</b> PB 2019 Navy		<b>Date:</b> February 2018		
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 1109N / 03 / 1	<b>P-1 Line Item Number / Title:</b> 3011 / Anti-Armor Missile-Javelin	<b>Item Number / Title [DODIC]:</b> 1 / JAVELIN		
<b>ID Code</b> (A=Service Ready, B=Not Service Ready) :	<b>MDAP/MAIS Code:</b>			
(1) The unit price per missile is determined by the demand in production quantities per year through foreign military sales and combined service bulk purchases of 850 missiles for the option year. The missile unit price for FY 2017 has been updated to reflect the actual cost for Block I missile variant. The increase in unit price per missile in FY18 is based on a Government Estimate for procurement of the new missile variant (Javelin PMC1 MPWH FGM-148F). The unit price for FY19 based on a Government Estimate for procurement of the new missile variant (Javelin PMC1 MPWH FGM-148F). Surcharge fees are shown as separate recurring cost. Missile quantities are accurate on P-5 through the FYDP. The quantities on the P-40 will be updated for the President's Budget submission.				
(2) Government Program Management support increases after FY17 due to new safety support requirements.				

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Exhibit P-5a, Procurement History and Planning: PB 2019 Navy								Date: February 2018				
Appropriation / Budget Activity / Budget Sub Activity: 1109N / 03 / 1			P-1 Line Item Number / Title: 3011 / Anti-Armor Missile-Javelin					Item Number / Title [DODIC]: 1 / JAVELIN				
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
1.1.1) Guided Missiles <sup>(†)</sup>		2014	Javelin Joint Venture All Up Round / Orlando. FL/Tucson, AZ	C / FFP	Orlando, FL/Tucson, AZ	Sep 2014	Aug 2017	229	141.418	Y		
1.1.1) Guided Missiles <sup>(†)</sup>	✓	2014	Javelin Joint Venture All Up Round / Orlando. FL/Tucson, AZ	C / FFP	Orlando, FL/Tucson, AZ	Sep 2014	Aug 2017	178	141.418	Y		
1.1.1) Guided Missiles <sup>(†)</sup>	✓	2015	Javelin Joint Venture All Up Round / Orlando. FL/Tucson, AZ	C / FFP	Orlando, FL/Tucson, AZ	Jun 2015	Aug 2018	102	163.328	Y		
1.1.1) Guided Missiles <sup>(†)</sup>		2016	Javelin Joint Venture, All Up Round / Orlando. FL/Tucson, AZ	C / FFP	Orlando, FL/Tucson, AZ	Apr 2016	Aug 2018	350	144.505	Y		
1.1.1) Guided Missiles <sup>(†)</sup>	✓	2016	Javelin Joint Venture, All Up Round / Orlando. FL/Tucson, AZ	C / FFP	Orlando, FL/Tucson, AZ	Apr 2016	Aug 2018	48	144.505	Y		
1.1.1) Guided Missiles <sup>(†)</sup>		2017	Javelin Joint Venture All Up Round / Orlando. FL/Tucson, AZ	C / TBD	Orlando, FL/Tucson, AZ	Jul 2017	Mar 2020	522	143.818	Y		
1.1.1) Guided Missiles <sup>(†)</sup>	✓	2017	Javelin Joint Venture All Up Round / Orlando. FL/Tucson, AZ	C / FFP	Orlando, FL/Tucson, AZ	Jul 2017	Mar 2020	9	149.532	Y		
1.1.1) Guided Missiles <sup>(†)</sup>		2018	Javelin Joint Venture All Up Round / Orlando. FL/Tucson, AZ	C / FFP	Orlando, FL/Tucson, AZ	Apr 2018	Dec 2020	224	170.670	Y		
1.1.1) Guided Missiles <sup>(†)</sup>	✓	2018	Javelin Joint Venture All Up Round / Orlando. FL/Tucson, AZ	C / FFP	Orlando, FL/Tucson, AZ	Apr 2018	Dec 2020	10	170.600	Y		
1.1.1) Guided Missiles <sup>(†)</sup>		2019	Javelin Joint Venture All Up Round / Orlando. FL/Tucson, AZ	C / FFP	Orlando, FL/Tucson, AZ	Jun 2019	Feb 2022	5	199.333	Y		

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

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Exhibit P-21, Production Schedule: PB 2019 Navy																				Date: February 2018																								
Appropriation / Budget Activity / Budget Sub Activity: 1109N / 03 / 1										P-1 Line Item Number / Title: 3011 / Anti-Armor Missile-Javelin										Item Number / Title [DODIC]: 1 / JAVELIN																								
Cost Elements (Units in Each)							Fiscal Year 2014												Fiscal Year 2015																									
O C R O #	M F R Y	SERVICE	PROC QTY	ACCEPT PRIOR TO 1 OCT 2013	BAL DUE AS OF 1 OCT	FY	O C T	N O V	D E C	J A N	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	B A L A N C E													
1.1.1) Guided Missiles <sup>(1)</sup>																																												
Prior Years Deliveries: 419																																												
2	2014	NAVY	229	0	229															A -	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	229						
✓	2	2014	NAVY	178	0	178														A -	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	178							
✓	3	2015	NAVY	102	0	102																																102						
4	2016	NAVY	350	0	350																																		350					
✓	4	2016	NAVY	48	0	48																																	48					
1	2017	NAVY	522	0	522																																		522					
✓	1	2017	NAVY	9	0	9																																	9					
1	2018	NAVY	224	0	224																																		224					
✓	1	2018	NAVY	10	0	10																																	10					
1	2019	NAVY	5	0	5																																		5					
																				O C T	N O V	D E C	J A N	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 Navy																					Date: February 2018															
Appropriation / Budget Activity / Budget Sub Activity:																					Item Number / Title [DODIC]:															
1109N / 03 / 1																					1 / JAVELIN															
Cost Elements (Units in Each)																					Fiscal Year 2016															
O C R O #	M F R Y	SERVICE	PROC QTY	ACCEPT PRIOR TO 1 OCT 2015	BAL DUE AS OF 1 OCT	Fiscal Year 2016																					Fiscal Year 2017									
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	B A L A N C E												
1.1.1) Guided Missiles <sup>(1)</sup>																																				
Prior Years Deliveries: 419																																				
2	2014	NAVY	229	0	229	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	229	0	0							
✓	2	2014	NAVY	178	0	178	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	178	0	0							
✓	3	2015	NAVY	102	0	102	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	102	-	-					
4	2016	NAVY	350	0	350						A -	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	350	-	-					
✓	4	2016	NAVY	48	0	48						A -	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	48	-	-			
1	2017	NAVY	522	0	522																							A -	-	-	522	-	-			
✓	1	2017	NAVY	9	0	9																							A -	-	-	9	-	-		
1	2018	NAVY	224	0	224																									224	-	-				
✓	1	2018	NAVY	10	0	10																									10	-	-			
1	2019	NAVY	5	0	5																									5	-	-				
O C T	N O V	D E C	J A N	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 Navy																				Date: February 2018																
Appropriation / Budget Activity / Budget Sub Activity:																				P-1 Line Item Number / Title:																
1109N / 03 / 1																				Item Number / Title [DODIC]:																
1 / JAVELIN																																				
Cost Elements (Units in Each)																				Fiscal Year 2018																
O C R O #	M F R Y	SERVICE	PROC QTY	ACCEPT PRIOR TO 1 OCT 2017	BAL DUE AS OF 1 OCT	Fiscal Year 2018																				Fiscal 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	B A L A N C E						
1.1.1) Guided Missiles <sup>(1)</sup>																																				
Prior Years Deliveries: 419																																				
2	2014	NAVY	229	229	0																															
✓	2	2014	NAVY	178	178	0																														
✓	3	2015	NAVY	102	0	102	-	-	-	-	-	-	-	-	-	-	-	-	-	102																
4	2016	NAVY	350	0	350	-	-	-	-	-	-	-	-	-	-	-	-	-	-	350																
✓	4	2016	NAVY	48	0	48	-	-	-	-	-	-	-	-	-	-	-	-	-	48																
1	2017	NAVY	522	0	522	-	-	-	-	-	-	-	-	-	-	-	-	-	-	522																
✓	1	2017	NAVY	9	0	9	-	-	-	-	-	-	-	-	-	-	-	-	-	9																
1	2018	NAVY	224	0	224																															
✓	1	2018	NAVY	10	0	10																														
1	2019	NAVY	5	0	5																															

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Exhibit P-21, Production Schedule: PB 2019 Navy																				Date: February 2018																
Appropriation / Budget Activity / Budget Sub Activity:																				P-1 Line Item Number / Title:																
1109N / 03 / 1																				Item Number / Title [DODIC]:																
1 / JAVELIN																																				
Cost Elements (Units in Each)																				Fiscal Year 2020																
O C R O #	M F R Y	SERVICE	PROC QTY	ACCEPT PRIOR TO 1 OCT 2019	BAL DUE AS OF 1 OCT	Fiscal Year 2020																				Fiscal Year 2021										
						O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P	O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P	B A L A N C E						
1.1.1) Guided Missiles <sup>(1)</sup>																																				
Prior Years Deliveries: 419																																				
2	2014	NAVY	229	229	0																										0					
✓	2	2014	NAVY	178	178	0																														
✓	3	2015	NAVY	102	102	0																														
4	2016	NAVY	350	350	0	0																														
✓	4	2016	NAVY	48	48	0																														
1	2017	NAVY	522	0	522	-	-	-	-	-	522	0																								
✓	1	2017	NAVY	9	0	9	-	-	-	-	9																					0				
1	2018	NAVY	224	0	224	-	-	-	-	-	-	0																								
✓	1	2018	NAVY	10	0	10	-	-	-	-	-	0																								
1	2019	NAVY	5	0	5	-	-	-	-	-	-	5																								
						O C T	N O V	D E C	J A N	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 Navy																			Date: February 2018																															
Appropriation / Budget Activity / Budget Sub Activity: 1109N / 03 / 1										P-1 Line Item Number / Title: 3011 / Anti-Armor Missile-Javelin										Item Number / Title [DODIC]: 1 / JAVELIN																														
Cost Elements (Units in Each)							Fiscal Year 2022												Fiscal Year 2023																															
O C R O #	M F R Y	SERVICE	PROC QTY	ACCEPT PRIOR TO 1 OCT 2021	BAL DUE AS OF 1 OCT	FY	Calendar Year 2022												Calendar Year 2023																															
O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P	O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P	B A L A N C E																										
1.1.1) Guided Missiles <sup>(1)</sup>																																																		
Prior Years Deliveries: 419																																																		
2	2014	NAVY	229	229	0																																		0											
✓	2	2014	NAVY	178	178	0																																	0											
✓	3	2015	NAVY	102	102	0																																	0											
	4	2016	NAVY	350	350	0																																	0											
✓	4	2016	NAVY	48	48	0																																	0											
	1	2017	NAVY	522	522	0																																	0											
✓	1	2017	NAVY	9	9	0																																	0											
	1	2018	NAVY	224	224	0																																	0											
✓	1	2018	NAVY	10	10	0																																	0											
	1	2019	NAVY	5	0	5	-	-	-	-	5																											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	B A L A N C E																						

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Exhibit P-21, Production Schedule: PB 2019 Navy									Date: February 2018			
Appropriation / Budget Activity / Budget Sub Activity: 1109N / 03 / 1			P-1 Line Item Number / Title: 3011 / Anti-Armor Missile-Javelin						Item Number / Title [DODIC]: 1 / JAVELIN			
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	Javelin Joint Venture All Up Round - Orlando. FL/Tucson, AZ	1,320	6,480	8,040	11	3	26	29	11	3	32	35
2	Javelin Joint Venture All Up Round - Orlando. FL/Tucson, AZ				0	0	0	0	0	0	35	35
3	Javelin Joint Venture All Up Round - Orlando. FL/Tucson, AZ				0	0	0	0	0	0	38	38
4	Javelin Joint Venture, All Up Round - Orlando. FL/Tucson, AZ				0	0	0	0	0	0	28	28

"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: PB 2019 Navy</b>										<b>Date:</b> February 2018			
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 1109N: Procurement, Marine Corps / BA 03: Guided missiles and equipment / BSA 1: Guided Missiles										<b>P-1 Line Item Number / Title:</b> 3016 / Family Anti-Armor Weapon Systems (FOAAWS)			
<b>ID Code</b> (A=Service Ready, B=Not Service Ready): A										<b>Program Elements for Code B Items:</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 (\$ in Millions)	54.852	22.918	25.174	13.760	0.000	13.760	13.789	13.810	13.828	13.839	Continuing	Continuing	
Less PY Advance Procurement (\$ in Millions)	-	-	-	-	-	-	-	-	-	-	-	-	
Net Procurement (P-1) (\$ in Millions)	54.852	22.918	25.174	13.760	0.000	13.760	13.789	13.810	13.828	13.839	Continuing	Continuing	
Plus CY Advance Procurement (\$ in Millions)	-	-	-	-	-	-	-	-	-	-	-	-	
<b>Total Obligation Authority (\$ in Millions)</b>	<b>54.852</b>	<b>22.918</b>	<b>25.174</b>	<b>13.760</b>	<b>0.000</b>	<b>13.760</b>	<b>13.789</b>	<b>13.810</b>	<b>13.828</b>	<b>13.839</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 (\$ in Millions)	-	-	-	-	-	-	-	-	-	-	-	-	
Flyaway Unit Cost (\$ in Dollars)	-	-	-	-	-	-	-	-	-	-	-	-	
Gross/Weapon System Unit Cost (\$ in Dollars)	-	-	-	-	-	-	-	-	-	-	-	-	
<b>Description:</b> Follow on to Shoulder-Launched Multipurpose Assault Weapon (SMAW) (FOTS): The solution to the Follow on to SMAW (FOTS) capability requirement is a Family of Marine-portable Rocket Systems. This Family of Systems is composed of separate lightweight, short range, fire-and-forget weapons. Marine Expeditionary Forces will employ the Family of Systems across the spectrum of conflict, under all environmental conditions, to neutralize or destroy a variety of ground targets including personnel, thin-skinned vehicles, and positions. The Family of Systems include various systems, such as SMAW Mod 2 and M3A1 Multi-purpose Anti-Armor Weapon System (MAAWS), with future capability for expansion to additional systems. SMAW Mod 2 consists of a new launcher with an integrated laser range finder and thermal sight. MAAWS consists of a new launcher and integrated fire control system. Future systems and capabilities include similar Marine-portable fire-and-forget shoulder-launched rocket systems with anti-armor, anti-personnel, anti-material, and assault capabilities.													

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Exhibit P-40, Budget Line Item Justification: PB 2019 Navy							Date: February 2018			
Appropriation / Budget Activity / Budget Sub Activity:				P-1 Line Item Number / Title:						
1109N: Procurement, Marine Corps / BA 03: Guided missiles and equipment / BSA 1: Guided Missiles				3016 / Family Anti-Armor Weapon Systems (FOAAWS)						
ID Code (A=Service Ready, B=Not Service Ready): A		Program Elements for Code B Items: N/A				Other Related Program Elements: 0603635M				
Line Item MDAP/MAIS Code: 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)	
P-5	1 / Follow on To Smaw - Active	P-5a, P-21			- / 54.852	- / 22.918	- / 25.174	- / 13.760	- / 0.000	- / 13.760
P-40	Total Gross/Weapon System Cost				- / 54.852	- / 22.918	- / 25.174	- / 13.760	- / 0.000	- / 13.760

\*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 2018 Base Appropriation Request: \$25.125M

\$24.754M will Fund procurement of 512 Full Rate Production quantities of SMAW MOD 2 systems, associated support equipment, replacement millijoule meters for boresight kits, and initial issue spare parts. \$0.371M funds the USMC program office and engineering support.

Increase of \$2.256M funding from FY17 to FY18 supports additional quantity of 39 SMAW Mod 2 Launchers.

FY 2019 Base Appropriation Request: \$13.760M

FY19: \$13.737M will fund procurement of M3A1 Multi-purpose Anti-Armor Weapon System (MAAWS), with future capability for expansion to additional systems. \$0.023M funds the USMC program management support.

Decrease of \$11.414M funding from FY18 to FY19 is due to Shoulder-Launched Multipurpose Assault Weapon (SMAW) AAO being reached with SMAW Mod 2 and M3A1 Multi-purpose Anti-Armor Weapon System (MAAWS) being implemented with future capability for expansion to additional systems.

**OCO:**

FY2018 Overseas Contingency Operations (OCO): \$0.049M

Funding will support procurement of 1 SMAW MOD 2 system due to combat loss.

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<b>Exhibit P-5, Cost Analysis:</b> PB 2019 Navy													<b>Date:</b> February 2018						
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 1109N / 03 / 1			<b>P-1 Line Item Number / Title:</b> 3016 / Family Anti-Armor Weapon Systems (FOAAWS)										<b>Item Number / Title [DODIC]:</b> 1 / Follow on To Smaw - Active						
<b>ID Code</b> (A=Service Ready, B=Not Service Ready) :													<b>MDAP/MAIS Code:</b>						
<b>Resource Summary</b>				<b>Prior Years</b>			<b>FY 2017</b>		<b>FY 2018</b>		<b>FY 2019 Base</b>		<b>FY 2019 OCO</b>		<b>FY 2019 Total</b>				
Procurement Quantity ( <i>Units in Each</i> )							-		-		-		-		-				
Gross/Weapon System Cost (\$ in Millions)							54.852		22.918		25.174		13.760		0.000		13.760		
Less PY Advance Procurement (\$ in Millions)							-		-		-		-		-		-		
Net Procurement (P-1) (\$ in Millions)							54.852		22.918		25.174		13.760		0.000		13.760		
Plus CY Advance Procurement (\$ in Millions)							-		-		-		-		-		-		
<b>Total Obligation Authority</b> (\$ in Millions)							54.852		22.918		25.174		13.760		0.000		13.760		
(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 Dollars)							-		-		-		-		-		-		
Note: Subtotals or Totals in this Exhibit P-5 may not be exact or sum exactly due to rounding.																			
<b>Cost Elements</b>	<b>Prior Years</b>			<b>FY 2017</b>			<b>FY 2018</b>			<b>FY 2019 Base</b>			<b>FY 2019 OCO</b>			<b>FY 2019 Total</b>			
	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	
Flyaway Cost																			
Recurring Cost																			
1.1.1) Government Engineering Services	-	-	4.556	-	-	0.310	-	-	0.092	-	-	-	-	-	-	-	-		
1.1.2) SMAW MOD 2 Launcher <sup>(†)</sup>	625,825.40	63	39.427	47,033.20	474	22.294	48,349.61	513	24.803	-	-	-	-	-	-	-	-		
1.1.3) M3A1 Multi-purpose Anti-Armor Weapon System (MAAWS) <sup>(†)</sup>	-	-	-	-	-	-	-	-	65,104.27	211	13.737	-	-	-	65,104.27	211	13.737		
1.1.4) Government Program Management	-	-	0.118	-	-	0.314	-	-	0.279	-	-	0.023	-	-	-	-	0.023		
1.1.5) Non Recurring Expenditure (NRE) Production	-	-	2.254	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
<i>Subtotal: Recurring Cost</i>	-	-	<b>46.355</b>	-	-	<b>22.918</b>	-	-	<b>25.174</b>	-	-	<b>13.760</b>	-	-	-	-	<b>13.760</b>		
<i>Subtotal: Flyaway Cost</i>	-	-	<b>46.355</b>	-	-	<b>22.918</b>	-	-	<b>25.174</b>	-	-	<b>13.760</b>	-	-	-	-	<b>13.760</b>		
Support Cost																			
2.1) SMAW MOD 2 - Reserves	-	-	0.894	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
2.2) Prior Years Cumulative Funding	-	-	7.603	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
<i>Subtotal: Support Cost</i>	-	-	<b>8.497</b>	-	-	<b>22.918</b>	-	-	<b>25.174</b>	-	-	<b>13.760</b>	-	-	-	-	-		
<b>Gross/Weapon System Cost</b>	-	-	<b>54.852</b>	-	-	<b>22.918</b>	-	-	<b>25.174</b>	-	-	<b>13.760</b>	-	-	<b>0.000</b>	-	<b>13.760</b>		

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<b>Exhibit P-5, Cost Analysis:</b> PB 2019 Navy		<b>Date:</b> February 2018
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 1109N / 03 / 1	<b>P-1 Line Item Number / Title:</b> 3016 / Family Anti-Armor Weapon Systems (FOAAWS)	<b>Item Number / Title [DODIC]:</b> 1 / Follow on To Smaw - Active
<b>ID Code</b> (A=Service Ready, B=Not Service Ready) : (†) indicates the presence of a P-5a	<b>MDAP/MAIS Code:</b>	

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Exhibit P-5a, Procurement History and Planning: PB 2019 Navy								Date: February 2018				
Appropriation / Budget Activity / Budget Sub Activity: 1109N / 03 / 1			P-1 Line Item Number / Title: 3016 / Family Anti-Armor Weapon Systems (FOAAWS)					Item Number / Title [DODIC]: 1 / Follow on To Smaw - Active				
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 (\$)	Specs Avail Now?	Date Revision Available	RFP Issue Date
1.1.2) SMAW MOD 2 Launcher(†)		2017	ADS, Inc. / Virginia Beach, VA	C / FFP	MCSC, Quantico, VA	May 2017	Nov 2018	474	47,033.20	Y		Jan 2015
1.1.2) SMAW MOD 2 Launcher(†)		2018	ADS, Inc. / Virginia Beach, VA	C / FFP	MCSC, Quantico, VA	Nov 2017	May 2019	512	48,349.61	Y		Jan 2015
1.1.2) SMAW MOD 2 Launcher(†)	✓	2018	ADS, Inc. / Virginia Beach, VA	C / FFP	MCSC, Quantico, VA	Nov 2017	May 2019	1	48,349.61	Y		Jan 2015
1.1.3) M3A1 Multi-purpose Anti-Armor Weapon System (MAAWS)(†)		2019	TBD / TBD	TBD	CCWS, Redstone	Jan 2019	Dec 2019	211	65,104.27	Y		

(†) indicates the presence of a P-21

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Exhibit P-21, Production Schedule: PB 2019 Navy																					Date: February 2018										
Appropriation / Budget Activity / Budget Sub Activity:																					Item Number / Title [DODIC]:										
1109N / 03 / 1																					1 / Follow on To Smaw - Active										
Cost Elements (Units in Each)																					Fiscal Year 2018										
O C R O #	M F R Y	SERVICE	PROC QTY	ACCEPT PRIOR TO 1 OCT 2016	BAL DUE AS OF 1 OCT	Fiscal Year 2017	Calendar Year 2017														Calendar Year 2018										B A L A N C E
O C R O #	FY	Service	PROC QTY	ACCEPT PRIOR TO 1 OCT 2016	BAL DUE AS OF 1 OCT	O C T	N O V	D E C	J A N	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		
1.1.2) SMAW MOD 2 Launcher																					Fiscal Year 2018										
Prior Years Deliveries: 63																					Calendar Year 2018										
1	2017	NAVY	474	0	474																										474
1	2018	NAVY	512	0	512																										512
✓	1	2018	NAVY	1	0	1																									1
1.1.3) M3A1 Multi-purpose Anti-Armor Weapon System (MAAWS)																					Fiscal Year 2018										211
2	2019	NAVY	211	0	211																										
O C T	N O V	D E C	J A N	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 Navy																				Date: February 2018															
Appropriation / Budget Activity / Budget Sub Activity:																				Item Number / Title [DODIC]:															
1109N / 03 / 1																				1 / Follow on To Smaw - Active															
Cost Elements (Units in Each)																				Fiscal Year 2019															
O C R O #	M F R Y	SERVICE	PROC QTY	ACCEPT PRIOR TO 1 OCT 2018	BAL DUE AS OF 1 OCT	Calendar Year 2019																				Fiscal 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	B A L A N C E							
1.1.2) SMAW MOD 2 Launcher																																			
Prior Years Deliveries: 63																																			
1	2017	NAVY	474	0	474	-	50	50	50	50	50	50	50	50	50	50	50	24												0					
1	2018	NAVY	512	0	512	-	-	-	-	-	-	-	-	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	12	0					
✓	1	2018	NAVY	1	0	1	-	-	-	-	-	-	-	1																	0				
1.1.3) M3A1 Multi-purpose Anti-Armor Weapon System (MAAWS)																																	0		
2	2019	NAVY	211	0	211	A -	-	-	-	-	-	-	-	-	-	-	-	-	50	50	50	50	11									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: PB 2019 Navy</b>								<b>Date:</b> February 2018				
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 1109N / 03 / 1			<b>P-1 Line Item Number / Title:</b> 3016 / Family Anti-Armor Weapon Systems (FOAAWS)					<b>Item Number / Title [DODIC]:</b> 1 / Follow on To Smaw - Active				
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	ADS, Inc. - Virginia Beach, VA	400	600	800	0	5	11	16	0	5	11	16
2	TBD - TBD	400	600	800	0	5	11	16	0	5	11	16

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

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

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Exhibit P-40, Budget Line Item Justification: PB 2019 Navy										<b>Date:</b> February 2018		
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 1109N: Procurement, Marine Corps / BA 03: Guided missiles and equipment / BSA 1: Guided Missiles					<b>P-1 Line Item Number / Title:</b> 3017 / Anti-Armor Missile-TOW							
ID Code (A=Service Ready, B=Not Service Ready): A			Program Elements for Code B Items: N/A				Other Related Program Elements: 0603635M					
<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 (\$ in Millions)	138.773	17.080	56.577	59.702	0.000	59.702	39.092	40.968	42.956	33.778	Continuing	Continuing
Less PY Advance Procurement (\$ in Millions)	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) (\$ in Millions)	138.773	17.080	56.577	59.702	0.000	59.702	39.092	40.968	42.956	33.778	Continuing	Continuing
Plus CY Advance Procurement (\$ in Millions)	-	-	-	-	-	-	-	-	-	-	-	-
<b>Total Obligation Authority (\$ in Millions)</b>	<b>138.773</b>	<b>17.080</b>	<b>56.577</b>	<b>59.702</b>	<b>0.000</b>	<b>59.702</b>	<b>39.092</b>	<b>40.968</b>	<b>42.956</b>	<b>33.778</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 (\$ in Millions)	-	-	-	-	-	-	-	-	-	-	-	-
Flyaway Unit Cost (\$ in Dollars)	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost (\$ in Dollars)	-	-	-	-	-	-	-	-	-	-	-	-
<b>Description:</b>												
The M41A7 Saber weapon system is a combat proven system that provides long-range, lethal anti-armor and precision assault fires capability for USMC Infantry, Tank and Light Armored Reconnaissance Battalions across the spectrum of contemporary operational environments. The M41A7 is the replacement for the M220 Tube-launched, Optically tracked, Wire/Wireless-guided (TOW) 2 weapon system. Far target location includes a GPS based position and altitude determination subsystem, enabling the system to generate a 10-digit grid coordinate of a target location. The M41A7's superior surveillance capability also enables the Marine to shape the battlefield by detecting targets at long range and either engaging with TOW missiles or other weapon systems to destroy those targets. The M41A7 continues to be the weapon of choice in precision combat engagements in Overseas Contingency Operations (OCO).												
TOW missiles (BGM-71 Series) are the munition for the M41A7 system. The TOW missile is a highly lethal, cost effective, interoperable, multi-purpose munition. TOW missiles are used in direct fire or fly-over, shoot down mode against anti-armor or direct fire against field fortifications and structures. In its current configuration, the combination of the M41A7 and the TOW missile provides the capability to defeat armored vehicles, bunkers, and buildings at extended ranges in all battlefield conditions.												
The Lithium-Ion Battery Box (LBB) GEN 2 is the power source to the M41A7 Saber weapon system. The current Saber LBB cannot be transported on ships while in the weapon system, reducing the mission readiness of units operating on ships. The procurement of LBB GEN 2 will maintain the current operational capability with Navy safety certification for charging, shipping, and storage aboard Naval vessels.												
The Image Enhancement (IE) modification to the M41A7 reduces operator workload by automating the display's focus and brightness and contrast adjustments and optimizing the Night Sight image presented to gunner through electronic processing of the Forward Looking Infrared (FLIR) image. The Night Sight image optimization reduces the time required for the operator to identify targets thereby decreasing engagement times.												
The M41A7 is mounted from a variety of combat vehicle systems such as High Mobility Multipurpose Wheeled Vehicle (HMMWV), Mine Resistant Ambush Protected Vehicle (MRAP), and Light Armored Vehicle - Anti-Tank (LAV-AT), and Joint Lightweight Tactical Vehicle (JLTV), as well as having the capability for ground mounted operations.												
Procurement activities include replenishment of stocks used in combat operations, and modification of missiles for training and expiring stocks. In addition, modification kits, upgrades, engineering and program support services for maintenance and configuration management are procured from this budget line item.												

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<b>Exhibit P-40, Budget Line Item Justification: PB 2019 Navy</b>							<b>Date:</b> February 2018			
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 1109N: Procurement, Marine Corps / BA 03: Guided missiles and equipment / BSA 1: Guided Missiles				<b>P-1 Line Item Number / Title:</b> 3017 / Anti-Armor Missile-TOW						
<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> 0603635M			
<b>Line Item MDAP/MAIS Code:</b> 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
Navy	Quantity	-	-	-	-	-	-	-	-	-
	Total Obligation Authority	16.859	56.366	59.516	-	59.516	38.900	40.774	42.763	33.581
NR	Quantity	-	-	-	-	-	-	-	-	-
	Total Obligation Authority	0.221	0.211	0.186	-	0.186	0.192	0.194	0.193	0.197
<b>Total: Secondary Distribution</b>	Quantity	-	-	-	-	-	-	-	-	-
	<b>Total Obligation Authority</b>	<b>17.080</b>	<b>56.577</b>	<b>59.702</b>	-	<b>59.702</b>	<b>39.092</b>	<b>40.968</b>	<b>42.956</b>	<b>33.778</b>

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Exhibit P-40, Budget Line Item Justification: PB 2019 Navy							Date: February 2018		
Appropriation / Budget Activity / Budget Sub Activity:				P-1 Line Item Number / Title:					
1109N: Procurement, Marine Corps / BA 03: Guided missiles and equipment / BSA 1: Guided Missiles				3017 / Anti-Armor Missile-TOW					
<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> 0603635M			
<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)
P-5	1 / ANTI ARMOR WEAPNS SYSTEM-HEAVY (AAWS-H)	P-5a, P-21			- / 138.773	- / 17.080	- / 56.577	- / 59.702	- / 0.000
P-40	Total Gross/Weapon System Cost				- / 138.773	- / 17.080	- / 56.577	- / 59.702	- / 0.000
*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.									
<b>Justification:</b> The FY 2019 funding request was reduced by (\$8.512) million to account for the availability of prior year execution balances.									
FY2018 Base Appropriation Request: \$56.577M (\$56.366M Active; \$0.211M Reserve) \$49.312M will procure 690 missiles expended during the Pre-Deployment Training Period (PTP) for training conducted during Desert Talon, Integrated Training Exercise (ITX), Weapons and Tactics Instructor course (WTI), Urban Warfare, Marine Corps Mountain Warfare Training Center (MCMWTC), combined arms training for units preparing to deploy and loss of missiles due to end of service life. Failure to replenish missile expenditures will require additional withdrawals from war reserve stockpiles, further exacerbating the delay between expenditure reporting and replacement via the acquisition process. Funds will also be used for engineering and program management efforts associated with the refurbishing and retrofitting of missiles in order to extend their service life. Additionally, \$7.199M will support product improvement upgrades for the Saber System, engineering, logistics, program office support and reserve equipment support.									
FY2019 Base Appropriation Request: \$59.702M (\$59.516M Active; \$0.186M Reserve) \$51.169M will procure 571 missiles expended during the Pre-Deployment Training Period (PTP) for training conducted during Desert Talon, Integrated Training Exercise (ITX), Weapons and Tactics Instructor course (WTI), Urban Warfare, Marine Corps Mountain Warfare Training Center (MCMWTC), combined arms training for units preparing to deploy and loss of missiles due to end of service life. Failure to replenish missile expenditures will require additional withdrawals from war reserve stockpiles, further exacerbating the delay between expenditure reporting and replacement via the acquisition process. Funds will also be used for engineering and program management efforts associated with the refurbishing and retrofitting of missiles in order to extend their service life.									
The funding increase of \$3.125M from FY18 to FY19 is a reflection of the TOW missile procurement. FY 2018 missiles unit price is based on a Government Estimate for procurement of the TOW 2A Practice missile variant, factoring inflation and lower demand in production quantities. The unit price for FY 2019 is based on a Government Estimate for procurement of the TOW 2B Aero RF missile variant, factoring inflation and lower demand in production quantities.									
<b>OCO:</b> FY2018 Overseas Contingency Operations (OCO): \$5.024M Funding in the amount of \$4.958M covers replenishment of 74 TOW missiles in combat operations in theater as well as training specific ammunition for units in direct support of operations. Additionally, \$0.066M will provide program support.									

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<b>Exhibit P-5, Cost Analysis:</b> PB 2019 Navy													<b>Date:</b> February 2018					
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 1109N / 03 / 1			<b>P-1 Line Item Number / Title:</b> 3017 / Anti-Armor Missile-TOW										<b>Item Number / Title [DODIC]:</b> 1 / ANTI ARMOR WEAPNS SYSTEM-HEAVY (AAWS-H)					
<b>ID Code</b> (A=Service Ready, B=Not Service Ready) :													<b>MDAP/MAIS Code:</b>					
<b>Resource Summary</b>			<b>Prior Years</b>			<b>FY 2017</b>		<b>FY 2018</b>		<b>FY 2019 Base</b>		<b>FY 2019 OCO</b>		<b>FY 2019 Total</b>				
Procurement Quantity ( <i>Units in Each</i> )			-			-		-		-		-		-				
Gross/Weapon System Cost (\$ in Millions)			138.773			17.080		56.577		59.702		0.000		59.702				
Less PY Advance Procurement (\$ in Millions)			-			-		-		-		-		-				
Net Procurement (P-1) (\$ in Millions)			138.773			17.080		56.577		59.702		0.000		59.702				
Plus CY Advance Procurement (\$ in Millions)			-			-		-		-		-		-				
<b>Total Obligation Authority</b> (\$ in Millions)			138.773			17.080		56.577		59.702		0.000		59.702				
(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 Dollars)			-			-		-		-		-		-				
Note: Subtotals or Totals in this Exhibit P-5 may not be exact or sum exactly due to rounding.																		
<b>Cost Elements</b>	<b>Prior Years</b>			<b>FY 2017</b>			<b>FY 2018</b>			<b>FY 2019 Base</b>			<b>FY 2019 OCO</b>			<b>FY 2019 Total</b>		
	<b>Unit Cost</b> (\$)	<b>Qty</b> ( <i>Each</i> )	<b>Total Cost</b> (\$ M)	<b>Unit Cost</b> (\$)	<b>Qty</b> ( <i>Each</i> )	<b>Total Cost</b> (\$ M)	<b>Unit Cost</b> (\$)	<b>Qty</b> ( <i>Each</i> )	<b>Total Cost</b> (\$ M)	<b>Unit Cost</b> (\$)	<b>Qty</b> ( <i>Each</i> )	<b>Total Cost</b> (\$ M)	<b>Unit Cost</b> (\$)	<b>Qty</b> ( <i>Each</i> )	<b>Total Cost</b> (\$ M)	<b>Unit Cost</b> (\$)	<b>Qty</b> ( <i>Each</i> )	<b>Total Cost</b> (\$ M)
Flyaway - Prior Years Cumulative Funding Cost																		
Recurring Cost																		
1.1.1) TOW Missiles <sup>(t)</sup> (1)	-	-	-	58,273.00	157	9.149	68,463.77	690	47.240	89,612.96	571	51.169	-	-	-	89,612.96	571	51.169
1.1.2) Recurring Missile Surcharge	-	-	-	-	-	-	-	-	1.991	-	-	1.548	-	-	-	-	-	1.548
1.1.4) Prior Years Cumulative Funding	-	-	90.212	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
<i>Subtotal: Recurring Cost</i>	-	-	90.212	-	-	9.149	-	-	49.231	-	-	52.717	-	-	-	-	-	52.717
<i>Subtotal: Flyaway - Prior Years Cumulative Funding Cost</i>	-	-	90.212	-	-	9.149	-	-	49.231	-	-	52.717	-	-	-	-	-	52.717
Hardware - Cost																		
Recurring Cost																		
2.1.1) Saber Maintenance and Support Equipment	-	-	5,298	-	-	0.808	-	-	0.867	-	-	1.184	-	-	-	-	-	1.184
2.1.2) Saber Subsystems/ Components	-	-	5,830	-	-	1,968	-	-	1,983	-	-	1,999	-	-	-	-	-	1,999
2.1.3) Prior Years Cumulative Funding	37,561.57	942	35,383	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
<i>Subtotal: Recurring Cost</i>	-	-	46,511	-	-	2,776	-	-	2,850	-	-	3,183	-	-	-	-	-	3,183
<i>Subtotal: Hardware - Cost</i>	-	-	46,511	-	-	2,776	-	-	2,850	-	-	3,183	-	-	-	-	-	3,183

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Exhibit P-5, Cost Analysis: PB 2019 Navy													<b>Date:</b> February 2018										
Appropriation / Budget Activity / Budget Sub Activity: 1109N / 03 / 1				P-1 Line Item Number / Title: 3017 / Anti-Armor Missile-TOW									Item Number / Title [DODIC]: 1 / ANTI ARMOR WEAPNS SYSTEM-HEAVY (AAWS-H)										
ID Code (A=Service Ready, B=Not Service Ready) :							MDAP/MAIS Code:																
Note: Subtotals or Totals in this Exhibit P-5 may not be exact or sum exactly due to rounding.																							
Cost Elements	Prior Years			FY 2017			FY 2018			FY 2019 Base			FY 2019 OCO			FY 2019 Total							
	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)					
Support Cost																							
3.1) USMC PMO Support - Saber Product Improvement	-	-	0.847	-	-	0.404	-	-	0.503	-	-	0.321	-	-	-	-	-	0.321					
3.2) Engineering Support	-	-	0.352	-	-	3.345	-	-	2.528	-	-	2.070	-	-	-	-	-	2.070					
3.3) Program Support	-	-	0.391	-	-	1.185	-	-	1.254	-	-	1.223	-	-	-	-	-	1.223					
3.4) Reserves - Saber	-	-	0.460	-	-	0.221	-	-	0.211	-	-	0.188	-	-	-	-	-	0.188					
<i>Subtotal: Support Cost</i>	-	-	<b>2.050</b>	-	-	<b>5.155</b>	-	-	<b>4.496</b>	-	-	<b>3.802</b>	-	-	-	-	-	<b>3.802</b>					
Gross/Weapon System Cost	-	-	<b>138.773</b>	-	-	<b>17.080</b>	-	-	<b>56.577</b>	-	-	<b>59.702</b>	-	-	<b>0.000</b>	-	-	<b>59.702</b>					

(†) indicates the presence of a P-5a

**Footnotes:**

(1) The unit price per missile is influenced by the demand in production quantities per year through foreign military sales and combined service purchases. The estimated missile unit price for FY 2017 is based on a Government Estimate for procurement of the TOW 2A missile variant, factoring inflation. The estimated missile unit price for FY 2018 is based on a Government Estimate for procurement of the TOW 2A Practice missile variant, factoring inflation and lower demand in production quantities. The unit price for FY 2019 is based on a Government Estimate for procurement of the TOW 2B Aero RF missile variant, factoring inflation and lower demand in production quantities. Surcharge fees are shown as separate recurring cost. Surcharge fees are shown as separate recurring cost.

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Exhibit P-5a, Procurement History and Planning: PB 2019 Navy								Date: February 2018				
Appropriation / Budget Activity / Budget Sub Activity: 1109N / 03 / 1			P-1 Line Item Number / Title: 3017 / Anti-Armor Missile-TOW					Item Number / Title [DODIC]: 1 / ANTI ARMOR WEAPNS SYSTEM-HEAVY (AAWS-H)				
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 (\$)	Specs Avail Now?	Date Revision Available	RFP Issue Date
1.1.1) TOW Missiles <sup>(†)</sup>		2017	Raytheon, Tuscon, AZ / USARMY Huntsville, AL	C / FFP	CCWS, Redstone	Jul 2017	Jun 2020	157	58,273.00	Y		Oct 2015
1.1.1) TOW Missiles <sup>(†)</sup>		2018	Raytheon, Tuscon, AZ / USARMY Huntsville, AL	C / FFP	CCWS, Redstone	Jun 2018	May 2021	614	69,242.67	Y		Oct 2015
1.1.1) TOW Missiles <sup>(†)</sup>	✓	2018	Raytheon, Tuscon, AZ / USARMY Huntsville, AL	C / FFP	CCWS, Redstone	Jun 2018	May 2021	76	62,171.05	Y		Oct 2015
1.1.1) TOW Missiles <sup>(†)</sup>		2019	Raytheon, Tuscon, AZ / USARMY Huntsville, AL	C / FFP	CCWS, Redstone	Jun 2019	May 2022	571	89,612.96	Y		Oct 2015

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

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Exhibit P-21, Production Schedule: PB 2019 Navy																				Date: February 2018																								
Appropriation / Budget Activity / Budget Sub Activity: 1109N / 03 / 1										P-1 Line Item Number / Title: 3017 / Anti-Armor Missile-TOW										Item Number / Title [DODIC]: 1 / ANTI ARMOR WEAPNS SYSTEM-HEAVY (AAWS-H)																								
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	ACCEPT PRIOR TO 1 OCT 2016	BAL DUE AS OF 1 OCT	O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P	O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P														
O C O #	M F R #	FY	SERVICE	PROC QTY	ACCEPT PRIOR TO 1 OCT 2016	BAL DUE AS OF 1 OCT	O C T	N O V	D E C	J A N	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														
1.1.1) TOW Missiles <sup>(1)</sup>																				A -	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	157							
1	2017	NAVY		157	0	157																															A -	-	-	-	614			
✓	1	2018	NAVY		614	0	614																																	A -	-	-	-	76
1	2019	NAVY			571	0	571																																			571		
																				O C T	N O V	D E C	J A N	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 Navy																			Date: February 2018																				
Appropriation / Budget Activity / Budget Sub Activity: 1109N / 03 / 1										P-1 Line Item Number / Title: 3017 / Anti-Armor Missile-TOW										Item Number / Title [DODIC]: 1 / ANTI ARMOR WEAPNS SYSTEM-HEAVY (AAWS-H)																			
Cost Elements (Units in Each)								Fiscal Year 2019												Fiscal Year 2020												B A L A N C E							
O C O #	M F R #	FY	SERVICE	PROC QTY	ACCEPT PRIOR TO 1 OCT 2018	BAL DUE AS OF 1 OCT	O C T	N O V	D E C	J A N	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									
1.1.1) TOW Missiles <sup>(1)</sup>																																							
1	2017	NAVY	157	0	157	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	157		0						
1	2018	NAVY	614	0	614	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	614							
✓	1	2018	NAVY	76	0	76	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	76						
1	2019	NAVY	571	0	571																															571			
O C T	N O V	D E C	J A N	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 Navy																			Date: February 2018											
Appropriation / Budget Activity / Budget Sub Activity: 1109N / 03 / 1																			Item Number / Title [DODIC]: 1 / ANTI ARMOR WEAPNS SYSTEM-HEAVY (AAWS-H)											
Cost Elements (Units in Each)																			Fiscal Year 2021											
																			Fiscal Year 2022											
O C O #	M F R #	FY	SERVICE	PROC QTY	ACCEPT PRIOR TO 1 OCT 2020	BAL DUE AS OF 1 OCT	Calendar Year 2021																			Calendar Year 2022				
					O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P	O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P		
1.1.1) TOW Missiles <sup>(1)</sup>																														
1	2017	NAVY	157	157	0																									0
1	2018	NAVY	614	0	614	-	-	-	-	-	-	-	-	614															0	
✓	1	2018	NAVY	76	0	76	-	-	-	-	-	-	-	-	76														0	
1	2019	NAVY	571	0	571	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	571			

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<b>Exhibit P-21, Production Schedule: PB 2019 Navy</b>								<b>Date:</b> February 2018				
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 1109N / 03 / 1			<b>P-1 Line Item Number / Title:</b> 3017 / Anti-Armor Missile-TOW					<b>Item Number / Title [DODIC]:</b> 1 / ANTI ARMOR WEAPNS SYSTEM-HEAVY (AAWS-H)				
<b>MFR Ref #</b>	<b>Manufacturer Name - Location</b>	<b>Production Rates (Each / Year)</b>			<b>Procurement Leadtime (Months)</b>							
		<b>MSR For 2019</b>	<b>1-8-5 For 2019</b>	<b>MAX For 2019</b>	<b>Initial</b>		<b>Reorder</b>					
1	Raytheon, Tuscon, AZ - USARMY Huntsville, AL	1,200	3,000	4,200	0	5	27	32	0	5	35	40

"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: PB 2019 Navy</b>										<b>Date:</b> February 2018			
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 1109N: Procurement, Marine Corps / BA 04: Communications and Electronics Equipment / BSA 4: Command and Control Systems										<b>P-1 Line Item Number / Title:</b> 4644 / Common Aviation Command and Control System (CAC2S)			
<b>ID Code</b> (A=Service Ready, B=Not Service Ready): A										<b>Program Elements for Code B Items:</b> N/A			
<b>Line Item MDAP/MAIS Code:</b> N36													
<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 (\$ in Millions)	30.416	52.487	44.928	35.467	0.000	35.467	34.412	33.781	16.710	17.476	-	265.677	
Less PY Advance Procurement (\$ in Millions)	-	-	-	-	-	-	-	-	-	-	-	-	
Net Procurement (P-1) (\$ in Millions)	30.416	52.487	44.928	35.467	0.000	35.467	34.412	33.781	16.710	17.476	-	265.677	
Plus CY Advance Procurement (\$ in Millions)	-	-	-	-	-	-	-	-	-	-	-	-	
<b>Total Obligation Authority (\$ in Millions)</b>	<b>30.416</b>	<b>52.487</b>	<b>44.928</b>	<b>35.467</b>	<b>0.000</b>	<b>35.467</b>	<b>34.412</b>	<b>33.781</b>	<b>16.710</b>	<b>17.476</b>	-	<b>265.677</b>	
<i>(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)</i>													
Initial Spares (\$ in Millions)	-	-	-	-	-	-	-	-	-	-	-	-	
Flyaway Unit Cost (\$ in Dollars)	-	-	-	-	-	-	-	-	-	-	-	-	
Gross/Weapon System Unit Cost (\$ in Dollars)	-	-	-	-	-	-	-	-	-	-	-	-	
<b>Description:</b> The Common Aviation Command and Control System (CAC2S) is a coordinated modernization effort to replace the existing aviation command and control equipment of the Marine Air Command and Control System (MACCS) and to provide the Aviation Combat Element with the necessary hardware, software, equipment, and facilities to effectively command, control, and coordinate aviation operations. The CAC2S system will accomplish the MACCS missions with a suite of operationally scalable modules to support Marine Air-Ground Task Force (MAGTF), Joint, and Coalition Forces. The CAC2S integrates the functions of aviation command and control into an interoperable system that will support the core competencies of all Marine Corps warfighting concepts. The CAC2S, in conjunction with the MACCS organic sensors (AN/TPS-63, AN/TPS-59 and AN/TPS-80 (G/ATOR)) and weapon systems Composite Tracking Network (CTN), supports the tenets of Expeditionary Maneuver Warfare and fosters joint interoperability. CAC2S Increment I will replace legacy aviation command and control systems in the following Marine aviation agencies: Direct Air Support Center (DASC), Tactical Air Command Center (TACC), and Tactical Air Operations Center (TAOC). Future increments encompassing Marine Air Traffic Control Detachment (MATCD), Low Altitude Air Defense Battalion (LAAD BN), Unmanned Aerial Systems (UAS), and airborne node capabilities are anticipated, but are not yet baselined. Approved Acquisition Objective (AAO) is 50 systems.													

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Exhibit P-40, Budget Line Item Justification: PB 2019 Navy							Date: February 2018			
Appropriation / Budget Activity / Budget Sub Activity:				P-1 Line Item Number / Title:						
1109N: Procurement, Marine Corps / BA 04: Communications and Electronics Equipment / BSA 4: Command and Control Systems				4644 / Common Aviation Command and Control System (CAC2S)						
ID Code (A=Service Ready, B=Not Service Ready): A			Program Elements for Code B Items: N/A				Other Related Program Elements: 0206313M, 0206335M			
Line Item MDAP/MAIS Code: N36										
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)	
P-5	1 / Common Aviation Command and Control System (CAC2S)	P-5a, P-21			- / 30.416	- / 52.487	- / 44.928	- / 35.467	- / 0.000	- / 35.467
P-40	Total Gross/Weapon System Cost				- / 30.416	- / 52.487	- / 44.928	- / 35.467	- / 0.000	- / 35.467

\*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 2018 Base Appropriation (\$44.928M):

Funds the continuation of production contract to procure Lot 2 quantity sixteen (16) Full Deployment Units (FDUs) and all activities associated with the procurement, such as the Government Furnished Equipment (GFE), production/fielding support and New Equipment Training (NET). The GFE consists of Army-Navy/Portable Radio Communication 117G (AN/PRC-117G) and Global Positioning System - Miniature Precision Lightweight GPS Receiver (PLGR) Engine - Selective (GPS MPE-S).

FY 2019 Base Appropriation (\$35.467M):

Funds the remaining Lot 3 quantity nine (9) Full Deployment Units (FDUs) to achieve AAO of 50 systems. Funds also support activities associated with the procurement, such as the Government Furnished Equipment (GFE), production/fielding support and New Equipment Training (NET). The GFE consists of Army-Navy/Portable Radio Communication 117G (AN/PRC-117G) and Global Positioning System - Miniature Precision Lightweight GPS Receiver (PLGR) Engine - Selective (GPS MPE-S). FY19 budget increase from PB-18 to PB-19 of \$2.616M supports the procurement of the Multifunction Information Distribution System (MIDS) Block II upgrade in order to comply with DoD mandate to upgrade for frequency remapping and cryptography modernization by FY 2020. Critical components are over 30 years old and have reached the end of their intended life cycle. Upgraded MIDS Block II will be integrated into Lot 3 FDUs prior to fielding. Funding decrease of \$9.461M from FY 2018 to FY 2019 is largely due to procuring seven (7) less FDU systems in FY 2019.

**OCO:**

FY 2019 Overseas Contingency Operations: NA

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Exhibit P-5, Cost Analysis: PB 2019 Navy													Date: February 2018						
Appropriation / Budget Activity / Budget Sub Activity: 1109N / 04 / 4			P-1 Line Item Number / Title: 4644 / Common Aviation Command and Control System (CAC2S)										Item Number / Title [DODIC]: 1 / Common Aviation Command and Control System (CAC2S)						
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 (\$ in Millions)				30.416		52.487		44.928		35.467		0.000		35.467					
Less PY Advance Procurement (\$ in Millions)				-		-		-		-		-		-					
Net Procurement (P-1) (\$ in Millions)				30.416		52.487		44.928		35.467		0.000		35.467					
Plus CY Advance Procurement (\$ in Millions)				-		-		-		-		-		-					
<b>Total Obligation Authority (\$ in Millions)</b>				<b>30.416</b>		<b>52.487</b>		<b>44.928</b>		<b>35.467</b>		<b>0.000</b>		<b>35.467</b>					
(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)																			
Initial Spares (\$ in Millions)				-		-		-		-		-		-					
Gross/Weapon System Unit Cost (\$ in Dollars)				-		-		-		-		-		-					
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 (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	
Flyaway Cost																			
Recurring Cost																			
1.1.1) Limited Deployment Unit (LDU) <sup>(†)</sup>	2,422K	8	19.377	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
1.1.2) LDU (Reserve) <sup>(†)</sup>	2,158K	1	2.158	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
1.1.3) Full Deployment Unit (FDU) - AN/TSQ-297(V)1 Variant <sup>(†) (1)</sup>	-	-	-	2,087K	9	18.784	2,102K	13	27.320	2,168K	9	19.515	-	-	-	2,168K	9	19.515	
1.1.4) Full Deployment Unit (FDU) - AN/TSQ-297(V)2 Variant <sup>(†) (2)</sup>	-	-	-	3,229K	3	9.688	-	-	-	-	-	-	-	-	-	-	-		
1.1.5) Full Deployment Unit (FDU) AN/TSQ-297(V)3 Variant <sup>(†) (3)</sup>	-	-	-	2,039K	4	8.157	2,080K	3	6.240	-	-	-	-	-	-	-	-		
1.1.6) ECP Production (4)	-	-	2.917	-	-	0.500	-	-	0.966	-	-	1.671	-	-	-	-	1.671		
<i>Subtotal: Recurring Cost</i>	-	-	24.452	-	-	37.129	-	-	34.526	-	-	21.186	-	-	-	-	21.186		
Non Recurring Cost																			

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<b>Exhibit P-5, Cost Analysis:</b> PB 2019 Navy													<b>Date:</b> February 2018					
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 1109N / 04 / 4				<b>P-1 Line Item Number / Title:</b> 4644 / Common Aviation Command and Control System (CAC2S)									<b>Item Number / Title [DODIC]:</b> 1 / Common Aviation Command and Control System (CAC2S)					
<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.																		
<b>Cost Elements</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>Unit Cost</b> (\$)	<b>Qty</b> (Each)	<b>Total Cost</b> (\$ M)	<b>Unit Cost</b> (\$)	<b>Qty</b> (Each)	<b>Total Cost</b> (\$ M)	<b>Unit Cost</b> (\$)	<b>Qty</b> (Each)	<b>Total Cost</b> (\$ M)	<b>Unit Cost</b> (\$)	<b>Qty</b> (Each)	<b>Total Cost</b> (\$ M)	<b>Unit Cost</b> (\$)	<b>Qty</b> (Each)	<b>Total Cost</b> (\$ M)	<b>Unit Cost</b> (\$)	<b>Qty</b> (Each)	<b>Total Cost</b> (\$ M)
1.2.1) LDU Refurbishment	-	-	1.127	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
<i>Subtotal: Non Recurring Cost</i>	-	-	1.127	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
<i>Subtotal: Flyaway Cost</i>	-	-	25.579	-	-	37.129	-	-	34.526	-	-	21.186	-	-	-	-	-	21.186
<b>Hardware Cost</b>																		
Recurring Cost																		
2.1.1) Army-Navy/Portable Radio Communication 117G (AN/PRC 117G)	-	-	-	-	-	-	0.441	-	-	0.363	-	-	0.218	-	-	-	-	0.218
2.1.2) GPS - MPE-S (See ACRN defined in P5 Remarks) <sup>(5)</sup>	-	-	-	-	-	-	0.013	-	-	0.012	-	-	0.009	-	-	-	-	0.009
2.1.3) MIDS Block II Crypto Modernization (6)	-	-	-	-	-	-	-	-	-	-	-	-	3.691	-	-	-	-	3.691
<i>Subtotal: Recurring Cost</i>	-	-	-	-	-	-	0.454	-	-	0.375	-	-	3.918	-	-	-	-	3.918
<i>Subtotal: Hardware Cost</i>	-	-	-	-	-	-	0.454	-	-	0.375	-	-	3.918	-	-	-	-	3.918
<b>Support Cost</b>																		
3.1) Production Support	-	-	3.843	-	-	1.039	-	-	1.171	-	-	1.218	-	-	-	-	-	1.218
3.2) Engineering/Fielding Support <sup>(7)</sup>	-	-	-	-	-	3.564	-	-	3.850	-	-	3.965	-	-	-	-	-	3.965
3.3) Common Software Baseline <sup>(8)</sup>	-	-	-	-	-	5.833	-	-	-	-	-	-	-	-	-	-	-	
3.4) Program Acquisition Support <sup>(9)</sup>	-	-	-	-	-	1.040	-	-	1.239	-	-	1.343	-	-	-	-	-	1.343
3.5) New Equipment Training (NET) <sup>(10)</sup>	-	-	0.994	-	-	3.428	-	-	3.767	-	-	3.837	-	-	-	-	-	3.837
<i>Subtotal: Support Cost</i>	-	-	4.837	-	-	14.904	-	-	10.027	-	-	10.363	-	-	-	-	-	10.363
<b>Gross/Weapon System Cost</b>	-	-	30.416	-	-	52.487	-	-	44.928	-	-	35.467	-	-	<b>0.000</b>	-	-	35.467
(†) indicates the presence of a P-5a																		
<b>Footnotes:</b>																		

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<b>Exhibit P-5, Cost Analysis:</b> PB 2019 Navy		<b>Date:</b> February 2018
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 1109N / 04 / 4	<b>P-1 Line Item Number / Title:</b> 4644 / Common Aviation Command and Control System (CAC2S)	<b>Item Number / Title [DODIC]:</b> 1 / Common Aviation Command and Control System (CAC2S)
<b>ID Code</b> (A=Service Ready, B=Not Service Ready) :		<b>MDAP/MAIS Code:</b>
(1) CAC2S Full Deployment Unit (FDU) production contract includes procurement of three variants which differ in capacity and cost. PB-18 P-5 unit cost and quantity to be procured based on CAC2S Full Rate Production Lifecycle Cost Estimate as an average unit cost for all three variants. PB-19 is updated to reflect actual unit cost and quantity to be procured in accordance with awarded contract. The AN/TSQ-297(V)1 variant is an 18 seat tactical air command & control system fielded to the Tactical Air Operations Center (TAOC), the Early Warning & Control (E/WC) detachment, the Direct Air Support Center (DASC), and the Tactical Air Command Center (TACC) Echelon agencies. Unit cost increase in FY 2018 and FY 2019 is in accordance with negotiated contract award and includes inflation.		
(2) FDU - AN/TSQ-297(V)2 variant is a 176 seat tactical air command & control system fielded to each Marine Aircraft Wing's primary TACC. Unit cost is higher than (V)1 and (V)3 variants due to the size (i.e., number of seats) of the system. By procuring all three TACC (V)2 variants in FY 2017, the legacy Marine Air Command and Control System (MACCS) system will sunset sooner resulting in future sustainment cost avoidance.		
(3) FDU - AN/TSQ-297(V)3 variant has the same capability and configuration as the (V)1 variant minus the tactical vehicle and shelters which reduces the unit cost; the (V)3 is fielded to the Supporting Establishment and Formal Military Occupational Specialty Schools. Unit cost increase in FY 2018 is in accordance with negotiated award and includes inflation.		
(4) Engineering Change Proposal production costs increased in FY 2019 to provide funding to initiate computer systems hardware replacements to address hardware and software obsolescence.		
(5) Global Positioning System - Miniature Precision Lightweight GPS Receiver (PLGR) Engine - Selective Availability Anti-spoofing Module (SAASM) (GPS - MPE-S).		
(6) FY19 budget increase is attributed to the procurement of Multifunctional Information Distribution System (MIDS) Block-II upgrade in order to comply with DoD mandate to upgrade for frequency remapping and cryptography modernization by FY 2020. Critical components are over 30 years old and have reached the end of their intended life cycle. This requirement is funded by Marine Air Command and Control System (MACCS) (PE: 0206313M; BLI: 4640) FY 2017 and FY 2018. As CAC2S is replacement of the sun setting MACCS system, CAC2S will procure the FY 2019 MIDS Block II upgrade for integration into CAC2S Lot 3 FDUs prior to fielding.		
(7) FY 2019 Engineering/Fielding support provides funds required to address fact of life system failure and reliability fixes as well as engineering support required to address hardware obsolescence and refresh.		
(8) CAC2S was fielded in 2 phases (Phase 1 and Phase 2/Full Rate Production systems). The Phase 1 and Phase 2 systems currently utilize similar, but independent software baselines. The Common Software Baseline effort enabled all CAC2S systems to operate from a single software version, consolidating and reducing future software baseline management activities (i.e. transition to a single cyber security effort / ATO). Additionally, the FY 2017 funding supported fielding and deployment of the Common Software Baseline to all CAC2S systems.		
(9) FY 2019 Program Acquisition Support includes program office fielding and logistics support required during procurement and fielding of CAC2S Full Deployment Units (Lot 3).		
(10) New Equipment Training cost increase from PB-18 to PB-19 per revised cost estimate to support operating forces driven/requested training requirements and schedules in accordance with awarded contract. The NET team personnel and travel costs were increased to allow on-site training (CONUS and OCONUS) to be conducted concurrently at multiple units/sites, as opposed to previous plans to consolidate multiple units at a single location.		

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Exhibit P-5a, Procurement History and Planning: PB 2019 Navy								<b>Date:</b> February 2018				
Appropriation / Budget Activity / Budget Sub Activity: 1109N / 04 / 4			P-1 Line Item Number / Title: 4644 / Common Aviation Command and Control System (CAC2S)					Item Number / Title [DODIC]: 1 / Common Aviation Command and Control System (CAC2S)				
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 (\$)	Specs Avail Now?	Date Revision Available	RFP Issue Date
1.1.1) Limited Deployment Unit (LDU) <sup>(†)</sup>		2016	General Dynamics / Scottsdale, AZ	C / FFP	MCSC, Quantico, VA	Jun 2016	Jun 2017	4	2,158K	Y		Feb 2012
1.1.2) LDU (Reserve) <sup>(†)</sup>		2016	General Dynamics / Scottsdale, AZ	C / FFP	MCSC, Quantico, VA	Apr 2016	Apr 2017	1	2,158K	Y		Feb 2012
1.1.3) Full Deployment Unit (FDU) - AN/TSQ-297(V)1 Variant <sup>(†)</sup>		2017 <sup>(11)</sup>	General Dynamics / Scottsdale, AZ	C / FFP	MCSC, Quantico, VA	Aug 2017	Aug 2018	9	2,087K	Y		Oct 2016
1.1.3) Full Deployment Unit (FDU) - AN/TSQ-297(V)1 Variant <sup>(†)</sup>		2018 <sup>(12)</sup>	General Dynamics / Scottsdale, AZ	C / FFP	MCSC, Quantico, MCSC, Quantico, VA	May 2018	Feb 2019	13	2,102K	Y		Oct 2016
1.1.3) Full Deployment Unit (FDU) - AN/TSQ-297(V)1 Variant <sup>(†)</sup>		2019 <sup>(13)</sup>	General Dynamics / Scottsdale, AZ	C / FFP	MCSC, Quantico, VA	May 2019	Feb 2020	9	2,168K	Y		Oct 2016
1.1.4) Full Deployment Unit (FDU) - AN/TSQ-297(V)2 Variant		2017 <sup>(14)</sup>	General Dynamics / Scottsdale, AZ	C / FFP	Quantico, VA	Aug 2017	Aug 2018	3	3,229K	Y		Oct 2016
1.1.5) Full Deployment Unit (FDU) AN/TSQ-297(V)3 Variant		2017	General Dynamics / Scottsdale, AZ	C / FFP	Quantico, VA	Aug 2017	Aug 2018	4	2,039K	Y		Oct 2016
1.1.5) Full Deployment Unit (FDU) AN/TSQ-297(V)3 Variant		2018	General Dynamics / Scottsdale, AZ	C / FFP	Quantico, VA	May 2018	Feb 2019	3	2,080K	Y		Oct 2016

(†) indicates the presence of a P-21

**Footnotes:**

(11) FDU Lot 1 production contract awarded 24 August 2017 to procure quantity 16 systems.

(12) FDU Lot 2 will award May 2018 to procure quantity 16 systems (13 AN/TSQ-297(V)1 and 3 AN/TSQ-297(V)3).

(13) FDU Lot 3 will award May 2019 to procure quantity 9 systems to achieve AAO of 50 systems. Production contract ends FY20 upon procurement of final 9 systems.

(14) P21 was not required for V2 and V3 due to dollar thresholds.

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Exhibit P-21, Production Schedule: PB 2019 Navy																				Date: February 2018																																																																																														
Appropriation / Budget Activity / Budget Sub Activity: 1109N / 04 / 4																				Item Number / Title [DODIC]: 1 / Common Aviation Command and Control System (CAC2S)																																																																																														
Cost Elements (Units in Each)																				Fiscal Year 2016																																																																																														
<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th rowspan="2">O C O #</th><th rowspan="2">M F R #</th><th rowspan="2">FY</th><th rowspan="2">SERVICE</th><th rowspan="2">PROC QTY</th><th rowspan="2">ACCEPT PRIOR TO 1 OCT 2015</th><th rowspan="2">BAL DUE AS OF 1 OCT</th><th colspan="12">Calendar Year 2016</th><th colspan="12">Calendar Year 2017</th><th rowspan="2">B A L A N C E</th></tr> <tr> <th>O C T</th><th>N O V</th><th>D E C</th><th>J A N</th><th>F E B</th><th>M A R</th><th>A P R</th><th>M A Y</th><th>J U N</th><th>J U L</th><th>A U G</th><th>S E P</th><th>O C T</th><th>N O V</th><th>D E C</th><th>J A N</th><th>F E B</th><th>M A R</th><th>A P R</th><th>M A Y</th><th>J U N</th><th>J U L</th><th>A U G</th><th>S E P</th></tr> </thead> <tbody> <tr> <td>1</td><td>2016</td><td>NAVY</td><td>4</td><td>0</td><td>4</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td>0</td></tr> </tbody> </table>																			O C O #	M F R #	FY	SERVICE	PROC QTY	ACCEPT PRIOR TO 1 OCT 2015	BAL DUE AS OF 1 OCT	Calendar Year 2016												Calendar Year 2017												B A L A N C E	O C T	N O V	D E C	J A N	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	1	2016	NAVY	4	0	4																								0	Fiscal Year 2017									
O C O #	M F R #	FY	SERVICE	PROC QTY	ACCEPT PRIOR TO 1 OCT 2015	BAL DUE AS OF 1 OCT	Calendar Year 2016																			Calendar Year 2017												B A L A N C E																																																																												
							O C T	N O V	D E C	J A N	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																																																																																				
1	2016	NAVY	4	0	4																								0																																																																																					
1.1.1) Limited Deployment Unit (LDU) Prior Years Deliveries: 4																				A -	-	-	-	-	-	-	-	-	2																																																																																					
1.1.2) LDU (Reserve)																				A -	-	-	-	-	-	-	-	-	1																																																																																					
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Exhibit P-21, Production Schedule: PB 2019 Navy																				Date: February 2018																								
Appropriation / Budget Activity / Budget Sub Activity:																				Item Number / Title [DODIC]:																								
1109N / 04 / 4																				1 / Common Aviation Command and Control System (CAC2S)																								
Cost Elements (Units in Each)																				Fiscal Year 2018																								
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																				Fiscal Year 2019		B A L A N C E															
							O C T	N O V	D E C	J A N	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															
1.1.1) Limited Deployment Unit (LDU)																																												
Prior Years Deliveries: 4																																												
1	2016	NAVY	4	4	0																									0														
1.1.2) LDU (Reserve)																																												
2	2016	NAVY	1	1	0																									0														
1.1.3) Full Deployment Unit (FDU) - AN/TSQ-297(V)1 Variant <sup>(1)</sup>																																												
3	2017	NAVY	9	0	9	-	-	-	-	-	-	-	-	-	-	-	1	1	1	1	1	1	1	1	1	1	1	1	0															
3	2018	NAVY	13	0	13													A -	-	-	-	-	-	-	-	1	1	1	1	4														
3	2019	NAVY	9	0	9																								A -	9														
																				O C T	N O V	D E C	J A N	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	B A L A N C E
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Exhibit P-21, Production Schedule: PB 2019 Navy																				Date: February 2018																			
Appropriation / Budget Activity / Budget Sub Activity: 1109N / 04 / 4										P-1 Line Item Number / Title: 4644 / Common Aviation Command and Control System (CAC2S)										Item Number / Title [DODIC]: 1 / Common Aviation Command and Control System (CAC2S)																			
Cost Elements (Units in Each)					Fiscal Year 2020												Fiscal Year 2021												B A L A N C E										
O C O #	M F R #	FY	SERVICE	PROC QTY	ACCEPT PRIOR TO 1 OCT 2019	BAL DUE AS OF 1 OCT	O C T	N O V	D E C	J A N	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									
1.1.1) Limited Deployment Unit (LDU)	Prior Years Deliveries: 4	1	2016	NAVY	4	4	0																												0				
1.1.2) LDU (Reserve)		2	2016	NAVY	1	1	0																												0				
1.1.3) Full Deployment Unit (FDU) - AN/TSQ-297(V)1 Variant <sup>(1)</sup>		3	2017	NAVY	9	9	0																												0				
		3	2018	NAVY	13	9	4	1	1	1	1																						0						
		3	2019	NAVY	9	0	9	-	-	-	-	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0								
					O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P	O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P											

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Exhibit P-21, Production Schedule: PB 2019 Navy										Date: February 2018		
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 1109N / 04 / 4			<b>P-1 Line Item Number / Title:</b> 4644 / Common Aviation Command and Control System (CAC2S)									
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	General Dynamics - Scottsdale, AZ	10	10	30	0	0	12	12	0	0	12	12
2	General Dynamics - Scottsdale, AZ	10	10	30	0	0	12	12	0	0	12	12
3	General Dynamics - Scottsdale, AZ	7	19	22	0	0	12	12	0	0	9	9

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

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

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<b>Exhibit P-40, Budget Line Item Justification: PB 2019 Navy</b>								<b>Date:</b> February 2018				
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 1109N: Procurement, Marine Corps / BA 04: Communications and Electronics Equipment / BSA 7: Repair and Test Equipment					<b>P-1 Line Item Number / Title:</b> 4181 / Repair and Test Equipment							
<b>ID Code</b> (A=Service Ready, B=Not Service Ready): A			<b>Program Elements for Code B Items:</b> N/A					<b>Other Related Program Elements:</b> 0206313M, 0206624M				
<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 (\$ in Millions)	234.243	14.469	41.297	46.081	0.000	46.081	57.405	30.322	35.746	33.327	-	492.890
Less PY Advance Procurement (\$ in Millions)	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) (\$ in Millions)	234.243	14.469	41.297	46.081	0.000	46.081	57.405	30.322	35.746	33.327	-	492.890
Plus CY Advance Procurement (\$ in Millions)	-	-	-	-	-	-	-	-	-	-	-	-
<b>Total Obligation Authority</b> (\$ in Millions)	<b>234.243</b>	<b>14.469</b>	<b>41.297</b>	<b>46.081</b>	<b>0.000</b>	<b>46.081</b>	<b>57.405</b>	<b>30.322</b>	<b>35.746</b>	<b>33.327</b>	-	<b>492.890</b>
<i>(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)</i>												
Initial Spares (\$ in Millions)	-	0.218	0.173	0.174	-	0.174	0.178	0.180	0.184	0.189	Continuing	Continuing
Flyaway Unit Cost (\$ in Dollars)	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost (\$ in Dollars)	-	-	-	-	-	-	-	-	-	-	-	-
<b>Description:</b>												
Repair and Test Equipment Budget Line Item provides repair and test equipment consisting of more than 200 different items of equipment required to support the operation and maintenance of USMC ground based weapon systems or major end items. Repair and test equipment includes items such as tool kits, shop sets, manual and automatic test equipment, as well as, metrology and calibration equipment. The following acquisition programs fall under the repair and test equipment budget line: General Purpose Tools and Test Systems (GPT&TS); Automatic Test Systems, Calibration and Maintenance Program (CAMP) and Electronic Maintenance Support System (EMSS) which was renamed MAGTF Logistics Support Systems (MLS2) for FY16 and beyond.												
<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>			
Navy	Quantity	-	-	-	-	-	-	-	-	-	-	-
	Total Obligation Authority	13.237	41.297	46.081	-	46.081	57.405	30.322	35.746	33.327		
NR	Quantity	-	-	-	-	-	-	-	-	-	-	-
	Total Obligation Authority	1.232	-	-	-	-	-	-	-	-	-	-
<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>14.469</b>	<b>41.297</b>	<b>46.081</b>	<b>-</b>	<b>46.081</b>	<b>57.405</b>	<b>30.322</b>	<b>35.746</b>	<b>33.327</b>		

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Exhibit P-40, Budget Line Item Justification: PB 2019 Navy							Date: February 2018		
Appropriation / Budget Activity / Budget Sub Activity: 1109N: Procurement, Marine Corps / BA 04: Communications and Electronics Equipment / BSA 7: Repair and Test Equipment				P-1 Line Item Number / Title: 4181 / Repair and Test Equipment					
ID Code (A=Service Ready, B=Not Service Ready): A		Program Elements for Code B Items: N/A			Other Related Program Elements: 0206313M, 0206624M				
<b>Line Item MDAP/MAIS Code:</b> N/A									
<b>Exhibits Schedule</b>				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)
P-40a	Repair and Test Equipment	P-5a, P-21			- / 234.243	- / 14.469	- / 41.297	- / 46.081	- / -
<b>P-40</b>	<b>Total Gross/Weapon System Cost</b>				<b>- / 234.243</b>	<b>- / 14.469</b>	<b>- / 41.297</b>	<b>- / 46.081</b>	<b>- / 0.000</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. Title represents the P-40a Title when only the P-40a Summary/Total is shown.									
Note: Totals in this Exhibit P-40 set may not be exact or sum exactly due to rounding.									

**Justification:**

FY2018 Baseline Appropriation Request: \$33.056M (ACTIVE:\$33.056M/RESERVE:\$0.000M)

General Purpose Tools and Test Systems (GPT&TS) \$4.754M: Funding will support units for the procurement of GPT&TS. The GPT&TS budget represents a wide variety of Tool Kits, Shop Sets, Electronic Test Equipment, hand-held mechanical test equipment, and large mechanical test equipment contained in shelters or buildings. All of these items are commercial off the shelf or modified commercial off the shelf type equipment that are necessary/required to support the field maintenance effort of USMC ground equipment & weapon systems. These are the tools & test equipment used by Marine maintenance personnel in a field or expeditionary environment.

Automatic Test Systems (ATS) \$16.463M: Funding will support procurement of Engineer Change Proposal (ECP) kits to enhance capability and mitigate against obsolescence for Automatic Test Systems (ATS) such as the General Purpose Automatic Test System (GPATS), Ground Radio Maintenance Automatic Test System (GRMATS), and associated applications that enable ATS to test weapon system platforms. These ATS provide mobile automatic testing on Line Replaceable Units (LRU) and Circuit Card Assemblies (CCA), enabling rapid restoration of weapon systems. Equipment consists of hardware and software portable equipment. Specific Application Program Systems (APS) procurements for FY18 include the Light Armored Vehicle Anti-Tank (LAV-AT) LRU APS and the Saber CCA APS.

Calibration and Maintenance Program (CAMP) \$0.576M: Funding will support the necessary modifications and updates to the Marine Corps Field Level Calibration Facility (AN/TSM-214A). There are twelve fielded Calibration Facilities, with each consisting of four twenty-foot International Organization for Standardization (ISO) containers and containing a wide variety of Calibration Standards and support equipment. This facility is designed for expeditionary deployments and use in austere environments. Various Calibration Standards, controllers (work stations), and software must be replaced/upgraded over time in order to support & calibrate all the different test equipment used by various maintenance personnel working on USMC ground military equipment.

MAGTF Logistics Support Systems (MLS2) \$11.263M: Funding will be used to procure Electronic Maintenance Support Systems (EMSS). FY18 funds will procure Commercial Off-The-Shelf (COTS) equipment that comprises the EMSS and technical support for fielded systems. The EMSS provides a Commercial Off-The-Shelf (COTS) hardware device equipped with Built-In-Test/Built- In-Test Equipment (BIT/ BITE) interfaces, and Software Defined Test Instrument (SDTI) that provides capabilities such as Interactive Electronic Technical Manuals (IETMs), Computer Based Training (CBT), and other maintenance applications. EMSS also has the capability to connect to the Marine Corps Enterprise Network (MCEN) and access sites like Global Combat Support System - Marine Corps (GCSS-MC) in order to facilitate maintenance and supply transactions.

The FY 2019 funding request was reduced by (\$.336) million to reflect the Department of Navy's effort to support the Office of Management and Budget directed reforms for Efficiency and Effectiveness that include a lean, accountable, more efficient government.

FY2019 Baseline Appropriation Request: \$46.081M (ACTIVE:\$46.081M, RESERVE:\$0M)

General Purpose Tools and Test Systems (GPT&TS) \$13.754M: Funding will support units for the procurement of GPT&TS. The GPT&TS budget represents a wide variety of tool kits, shop sets, electronic test equipment, hand-held mechanical test equipment, and large mechanical test equipment contained in shelters or buildings. All of these items are commercial off the shelf or modified commercial off the shelf type

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<b>Exhibit P-40, Budget Line Item Justification: PB 2019 Navy</b>		<b>Date:</b> February 2018
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 1109N: Procurement, Marine Corps / BA 04: Communications and Electronics Equipment / BSA 7: Repair and Test Equipment	<b>P-1 Line Item Number / Title:</b> 4181 / Repair and Test Equipment	
<b>ID Code</b> (A=Service Ready, B=Not Service Ready): A	<b>Program Elements for Code B Items:</b> N/A	<b>Other Related Program Elements:</b> 0206313M, 0206624M
<b>Line Item MDAP/MAIS Code:</b> N/A		
equipment that are necessary/required to support the field maintenance effort of USMC ground equipment and weapon systems. These are the tools and test equipment used by Marine maintenance personnel in a field or expeditionary environment. The \$9.000M increase from FY18 to FY19 will support the procurement of the 1st article Expeditionary 3D Printer (SEMS XFab), Hand Held Microwave test sets, and additional Vehicle Automated Diagnostic test sets and controllers.		
Automatic Test Systems (ATS) \$9.958M: Funding will support procurement of Engineer Change Proposal (ECP) kits to enhance capability and mitigate against obsolescence for the General Purpose Automatic Test System (GPATS), Technical Manual publication, Ground Radio Maintenance Automatic Test System (GRMATS) ECPs, and Application Program Sets (APS) production that enable ATS to test multiple Marine Corps ground systems, such as the Very Small Aperture Terminal (VSAT) satellite APS and Saber Circuit Card Assembly (CCA) APS. ATS consists of both hardware and software components that provides mobile and automatic testing on Line Replaceable Units (LRU) and CCA in order to improve weapon system readiness, provide an organic maintenance solution, and decrease life cycle costs. The \$6.505M decrease from FY18 to FY19 is the result of a one year funding increase in FY18 to procure GRMATS ECP kits.		
Calibration and Maintenance Program (CAMP) \$11.916M: Funding will procure 2 lightened Expeditionary Calibration Facilities. These facilities are designed for expeditionary deployments and use in austere environments to support MAGTF deployed operations and will provide warfighters with a lighter, smaller and more capable Expeditionary Calibration Facility. Funding will also procure various calibration equipment. Various calibration standards, controllers (work stations), and software must be replaced/upgraded over time in order to support and calibrate all the different test equipment used by various maintenance personnel working on USMC ground military equipment. Increase \$11.340M from FY18 to FY19 supports procurement of 2 Expeditionary Calibration Facilities.		
MAGTF Logistics Support Systems (MLS2) \$10.453M: Funding will continue to procure Electronic Maintenance Support Systems (EMSS). FY19 funding will procure items such as Commercial Off-The-Shelf (COTS) equipment, operating software that comprises the EMSS and technical support. EMSS includes Built-In-Test/Built- In-Test Equipment (BIT/BITE) interfaces and Software Defined Test Instrument (SDTI) that enables capabilities such as storing and viewing Interactive Electronic Technical Manuals (IETMs), Computer Based Training (CBT), and other maintenance applications. EMSS also has the capability to connect to the Marine Corps Enterprise Network (MCEN) and access sites like Global Combat Support System - Marine Corps (GCSS-MC) in order to facilitate maintenance and supply transactions, thereby improving readiness. EMSS connected to the MCEN were demonstrated to provide maintainers a time savings of upwards of 15% per task and 40 minutes per day based on their average workload.		
OCO: FY 2018 Overseas Contingency Operations (OCO) Request: \$8.241M Automatic Test Systems (ATS) funds will be used to procure 9 Virtual Instrument Portable Equipment Repair/Tester (VIPER/T) systems. These systems are used while deployed to field test, align, and repair vehicle components for Special Purpose MAGTFs (SPMAGTF).		
FY 2019 Overseas Contingency Operations (OCO) Request: N/A		

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Exhibit P-40a, Budget Item Justification For Aggregated Items: PB 2019 Navy														Date: February 2018						
Appropriation / Budget Activity / Budget Sub Activity: 1109N / 04 / 7					P-1 Line Item Number / Title: 4181 / Repair and Test Equipment									Aggregated Items Title: Repair and Test Equipment						
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 (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)
<b>1) MAGTF Logistics Support Systems (MLS2)</b>																				
1.1) EMD Hardware (1)(t)	A		3,637.76	196	0.713	-	-	-	5,234.41	1,541	8.066	5,339.10	1,443	7.704	-	-	-	5,339.10	1,443	7.704
1.2) Operating Software <sup>(†)</sup>	A		454.21	273	0.124	-	-	-	700.00	1,541	1.079	713.00	1,443	1.029	-	-	-	713.00	1,443	1.029
1.3) Technical Support	A		-	-	2.733	-	-	3.364	-	-	2.118	-	-	1.720	-	-	-	-	-	1.720
<i>Subtotal: 1) MAGTF Logistics Support Systems (MLS2)</i>			-	-	<b>3.570</b>	-	-	<b>3.364</b>	-	-	<b>11.263</b>	-	-	<b>10.453</b>	-	-	-	-	-	<b>10.453</b>
<b>2) General Purpose Tools and Test Systems (GPT&amp;TS)</b>																				
2.1) SEMS Additive Manufacturing Shop (3D Printers) <sup>(2)(t)</sup>	A		-	-	-	-	-	-	-	-	-	2,700K	1	2.700	-	-	-	2,700K	1	2.700
2.2) Radio Test Set (3 GHz-Handheld) <sup>(†)</sup>	A		-	-	-	-	-	-	-	-	-	18,800.00	100	1.880	-	-	-	18,800.00	100	1.880
2.3) Microwave Comm and Radar Test Set (Handheld) <sup>(†)</sup>	A		-	-	-	-	-	-	-	-	-	26,476.92	65	1.721	-	-	-	26,476.92	65	1.721
2.4) Fire Bottle Refill Shop <sup>(3)(t)</sup>	A		-	-	-	-	-	-	-	-	-	425,000.00	1	0.425	-	-	-	425,000.00	1	0.425
2.6) Air Compressor (LUBE Unit) <sup>(†)</sup>	A		21,458.33	48	1.030	-	-	-	21,533.33	15	0.323	-	-	-	-	-	-	-	-	
2.7) General Mech Tool Kit (GMTK) <sup>(†)</sup>	A		-	-	-	-	-	-	3,275.00	140	0.458	3,275.00	140	0.458	-	-	-	3,275.00	140	0.458
2.8) Vehicle Automated Diagnostic System (VADS) (MT-Ordnance Eng Version) <sup>(†)</sup>	A		24,856.46	418	10.390	-	-	-	19,235.96	89	1.712	19,850.00	50	0.992	-	-	-	19,850.00	50	0.992
2.9) VADS Instrument Controller (IC) Hardware and Software Refresh <sup>(†)</sup>	A		4,544.39	428	1.945	-	-	-	2,600.00	110	0.286	2,602.00	110	0.286	-	-	-	2,602.00	110	0.286
2.10) Fuel Test Stand, Test Program Sets <sup>(4)</sup>	A		-	-	-	-	-	0.959	-	-	0.506	-	-	0.741	-	-	-	-	-	0.741
2.11) Dynamometer Test Stand - Test Program Sets	A		-	-	-	-	-	-	-	-	-	-	-	0.564	-	-	-	-	-	0.564
2.12) Operators Fluid Analysis Test Set <sup>(5)(t)</sup>	A		-	-	-	-	-	-	-	-	-	33,000.00	50	1.650	-	-	-	33,000.00	50	1.650
2.13) Technicians Fluid Analysis Test Set <sup>(6)(t)</sup>	A		-	-	-	-	-	-	-	-	-	100,000.00	5	0.500	-	-	-	100,000.00	5	0.500

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Exhibit P-40a, Budget Item Justification For Aggregated Items: PB 2019 Navy														Date: February 2018						
Appropriation / Budget Activity / Budget Sub Activity: 1109N / 04 / 7					P-1 Line Item Number / Title: 4181 / Repair and Test Equipment									Aggregated Items Title: Repair and Test Equipment						
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 (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)
2.14) VADS, Various TSK Systems; Fielding & Tech Data Support	A		-	-	0.925	-	-	0.451	-	-	-	-	-	-	-	-	-	-	-	
2.20) GSM TMDE Systems Fielding, Training & Calibration Support - FAST Team	A		-	-	0.650	-	-	0.263	-	-	0.363	-	-	0.366	-	-	-	-	0.366	
2.21) AN/USM-674 Circuit Card Tester (C7501) Fielding, Training & Tech Data	A		-	-	0.296	-	-	0.076	-	-	-	-	-	-	-	-	-	-	-	
2.22) GPT&TS Eng/ Soft/Log Support	A		-	-	7.415	-	-	0.848	-	-	1.106	-	-	1.471	-	-	-	-	1.471	
<b>Subtotal: 2) General Purpose Tools and Test Systems (GPT&amp;TS)</b>			-	-	<b>22.651</b>	-	-	<b>2.597</b>	-	-	<b>4.754</b>	-	-	<b>13.754</b>	-	-	-	-	<b>13.754</b>	
<b>3) Automatic Test Systems</b>																				
3.1) Application Program Sets/Test Program Sets <sup>(7)</sup>	A		-	-	7.108	-	-	1.050	-	-	1.700	-	-	1.500	-	-	-	-	1.500	
3.2) Automatic Test Equipment <sup>(8)</sup>	A		-	-	13.344	-	-	5.025	-	-	19.135	-	-	7.041	-	-	-	-	7.041	
3.3) ATS Engineering Support <sup>(9)</sup>			-	-	4.188	-	-	0.481	-	-	1.881	-	-	0.558	-	-	-	-	0.558	
3.4) ATS Software Support <sup>(10)</sup>			-	-	2.448	-	-	0.477	-	-	1.724	-	-	0.553	-	-	-	-	0.553	
3.5) ATS Logistic Support			-	-	0.666	-	-	0.243	-	-	0.264	-	-	0.306	-	-	-	-	0.306	
<b>Subtotal: 3) Automatic Test Systems</b>			-	-	<b>27.754</b>	-	-	<b>7.276</b>	-	-	<b>24.704</b>	-	-	<b>9.958</b>	-	-	-	-	<b>9.958</b>	
<b>4) Calibration &amp; Maintenance Program (CAMP) <sup>(11)</sup></b>																				
4.1) Calibration Control Group <sup>(12)(†)</sup>	A		-	-	-	-	-	-	48,000.00	12	0.576	-	-	-	-	-	-	-	-	
4.2) Various Calibration Equipment <sup>(13)</sup>	A		-	-	-	-	-	-	-	-	-	-	-	0.916	-	-	-	-	0.916	
4.3) Expeditionary Calibration Facility <sup>(14)(†)</sup>	A		-	-	-	-	-	-	-	-	-	5,500K	2	11.000	-	-	-	5,500K	2	11.000
<b>Subtotal: 4) Calibration &amp; Maintenance Program (CAMP)</b>			-	-	<b>0.000</b>	-	-	-	-	-	<b>0.576</b>	-	-	<b>11.916</b>	-	-	-	-	<b>11.916</b>	
<b>5) General Purpose Tools and Test Equipment (GPT&amp;TE) RESERVES</b>																				
5.1) Air Compressor (LUBE Unit) <sup>(†)</sup>	A		13,483.33	60	0.809	21,500.00	10	0.215	-	-	-	-	-	-	-	-	-	-	-	

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Exhibit P-40a, Budget Item Justification For Aggregated Items: PB 2019 Navy														Date: February 2018						
Appropriation / Budget Activity / Budget Sub Activity: 1109N / 04 / 7					P-1 Line Item Number / Title: 4181 / Repair and Test Equipment									Aggregated Items Title: Repair and Test Equipment						
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 (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)
5.2) Vehicles Automated Diagnostic System (VADS) (MT-Ordnance Eng Version)(†)	A		-	-	-	19,233.33	30	0.577	-	-	-	-	-	-	-	-	-	-	-	
5.3) VADS IC Hardware and Software (Refresh)(†)	A		3,875.00	40	0.155	2,600.00	60	0.156	-	-	-	-	-	-	-	-	-	-	-	
5.4) GPT&TS Eng/ Software/ Log Support	A		-	-	1.762	-	-	0.284	-	-	-	-	-	-	-	-	-	-	-	
<b>Subtotal: 5) General Purpose Tools and Test Equipment (GPT&amp;TE) RESERVES</b>			-	-	<b>2.726</b>	-	-	<b>1.232</b>	-	-	-	-	-	-	-	-	-	-	-	
<b>6) Prior Year Cum Funding</b>																				
6.1) Prior Year Cum Funding	A		-	-	177.542	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
<b>Subtotal: 6) Prior Year Cum Funding</b>			-	-	<b>177.542</b>	-	-	-	-	-	-	-	-	-	-	-	-	-		
<b>Total</b>			-	-	<b>234.243</b>	-	-	<b>14.469</b>	-	-	<b>41.297</b>	-	-	<b>46.081</b>	-	-	-	-	<b>46.081</b>	
Note: Subtotals or Totals in this Exhibit P-40a may not be exact or sum exactly, due to rounding.																				
(†) indicates the presence of a P-5a																				
<b>Footnotes:</b>																				
(1) Reduced FY18 unit cost from \$6,499.60/unit to \$5,234.41/unit to reflect Army's updated Independent Government Cost Estimate (IGCE) that originally estimated costs for the Army's maintenance device variant which exceeded the required capabilities for EMSS. The EMSS program received an updated IGCE from the Army in June 2017 that included a material solution that meets Marine Corps' requirements at an affordable cost. The EMSS program received an updated schedule dated August 2017 from the Army delaying the Firm-Fixed Price (FFP) contract award from 1QFY18 to 3QFY18. Contract award and unit cost/quantities will be updated based on contract cost. Decreased unit cost will procure total 1,541 systems in FY18 and increased quantities across FYDP to meet FOC of 10,000 systems.																				
(2) New requirement to field expeditionary Industrial Grade 3D Printers and associated equipment (scanners etc.) for use by Marine Machinists (2161's) to fabricate metal and plastic repair parts in a deployed environment.																				
(3) FY18 change shifts quantities from FY18/FY19 to FY19-21 due to acquisition strategy change resulting from US Army 1-year contract delay. FY18 funding will procure various items for Fuel Test Stand, Test Program Sets (CE 2.8)																				
(4) Fuel Test Stand Test Program Sets (CE 2.8) budget increase reflects FY18 funding redirected from CE 2.3 due to acquisition strategy change for contract delay. Funding will be used to procure additional fuel component Application Program Sets(APS)/Test Program Sets(TPS). APS/TPS consist of various adapters/connectors/software with different unit costs, to support various weapon systems. FY19 funding is required to procure additional APS/TPS for emerging weapon systems.																				
(5) Cost elements 2.12 and 2.13 replaced previous year cost element 2.12.																				
(6) Cost elements 2.12 and 2.13 replaced previous year cost element 2.12.																				
(7) Decrease from FY17 to FY18 reflects different unit cost of various Application Program Sets (APS)/Test Program Sets (TPS) being procured within this cost element (i.e. Light Armored Vehicle Anti-Tank (LAV-AT) and Saber CCA).																				
(8) FY18 to FY19 decrease is the result of a one year funding increase in FY18 to procure GRMATS ECP kits.																				
(9) ATS engineering support decrease from FY18 to FY19 is a result of fielding 5 distinctive Application Program Sets (APS) in the same FY.																				
(10) ATS software support decrease from FY18 to FY19 is a result of fielding 5 distinctive Application Program Sets (APS) in the same FY.																				
(11) New Grouping for BLI 4181. Calibration & Maintenance Program (CAMP) funding will refresh and modernize Calibration Facility equipment.																				
(12) Calibration Control Group (DAGC) consists of a laptop, server and printer.																				
(13) Various calibration equipment will be procured; Amplifier, Low and High Pressure Standards, Audio Analyzer and Meter Calibrator.																				

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<b>Exhibit P-40a, Budget Item Justification For Aggregated Items:</b> PB 2019 Navy	<b>Date:</b> February 2018
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 1109N / 04 / 7	<b>P-1 Line Item Number / Title:</b> 4181 / Repair and Test Equipment

(14) Increase FY18 to FY19 procures 2 Expeditionary Calibration Facilities.

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Exhibit P-5a, Procurement History and Planning: PB 2019 Navy									Date: February 2018			
Appropriation / Budget Activity / Budget Sub Activity: 1109N / 04 / 7				P-1 Line Item Number / Title: 4181 / Repair and Test Equipment					Aggregated Items: Repair and Test Equipment			
Item Number / Title [DODIC]	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 (\$)	Specs Avail Now?	Date Revision Available	RFP Issue Date
<b>1) MAGTF Logistics Support Systems (MLS2)</b>												
1.1) EMD Hardware <sup>(1)(†)</sup>		2016	CDW Government LLC <sup>(15)</sup> / Vernon Hills, IL	C / FFP	Quantico, VA	Aug 2016	Feb 2017	196	3,635.35	Y		
1.1) EMD Hardware <sup>(1)(†)</sup>		2018 <sup>(16)</sup>	TBD <sup>(17)</sup> / TBD	C / FFP	ACC, Huntsville, AL	Jun 2018	Dec 2018	1,541	5,234.41	Y		
1.1) EMD Hardware <sup>(1)(†)</sup>		2019 <sup>(18)</sup>	TBD <sup>(17)</sup> / TBD	C / FFP	ACC, Huntsville, AL	Feb 2019	May 2019	1,443	5,339.10	Y		
1.2) Operating Software		2016	Insight Public Sector, Inc. / Tempe, AZ	C / FFP	Quantico, VA	Aug 2016	Sep 2016	273	454.79	Y		
1.2) Operating Software		2018 <sup>(19)</sup>	TBD <sup>(20)</sup> / TBD	C / FFP	Quantico, VA	Feb 2018	Mar 2018	1,541	700.00	Y		
1.2) Operating Software		2019 <sup>(21)</sup>	TBD <sup>(20)</sup> / TBD	C / FFP	Quantico, VA	Feb 2019	Mar 2019	1,443	713.00	Y		
<b>2) General Purpose Tools and Test Systems (GPT&amp;TS)</b>												
2.1) SEMS Additive Manufacturing Shop (3D Printers) <sup>(2)</sup>		2019	TBD@ TBD / TBD	C / FFP	Quantico, VA	Aug 2019	Aug 2019	1	2,700K	N	Sep 2019	Jan 2019
2.2) Radio Test Set (3 GHz-Handheld)		2019	TBD@ TBD / TBD	C / TBD	Quantico, VA	Mar 2019	Mar 2019	100	18,800.00	Y		Jan 2019
2.3) Microwave Comm and Radar Test Set (Handheld)		2019	TBD@ TBD / TBD	C / TBD	Quantico, VA	Aug 2019	Aug 2019	65	26,476.92	Y		Jan 2019
2.4) Fire Bottle Refill Shop <sup>(3)</sup>		2019 <sup>(22)</sup>	TBD@ TBD <sup>(23)</sup> / TBD	C / TBD	TACOM, Warren, MI	Oct 2018	Oct 2018	1	425,000.00	Y		
2.6) Air Compressor (LUBE Unit)		2018	ADS, Inc. / VA Beach, VA	C / FFP	Quantico, VA	May 2018	Nov 2018	15	21,533.33	Y		
2.7) General Mech Tool Kit (GMTK)		2018	TBD@ TBD / TBD	C / FFP	TACOM, Warren, MI	Feb 2018	Dec 2018	140	3,275.00	Y		
2.8) Vehicle Automated Diagnostic System (VADS) (MT-Ordnance Eng Version)		2016	Raydar / Odon, IN	C / FFP	NSWC, CRANE, IN	Apr 2016	Nov 2016	41	18,763.75	Y		
2.8) Vehicle Automated Diagnostic System (VADS) (MT-Ordnance Eng Version)		2018	Raydar / Odon, IN	C / FFP	NSWC, CRANE, IN	Mar 2018	Oct 2018	89	19,235.96	Y		
2.9) VADS Instrument Controller (IC) Hardware and Software Refresh		2018	Intelligent Decisions, Inc. / Ashburn, VA	C / FFP	Quantico, VA	Jun 2018	Aug 2018	110	2,600.00	Y		
2.12) Operators Fluid Analysis Test Set <sup>(5)</sup>		2019	TBD@ TBD / New MFG - Loc	TBD	TBD	Apr 2019	Apr 2019	50	33,000.00	Y		
2.13) Technicians Fluid Analysis Test Set <sup>(6)</sup>		2019	TBD@ TBD / New MFG - Loc	C / TBD	TBD	Apr 2019	Apr 2019	5	100,000.00	Y		
<b>4) Calibration &amp; Maintenance Program (CAMP)</b>												
4.1) Calibration Control Group <sup>(12)</sup>		2018	TBD@ TBD / TBD	C / TBD	NSWC, Corona, CA	Jan 2018	Aug 2018	12	48,000.00	Y		
4.3) Expeditionary Calibration Facility <sup>(14)(†)</sup>		2019	TBD@ TBD / TBD	C / TBD	TBD	Feb 2019	Feb 2020	2	5,500K	Y		

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Exhibit P-5a, Procurement History and Planning: PB 2019 Navy								Date: February 2018				
Appropriation / Budget Activity / Budget Sub Activity: 1109N / 04 / 7			P-1 Line Item Number / Title: 4181 / Repair and Test Equipment					Aggregated Items: Repair and Test Equipment				
Item Number / Title [DODIC]	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 (\$)	Specs Avail Now?	Date Revision Available	RFP Issue Date
<b>5) General Purpose Tools and Test Equipment (GPT&amp;TE) RESERVES</b>												
5.1) Air Compressor (LUBE Unit)		2017	ADS, Inc. / Virginia Beach, VA	C / FFP	Quantico, VA	Feb 2017	Aug 2017	10	21,500.00	Y		
5.2) Vehicles Automated Diagnostic System (VADS) (MT-Ordnance Eng Version)		2017	RAYDAR / Bedford, IN	C / FFP	NSWC, CRANE, IN	May 2017	Dec 2017	30	19,233.33	Y		
5.3) VADS IC Hardware and Software (Refresh)		2017	Intelligent Decisions, Inc. / Ashburn, VA	C / FFP	Quantico, VA	Jun 2017	Aug 2017	60	2,600.00	Y		

(†) indicates the presence of a P-21

**Footnotes:**

- (15) MSR for multiple program offices procured off of the same contract.
- (16) Multiple Vendors ; Army contract
- (17) Multiple Vendors
- (18) Multiple Vendors; Army contract
- (19) Multiple Vendors
- (20) Multiple Vendors
- (21) Multiple Vendors
- (22) Joint production with Army (TACOM) who is the lead for this requirement.
- (23) Initial Award: JUN 2017

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Exhibit P-21, Production Schedule: PB 2019 Navy																				Date: February 2018																										
Appropriation / Budget Activity / Budget Sub Activity: 1109N / 04 / 7										P-1 Line Item Number / Title: 4181 / Repair and Test Equipment										Aggregated Items: Repair and Test Equipment																										
Items (Units in Each)					Fiscal Year 2016															Fiscal Year 2017																										
O C R O #	M F R Y	SERVICE	PROC QTY	ACCEPT PRIOR TO 1 OCT 2015	BAL DUE AS OF 1 OCT	O C T	N O V	D E C	J A N	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	B A L A N C E																
1) MAGTF Logistics Support Systems (MLS2)					Calendar Year 2016															Calendar Year 2017																										
1.1) EMD Hardware <sup>(1)</sup>																																			0											
5	2016	NAVY	196	0	196																A -	-	-	-	-	-	-	-	-	196																0
6	2018	NAVY	1,541	0	1,541																															1,541										
6	2019	NAVY	1,443	0	1,443																															1,443										
4) Calibration & Maintenance Program (CAMP)					4.3) Expeditionary Calibration Facility <sup>(14)</sup>																														2											
					O C T	N O V	D E C	J A N	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																2		

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Exhibit P-21, Production Schedule: PB 2019 Navy																				Date: February 2018																			
Appropriation / Budget Activity / Budget Sub Activity: 1109N / 04 / 7										P-1 Line Item Number / Title: 4181 / Repair and Test Equipment										Aggregated Items: Repair and Test Equipment																			
Items (Units in Each)							Fiscal Year 2018												Fiscal Year 2019											B A L A N C E									
O C R O #	M F R Y	SERVICE	PROC QTY	ACCEPT PRIOR TO 1 OCT 2017	BAL DUE AS OF 1 OCT	O C T	N O V	D E C	J A N	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										
1) MAGTF Logistics Support Systems (MLS2)							Calendar Year 2018												Calendar Year 2019																				
1.1) EMD Hardware <sup>(1)</sup>							5	2016	NAVY	196	196	0																							0				
6							6	2018	NAVY	1,541	0	1,541																							41				
6							6	2019	NAVY	1,443	0	1,443																							693				
4) Calibration & Maintenance Program (CAMP)																																							
4.3) Expeditionary Calibration Facility <sup>(14)</sup>																																				2			
							O C T	N O V	D E C	J A N	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 Navy																				Date: February 2018																						
Appropriation / Budget Activity / Budget Sub Activity: 1109N / 04 / 7										P-1 Line Item Number / Title: 4181 / Repair and Test Equipment										Aggregated Items: Repair and Test Equipment																						
Items (Units in Each)					Fiscal Year 2020															Fiscal Year 2021																						
O C R O #	M F R Y	SERVICE	PROC QTY	ACCEPT PRIOR TO 1 OCT 2019	BAL DUE AS OF 1 OCT	O C T	N O V	D E C	J A N	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	B A L A N C E												
1) MAGTF Logistics Support Systems (MLS2)					Calendar Year 2020															Calendar Year 2021																						
1.1) EMD Hardware (1)																																			0							
5	2016	NAVY	196	196	0																															0						
6	2018	NAVY	1,541	1,500	41	41																															0					
6	2019	NAVY	1,443	750	693	150	150	150	150	93																															0	
4) Calibration & Maintenance Program (CAMP)					4.3) Expeditionary Calibration Facility (14)																														0							
					O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P	O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P														

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Exhibit P-21, Production Schedule: PB 2019 Navy										Date: February 2018		
Appropriation / Budget Activity / Budget Sub Activity: 1109N / 04 / 7			P-1 Line Item Number / Title: 4181 / Repair and Test Equipment						Aggregated Items: Repair and Test Equipment			
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	CDW Government LLC <sup>(15)</sup> - Vernon Hills, IL	300	600	900	0	10	3	13	0	0	0	0
2	TBD <sup>(17)</sup> - TBD	500	1,000	2,000	0	4	3	7	0	0	0	0
3	TBD@ TBD - TBD	1	2	6	0	4	12	16	0	0	0	0

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

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

**Footnotes:**

(15) MSR for multiple program offices procured off of the same contract.

(17) Multiple Vendors

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<b>Exhibit P-40, Budget Line Item Justification: PB 2019 Navy</b>										<b>Date:</b> February 2018							
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 1109N: Procurement, Marine Corps / BA 04: Communications and Electronics Equipment / BSA 9: Other Support (Tel)					<b>P-1 Line Item Number / Title:</b> 4652 / Modification Kits												
ID Code (A=Service Ready, B=Not Service Ready): A			Program Elements for Code B Items: N/A					Other Related Program Elements: 0206313M									
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 (\$ in Millions)	17.115	2.080	0.750	0.971	0.000	0.971	4.945	1.007	0.000	0.000	Continuing	Continuing					
Less PY Advance Procurement (\$ in Millions)	-	-	-	-	-	-	-	-	-	-	-	-					
Net Procurement (P-1) (\$ in Millions)	17.115	2.080	0.750	0.971	0.000	0.971	4.945	1.007	0.000	0.000	Continuing	Continuing					
Plus CY Advance Procurement (\$ in Millions)	-	-	-	-	-	-	-	-	-	-	-	-					
<b>Total Obligation Authority (\$ in Millions)</b>	<b>17.115</b>	<b>2.080</b>	<b>0.750</b>	<b>0.971</b>	<b>0.000</b>	<b>0.971</b>	<b>4.945</b>	<b>1.007</b>	<b>0.000</b>	<b>0.000</b>	<b>Continuing</b>	<b>Continuing</b>					
(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)																	
Initial Spares (\$ in Millions)	-	-	-	-	-	-	-	-	-	-	-	-					
Flyaway Unit Cost (\$ in Dollars)	-	-	-	-	-	-	-	-	-	-	-	-					
Gross/Weapon System Unit Cost (\$ in Dollars)	-	-	-	-	-	-	-	-	-	-	-	-					
<b>Description:</b>																	
The Biometric Automated Toolset System (BATS) can collect and store biometric information, to include fingerprints, iris scans and facial images and is able to "match" personnel whose biometrics correspond to a record of stored data. Information from networked BAT-Clients is sent to BAT-Servers. The BAT-Servers update other BAT-Servers and provide information to the biometrics intelligence process for further analysis. Funding supports the hardware reset and technical refresh of the Family of Systems Biometrics equipment. The refresh will address hardware technology obsolescence, along with software updates to meet Electronic Biometric Transmission Specification (EBTS) compliance. Biometric identification has become a key capability in counter insurgency warfare in support of ongoing contingency operations. Without this critical capability, the Marine Corps loses the ability to provide the Combatant Commander with required Identity Operations/Biometrics/Forensics capabilities.																	
Identity Dominance System-MC (IDS-MC) is a multi-modal (fingerprint, iris and face) biometric collection system that provides the United States Marine Corps (USMC) a reliable and effective capability to collect, share, match, access, verify, and store identity information. IDS-MC will enable the Marine to collect appropriate biometric, biographical and reference information on an individual and match this locally developed information with pre-existing information available to the expeditionary force. The system will display match results with linkage to the respective individual's biographical and reference information as well as help to analyze the response, update records as appropriate, create reports, and disseminate updated information in accordance with current Marine Air-Ground Task Force (MAGTF) policy. The primary mission of IDS-MC is to provide the MAGTF with the means to identify persons encountered in the battlespace. While IDS-MC is not an intelligence analysis system, it does provide identification information in support of military intelligence and law enforcement operations by providing positive identification of persons of interest. IDS-MC is an enabler in the areas of detainee management and questioning, base access, counterintelligence screening, border control, law enforcement, displaced persons' management and aiding in humanitarian assistance missions. IDS-MC supports the tactical application of identity dominance and fully supports a forward presence, crisis response and contingency response capability. IDS will subsume the Biometrics Automated Toolset (BAT). The total AAO of 804 is required for training facilities and eleven battalion-sized elements. Prior to FY2019, IDS-MC had funding in BLI 6438, Physical Security Equipment.																	
Expeditionary Forensic Exploitation Capability (EFEC) is a portable, expeditionary laboratory capable of conducting Level I and II forensics analysis of captured enemy material, evidence and information. It is comprised of 4 Table of Authorized Material Control Numbers (TAMCN), which include Chemical, Media, and Site Exploitation, and a Laboratory kit.																	

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<b>Exhibit P-40, Budget Line Item Justification: PB 2019 Navy</b>							<b>Date:</b> February 2018			
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 1109N: Procurement, Marine Corps / BA 04: Communications and Electronics Equipment / BSA 9: Other Support (Tel)				<b>P-1 Line Item Number / Title:</b> 4652 / Modification Kits						
<b>ID Code</b> (A=Service Ready, B=Not Service Ready): A				<b>Program Elements for Code B Items:</b> N/A						
<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>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>	
P-5	1 / Modification Kits				- / 17.115	- / 2.080	- / 0.750	- / 0.971	- / 0.000	- / 0.971
P-40	<b>Total Gross/Weapon System Cost</b>				<b>- / 17.115</b>	<b>- / 2.080</b>	<b>- / 0.750</b>	<b>- / 0.971</b>	<b>- / 0.000</b>	<b>- / 0.971</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:**

Beginning in FY19, IDS-MC funding has been realigned from BLI 6438, PHYSICAL SECURITY EQUIPMENT to BLI 4652, MODIFICATION KITS.

FY2018 Base Appropriation Request: N/A

FY2019 Base Appropriation Request: \$0.971M

Identity Dominance System-MC (IDS-MC): \$0.971M to initiate procurement of the hardware and software for IDS-MC Increment 2 in accordance with a MS C/LRIP procurement decision. FY19 increase is due to realignment from BLI 6438 to 4652. Realignment of effort to new BLI in FY19 and beyond reflects USMC Program Management Office (PMO) reorganization to improve support of USMC OPFOR.

OCO:

FY2018 Overseas Contingency Operations (OCO) Request: \$0.750M

Expeditionary Forensic Exploitation Capability (EFEC) will procure hardware for replacement of legacy obsolete IT equipment and other peripherals such as Sabre 5000 Handheld Trace Detectors for explosives, chemical agents and toxic industrial chemicals and narcotics. Forensics Exploitation has become a key capability in counter insurgency (COIN) warfare. This system provides the Marine Corps the ability to provide the Combatant Commander with required Identity Operations/Biometrics/Forensics capabilities identified in COCOM CONOPS, CONPLANS/OPLANS, and Theater Campaign Plans in support of the Joint Force requirement.

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<b>Exhibit P-5, Cost Analysis:</b> PB 2019 Navy												<b>Date:</b> February 2018						
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 1109N / 04 / 9				<b>P-1 Line Item Number / Title:</b> 4652 / Modification Kits								<b>Item Number / Title [DODIC]:</b> 1 / Modification Kits						
<b>ID Code</b> (A=Service Ready, B=Not Service Ready) :												<b>MDAP/MAIS Code:</b>						
<b>Resource Summary</b>				<b>Prior Years</b>		<b>FY 2017</b>		<b>FY 2018</b>		<b>FY 2019 Base</b>		<b>FY 2019 OCO</b>		<b>FY 2019 Total</b>				
Procurement Quantity ( <i>Units in Each</i> )				-		-		-		-		-		-				
Gross/Weapon System Cost (\$ in Millions)				17.115		2.080		0.750		0.971		0.000		0.971				
Less PY Advance Procurement (\$ in Millions)				-		-		-		-		-		-				
Net Procurement (P-1) (\$ in Millions)				17.115		2.080		0.750		0.971		0.000		0.971				
Plus CY Advance Procurement (\$ in Millions)				-		-		-		-		-		-				
<b>Total Obligation Authority</b> (\$ in Millions)				17.115		2.080		0.750		0.971		0.000		0.971				
(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 Dollars)				-		-		-		-		-		-				
Note: Subtotals or Totals in this Exhibit P-5 may not be exact or sum exactly due to rounding.																		
<b>Cost Elements</b>	<b>Prior Years</b>			<b>FY 2017</b>			<b>FY 2018</b>			<b>FY 2019 Base</b>			<b>FY 2019 OCO</b>			<b>FY 2019 Total</b>		
	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)
Flyaway Cost																		
Recurring Cost																		
1.1.1) The Biometric Automated Toolset (BAT)	-	-	17.115	-	-	2.080	-	-	-	-	-	-	-	-	-	-	-	
1.1.2) Expeditionary Forensics and Exploitation	-	-	-	-	-	-	-	-	0.750	-	-	-	-	-	-	-	-	
<i>Subtotal: Recurring Cost</i>	-	-	17.115	-	-	2.080	-	-	0.750	-	-	-	-	-	-	-	-	
<i>Subtotal: Flyaway Cost</i>	-	-	17.115	-	-	2.080	-	-	0.750	-	-	-	-	-	-	-	-	
Hardware Cost																		
Recurring Cost																		
2.1.1) IDS Marine Corps Increment II Hardware	-	-	-	-	-	-	-	-	-	-	-	0.250	-	-	-	-	0.250	
<i>Subtotal: Recurring Cost</i>	-	-	-	-	-	-	-	-	-	-	-	0.250	-	-	-	-	0.250	
<i>Subtotal: Hardware Cost</i>	-	-	-	-	-	-	-	-	-	-	-	0.250	-	-	-	-	0.250	
Software Cost																		
Recurring Cost																		
3.1.1) IDS Marine Corps Software	-	-	-	-	-	-	-	-	-	-	-	0.721	-	-	-	-	0.721	
<i>Subtotal: Recurring Cost</i>	-	-	-	-	-	-	-	-	-	-	-	0.721	-	-	-	-	0.721	
<i>Subtotal: Software Cost</i>	-	-	-	-	-	-	-	-	-	-	-	0.721	-	-	-	-	0.721	
<b>Gross/Weapon System Cost</b>	-	-	17.115	-	-	2.080	-	-	0.750	-	-	0.971	-	-	0.000	-	0.971	

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<b>Exhibit P-5, Cost Analysis:</b> PB 2019 Navy		<b>Date:</b> February 2018
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 1109N / 04 / 9	<b>P-1 Line Item Number / Title:</b> 4652 / Modification Kits	<b>Item Number / Title [DODIC]:</b> 1 / Modification Kits
<b>ID Code</b> (A=Service Ready, B=Not Service Ready) :		<b>MDAP/MAIS Code:</b>

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Exhibit P-40, Budget Line Item Justification: PB 2019 Navy										<b>Date:</b> February 2018		
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 1109N: Procurement, Marine Corps / BA 04: Communications and Electronics Equipment / BSA 14: Command and Control System (Non-Tel)					<b>P-1 Line Item Number / Title:</b> 4620 / Items under \$5 million (Comm & Elec)							
ID Code (A=Service Ready, B=Not Service Ready): A			Program Elements for Code B Items: N/A				Other Related Program Elements: 0206313M, 0502514M					
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 (\$ in Millions)	51.698	18.449	17.844	69.203	0.000	69.203	76.258	77.316	67.937	66.462	Continuing	Continuing
Less PY Advance Procurement (\$ in Millions)	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) (\$ in Millions)	51.698	18.449	17.844	69.203	0.000	69.203	76.258	77.316	67.937	66.462	Continuing	Continuing
Plus CY Advance Procurement (\$ in Millions)	-	-	-	-	-	-	-	-	-	-	-	-
<b>Total Obligation Authority (\$ in Millions)</b>	<b>51.698</b>	<b>18.449</b>	<b>17.844</b>	<b>69.203</b>	<b>0.000</b>	<b>69.203</b>	<b>76.258</b>	<b>77.316</b>	<b>67.937</b>	<b>66.462</b>	<b>Continuing</b>	<b>Continuing</b>
(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)												
Initial Spares (\$ in Millions)	-	-	-	-	-	-	-	-	-	-	-	-
Flyaway Unit Cost (\$ in Dollars)	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost (\$ in Dollars)	-	-	-	-	-	-	-	-	-	-	-	-
<b>Description:</b>												
Funding supports the procurement of communication and electrical items such as cameras, reproduction equipment, laptops, software, satellite dishes, and items/upgrades with a unit cost under \$5M in support of the Marine Corps.												
Combat Camera Systems (CCS): Provides equipment to Fleet Marine Force (FMF) Combat Camera Units and training commands. This imagery acquisition/production equipment is used for collecting, editing and dissemination of imagery used to support the Marine Air Ground Task Force (MAGTF), to include Department of Defense (DoD), Joint and Marine Forces, and supporting establishments. This program standardizes equipment/systems and replaces worn out, unserviceable or obsolete acquisition/production equipment. Procurements are centrally managed and are non-developmental, Commercial/Government Off-the-Shelf (COTS/GOTS).												
Public Affairs System (PAS): Public Affairs (PA) provides the MAGTF and the broader Marine Corps the capability to research, understand and affect the information environment. PA Marines and Systems enable commanders at all levels and across the range of military operations to engage domestic and foreign publics whose trust, confidence, and understanding are mission critical. The Public Affairs Systems (PAS) Abbreviated Acquisition Program (AAP) identifies and fields materiel solutions required to research and plan communication initiatives, acquire still and video visual information, produce and disseminate communication products, and assess the effects of communication initiatives within the information environment. The program maintains an evolutionary approach to acquisitions, and leverages commercial industry-standard non-developmental items to provide the best value to the Marine Corps, while keeping PA Marines appropriately equipped to understand and affect the information environment.												
Marine Civil Information Management System (MARCIMS): MARCIMS is a system of systems comprised of people, process and technology that operates in the full Joint, Interagency, Intergovernmental, and Multinational (JIIM) environment. It is a force multiplier which allows the Commander to leverage the process of Planning, Collection, Consolidation, Analysis, Production, and sharing of civil information to support the visualization and understanding of the civil environment to the military Commander's decision making process. Program name has changed from Civil Affairs Capability Set and Civil Affairs Information Data Processing System (CIMDPS).												
Military Information Support Operations (MISO) Family of Systems (FOS), which consists of the Fly-Away Broadcast System (FABS), Next-Generation Loud Speaker (NGLS), Radio-In-A-Box (RIAB), and Marine Corps SOF Integration Node (MISN), provides the Marine Air Ground Task Force (MAGTF) Commander the capability to conduct planned operations to convey selected information and indicators to foreign adversary, neutral and friendly target audiences to influence their emotions, motives, objective reasoning, providing an operational advantage. The MISO was established in response to multiple Marine Requirements Oversight Council Memorandums, and the approval of a MISO Organizational and Operational (O&O) Concept, 16 June 2015. MISO capabilities are critical to the success of the MAGTF mission,												

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<b>Exhibit P-40, Budget Line Item Justification: PB 2019 Navy</b>		<b>Date:</b> February 2018
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 1109N: Procurement, Marine Corps / BA 04: Communications and Electronics Equipment / BSA 14: Command and Control System (Non-Tel)	<b>P-1 Line Item Number / Title:</b> 4620 / Items under \$5 million (Comm & Elec)	
<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> 0206313M, 0502514M
<b>Line Item MDAP/MAIS Code:</b> N/A		
enabling commanders to shape the information environment, counter enemy propaganda, misinformation, disinformation, and adversarial narratives. The Signature Management (SIGMAN) capability will support MAGTF Operations with a baseline capability to include Own-force signature monitoring and assessment, Electromagnetic signature masking and projection, and physical decoys.		
Safety: Risk Management Information (RMI) initiative to deploy a Department of Navy (DON)-wide, web based solution facilitating unit-level Safety Program management and provides aggregate reporting, analysis, and tracking of all hazards and reportable mishaps. IAW 2011 Federal Cloud Computing Strategy and guidance by the DON Chief Information Officer, RMI will involve the fielding of an overarching, single site safety portal or architecture critical for complying with OSD safety reporting requirements and for allowing seamless on-demand access to the pool of existing safety and safety-related databases.		
MAGTF Logistics Support Systems (MLS2) - Radio Frequency Identification (RFID) devices encompass a variety of read and write data storage technologies that are used to improve accuracy, timeliness, and handling. These technologies are key in and provide near-real time Total Asset Visibility data used to influence critical decisions by Operational Commanders. RFID enhances our force in readiness by coordinating, synchronizing and automatically transferring data by means of Active Radio Frequency Identification (aRFID), as well as the software required to create and manage the devices, collect the information and integrate that information with other logistics data. These devices can be interrogated using a variety of means, including fixed infrastructures and portable systems. The information obtained from those interrogations is provided electronically to various Automated Information Systems (AIS). The RFID project provides procurement and life cycle management of the current RFID Infrastructures, and provides RFID Hardware and Software under the Joint Army Product Director Automated Movement and Identification Solutions (PD AMIS) Procurement Office. Starting in FY18, RFID is funded within the ELS2 portfolio.		
Enterprise Logistics Support Systems (ELS2) - Radio Frequency Identification (RFID) devices encompass a variety of read and write data storage technologies that are used to improve accuracy, timeliness, and handling. These technologies are key in and provide near-real time Total Asset Visibility data used to influence critical decisions by Operational Commanders. RFID enhances our force in readiness by coordinating, synchronizing and automatically transferring data by means of Active Radio Frequency Identification (aRFID), as well as the software required to create and manage the devices, collect the information and integrate that information with other logistics data. These devices can be interrogated using a variety of means, including fixed infrastructures and portable systems. The information obtained from those interrogations is provided electronically to various Automated Information Systems (AIS). The RFID project provides procurement and life cycle management of the current RFID Infrastructures, and provides RFID Hardware and Software under the Joint Army Product Director Automated Movement and Identification Solutions (PD AMIS) Procurement Office. Prior to FY18, RFID was funded within the MLS2 portfolio		
Combat Optics - This program encompasses all optical systems providing handheld, helmet and weapon-mounted optic systems such as various thermal, low light image intensifier (I2), magnified optical, laser range-finding, illuminating, short wave infrared (SWIR), and pointer functionalities. Thermal imagers can be used not only for target detection and engagement with Marine Corps individual and crew-served weapons; they can be used for all-weather surveillance as well. Combat Optics allow the dismounted Marine the ability to acquire, locate, identify, and engage targets during daylight and limited visibility conditions, and perform navigation and manual tasks during limited visibility conditions utilizing ambient or covert illumination. Additionally, the portfolio includes procurement of ammunition to support testing and evaluation of night vision equipment. The program coordinates with United States Army on optic, thermal, and night vision technologies.		
Manpower Operations Systems (MOS). MOS is a portfolio of enterprise information technology systems and modules that support manpower business operations for the Total Force (active and reserve). The investment funding in the portfolio improves dataflow and increases reliability, functionality, and accuracy of data while reducing the manpower required to operate and maintain these systems/operations. Development is partially driven by regulatory and policy changes mandated by Congress, DoD, DoN, and USMC. The systems support all five tiers of Manpower: Individual Marine; Small Unit Leader; Unit, Installation Personnel Administration Center/Disbursing Echelon; Headquarters Marine Corps Manpower and Reserve Affairs/ Department of Finance Accounting Service. The MOS portfolio provides support in functional areas such as Permanent Change of Station assignments, retention, mobilization, manpower planning, line of duty determination, personnel accountability, individual augmentation, personnel records management and maintenance, management of case incidents, civilian professional development planning, pay entitlement determinations, promotion and performance evaluations and self service/ visibility of personnel data. MOS interfaces with other systems to provide manpower data and web services functionality for pay and personnel transactions between systems. Systems in the portfolio include Web-enabled Manpower Assignment Support System, Performance Evaluation System, Total Force Retention System, Optical Digital Imaging- Records Management System, Automated Performance Evaluation System and the Manpower Mobilization Assignment System. Additionally, the portfolio includes Total Force Administration System associated modules: including Drill Management Module and Secure Personnel Accountability Module.		
Test, Evaluation,& Engineer Environment (TEEE): Marine Corps Tactical Systems Support Activity (MCTSSA) provides the only Marine Corps organic, operationally relevant, MAGTF Command, Control, Communications, Computers, and Intelligence (C4I) architecture for testing and engineering tasks. This environment is the sole organic solution in the Marine Corps for Link-16 Tactical Data Link Networks for		

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<b>Exhibit P-40, Budget Line Item Justification: PB 2019 Navy</b>							<b>Date:</b> February 2018										
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 1109N: Procurement, Marine Corps / BA 04: Communications and Electronics Equipment / BSA 14: Command and Control System (Non-Tel)				<b>P-1 Line Item Number / Title:</b> 4620 / Items under \$5 million (Comm & Elec)													
<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> 0206313M, 0502514M										
<b>Line Item MDAP/MAIS Code:</b> N/A																	
air-to- air, ship, and shore targeting and messaging, validated at MCTSSA before Marine/Navy use in theater. The environment also provides Marine Corps organic equipment, environments, operators, and testers for Joint Communications Exercises, Joint Interoperability Testing, and Systems of System testing. Funding supports modernization and expansion of the MAGTF Systems Integration Environment at MCTSSA for non-Table of Equipment items: Communications Backbone, Test Tool/Data Collection Hardware/Software, and Computers. The environment is essential to operating forces support for fielded C4I systems, as well as evaluating USMC and Joint C4I systems in a controlled, repeatable, and re-configurable manner that reduces program risk and identifies significant deficiencies prior to fielding to the operating forces. More than forty Marine Corps C4I programs and systems rely on MCTSSA support.																	
Item Unique Identification (IUID) - Provides the necessary hardware to exploit an IUID enabled ground fleet inventory of equipment and material. This capability will allow for the identification and tracking of tangible items by using the Unique Item Identifiers (UIIs) used globally as a common key. IUID will improve logistics functions for operational commanders, program managers, equipment accountability managers, maintainers and force planners, as well as, ensure accurate systems valuation to support a clean financial audit.																	
Marine Corps Information Operation Program (MCIOP) - provides MAGTF commanders and the Marine Corps a responsive and effective full-spectrum information operations (IO) planning and psychological operations delivery capability by means of deployable support teams and a comprehensive general support IO reach-back capability in order to integrate IO into Marine Corps operations. Multiple classification levels require separate Information Technology (IT) infrastructure to support each classification level in accordance with National Security Agency and Defense Intelligence Agency standards. This includes equipment necessary for connecting internal MCIOC IT infrastructure (voice, video, and data) with the existing Marine Corps Base Quantico support infrastructure. Transitioned from BLIs 4631 and 4635 in FY19.																	
<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>							
Navy	Quantity	-	-	-	-	-	-	-	-	-							
	Total Obligation Authority	18.402	17.798	69.155	-	69.155	76.209	77.265	67.887	66.411							
NR	Quantity	-	-	-	-	-	-	-	-	-							
	Total Obligation Authority	0.047	0.046	0.048	-	0.048	0.049	0.051	0.050	0.051							
<b>Total: Secondary Distribution</b>	Quantity	-	-	-	-	-	-	-	-	-							
	Total Obligation Authority	18.449	17.844	69.203	-	69.203	76.258	77.316	67.937	66.462							

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Exhibit P-40, Budget Line Item Justification: PB 2019 Navy							Date: February 2018			
Appropriation / Budget Activity / Budget Sub Activity:				P-1 Line Item Number / Title:						
1109N: Procurement, Marine Corps / BA 04: Communications and Electronics Equipment / BSA 14: Command and Control System (Non-Tel)				4620 / Items under \$5 million (Comm & Elec)						
ID Code (A=Service Ready, B=Not Service Ready): A		Program Elements for Code B Items: N/A				Other Related Program Elements: 0206313M, 0502514M				
<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)	
P-40a	Items under \$5 million (Comm & Elec)	P-5a, P-21			- / 51.698	- / 18.449	- / 17.844	- / 69.203	- / -	- / 69.203
<b>P-40</b>	<b>Total Gross/Weapon System Cost</b>				<b>- / 51.698</b>	<b>- / 18.449</b>	<b>- / 17.844</b>	<b>- / 69.203</b>	<b>- / 0.000</b>	<b>- / 69.203</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. Title represents the P-40a Title when only the P-40a Summary/Total is shown.										
Note: Totals in this Exhibit P-40 set may not be exact or sum exactly due to rounding.										
<b>Justification:</b>										
Beginning in FY19, MCIOP and TEEE funding has been realigned from BLI 4635 COMM & ELEC INFRASTRUCTURE SUPT, to BLI 4620, ITEMS UNDER \$5 MILLION (COMM & ELEC).										
FY2018 Base Appropriation Request: \$17.644M (\$17.598 Active; \$.046M Reserve)										
Combat Camera Systems (CCS) \$2.409M: Funds will procure the following in FY18: Expeditionary Deployable Production Systems (EDPS) which equips Marines with a high-powered computing and processing capability to edit, store, retrieve, and transfer operational imagery in multiple formats (40 systems). Expeditionary Combat Photography Systems (ECPS) which enable Marines with imagery acquisition in day or low-light conditions, imagery processing and storage, and production and transfer capability in support of audiovisual communication requirements (13 systems). Expeditionary Combat Video Systems (ECVS) which enables Marines with video acquisition in day or low-light conditions, video processing and storage, and production and transfer capability in support of operational audiovisual communication requirements (41 systems).										
Public Affairs System (PAS) \$1.713M (\$1.667M Active; \$.046M Reserves): Funding provides Public Affairs Content Creation System (PACCS) Next Generation of digital camera system in order to support equipment modernization and obsolescence life cycle. PACCS provides image and video acquisition and editing capabilities for active and reserve component commands. Funding will procure of 3 PALMES and modernization of currently fielded PALMES. PALMES provides MAGTF and Supporting Establishment commanders the capability to transmit approved Public Affairs products, such as high-resolution video and to conduct live television and media interviews via satellite.										
Marine Civil Information Management System (MARCIMS) \$0.235M: Funding will procure virtual private cloud components as part of the expanding capability of MARCIMS across the coalition and joint force, components and support post production integration with other applications and cloud storage. This capability supports real-world operations and overseas contingencies that require a civil military presence, such as humanitarian assistance and disaster relief operations.										
Combat Optics - \$12.793M: Funding will support the continued procurement of Sniper Range Finder (SRF) systems. The SRF will allow the scout sniper and infantry squad leader to rapidly determine range out to the maximum effective range of Marine Corps sniper weapons for North Atlantic Treaty Organization (NATO) standard man and vehicle size targets while the systems is mounted to any of the Marine Corps sniper rifles, infantry rifles, or to the Scout Sniper Observation Telescope (SSOT). It will also contain an aiming laser capability to give the operator the ability to point to targets at night and conduct boresighting during the day. Funds will also continue to support the procurement of Rifle Combat Optics (RCO) that are damaged beyond economic repair.										
Enterprise Logistics Support Systems (ELS2) - \$0.253M: FY18 funding will support the continued Procurement of RFID hardware in support of the migration of aRFID Legacy to RFID Land (MCEITS). Prior to FY18, this funding line was within MAGTF Logistics Support Systems (MLS2).										
Manpower Operations Systems (MOS) - \$0.241M: FY18 funding will support procurement of IT hardware, software and fielding support for the systems in the MOS portfolio.										

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<b>Exhibit P-40, Budget Line Item Justification: PB 2019 Navy</b>		<b>Date:</b> February 2018
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 1109N: Procurement, Marine Corps / BA 04: Communications and Electronics Equipment / BSA 14: Command and Control System (Non-Tel)	<b>P-1 Line Item Number / Title:</b> 4620 / Items under \$5 million (Comm & Elec)	
<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> 0206313M, 0502514M
<b>Line Item MDAP/MAIS Code:</b> N/A		
The FY 2019 funding request was reduced by (\$.135) million to reflect the Department of Navy's effort to support the Office of Management and Budget directed reforms for Efficiency and Effectiveness that include a lean, accountable, more efficient government.		
FY2019 Base Appropriation Request: \$69.203M (\$69.155M Active; \$.048M Reserve)		
Combat Camera Systems (CCS) \$4.585M Active: In FY19 funding will support the procurement of Expeditionary Deployable Production Systems (EDPS) which equips Marines with a high-powered computing and processing capability to edit, store, retrieve, and transfer operational imagery in multiple formats (123 systems). Increase \$2.176M from FY18 to FY19 supports the Tactical Imagery Production Suite (TIPS) procurement and initial support; TIPS enables extensively trained COMCAM documentation and production teams with increased capability to acquire, process, develop, reproduce, archive, distribute in hardcopy or multiple electronic formats digital still and motion media products as primary suppliers of operational imagery reinforcing distributive operations.		
Public Affairs System (PAS) \$0.682M (\$0.634M Active; \$0.048M Reserves): Funding provides Public Affairs Content Creation System (PACCS) Next Generation of digital camera system in order to support equipment modernization and obsolescence life cycle. PACCS provides image and video acquisition and editing capabilities for active and reserve component commands. Funding will procure 2 PALMES and modernization of currently fielded PALMES and Public Affairs Laptop (PAL). PALMES provides MAGTF and Supporting Establishment commanders the capability to transmit approved Public Affairs products, such as high-resolution video and to conduct live television and media interviews via satellite. Decrease of \$1.231M from FY18 to FY19 reflects completion of PALMES procurement.		
Marine Civil Information Management System (MARCIMS) \$0.296M Active: Funding supports the procurement of mobile devices and mobile devices management licenses as part of the MARCIMS refresh cycle. Beginning in FY19 MARCIMS mobile devices will be refreshed in odd years only. Funding will procure virtual private cloud components as part of the expanding capability of MARCIMS across the coalition and joint force, components and support post production integration with other applications and cloud storage. This capability supports real-world operations and overseas contingencies that require a civil military presence, such as humanitarian assistance and disaster relief operations.		
Military Information Support Operations (MISO) Family of Systems (FOS) \$2.976M Active: Increase of \$2.976M from FY18 to FY19 procures the Fly-Away Broadcast System (FABS) and MISO equipment such as Next-Generation Loud Speaker (NGLS), Radio-In-A-Box (RIAB), and Marine Corps SOF Integration Node (MISN) and initial support, which provides the MAGTF Commander the capability to conduct planned operations to convey selected information and indicators to foreign adversary, neutral and friendly target audiences to influence their emotions, motives, objective reasoning, providing an operational advantage. FY19 also funds Signature Management (SIGMAN) equipment to provide a capability to include Own-force signature monitoring and assessment, Electromagnetic signature masking and projection, and physical decoys.		
Combat Optics - \$59.052M Increase of \$46.269M from FY18 to FY19 supports the procurement of the entire Squad Thermal System (STS) AAO during the period of contract availability (FY19 - FY21) and the initial procurement of Squad Binocular Night Vision Goggles (SBNVG). The STS will provide an individual thermal imaging capability to the Marine Rifle Squad and the Marine Reconnaissance Team while engaging in offensive and defensive operations. The STS will be employed as a weapon mounted clip-on thermal sight that can be used in conjunction with the AN/PVQ-31A/B RCO, and also serves as a lightweight, pocket-sized hand-held thermal imager. This will enable fire team leaders and reconnaissance team leaders to detect and recognize potential targets, danger areas, and items of interest. Marines will be able to employ the STS during most atmospheric and lighting conditions, including total darkness. The Squad Binocular Night Vision Goggle is a helmet-mounted or handheld, battery-operated Night Vision Goggle (NVG) that combines the capabilities of Image-Intensification (I2) and Thermal Imaging. The SBNVG is a capability that will be provided to each Marine Rifle Team (4 per squad) and will enable the ability to detect, recognize, and engage targets during limited visibility, thereby increasing lethality and the probability of mission success (particularly in extremely low light levels, weather, and obscurants).		
Manpower Operations Systems (MOS) - \$0.246M: FY19 funding will support procurement of IT hardware, software and fielding support for the systems in the MOS portfolio.		
TEST, EVALUATION, & ENGINEERING ENVIRONMENT - EQUIPMENT & TECHNICAL SERVICES (TEEE): \$ .748M Funding supports maintenance and expansion of the MAGTF Systems Integration Environment at MCTSSA for non-Table of Equipment Items: Communications Backbone, Test Tool/Data Collection Hardware/Software, and Computers.		
MARINE CORPS INFORMATION OPERATIONS PROGRAM (MCIOP) \$.382M: Funds will support a variety of efforts related to the Marine Corps Information Operations Center(MCIOC).		

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<b>Exhibit P-40, Budget Line Item Justification: PB 2019 Navy</b>		<b>Date:</b> February 2018
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 1109N: Procurement, Marine Corps / BA 04: Communications and Electronics Equipment / BSA 14: Command and Control System (Non-Tel)	<b>P-1 Line Item Number / Title:</b> 4620 / Items under \$5 million (Comm & Elec)	
<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> 0206313M, 0502514M
<b>Line Item MDAP/MAIS Code:</b> N/A		
Combined Unit Exercise (CUX) expansion: the CUX is currently being certified as the sole Joint Information Operations (IO) exercise in the Department of Defense. This funding will be used to purchase additional non-Marine Corps Enterprise Network (MCEN) computer assets that will be operated on a closed, exercise-only network. Voice Over Internet Protocol (VOIP) Transition: Servers and telephones; The MCIOC currently utilizes Secure Terminal Equipment (STE) telephones for non-secure telephone calls. The STE telephones were originally envisioned to provide an additional secure voice capability that no longer meets mission requirements. The transition to VOIP telephones will provide a more user-friendly telephone capability for users that can be centrally configured by network administrators to maintain Operational Security. Lifecycle Open Source Intelligence System (OSIS) and Joint Worldwide Intelligence Communications System (JWICS) replacement systems: The MCIOC is responsible for purchasing our own computer assets and equipment for the OSIS and JWICS networks. This funding line is allocated towards replacement systems as existing systems reach the end of their service life.		
Enterprise Logistics Support Systems (ELS2): FY19 funding in the amount of \$0.236M will support the continued Procurement of RFID hardware in support of the migration of aRFID Legacy to RFID Land (MCEITS).		
OCO: FY2018 Overseas Contingency Operations Request: \$0.200M		
Public Affairs System (PAS) \$0.200M: FY18 funding will procure one replacement PALMES kit IAW system refresh strategy.		

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Exhibit P-40a, Budget Item Justification For Aggregated Items: PB 2019 Navy														Date: February 2018						
Appropriation / Budget Activity / Budget Sub Activity: 1109N / 04 / 14					P-1 Line Item Number / Title: 4620 / Items under \$5 million (Comm & Elec)									Aggregated Items Title: Items under \$5 million (Comm & Elec)						
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 (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)
<b>1) Prior Year Cumulative Funding</b>																				
1.1) Prior Year Cumulative Funding	A		-	-	16.337	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
<i>Subtotal: 1) Prior Year Cumulative Funding</i>			-	-	<b>16.337</b>	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
<b>2) Combat Camera Systems</b>																				
2.1) Tactical Imagery Production System (TIPS) <sup>(1)</sup>	A		-	-	13.333	-	-	-	-	-	-	-	-	4.072	-	-	-	-	4.072	
2.2) Expeditionary Deployable Production System (EDPS) <sup>(†)</sup>	A		48,000.00	28	1.344	-	-	-	3,066.00	40	0.123	3,066.00	123	0.377	-	-	-	3,066.00	123	0.377
2.3) Expeditionary Combat Photography System (ECPS) <sup>(†)</sup>	A		-	-	2.272	37,303.03	33	1.231	37,303.03	13	0.485	-	-	-	-	-	-	-	-	
2.4) Expeditionary Combat Video System (ECVS) <sup>(2)(†)</sup>	A		16,314.72	197	3.214	39,140.00	30	1.174	39,140.00	41	1.605	-	-	-	-	-	-	-	-	
2.5) Non-recurring Items	A		-	-	-	-	-	0.625	-	-	0.196	-	-	0.136	-	-	-	-	0.136	
<i>Subtotal: 2) Combat Camera Systems</i>			-	-	<b>20.163</b>	-	-	<b>3.030</b>	-	-	<b>2.409</b>	-	-	<b>4.585</b>	-	-	-	-	<b>4.585</b>	
<b>3) Public Affairs System</b>																				
3.1) Public Affairs PALMES <sup>(†)</sup>	A		-	-	-	-	-	-	200,000.00	4	0.800	-	-	-	-	-	-	-	-	
3.2) Public Affairs System Equipment - Active	A		-	-	12.384	-	-	0.882	-	-	1.067	-	-	0.634	-	-	-	-	0.634	
3.3) Public Affairs System Equipment - Reserves	A		-	-	0.117	-	-	0.047	-	-	0.046	-	-	0.048	-	-	-	-	0.048	
<i>Subtotal: 3) Public Affairs System</i>			-	-	<b>12.501</b>	-	-	<b>0.929</b>	-	-	<b>1.913</b>	-	-	<b>0.682</b>	-	-	-	-	<b>0.682</b>	
<b>4) Marine Civil Information Management System (MARCIMS)</b>																				
4.1) Marine Civil Information Management System (MARCIMS)	A		-	-	2.598	-	-	0.227	-	-	0.235	-	-	0.296	-	-	-	-	0.296	
<i>Subtotal: 4) Marine Civil Information Management System (MARCIMS)</i>			-	-	<b>2.598</b>	-	-	<b>0.227</b>	-	-	<b>0.235</b>	-	-	<b>0.296</b>	-	-	-	-	<b>0.296</b>	
<b>5) Safety</b>																				
5.1) Safety	A		-	-	0.099	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
<i>Subtotal: 5) Safety</i>			-	-	<b>0.099</b>	-	-	-	-	-	-	-	-	-	-	-	-	-		

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Exhibit P-40a, Budget Item Justification For Aggregated Items: PB 2019 Navy														Date: February 2018						
Appropriation / Budget Activity / Budget Sub Activity: 1109N / 04 / 14					P-1 Line Item Number / Title: 4620 / Items under \$5 million (Comm & Elec)									Aggregated Items Title: Items under \$5 million (Comm & Elec)						
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 (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)
<b>6) MAGTF Logistics Support Systems (MLS2) (RFID)</b>																				
6.1) RFID Legacy Migration	A		-	-	-	-	-	0.197	-	-	-	-	-	-	-	-	-	-	-	
<i>Subtotal: 6) MAGTF Logistics Support Systems (MLS2) (RFID)</i>			-	-	<b>0.000</b>	-	-	<b>0.197</b>	-	-	-	-	-	-	-	-	-	-	-	
<b>7) ENTERPRISE LOGISTICS SUPPORT SYSTEMS (ELS2)</b>																				
7.1) RFID Legacy Migration	A		-	-	-	-	-	0.594	-	-	0.253	-	-	0.236	-	-	-	-	0.236	
<i>Subtotal: 7) ENTERPRISE LOGISTICS SUPPORT SYSTEMS (ELS2)</i>			-	-	<b>0.000</b>	-	-	<b>0.594</b>	-	-	<b>0.253</b>	-	-	<b>0.236</b>	-	-	-	-	<b>0.236</b>	
<b>8) COMBAT OPTICS</b>																				
8.1) Binocular Night Vision Goggles <sup>(†)</sup>	A		-	-	-	9,996.39	830	8.297	-	-	-	-	-	-	-	-	-	-	-	
8.2) Rifle Combat Optics Replenishment <sup>(†)</sup>	A		-	-	-	1,229.95	187	0.230	1,200.00	217	0.260	1,250.00	21	0.026	-	-	-	1,250.00	21	0.026
8.3) Sniper Range Finder <sup>(†)</sup>	A		-	-	-	6,657.14	227	1.511	6,702.50	1,751	11.736	-	-	-	-	-	-	-	-	
8.4) Squad Thermal System <sup>(†)</sup>	A		-	-	-	-	-	-	-	-	9,502.72	1,640	15.584	-	-	-	-	9,502.72	1,640	15.584
8.5) Production Support	A		-	-	-	-	-	0.940	-	-	0.797	-	-	0.092	-	-	-	-	0.092	
8.8) Squad BNVG <sup>(3)(†)</sup>	A		-	-	-	-	-	-	-	-	12,500.00	3,468	43.350	-	-	-	-	12,500.00	3,468	43.350
<i>Subtotal: 8) COMBAT OPTICS</i>			-	-	<b>0.000</b>	-	-	<b>10.978</b>	-	-	<b>12.793</b>	-	-	<b>59.052</b>	-	-	-	-	<b>59.052</b>	
<b>9) Manpower Operations Systems (MOS)</b>																				
9.1) Servers	A		-	-	-	-	-	0.234	-	-	0.185	-	-	0.184	-	-	-	-	0.184	
9.2) Software	A		-	-	-	-	-	0.060	-	-	0.056	-	-	0.062	-	-	-	-	0.062	
<i>Subtotal: 9) Manpower Operations Systems (MOS)</i>			-	-	<b>0.000</b>	-	-	<b>0.294</b>	-	-	<b>0.241</b>	-	-	<b>0.246</b>	-	-	-	-	<b>0.246</b>	
<b>10) Item Unique Identification (IUID)</b>																				
10.1) Automation Information Technology (AIT) Hardware	A		-	-	-	-	-	2.200	-	-	-	-	-	-	-	-	-	-	-	
<i>Subtotal: 10) Item Unique Identification (IUID)</i>			-	-	<b>0.000</b>	-	-	<b>2.200</b>	-	-	-	-	-	-	-	-	-	-		
<b>11) Test, Evaluation &amp; Engineer Environment</b>																				
11.1) Test Engineering Labs Infrastructure	A		-	-	-	-	-	-	-	-	-	-	-	0.748	-	-	-	-	0.748	

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Exhibit P-40a, Budget Item Justification For Aggregated Items: PB 2019 Navy														Date: February 2018						
Appropriation / Budget Activity / Budget Sub Activity: 1109N / 04 / 14					P-1 Line Item Number / Title: 4620 / Items under \$5 million (Comm & Elec)									Aggregated Items Title: Items under \$5 million (Comm & Elec)						
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 (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)
<i>Subtotal: 11) Test, Evaluation &amp; Engineer Environment</i>			-	-	0.000	-	-	-	-	-	-	-	-	0.748	-	-	-	-	0.748	
<b>12) Military Information Support Operations (MISO) Family of Systems</b>																				
12.1) Fly-Away Broadcast System (FABS) <sup>(4)</sup>	A		-	-	-	-	-	-	-	-	-	-	-	2.075	-	-	-	-	2.075	
12.2) Signature Management (SIGMAN) Equipment <sup>(5)</sup>	A		-	-	-	-	-	-	-	-	-	-	-	0.530	-	-	-	-	0.530	
12.3) MISO Equipment <sup>(6)</sup>	A		-	-	-	-	-	-	-	-	-	-	-	0.371	-	-	-	-	0.371	
<i>Subtotal: 12) Military Information Support Operations (MISO) Family of Systems</i>			-	-	0.000	-	-	-	-	-	-	-	-	2.976	-	-	-	-	2.976	
<b>13) Marine Corps Information Operations Program (MCIOP)</b>																				
13.1) VARIOUS HARDWARE	A		-	-	-	-	-	-	-	-	-	-	-	0.382	-	-	-	-	0.382	
<i>Subtotal: 13) Marine Corps Information Operations Program (MCIOP)</i>			-	-	0.000	-	-	-	-	-	-	-	-	0.382	-	-	-	-	0.382	
<b>Total</b>			-	-	<b>51.698</b>	-	-	<b>18.449</b>	-	-	<b>17.844</b>	-	-	<b>69.203</b>	-	-	-	-	<b>69.203</b>	

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

(†) indicates the presence of a P-5a

**Footnotes:**

- (1) CCS: Tactical Imagery Production System (TIPS) enables extensively trained COMCAM documentation and production teams with increased capability to acquire, process, develop, reproduce, archive, distribute in hardcopy or multiple electronic formats digital still and motion media products as primary suppliers of operational imagery reinforcing distributive operations.
- (2) CCS: \$1.621M decrease from FY18 to FY19 for ECVS reflects completion of procurement in FY18.
- (3) Squad BNVD RFI was released 21 Dec 2017. Unit price is an estimate based on market research.
- (4) MISO: Fly-Away Broadcast System (FABS) increase of \$2.075M from FY18 to FY19 provides the MAGTF Commander the capability to conduct planned operations to convey selected information and indicators to foreign adversary, neutral and friendly target audiences to influence their emotions, motives, objective reasoning, providing an operational advantage.
- (5) MISO: SIGMAN equipment \$0.530M increase from FY18 to FY19 provides a capability to include Own-force signature monitoring and assessment, Electromagnetic signature masking and projection, and physical decoys.
- (6) MISO: MISO Equipment increase of \$0.371M from FY18 to FY19 procures items such as Next-Generation Loud Speaker (NGLS), Radio-In-A-Box (RIAB), and Marine Corps SOF Integration Node (MISN), which provides the MAGTF Commander the capability to conduct planned operations to convey selected information and indicators to foreign adversary, neutral and friendly target audiences to influence their emotions, motives, objective reasoning, providing an operational advantage.

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Exhibit P-5a, Procurement History and Planning: PB 2019 Navy									Date: February 2018			
Appropriation / Budget Activity / Budget Sub Activity: 1109N / 04 / 14			P-1 Line Item Number / Title: 4620 / Items under \$5 million (Comm & Elec)					Aggregated Items: Items under \$5 million (Comm & Elec)				
Item Number / Title [DODIC]	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 (\$)	Specs Avail Now?	Date Revision Available	RFP Issue Date
<b>2) Combat Camera Systems</b>												
2.2) Expeditionary Deployable Production System (EDPS)		2018	CERDEC / Aberdeen, MD	MIPR	Aberdeen, MD	Oct 2017	Jan 2018	40	3,066.00	Y		
2.3) Expeditionary Combat Photography System (ECPS)		2017	ECBC / APGEA, MD	MIPR	Aberdeen, MD	Dec 2016	Mar 2017	33	37,303.03	Y		
2.3) Expeditionary Combat Photography System (ECPS)		2018	ECBC / APGEA, MD	MIPR	Aberdeen, MD	Feb 2018	May 2018	13	37,303.03	Y		
2.4) Expeditionary Combat Video System (ECVS) <sup>(2)</sup>		2017	ECBC / APGEA, MD	C / TBD	** NO PCO **	Oct 2016	Oct 2016	30	39,140.00	N		
2.4) Expeditionary Combat Video System (ECVS) <sup>(2)</sup>		2018	ECBC / APGEA, MD	MIPR	Aberdeen, MD	Feb 2018	May 2018	41	39,140.00	Y		
<b>3) Public Affairs System</b>												
3.1) Public Affairs PALMES		2018	SSC-PAC / San Diego, CA	WR	San Diego, CA	Dec 2017	Mar 2018	3	200,000.00	Y		
3.1) Public Affairs PALMES	✓	2018	SSC-PAC / San Diego, CA	WR	San Diego, CA	Dec 2017	Mar 2018	1	200,000.00	Y		
<b>8) COMBAT OPTICS</b>												
8.1) Binocular Night Vision Goggles		2017	DLA/L-3 / Londonderry, NH	MIPR	TBD	Sep 2017	Feb 2018	830	9,996.39	Y		
8.2) Rifle Combat Optics Replenishment		2017	Trijicon / Wixom, MI	C / FFP	Quantico, VA	Feb 2017	Jun 2017	187	1,229.95	Y		
8.2) Rifle Combat Optics Replenishment		2018	DLA/Trijicon / Wixom, MI	MIPR	Philadelphia, PA	Feb 2018	Jun 2018	217	1,200.00	Y		
8.2) Rifle Combat Optics Replenishment		2019	DLA/Trijicon / Wixom, MI	MIPR	Philadelphia, PA	Feb 2019	Jun 2019	21	1,250.00	Y		
8.3) Sniper Range Finder		2017	DLA/Optics 1 / Bedford, NH	MIPR	Philadelphia, PA	Jun 2017	Oct 2017	227	6,657.14	N		
8.3) Sniper Range Finder		2018	DLA/Optics 1 / Bedford, NH	MIPR	Philadelphia, PA	Jan 2018	May 2018	1,751	6,702.50	N		
8.4) Squad Thermal System <sup>(†)</sup>		2019	TBD <sup>(7)</sup> / TBD	MIPR	Fort Belvoir, VA	Mar 2019	Aug 2019	1,640	9,502.72	Y		
8.8) Squad BNVG <sup>(3)(†)</sup>		2019	TBD <sup>(8)</sup> / TBD	C / TBD	Quantico, VA	Aug 2019	Jun 2020	3,468	12,500.00	N		Nov 2018

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

**Footnotes:**

<sup>(7)</sup> Annual production rates for the Squad Thermal System are estimates of the manufacturing capacity for the entire inter-service contract, of which the Marine Corps is a small component.

<sup>(8)</sup> Squad BNVG RFI released 21 Dec 2017. Contract and manufacturing data is estimated based on market research.

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Exhibit P-21, Production Schedule: PB 2019 Navy																					Date: February 2018																
Appropriation / Budget Activity / Budget Sub Activity: 1109N / 04 / 14										P-1 Line Item Number / Title: 4620 / Items under \$5 million (Comm & Elec)											Aggregated Items: Items under \$5 million (Comm & Elec)																
Items (Units in Each)						Fiscal Year 2017												Fiscal Year 2018																			
O C R O #	M F R Y	SERVICE	PROC QTY	ACCEPT PRIOR TO 1 OCT 2016	BAL DUE AS OF 1 OCT	O C T	N O V	D E C	J A N	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	B A L A N C E							
8) COMBAT OPTICS																																					
8.4) Squad Thermal System																																					
8	2019	NAVY	1,640	0	1,640																																1,640
8.8) Squad BNVG <sup>(3)</sup>																																					
9	2019	NAVY	3,468	0	3,468																																3,468
						O C T	N O V	D E C	J A N	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 Navy																					Date: February 2018																			
Appropriation / Budget Activity / Budget Sub Activity: 1109N / 04 / 14										P-1 Line Item Number / Title: 4620 / Items under \$5 million (Comm & Elec)										Aggregated Items: Items under \$5 million (Comm & Elec)																				
Items (Units in Each)							Fiscal Year 2019												Fiscal Year 2020											BALANCE										
O C R O #	M F R Y	SERVICE	PROC QTY	ACCEPT PRIOR TO 1 OCT 2018	BAL DUE AS OF 1 OCT	O C T	N O V	D E C	J A N	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											
8) COMBAT OPTICS	Fiscal Year 2019												Calendar Year 2019												Calendar Year 2020															
8	2019	NAVY	1,640	0	1,640								A -	-	-	-	-	50	80	160	170	150	150	150	150	150	150	150	130		0									
8.4) Squad Thermal System																																								
8.8) Squad BNVG <sup>(3)</sup>																																								
9	2019	NAVY	3,468	0	3,468								A -	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	289	289	289	289	2,312						
							O C T	N O V	D E C	J A N	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 Navy																					Date: February 2018																				
Appropriation / Budget Activity / Budget Sub Activity: 1109N / 04 / 14										P-1 Line Item Number / Title: 4620 / Items under \$5 million (Comm & Elec)										Aggregated Items: Items under \$5 million (Comm & Elec)																					
Items (Units in Each)							Fiscal Year 2021												Fiscal Year 2022																						
O C R O #	M F R Y	SERVICE	PROC QTY	ACCEPT PRIOR TO 1 OCT 2020	BAL DUE AS OF 1 OCT	FY	O C T	N O V	D E C	J A N	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	B A L A N C E										
8) COMBAT OPTICS							Calendar Year 2021												Calendar Year 2022																						
8.4) Squad Thermal System							8	2019	NAVY	1,640	1,640	0																									0				
8.8) Squad BNVG <sup>(3)</sup>							9	2019	NAVY	3,468	1,156	2,312	289	289	289	289	289	289	289	289	289	289	289	289	289	289	289	289	289	289	289	289	289	289	289	289	289	289	289	289	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	B A L A N C E										

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<b>Exhibit P-21, Production Schedule: PB 2019 Navy</b>								<b>Date:</b> February 2018				
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 1109N / 04 / 14			<b>P-1 Line Item Number / Title:</b> 4620 / Items under \$5 million (Comm & Elec)					<b>Aggregated Items:</b> Items under \$5 million (Comm & Elec)				
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	TBD <sup>(7)</sup> - TBD	4,800	18,000	20,000	1	0	5	5	0	0	0	0
2	TBD <sup>(8)</sup> - TBD	2,000	3,500	5,000	0	9	10	19	0	0	0	0

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

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

**Footnotes:**

(7) Annual production rates for the Squad Thermal System are estimates of the manufacturing capacity for the entire inter-service contract, of which the Marine Corps is a small component.

(8) Squad BVNG RFI released 21 Dec 2017. Contract and manufacturing data is estimated based on market research.

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Exhibit P-40, Budget Line Item Justification: PB 2019 Navy										Date: February 2018							
Appropriation / Budget Activity / Budget Sub Activity:					P-1 Line Item Number / Title:												
1109N: Procurement, Marine Corps / BA 04: Communications and Electronics Equipment / BSA 14: Command and Control System (Non-Tel)					4640 / Air Operations C2 Systems												
ID Code (A=Service Ready, B=Not Service Ready): A			Program Elements for Code B Items: N/A					Other Related Program Elements: 0206313M, 0206335M									
Line Item MDAP/MAIS Code: N36																	
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 (\$ in Millions)	300.164	15.917	18.393	14.269	0.000	14.269	11.861	7.250	7.584	7.805	Continuing	Continuing					
Less PY Advance Procurement (\$ in Millions)	-	-	-	-	-	-	-	-	-	-	-	-					
Net Procurement (P-1) (\$ in Millions)	300.164	15.917	18.393	14.269	0.000	14.269	11.861	7.250	7.584	7.805	Continuing	Continuing					
Plus CY Advance Procurement (\$ in Millions)	-	-	-	-	-	-	-	-	-	-	-	-					
<b>Total Obligation Authority (\$ in Millions)</b>	<b>300.164</b>	<b>15.917</b>	<b>18.393</b>	<b>14.269</b>	<b>0.000</b>	<b>14.269</b>	<b>11.861</b>	<b>7.250</b>	<b>7.584</b>	<b>7.805</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 (\$ in Millions)	-	-	-	-	-	-	-	-	-	-	-	-					
Flyaway Unit Cost (\$ in Dollars)	-	-	-	-	-	-	-	-	-	-	-	-					
Gross/Weapon System Unit Cost (\$ in Dollars)	-	-	-	-	-	-	-	-	-	-	-	-					
<b>Description:</b>																	
Joint Cooperative Target Identification-Ground (JCTI-G): The Joint Cooperative Target ID - Ground (JCTI-G) program will address four of the 26 capability gaps identified in the validated Combat ID - Friendly Force Tracker (CID-FFT) Joint Capabilities Document (JCD). A Jun 2010 JFCOM-led AoA concluded, and the USMC concurred, that pursuit of a new material solution and introduction of a new system would not be cost effective. This conclusion was based upon both cost and ability to address the four defined capability gaps in Combat Identification specific to reducing fratricide of U.S. and coalition forces. The AoA evaluated the currently Fielded and Planned Capability Improvements (FPCI) resident within funded projects and existing programs of records across all Services and determined that the most affordable alternative would leverage the FPCI programs by allocating the CID-FFT requirements and funding capability improvements within these existing programs. The AoA further concluded that, in addition to significant cost avoidance, leveraging the FPCI to meet the CID-FFT requirements, as opposed to establishing a new program of record material solution, would have greater impact and achieve a higher percentage of CID-FFT JCD capability gap closure by 2016. In support of a Jan 2010 Memorandum of Understanding between the Vice Chief of Staff of the Army and Assistant Commandant of the Marine Corps (which documents the Army and Marine Corps agreement to support closure of the Fires on Dismounts fratricide mitigation gap), the USMC refocused the program in June 2011 to begin allocation of CID-FFT JCD requirements to the USMC FPCI programs to meet this valid Joint Capabilities Integration and Development System (JCIDS) requirement. Having no previous CID-FFT requirement, these FPCI programs have neither planned nor been resourced to support the additional requirements of the CID-FFT JCD. As a result of these events, this effort will ensure requirements allocation, traceability and validation within 24 USMC FPCI programs in accordance with the CID-FFT JCD and JCIDS processes and provide resource funding and augment workforce to support the additional unanticipated requirements being levied on FPCI programs. Additionally, it will support aggregation of a time-phased schedule of USMC CID-FFT capabilities and future interoperability engineering/testing between FPCI systems and related modernization efforts necessary to minimize costs and measure attainment of CID-FFT JCD capability gap closure by 2016. The AoA recommendation, accepted by the Services and OSD, is to maintain and enhance the full range of FPCI programs to meet the requirements and mitigate CID-FFT capability gaps identified in the CID-FFT JCD. The intent is to reduce fratricide, uphold the DOD and USMC position on JCTI-G, remain consistent with the AoA recommendations, comply with the purpose of JCTI-G appropriations, and support capability gap closure in accordance with the AoA and OSD led OIPT findings. Funding included in PY column. (RDTE: 0206313M)																	
Composite Tracking Network (CTN) - The Composite Tracking Network (CTN) system distributes composite tracking data to Command and Control (C2) and weapon systems participating in a Cooperative Engagement Capability (CEC) network. The system will significantly contribute to real-time situational awareness. The program received ACAT III designation in Nov 01. The program is USMC led with US Navy and US Army cooperation. The CTN program is executing a single-step to full capability acquisition strategy by integrating Commercial Off-the-Shelf (COTS) and Non-Development Item (NDI) subsystems. AAO: 10 systems. The 12 April 1995 Mission Need Statement (MNS) No. AAS 48 for the Common Aviation Command and Control System (CAC2S) established the Marine Corps' need to upgrade its existing air defense architecture with capabilities to support improved situational awareness (SA) and advanced engagement concepts. The Composite Tracking Network (CTN) program was initiated to address this capability gap. The CTN system (AN/MSQ-143) is an integration effort consisting of an AN/USG-4A and other Marine-unique components. All Marine-unique components are Government Furnished Equipment (GFE) with the exception of the shelter and mast. The components include: Vehicle - M1152A-1 (GFE Marine Corps Systems Command (MCSC), Trailer - M102 LTT-MCC (GFE MCSC), 10 KW Generator -																	

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<b>Exhibit P-40, Budget Line Item Justification: PB 2019 Navy</b>		<b>Date:</b> February 2018
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 1109N: Procurement, Marine Corps / BA 04: Communications and Electronics Equipment / BSA 14: Command and Control System (Non-Tel)	<b>P-1 Line Item Number / Title:</b> 4640 / Air Operations C2 Systems	
<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> 0206313M, 0206335M
<b>Line Item MDAP/MAIS Code:</b> N36		
MEP 803 (GFE MCSC), Tactical Radio - AN/MRC103 (GFE MCSC), Global Positioning System - DAGR (GFE MCSC), Environmental Control Unit - BOO03 (GFE MCSC), Shelter - S788 (COTS NSWC Crane), and Antenna Mast - TEAMS EXL 195/26-5.4 (COTS Naval Surface Warfare Center Crane). The CTN system interfaces with the AN/TPS-59 radar, the AN/TPS-80 Ground/Air Task Oriented Radar (GATOR), and the CAC2S to provide the Marine Air-Ground Task Force (MAGTF) and Joint Task Force Commanders a ground based sensor netting solution that correlates sensor measurement data (target velocity and position) from local and remote radars that interface in the CEC network. This data will effectively increase Situational Awareness by providing accurate, composite, and real-time surveillance tracks, reduce ground-to-air and air-to-air fratricide, enable air and surface Integrated fire control (IFC), and extend the air defensive capability of forces in the littorals. Procurement of Common Array Block - Expeditionary (CAB-E) to replace obsolete Compact Solid State Antenna (CSSA) to begin FY 2018. (RDTE: 0206313M)		
Marine Air Command and Control (MACCS) - MACCS Family of Systems (FoS) is organized into tactical agencies and operational facilities, each having different functions, tasks, and equipment suites. These agencies are fielded and supported by squadrons within the Marine Air Control Group (MACG) in support of the Aviation Combat Element (ACE). The tactical agencies are: the Tactical Air Command Center (TACC), the Tactical Air Operations Center (TAOC), and the Direct Air Support Center (DASC). The core MACCS systems consist of: The AN/TYQ-23 Tactical Air Operations Module (TAOM); AN/TYQ-101 Communications Data Link System (CDLS); AN/MRQ-12(V)4 Communications Interface System (CIS); AN/TYQ-87(V)2 Sector Anti Air Warfare Facility; AN/UYQ-3B Direct Air Support Central/Airborne System (DASC/AS); and the AN/MSQ-124 Air Defense Communications Platform (ADCP). The MACCS FoS program office ensures that the TACC, TAOC, and DASC systems remain ready, relevant, and capable until Full Operational Capability (FOC) of Common Aviation Command and Control System (CAC2S). (RDTE: 0206313M)		
Remote Video Viewing Terminal (RVVT) - Consists of Video Down-Link (VDL) products such as the VideoScout Mobile Configuration 2 (VS-MC/2), VideoScout Mobile Configuration 3 (VS-MC/3), and Man Portable Video Down-Link (MPVDL) that allow for the viewing and exploitation of Full Motion Video (FMV) from Intelligence, Surveillance and Reconnaissance (ISR) assets. VDL systems are mission critical for coordination of direct and indirect fires and the prevention of fratricide. These systems provide the warfighter with video and metadata from all USMC manned and unmanned aircraft such as the Raven B, Puma, Micro-UAS, Shadow, Predator, Fire Scout, and Litening Pod on P-3, AV8-B, and F/A-18. Data is displayed to Forward Observers (FO), Joint Fires Observers (JFO), Joint Terminal Attack Coordinators (JTAC), and Forward Air Controller (FAC).		
Theater Battle Management Core System (TBMCS) - Joint mandated Air War planning tool for the generation, dissemination, and execution of the Air Tasking Order (ATO). TBMCS is an Air Force led program, which provides the automated tools necessary to manage tactical air operations, execute area air defense and airspace management in the tactical area of operation, and coordinate operations with components of other military services. TBMCS is located at the Tactical Air Command Center (TACC), with remotes located throughout the Marine Air Ground Task Force (MAGTF). It is scalable, allowing for joint, coalition, and service specific operations. It is an evolutionary acquisition program. (RDTE: 0206313M)		
Integrated Range Status System (IRSS)- The IRSS is a position location and area status display system that allows range and/or air traffic controllers to update area status information and monitor commercial and military aircraft within special use airspace (SUA) using information, if available, from radars and air and ground position location information (PLI) systems. Funding included in PY column.		
Common Aviation Command and Control (CAC2S) - Prior year funding resides in this Budget Line Item. Funding for FY 2015 and beyond resides in Budget Line Item 4644. (RDTE: 0206313M, Project 2273 for FY 2014 and prior. PE 0206335M, Project 3373 for FY 2015 and beyond).		

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Exhibit P-40, Budget Line Item Justification: PB 2019 Navy							Date: February 2018		
Appropriation / Budget Activity / Budget Sub Activity: 1109N: Procurement, Marine Corps / BA 04: Communications and Electronics Equipment / BSA 14: Command and Control System (Non-Tel)				P-1 Line Item Number / Title: 4640 / Air Operations C2 Systems					
ID Code (A=Service Ready, B=Not Service Ready): A		Program Elements for Code B Items: N/A			Other Related Program Elements: 0206313M, 0206335M				
Line Item MDAP/MAIS Code: N36									
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)
P-40a	Air Operations C2 Systems	P-5a			- / 300.164	- / 15.917	- / 18.393	- / 14.269	- / -
<b>P-40</b>	<b>Total Gross/Weapon System Cost</b>				<b>- / 300.164</b>	<b>- / 15.917</b>	<b>- / 18.393</b>	<b>- / 14.269</b>	<b>- / 0.000</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. Title represents the P-40a Title when only the P-40a Summary/Total is shown.

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

**Justification:**

FY 2018 Base Appropriation (\$18.393M):

Composite Tracking Network (CTN) \$5.360M - Funds support the procurement of quantity five Common Array Block - Expeditionary (CAB-E) and associated New Equipment Training (NET). Funds also support completion of AN/USG-4B retrofit and fielding.

Marine Air Command and Control (MACCS) \$2.662M - Funds support the procurement of twenty five (25) Multifunctional Information Distribution System (MIDS) Block II Upgrades in accordance with DoD mandate and to ensure participation in any radio frequency Link-16 network.

Theater Battle Management Core System (TBMCS) \$1.902M - Funding continues efforts such as on-site fielding representatives to support updated software and hardware fielding and the incremental procurement of new hardware for TBMCS to maintain cyber security accreditation as well as associated NET.

Remote Video Viewing Terminal (RVVT) \$8.469M- Funds procure hardware and ancillary equipment for the integration of the Full Motion Video capability into a user supported viewing platform.

FY 2019 Base Appropriation (\$14.269M):

Composite Tracking Network (CTN) \$5.455M - Funds support the procurement of five Common Array Block - Expeditionary (CAB-E) antennas to replace the obsolete Compact Solid State Antenna (CSSA) as well as associated New Equipment Training (NET) prior to fielding. Increase of \$0.095M from FY 2018 to FY 2019 supports Engineering Change Proposals (ECPs) related to the 5 CAB-E Antennas procured in FY 2018.

Marine Air Command and Control (MACCS) \$0.050M - Funds support program office travel related to MIDS Block II Upgrade fielding beginning FY 2019. Decrease of \$2.612M from FY18 to FY19 is due to transition of MIDS Block II Upgrade procurement to CAC2S in FY 2019. Common Aviation Command and Control System (CAC2S) to procure remaining MIDS Block II Upgrades in FY 2019 for integration into Lot 3 Full Deployment Units (0206335M).

Theater Battle Management Core System (TBMCS) \$1.477M - Funding continues efforts such as on-site fielding representatives to support updated software and hardware fielding and the incremental procurement of new hardware for TBMCS to maintain cyber security accreditation as well as associated NET in support of Maintenance Release Version 7 (MR7V). Decrease of \$0.425M from FY 2018 to FY 2019 due to reduction of NET and On Site Field Representatives required for MR7V fielding.

Remote Video Viewing Terminal (RVVT) \$7.287M - Funds will procure hardware and ancillary equipment for the integration of the Full Motion Video capability into a user supported viewing platform. The decrease in funding from FY18 to FY19 (\$1.182M) is due to a decreased requirement for Full Motion Video components.

OCO:

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<b>Exhibit P-40, Budget Line Item Justification:</b> PB 2019 Navy		<b>Date:</b> February 2018
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 1109N: Procurement, Marine Corps / BA 04: Communications and Electronics Equipment / BSA 14: Command and Control System (Non-Tel)		<b>P-1 Line Item Number / Title:</b> 4640 / Air Operations C2 Systems
<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> 0206313M, 0206335M
<b>Line Item MDAP/MAIS Code:</b> N36		
FY 2019 Overseas Contingency Operations (OCO): N/A		

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Exhibit P-40a, Budget Item Justification For Aggregated Items: PB 2019 Navy														Date: February 2018						
Appropriation / Budget Activity / Budget Sub Activity: 1109N / 04 / 14					P-1 Line Item Number / Title: 4640 / Air Operations C2 Systems									Aggregated Items Title: Air Operations C2 Systems						
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 (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)
<b>1) Remote Video Viewing Terminal (RVVT)</b>																				
1.1) PRIOR YEARS CUMULATIVE FUNDING (RVVT)	A		-	-	13.389	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
1.2) FMV Components	A		-	-	-	-	-	10.248	-	-	8.469	-	-	7.287	-	-	-	-	7.287	
<i>Subtotal: 1) Remote Video Viewing Terminal (RVVT)</i>			-	-	<b>13.389</b>	-	-	<b>10.248</b>	-	-	<b>8.469</b>	-	-	<b>7.287</b>	-	-	-	-	<b>7.287</b>	
<b>2) CTN</b>																				
2.1) CTN CAB-E Antenna Procurement (1)(t)	A		-	-	-	-	-	-	768,800.00	5	3,844	768,800.00	5	3,844	-	-	-	768,800.00	5	3,844
2.2) Engineering change Proposals (ECPs) <sup>(2)</sup>			-	-	20.272	-	-	1.380	-	-	1.370	-	-	1.473	-	-	-	-	1.473	
2.3) Fielding and NET training	A		-	-	1.659	-	-	0.135	-	-	0.146	-	-	0.138	-	-	-	-	0.138	
2.4) PRIOR YEARS CUMULATIVE FUNDING (CTN)			-	-	32.665	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
<i>Subtotal: 2) CTN</i>			-	-	<b>54.596</b>	-	-	<b>1.515</b>	-	-	<b>5.360</b>	-	-	<b>5.455</b>	-	-	-	-	<b>5.455</b>	
<b>3) Common Aviation Command and Control System (CAC2S)</b>																				
3.1) PRIOR YEARS CUMULATIVE FUNDING (CAC2S)			-	-	63.214	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
<i>Subtotal: 3) Common Aviation Command and Control System (CAC2S)</i>			-	-	<b>63.214</b>	-	-	-	-	-	-	-	-	-	-	-	-	-		
<b>4) TBMCS</b>																				
4.1) TBMCS HW Procurement/ Integration Support	A		-	-	24.249	-	-	2.471	-	-	0.093	-	-	0.102	-	-	-	-	0.102	
4.2) New Equipment Training			-	-	26.645	-	-	0.759	-	-	0.937	-	-	0.760	-	-	-	-	0.760	
4.3) OnSite Fielding Reps			-	-	7.078	-	-	0.490	-	-	0.872	-	-	0.615	-	-	-	-	0.615	
4.4) PRIOR YEARS CUMULATIVE FUNDING (TBMCS)			-	-	10.107	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
<i>Subtotal: 4) TBMCS</i>			-	-	<b>68.079</b>	-	-	<b>3.720</b>	-	-	<b>1.902</b>	-	-	<b>1.477</b>	-	-	-	-	<b>1.477</b>	
<b>5) Marine Air Command and Control System (MACCS) Service</b>																				
5.1) ADCP/MERWS/ DASCAS/MIDS <sup>(3)</sup>	A		-	-	4.226	-	-	0.434	-	-	2.662	-	-	-	-	-	-	-	-	

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<b>Exhibit P-40a, Budget Item Justification For Aggregated Items:</b> PB 2019 Navy														<b>Date:</b> February 2018			
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 1109N / 04 / 14														<b>Aggregated Items Title:</b> Air Operations C2 Systems			

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 (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)			
5.2) PRIOR YEARS CUMULATIVE FUNDING (MACCS)			-	-	96.660	-	-	-	-	-	-	-	-	-	-	-	-	-		
5.3) Program Travel - MIDS Block II Fielding	A		-	-	-	-	-	-	-	-	-	-	0.050	-	-	-	-	0.050		
<i>Subtotal: 5) Marine Air Command and Control System (MACCS) Service</i>			-	-	100.886	-	-	0.434	-	-	2.662	-	-	0.050	-	-	-	0.050		
<b>Total</b>			<b>-</b>	<b>-</b>	<b>300.164</b>	<b>-</b>	<b>-</b>	<b>15.917</b>	<b>-</b>	<b>-</b>	<b>18.393</b>	<b>-</b>	<b>-</b>	<b>14.269</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>14.269</b>		

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

(†) indicates the presence of a P-5a

**Footnotes:**

(1) Procurement of quantity 14 Common Array Block - Expeditionary (CAB-E) to replace obsolete Compact Solid State Antenna (CSSA) to begin FY 2018. Acquisition Strategy is to procure CAB-E Antennas over three years (FY 2018-FY 2020) utilizing Naval Sea Systems Command (NAVSEA) contract. Yearly procurement quantities are as follows: FY 2018 (5); FY 2019 (5); FY 2020 (4).

(2) Increase of \$0.103M from FY 2018 to FY 2019 due to implementation of emergent corrective actions resulting from completion of FY 2018 testing with AN/TPS-80 and integration of the AN/TPS-59 Mode V to support certification of USMC adaptive layers.

(3) Decrease of \$2.662M from FY 2018 to FY 2019 due to the transition of MIDS Block II procurement to CAC2S program (BLI 4644).

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Exhibit P-5a, Procurement History and Planning: PB 2019 Navy								Date: February 2018				
Appropriation / Budget Activity / Budget Sub Activity: 1109N / 04 / 14			P-1 Line Item Number / Title: 4640 / Air Operations C2 Systems					Aggregated Items: Air Operations C2 Systems				
Item Number / Title [DODIC]	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 (\$)	Specs Avail Now?	Date Revision Available	RFP Issue Date
<b>2) CTN</b>												
2.1) CTN CAB-E Antenna Procurement <sup>(1)</sup>		2018 <sup>(4)</sup>	Raytheon / St. Petersburg, FL	C / FFP	St. Petersburg, FL	Jul 2018	Jul 2019	5	768,800.00	Y		Jan 2018
2.1) CTN CAB-E Antenna Procurement <sup>(1)</sup>		2019 <sup>(5)</sup>	Raytheon / St. Petersburg, FL	C / FFP	St. Petersburg, FL	Jul 2019	Jul 2020	5	768,800.00	Y		Jan 2019

**Footnotes:**

(4) Quantity 5 CAB-E Antennas will be procured utilizing Naval Sea System Command (NAVSEA) Raytheon contract and will be executed 1 July 2018.

(5) Quantity 5 CAB-E Antennas will be procured utilizing NAVSEA Raytheon contract and will be executed 1 July 2019.

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Exhibit P-40, Budget Line Item Justification: PB 2019 Navy										Date: February 2018		
Appropriation / Budget Activity / Budget Sub Activity: 1109N: Procurement, Marine Corps / BA 04: Communications and Electronics Equipment / BSA 15: Radar + Equipment (Non-Tel)					P-1 Line Item Number / Title: 4650 / Radar Systems							
ID Code (A=Service Ready, B=Not Service Ready): A			Program Elements for Code B Items: 0204460M				Other Related Program Elements: 0204460M, 0206313M					
<b>Line Item MDAP/MAIS Code:</b> 386												
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 (\$ in Millions)	589.794	17.327	12.411	6.694	0.000	6.694	10.460	12.265	16.140	16.473	Continuing	Continuing
Less PY Advance Procurement (\$ in Millions)	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) (\$ in Millions)	589.794	17.327	12.411	6.694	0.000	6.694	10.460	12.265	16.140	16.473	Continuing	Continuing
Plus CY Advance Procurement (\$ in Millions)	-	-	-	-	-	-	-	-	-	-	-	-
<b>Total Obligation Authority (\$ in Millions)</b>	<b>589.794</b>	<b>17.327</b>	<b>12.411</b>	<b>6.694</b>	<b>0.000</b>	<b>6.694</b>	<b>10.460</b>	<b>12.265</b>	<b>16.140</b>	<b>16.473</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 (\$ in Millions)	-	-	-	-	-	-	-	-	-	-	-	-
Flyaway Unit Cost (\$ in Millions)	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost (\$ in Millions)	-	-	-	-	-	-	-	-	-	-	-	-
<b>Description:</b>												
Long Range Radar (AN/TPS-59) - The AN/TPS-59A(V)3 is a transportable, three dimensional, tactical radar system that provides the Marine Air Ground Task Force (MAGTF) with long-range surveillance. It is the MAGTF's only ground based long range sensor that provides the capability to detect and report Air Breathing Targets (ABT) and track Theater Ballistic Missiles (TBM). The AN/TPS-59A(V)3 Radar System is connected to the Common Aviation Command and Control Systems (CAC2S). It provides the air defense controllers data and may be used autonomously to conduct Ground Control Intercept, tactical en-route Air Traffic Control (ATC), or TBM alert operations via the Joint Integrated Air Missile Defense (IAMD) encrypted Link-16. The USMC extended the AN/TPS-59 service life through 2035; therefore, in order to maintain its operational relevance on the battlefield, a number of modernization efforts will be needed.												
Family of Target Acquisition Systems (FTAS) - The FTAS provides the MAGTF the capability to locate, identify, and attack enemy indirect fire weapons systems and observe and direct friendly artillery fire. The FTAS consists of the AN/TPQ-46 Firefinder Radar, the AN/TPQ-49 Lightweight Counter Mortar Radar, and the AN/TSQ-267 Target Processing Set. The FTAS is critical in the execution of counterfire and the integration of target acquisition information enabling attack by MAGTF assets. The FTAS also provides artillery firing units the ability to conduct artillery registration and other friendly fire missions. The FTAS encompasses the equipment required to support target acquisition within the target acquisition platoon and is resident in the headquarters battery of each artillery regiment. The program will continue to address system issues that arise due to Diminishing Manufacturing Sources and Material Shortages (DMSMS) items within the FTAS. The USMC assumed the role of Primary Inventory Control Activity (PICA) for the AN/TPQ-49 in FY15 when the Army divested itself from the system.												
Short/Medium Range Air Defense Radar (AN/TPS-63 or SHORAD) - The AN/TPS-63 (SHORAD) is a two-dimensional, medium-range, medium altitude, transportable, mobile radar system which is employed as a tactical gap-filler or as an early warning system for deployment into the operational area. It has a 360-degree air surveillance capability at a range of 160 miles and complements the co-employed AN/TPS-59 three dimensional, long-range, air surveillance radar system. The AN/TPS-63 is employed by the Marine Air Control Squadron (MACS) as its Tactical Air Operations Center (TAOC) in support of air surveillance and air control mission objectives. Fielded in 1980, this system supported OFS and is addressing numerous DMS and obsolescence issues until replacement by Ground/Air Task Oriented Radar (G/ATOR AN/TPS-80).												
Secondary Distribution			FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	
Navy	Quantity		-	-	-	-	-	-	-	-	-	-
	Total Obligation Authority		13.452	8.764	2.312	-	2.312	3.642	5.460	9.488	9.685	

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Exhibit P-40, Budget Line Item Justification: PB 2019 Navy							Date: February 2018			
Appropriation / Budget Activity / Budget Sub Activity: 1109N: Procurement, Marine Corps / BA 04: Communications and Electronics Equipment / BSA 15: Radar + Equipment (Non-Tel)				P-1 Line Item Number / Title: 4650 / Radar Systems						
ID Code (A=Service Ready, B=Not Service Ready): A		Program Elements for Code B Items: 0204460M			Other Related Program Elements: 0204460M, 0206313M					
Line Item MDAP/MAIS Code: 386										
Secondary Distribution	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	
NR	Quantity	-	-	-	-	-	-	-	-	-
	Total Obligation Authority	3.875	3.647	4.382	-	4.382	6.818	6.805	6.652	6.788
Total: Secondary Distribution	Quantity	-	-	-	-	-	-	-	-	-
	Total Obligation Authority	17.327	12.411	6.694	-	6.694	10.460	12.265	16.140	16.473

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Exhibit P-40, Budget Line Item Justification: PB 2019 Navy							Date: February 2018			
Appropriation / Budget Activity / Budget Sub Activity:				P-1 Line Item Number / Title:						
1109N: Procurement, Marine Corps / BA 04: Communications and Electronics Equipment / BSA 15: Radar + Equipment (Non-Tel)				4650 / Radar Systems						
<b>ID Code</b> (A=Service Ready, B=Not Service Ready): A		<b>Program Elements for Code B Items:</b> 0204460M				<b>Other Related Program Elements:</b> 0204460M, 0206313M				
<b>Line Item MDAP/MAIS Code:</b> 386										
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)	
P-40a	Radar Systems				- / 589.794	- / 17.327	- / 12.411	- / 6.694	- / -	- / 6.694
<b>P-40</b>	<b>Total Gross/Weapon System Cost</b>				<b>- / 589.794</b>	<b>- / 17.327</b>	<b>- / 12.411</b>	<b>- / 6.694</b>	<b>- / 0.000</b>	<b>- / 6.694</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. Title represents the P-40a Title when only the P-40a Summary/Total is shown.										
Note: Totals in this Exhibit P-40 set may not be exact or sum exactly due to rounding.										
<b>Justification:</b>										
Beginning in FY19, FTAS funding has been realigned from BLI 4650, RADAR SYSTEMS to BLI 4733, FIRE SUPPORT SYSTEMS.										
The FY19 funding request was reduced by (\$.754M) to account for the availability of prior year execution balances.										
FY2018 Base Appropriation Request: \$12.411M										
AN/TPS-59 \$8.956M - (Active: \$5.647M, Reserve: \$3.309M) FY18 funding will complete the procurement of Identify Friend or Foe (IFF) Antennas that will increase the performance of the system. It will also procure Uninterruptible Power Supply (UPS) and Modular Azimuth Positioning System (MAPS) Readers to address DMSMS and obsolescence issues to increase operational availability. Decrease of \$5.120M from FY17 to FY18 is due to completion of previously scheduled upgrades and installations.										
AN/TPS-63 \$0.720M - (Active: \$0.667M, Reserve: \$0.053M) FY18 funding will procure ECP Modification Kits and address continuing DMSMS issues that arise with a 35 year old radar system, and associated program management, engineering and logistics support. Increase of \$0.008M from FY17 to FY18 is due to increased costs associated with ECP Modification Kit procurement.										
FTAS \$2.735M - (Active: \$2.450, Reserve: \$0.285M) FY18 funding procures ECP Modification Kits and continues to address DMSMS issues within the FTAS. Decrease of \$0.249M from FY17 to FY18 is due to completion of scheduled upgrades and installations.										
FY2019 Base Appropriation Request: \$6.694M										
AN/TPS-59 \$6.694M (Active: \$2.312M, Reserve: \$4.382M) FY19 funding will procure Auto North mod kit components which will eliminate the requirement for a man-in-the-loop interface while performing north alignment procedures. In addition, funds will procure the Digital Receiver and Exciter (DREX) Engineering Design Model (EDM) Technical Manuals; logistics; and training data. Funds will also support additional Engineering Change Proposal (ECP) Upgrades to address obsolescence within the Array. Decrease of \$2.262M from FY18 to FY19 is due to completion of the procurement of the Identify Friend or Foe (IFF) Antenna.										
FTAS \$0.000M - (Active: \$0.000M, Reserve: \$0.000M) FY19 decrease is due to a realignment from Budget Line Item (BLI)4650 to BLI 4733. Realignment of effort to new BLI in FY 19 and beyond reflects USMC Program Management Office (PMO) reorganization to improve support of USMC OPFOR.										
AN/TPS-63 \$0.000M (Active: \$0.000M, Reserve: \$0.000M) Funding decrease of \$720K is due to end of service life. System is currently in disposal.										
OCO:										

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<b>Exhibit P-40, Budget Line Item Justification:</b> PB 2019 Navy		<b>Date:</b> February 2018
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 1109N: Procurement, Marine Corps / BA 04: Communications and Electronics Equipment / BSA 15: Radar + Equipment (Non-Tel)		<b>P-1 Line Item Number / Title:</b> 4650 / Radar Systems
<b>ID Code</b> (A=Service Ready, B=Not Service Ready): A	<b>Program Elements for Code B Items:</b> 0204460M	<b>Other Related Program Elements:</b> 0204460M, 0206313M
<b>Line Item MDAP/MAIS Code:</b> 386	FY2018 Overseas Contingency Operations (OCO) Request: N/A	
FY2019 Overseas Contingency Operations (OCO) Request: N/A		

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Exhibit P-40a, Budget Item Justification For Aggregated Items: PB 2019 Navy													Date: February 2018					
Appropriation / Budget Activity / Budget Sub Activity: 1109N / 04 / 15					P-1 Line Item Number / Title: 4650 / Radar Systems								Aggregated Items Title: Radar Systems					
Item Number / Title [DODIC]	ID CD	MDAP/ MAIS Code	Prior Years			FY 2017			FY 2018			FY 2019 Base			FY 2019 OCO			
			Unit Cost (\$ M)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ M)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ M)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ M)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ M)	Qty (Each)	Total Cost (\$ M)	
<b>1) AN/TPS-59</b>																		
1.1) AN/TPS-59 Electronic Components	A		-	-	71.711	-	-	6.572	-	-	-	-	-	-	-	-	-	
1.2) AN/TPS-59 Electronic Components (Reserve)	A		-	-	1.325	-	-	1.942	-	-	-	-	-	-	-	-	-	
1.5) AN/TPS-59 DREX Logistics and Training Data	A		-	-	-	-	-	-	-	-	-	-	1.403	-	-	-	1.403	
1.6) AN/TPS-59 Discrete Interface Board	A		-	-	-	-	-	-	-	-	-	-	0.300	-	-	-	0.300	
1.11) AN/TPS-59 IFF Antenna	A		-	-	-	-	-	1.000	-	-	4.920	-	-	-	-	-	-	
1.12) AN/TPS-59 IFF Antenna (Reserve)	A		-	-	-	-	-	0.200	-	-	1.080	-	-	-	-	-	-	
1.13) AN/TPS-59 Mechanical Components	A		-	-	7.768	-	-	1.000	-	-	-	-	-	-	-	-	-	
1.14) AN/TPS-59 Mechanical Components (Reserve)	A		-	-	0.317	-	-	0.500	-	-	-	-	-	-	-	-	-	
1.15) AN/TPS-59 Auto North Modification	A		-	-	-	-	-	-	-	-	-	-	0.609	-	-	-	0.609	
1.16) AN/TPS-59 Auto North Modification (Reserve)	A		-	-	-	-	-	-	-	-	-	-	0.798	-	-	-	0.798	
1.17) AN/TPS-59 ECP Upgrades			-	-	6.887	-	-	-	-	-	0.727	-	-	-	-	-	-	
1.18) AN/TPS-59 ECP Upgrades (Reserve)	A		-	-	1.402	-	-	-	-	-	2.229	-	-	3.584	-	-	-	
1.19) AN/TPS-59 Program Mgt, Engineering & Logistics Services			-	-	2.921	-	-	2.000	-	-	-	-	-	-	-	-	-	
1.20) AN/TPS-59 Program Mgt, Engineering & Logistics Svcs (Reserve)	A		-	-	0.642	-	-	0.862	-	-	-	-	-	-	-	-	-	
<b>Subtotal: 1) AN/TPS-59</b>			-	-	<b>92.973</b>	-	-	<b>14.076</b>	-	-	<b>8.956</b>	-	-	<b>6.694</b>	-	-	-	<b>6.694</b>
<b>2) AN/TPS-63</b>																		
2.1) AN/TPS-63 ECP Upgrades	A		-	-	12.774	-	-	0.215	-	-	0.667	-	-	-	-	-	-	

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Exhibit P-40a, Budget Item Justification For Aggregated Items: PB 2019 Navy														Date: February 2018						
Appropriation / Budget Activity / Budget Sub Activity: 1109N / 04 / 15					P-1 Line Item Number / Title: 4650 / Radar Systems									Aggregated Items Title: Radar Systems						
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 (\$ M)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ M)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ M)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ M)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ M)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ M)	Qty (Each)	Total Cost (\$ M)
2.2) AN/TPS-63 ECP Upgrades (Reserve)	A		-	-	0.103	-	-	0.052	-	-	0.053	-	-	-	-	-	-	-	-	-
<i>Subtotal: 2) AN/TPS-63</i>			-	-	<b>12.877</b>	-	-	<b>0.267</b>	-	-	<b>0.720</b>	-	-	-	-	-	-	-	-	-
<b>3) FTAS</b>																				
3.1) FTAS Upgrades and Installation	A		-	-	11.599	-	-	2.665	-	-	2.450	-	-	-	-	-	-	-	-	-
3.2) FTAS Upgrades and Installation (Reserve)	A		-	-	0.788	-	-	0.319	-	-	0.285	-	-	-	-	-	-	-	-	-
<i>Subtotal: 3) FTAS</i>			-	-	<b>12.387</b>	-	-	<b>2.984</b>	-	-	<b>2.735</b>	-	-	-	-	-	-	-	-	-
<b>4) Prior Years Cumulative Funding</b>																				
4.1) Prior Years Cumulative Funding	A		-	-	471.557	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
<i>Subtotal: 4) Prior Years Cumulative Funding</i>			-	-	<b>471.557</b>	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
<b>Total</b>			-	-	<b>589.794</b>	-	-	<b>17.327</b>	-	-	<b>12.411</b>	-	-	<b>6.694</b>	-	-	-	-	-	<b>6.694</b>

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

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Exhibit P-40, Budget Line Item Justification: PB 2019 Navy										Date: February 2018							
Appropriation / Budget Activity / Budget Sub Activity:					P-1 Line Item Number / Title:												
1109N: Procurement, Marine Corps / BA 04: Communications and Electronics Equipment / BSA 15: Radar + Equipment (Non-Tel)					4655 / Ground/Air Task Oriented Radar (G/ATOR)												
ID Code (A=Service Ready, B=Not Service Ready): A			Program Elements for Code B Items: 0204460M, 0506313M					Other Related Program Elements: 0206313M									
Line Item MDAP/MAIS Code: 386																	
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> )	5	3	3	6	-	6	8	8	8	-	-	41					
Gross/Weapon System Cost (\$ in Millions)	213.935	122.563	139.167	224.969	0.000	224.969	273.022	284.592	298.024	19.307	73.943	1,649.522					
Less PY Advance Procurement (\$ in Millions)	-	-	-	-	-	-	-	-	-	-	-	-					
Net Procurement (P-1) (\$ in Millions)	213.935	122.563	139.167	224.969	0.000	224.969	273.022	284.592	298.024	19.307	73.943	1,649.522					
Plus CY Advance Procurement (\$ in Millions)	-	-	-	-	-	-	-	-	-	-	-	-					
<b>Total Obligation Authority (\$ in Millions)</b>	<b>213.935</b>	<b>122.563</b>	<b>139.167</b>	<b>224.969</b>	<b>0.000</b>	<b>224.969</b>	<b>273.022</b>	<b>284.592</b>	<b>298.024</b>	<b>19.307</b>	<b>73.943</b>	<b>1,649.522</b>					
<i>(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)</i>																	
Initial Spares (\$ in Millions)	-	11.193	16.840	13.018	-	13.018	13.235	13.506	13.805	14.102	Continuing	Continuing					
Flyaway Unit Cost (\$ in Millions)	41.288	37.234	38.380	32.970	-	32.970	32.106	33.321	34.947	-	-	36.957					
Gross/Weapon System Unit Cost (\$ in Millions)	42.787	40.854	46.389	37.495	-	37.495	34.128	35.574	37.253	-	-	40.232					
<b>Description:</b>																	
Ground/Air Task Oriented Radar (G/ATOR AN/TPS-80) - The Ground/Air Task Oriented Radar is a multi-role, ground-based, expeditionary radar that replaces five legacy radar systems for the Marine Air Ground Task Force.																	
It satisfies the Marine Air Command and Control System (G/ATOR Block 1) and the Ground Counter Fire/Counter Battery (G/ATOR Block 2) capabilities. The G/ATOR replaces the AN/TPS-63 and complements the AN/TPS-59 long range radar and will provide mobile, multi-functional, three-dimensional surveillance of air breathing targets, detection of cruise missiles and Unmanned Aerial Systems (UAS), and the cueing of air defense weapons. The G/ATOR contributes to the extension of Sea Shield/Sea Strike by surveillance and detection of enemy air threats not seen by Navy sensors in the littorals by participating in a cooperative engagement network of sensors and shooters; G/ATOR enables Integrated Fire Control (IFC) and provides engage/fire on remote capability. G/ATOR surveillance coverage with IFC will provide unprecedented reach, volume, and precision in the execution of Operational Maneuver From The Sea allowing Naval forces to project and sustain power deep inland. Prior year funding and quantities for the G/ATOR program can be found in BLI 4650 - Radar Systems.																	
Secondary Distribution		FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023							
Navy	Quantity	3	3	2	-	2	4	8	8	-							
	Total Obligation Authority	122.563	139.167	105.612	-	105.612	151.175	284.592	298.024	19.307							
NR	Quantity	-	-	4	-	4	4	-	-	-							
	Total Obligation Authority	-	-	119.357	-	119.357	121.847	-	-	-							
Total: Secondary Distribution	Quantity	-	-	-	-	-	-	-	-	-							
	Total Obligation Authority	122.563	139.167	224.969	-	224.969	273.022	284.592	298.024	19.307							

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Exhibit P-40, Budget Line Item Justification: PB 2019 Navy							Date: February 2018			
Appropriation / Budget Activity / Budget Sub Activity:				P-1 Line Item Number / Title:						
1109N: Procurement, Marine Corps / BA 04: Communications and Electronics Equipment / BSA 15: Radar + Equipment (Non-Tel)				4655 / Ground/Air Task Oriented Radar (G/ATOR)						
ID Code (A=Service Ready, B=Not Service Ready): A		Program Elements for Code B Items: 0204460M, 0506313M				Other Related Program Elements: 0206313M				
Line Item MDAP/MAIS Code: 386										
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)	
P-5	1 / Ground/Air Task Oriented Radar (G/ATOR)	P-5a, P-21			5 / 213.935	3 / 122.563	3 / 139.167	6 / 224.969	- / 0.000	6 / 224.969
P-40	Total Gross/Weapon System Cost				5 / 213.935	3 / 122.563	3 / 139.167	6 / 224.969	- / 0.000	6 / 224.969

\*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:**

FY2018 Base Appropriation Request:

AN/TPS-80 G/ATOR \$139.167M - FY18 funding will procure three (3) Gallium Nitride (GaN) LRIP G/ATOR systems and provide funding for support associated with the procurement of Systems, Hardware, Program Management and Logistics required for G/ATOR fielding related activities. The increase in funding (\$16.474M) from FY17 to FY18 primarily reflects an increase in Logistics Support (\$9.271M), as the ICLS contract awarded Oct 17 supports eight (8) fielded systems in FY18; an increase in Systems Engineering Program Management (SEPM) (\$3.385M), due to the shared nature of SEPM and less concurrency with the Lot 5 build schedule; an increase in Program Management (\$2.479M), with a corresponding decrease in the RDT&E appropriation; and an increase in Communications Equipment Group (CEG) Shelters (\$1.145M), in response to a capability requirements change. The CEG Shelter is an integral component of the G/ATOR System and supports external Command and Control voice and digital communications to CAC2S, CTN, and AFATDS.

FY2019 Base Appropriation Request \$224.969M (\$105.612M Active; \$119.357M Reserves)

AN/TPS-80 G/ATOR \$224.969M - FY19 funding will procure six (6) G/ATOR systems and provide logistic/program support associated with the procurement of Systems, Hardware, Program Management and Logistics required for G/ATOR fielding related activities. The increase in funding from FY18 to FY19 primarily reflects the increase in G/ATORs from three (3) to six (6) systems as part of the first year of full Rate Production, increases in logistics to support fielding of four (4) additional systems for a total of twelve (12) fielded systems in FY19 and a slight increase for Communications Equipment Group (CEG) Shelters necessary to support the initial Full Rate Production Lot procurement quantity of six (6) systems.

OCO:

FY2019 Overseas Contingency Operations (OCO) Request: N/A

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<b>Exhibit P-5, Cost Analysis: PB 2019 Navy</b>													<b>Date: February 2018</b>						
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 1109N / 04 / 15			<b>P-1 Line Item Number / Title:</b> 4655 / Ground/Air Task Oriented Radar (G/ATOR)										<b>Item Number / Title [DODIC]:</b> 1 / Ground/Air Task Oriented Radar (G/ATOR)						
<b>ID Code</b> (A=Service Ready, B=Not Service Ready) :													<b>MDAP/MAIS Code:</b>						
<b>Resource Summary</b>				<b>Prior Years</b>			<b>FY 2017</b>		<b>FY 2018</b>		<b>FY 2019 Base</b>		<b>FY 2019 OCO</b>		<b>FY 2019 Total</b>				
Procurement Quantity ( <i>Units in Each</i> )							5		3		3		6		-		6		
Gross/Weapon System Cost (\$ in Millions)							213.935		122.563		139.167		224.969		0.000		224.969		
Less PY Advance Procurement (\$ in Millions)							-		-		-		-		-		-		
Net Procurement (P-1) (\$ in Millions)							213.935		122.563		139.167		224.969		0.000		224.969		
Plus CY Advance Procurement (\$ in Millions)							-		-		-		-		-		-		
<b>Total Obligation Authority</b> (\$ in Millions)							213.935		122.563		139.167		224.969		0.000		224.969		
(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)																			
Initial Spares (\$ in Millions)							-		11.193		16.840		13.018		-		13.018		
Gross/Weapon System Unit Cost (\$ in Millions)							42.787		40.854		46.389		37.495		-		37.495		
Note: Subtotals or Totals in this Exhibit P-5 may not be exact or sum exactly due to rounding.																			
<b>Cost Elements</b>	<b>Prior Years</b>			<b>FY 2017</b>			<b>FY 2018</b>			<b>FY 2019 Base</b>			<b>FY 2019 OCO</b>			<b>FY 2019 Total</b>			
	Unit Cost (\$ M)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ M)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ M)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ M)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ M)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ M)	Qty (Each)	Total Cost (\$ M)	
Flyaway - G/ATOR - Active (PE 0204460M ) & Reserve (PE 0506313M) Cost																			
Recurring Cost																			
1.1.1) G/ATOR System (Active) <sup>(1)</sup>	33.263	5	166.314	31.837	3	95.511	31.837	3	95.511	29.839	2	59.677	-	-	-	29.839	2	59.677	
1.1.2) Systems Engineering/Program Management (SEPM) (Active) <sup>(1)</sup>	-	-	28.654	-	-	11.383	-	-	14.768	-	-	12.494	-	-	-	-	-	12.494	
1.1.3) G/ATOR System (Reserve) <sup>(1)</sup>	-	-	-	-	-	-	-	-	-	29.839	4	119.357	-	-	-	29.839	4	119.357	
<i>Subtotal: Recurring Cost</i>	-	-	194.968	-	-	106.894	-	-	110.279	-	-	191.528	-	-	-	-	-	191.528	
Non Recurring Cost																			
1.2.1) Engineering Change Orders (ECO) (Active) <sup>(2)</sup>	-	-	11.474	-	-	4.807	-	-	4.860	-	-	5.588	-	-	-	-	-	5.588	
1.2.4) Depot Facilitation (Active) <sup>(3)</sup>	-	-	-	-	-	-	-	-	-	-	-	0.705	-	-	-	-	-	0.705	
<i>Subtotal: Non Recurring Cost</i>	-	-	11.474	-	-	4.807	-	-	4.860	-	-	6.293	-	-	-	-	-	6.293	
<i>Subtotal: Flyaway - G/ATOR - Active (PE 0204460M ) &amp; Reserve (PE 0506313M) Cost</i>	-	-	206.442	-	-	111.701	-	-	115.139	-	-	197.821	-	-	-	-	-	197.821	

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<b>Exhibit P-5, Cost Analysis:</b> PB 2019 Navy														<b>Date:</b> February 2018						
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 1109N / 04 / 15							<b>P-1 Line Item Number / Title:</b> 4655 / Ground/Air Task Oriented Radar (G/ATOR)							<b>Item Number / Title [DODIC]:</b> 1 / Ground/Air Task Oriented Radar (G/ATOR)						
<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.																				
<b>Cost Elements</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>Unit Cost (\$ M)</b>	<b>Qty (Each)</b>	<b>Total Cost (\$ M)</b>	<b>Unit Cost (\$ M)</b>	<b>Qty (Each)</b>	<b>Total Cost (\$ M)</b>	<b>Unit Cost (\$ M)</b>	<b>Qty (Each)</b>	<b>Total Cost (\$ M)</b>	<b>Unit Cost (\$ M)</b>	<b>Qty (Each)</b>	<b>Total Cost (\$ M)</b>	<b>Unit Cost (\$ M)</b>	<b>Qty (Each)</b>	<b>Total Cost (\$ M)</b>	<b>Unit Cost (\$ M)</b>	<b>Qty (Each)</b>	<b>Total Cost (\$ M)</b>		
Hardware - G/ATOR - Active (PE 0204460M ) Cost																				
Recurring Cost																				
2.1.1) G/ATOR Shelters <sup>(4)</sup>	-	-	3.679	-	-	3.373	-	-	4.518	-	-	5.595	-	-	-	-	-	-	-	5.595
<i>Subtotal: Recurring Cost</i>	-	-	3.679	-	-	3.373	-	-	4.518	-	-	5.595	-	-	-	-	-	-	-	5.595
<i>Subtotal: Hardware - G/ATOR - Active (PE 0204460M ) Cost</i>	-	-	3.679	-	-	3.373	-	-	4.518	-	-	5.595	-	-	-	-	-	-	-	5.595
Support - G/ATOR - Support Active (PE 0204460M) Cost																				
3.1) Program Management Support <sup>(5)</sup>	-	-	2.703	-	-	2.750	-	-	5.229	-	-	5.500	-	-	-	-	-	-	-	5.500
3.2) Logistics Support (Shelters)	-	-	1.111	-	-	0.356	-	-	0.496	-	-	0.508	-	-	-	-	-	-	-	0.508
3.3) Logistics Support (CLS/ICLS) <sup>(6)</sup>	-	-	-	-	-	4.383	-	-	13.785	-	-	15.545	-	-	-	-	-	-	-	15.545
<i>Subtotal: Support - G/ATOR - Support Active (PE 0204460M) Cost</i>	-	-	3.814	-	-	7.489	-	-	19.510	-	-	21.553	-	-	-	-	-	-	-	21.553
<b>Gross/Weapon System Cost</b>	<b>42.787</b>	<b>5</b>	<b>213.935</b>	<b>40.854</b>	<b>3</b>	<b>122.563</b>	<b>46.389</b>	<b>3</b>	<b>139.167</b>	<b>37.495</b>	<b>6</b>	<b>224.969</b>	-	-	-	<b>0.000</b>	<b>37.495</b>	<b>6</b>	<b>224.969</b>	

(†) indicates the presence of a P-5a

**Footnotes:**

- (1) The increase in prime vendor SEPM between FY17 and FY18 is based on the awarded GaN LRIP contract costs and the production build schedule. The FY17 SEPM is lower, compared to FY16 and FY18, as it benefits from the shared nature of the SEPM burden spread between three GaN LRIP Lots. In FY19, with a new Full Rate Production contract, it is anticipated that the SEPM burden will be reduced on an annual basis, more closely aligned to the FY17 figure, as it will be shared across the four years of Full Rate Production.
- (2) In FY19, ECO funding will address emergent corrective actions from DT1C/OA, DT1D/OA and DT1E/IOT&E testing, as well as diminishing manufacturing sources/material shortages and user community feedback to improve Human Systems Integration (HSI). ECO funding will reduce the number of material/electronic obsolescence issues and ultimately improve future Marine Forces readiness.
- (3) Funding supports facilitization for both Line Replaceable Unit (LRU) Repair and Inspect and Repair Only As Necessary (IROAN) activities at Tobyhanna Army Depot. LRU Repair facilitization begins in FY19.
- (4) This requirement is derived from Change 4 of G/ATOR Block 2 Capabilities Development Document. The increase of \$1.475M from FY18 to FY19 procures Communications Equipment Group (CEG) Shelters and their associated components to support the G/ATOR Lot 6 procurement quantity. The CEG Shelter is comprised of an S-788 Shelter on an up-armored HMMWV, providing the G/ATOR system with operator interfaces and communications processing. The CEG Shelter is an integral component of the G/ATOR System and supports external Command and Control voice and digital communications to CAC2S, CTN, and AFATDS.

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<b>Exhibit P-5, Cost Analysis:</b> PB 2019 Navy		<b>Date:</b> February 2018	
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 1109N / 04 / 15	<b>P-1 Line Item Number / Title:</b> 4655 / Ground/Air Task Oriented Radar (G/ATOR)	<b>Item Number / Title [DODIC]:</b> 1 / Ground/Air Task Oriented Radar (G/ATOR)	
<b>ID Code</b> (A=Service Ready, B=Not Service Ready) :		<b>MDAP/MAIS Code:</b>	
(5) With G/ATOR being post Milestone C and beginning Full Rate Production, program management support completely migrates from RDT&E to PMC funding in FY19. The increase of \$0.471M in FY19 has a corresponding decrease in the RDT&E appropriation.		(6) G/ATOR's product support strategy employs a combination of Contractor Logistics Support (CLS) and Interim Contactor Logistics Support (ICLS) until Performance Based Logistics/Depot Maintenance is established during the Full Rate Production phase. Contractor Logistics Support (CLS) is for the LRIP systems through the testing phase. Contractor Logistics Support/Interim Contactor Logistics Support (CLS/ICLS) is supporting the fielding of G/ATOR LRIP systems to include their maintenance and repair, and the maintenance and repair of LRIP systems undergoing test prior to fielding. Additionally, it is capturing the necessary usage data in preparation for Performance Based Logistics, monitoring DMS issues, completing provisioning requirements, updating the Interactive Electronic Training Manual (ITEM) and preparing for and conducting four (4) training events in FY 19. The total quantity of G/ATOR Systems supported by a combination of both CLS and ICLS in FY18 is eight (8) and in FY19 will be twelve (12).	

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Exhibit P-5a, Procurement History and Planning: PB 2019 Navy								Date: February 2018				
Appropriation / Budget Activity / Budget Sub Activity: 1109N / 04 / 15			P-1 Line Item Number / Title: 4655 / Ground/Air Task Oriented Radar (G/ATOR)					Item Number / Title [DODIC]: 1 / Ground/Air Task Oriented Radar (G/ATOR)				
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 (\$ M)	Specs Avail Now?	Date Revision Available	RFP Issue Date
1.1.1) G/ATOR System (Active) <sup>(†)</sup>		2015 <sup>(7)</sup>	Northrop Grumman / Linthicum, MD	SS / FPIF	Quantico, VA	Mar 2015	Oct 2017	2	32.511	Y		May 2013
1.1.1) G/ATOR System (Active) <sup>(†)</sup>		2016 <sup>(8)</sup>	Northrop Grumman / Linthicum, MD	SS / FPIF	Quantico, VA	Aug 2016	Jul 2018	3	33.764	Y		Oct 2015
1.1.1) G/ATOR System (Active) <sup>(†)</sup>		2017 <sup>(9)</sup>	Northrop Grumman / Linthicum, MD	SS / FPIF	Quantico, VA	Mar 2017	Mar 2019	3	31.837	Y		Oct 2015
1.1.1) G/ATOR System (Active) <sup>(†)</sup>		2018 <sup>(10)</sup>	Northrop Grumman / Linthicum, MD	SS / FPIF	Quantico, VA	Mar 2018	Mar 2020	3	31.837	Y		Oct 2015
1.1.1) G/ATOR System (Active) <sup>(†)</sup>		2019 <sup>(11)</sup>	Northrop Grumman.. / Linthicum, MD	SS / FPIF	Quantico, VA	Apr 2019	Apr 2021	2	29.839	Y		Sep 2017
1.1.3) G/ATOR System (Reserve) <sup>(†)</sup>		2019	Northrop Grumman / Linthicum, MD	SS / FPIF	Quantico, VA	Apr 2019	Aug 2021	4	29.839	Y		Sep 2017

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

**Footnotes:**

(7) Date of FY15 First Delivery is based on the G/ATOR LRIP contract awarded in March 2015.

(8) Date of FY16 First Delivery is incentivized based on the G/ATOR GaN LRIP contract awarded in August 2016.

(9) Date of FY17 First Delivery is based on the G/ATOR GaN LRIP contract option exercised on 24 March 2017.

(10) Date of FY18 First Delivery is based on the G/ATOR GaN LRIP contract option award anticipated by 30 March 2018.

(11) Date of FY19 First Delivery is based on the G/ATOR FRP contract award anticipated by 30 April 2019.

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Exhibit P-21, Production Schedule: PB 2019 Navy																					Date: February 2018																																																																																																																																																																																																																																	
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1.1.1) G/ATOR System (Active)																																																																																																																																																																																																																																															
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1.1.3) G/ATOR System (Reserve)																																																																																																																																																																																																																																															

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Exhibit P-21, Production Schedule: PB 2019 Navy										Date: February 2018			
Appropriation / Budget Activity / Budget Sub Activity: 1109N / 04 / 15				P-1 Line Item Number / Title: 4655 / Ground/Air Task Oriented Radar (G/ATOR)						Item Number / Title [DODIC]: 1 / Ground/Air Task Oriented Radar (G/ATOR)			
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	Northrop Grumman - Linthicum, MD	2	8	9	0	5	31	36	0	5	26	31	
2	Northrop Grumman. - Linthicum, MD	2	8	9	0	10	23	33	0	5	24	29	
3	Northrop Grumman.. - Linthicum, MD	2	8	9	0	5	24	29	0	5	24	29	
4	Northrop Grumman - Linthicum, MD	2	8	9	0	5	28	33	0	5	30	35	

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

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

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Exhibit P-40, Budget Line Item Justification: PB 2019 Navy										<b>Date:</b> February 2018					
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 1109N: Procurement, Marine Corps / BA 04: Communications and Electronics Equipment / BSA 15: Radar + Equipment (Non-Tel)					<b>P-1 Line Item Number / Title:</b> 4737 / RQ-21 UAS										
ID Code (A=Service Ready, B=Not Service Ready): A			Program Elements for Code B Items: N/A				Other Related Program Elements: 0305239M, 0305234N								
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> )	6	4	4	-	-	-	-	-	-	-	-	14			
Gross/Weapon System Cost (\$ in Millions)	227.220	87.177	86.241	0.000	0.000	0.000	0.000	0.000	0.000	0.000	-	400.638			
Less PY Advance Procurement (\$ in Millions)	-	-	-	-	-	-	-	-	-	-	-	-			
Net Procurement (P-1) (\$ in Millions)	227.220	87.177	86.241	0.000	0.000	0.000	0.000	0.000	0.000	0.000	-	400.638			
Plus CY Advance Procurement (\$ in Millions)	-	-	-	-	-	-	-	-	-	-	-	-			
<b>Total Obligation Authority (\$ in Millions)</b>	<b>227.220</b>	<b>87.177</b>	<b>86.241</b>	<b>0.000</b>	<b>0.000</b>	<b>0.000</b>	<b>0.000</b>	<b>0.000</b>	<b>0.000</b>	<b>0.000</b>	-	<b>400.638</b>			
<i>(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)</i>															
Initial Spares (\$ in Millions)	-	15.012	11.027	-	-	-	-	-	-	-	-	26.039			
Flyaway Unit Cost (\$ in Dollars)	31,682K	20,011K	16,426K	-	-	-	-	-	-	-	-	23,989K			
Gross/Weapon System Unit Cost (\$ in Dollars)	37,870K	21,794K	21,560K	-	-	-	-	-	-	-	-	28,617K			

**Description:**

In FY19, funding for BLI 4737 Procurement Marine Corps transitions to BLI 0444 STUASLO, Aircraft Procurement Navy (APN).

The requirement for the RQ-21A Unmanned Aircraft System is defined in a Capability Development Document, dated 18 November 2008 and further defined in the Capability Production Document, dated 15 February 2013. The RQ-21A program entered the Engineering and Manufacturing Development (EMD) phase of the acquisition process as an Acquisition Category III program on 26 July 2010. On 19 August 2014 RQ-21A was designated and Acquisition Category II program.

The RQ-21A system provides the Marine Expeditionary Force and subordinate commands (divisions and regiments) a dedicated Intelligence, Surveillance, and Reconnaissance system capable of delivering intelligence products directly to the tactical commander in real time. The RQ-21A system is capable of providing actionable intelligence and communications relay for 12-hour continuous operations per day with a short surge capability of 24-hours continuous operations for 10 days. The system has an operating radius of 50 nautical miles, further extendable through hub and spoke operations. The Air Vehicle is capable of airspeeds up to 80 nautical miles per hour with a service ceiling of 15,000 feet.

An RQ-21A system consists of five air vehicles, two ground control stations, modular multi-mission plug and play payloads, one launcher, one recovery system, and support equipment. Standard payloads include a turret mounted EO/IR camera and a communications relay package with automated identification ship capability, carried in the payload bay.

The RQ-21A system will continue to evolve and upgrade capabilities to satisfy capability shortfalls, new requirements, and reliability, maintainability, and safety issues. Upgraded capabilities may include Command and Control integration, weapons, heavy fuel engine, laser designator, frequency agile communications relay, digital common data link, and cyclic refresh of the Electro-Optical/Infrared camera.

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Exhibit P-40, Budget Line Item Justification: PB 2019 Navy							Date: February 2018			
Appropriation / Budget Activity / Budget Sub Activity: 1109N: Procurement, Marine Corps / BA 04: Communications and Electronics Equipment / BSA 15: Radar + Equipment (Non-Tel)				P-1 Line Item Number / Title: 4737 / RQ-21 UAS						
ID Code (A=Service Ready, B=Not Service Ready): A		Program Elements for Code B Items: N/A			Other Related Program Elements: 0305239M, 0305234N					
Line Item MDAP/MAIS Code: 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)	
P-5	1 / RQ-21A UAS	P-5a, P-21			6 / 227.220	4 / 87.177	4 / 86.241	- / 0.000	- / 0.000	- / 0.000
P-40	Total Gross/Weapon System Cost				6 / 227.220	4 / 87.177	4 / 86.241	- / 0.000	- / 0.000	- / 0.000

\*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:**

FY2018 Base Appropriation Request: \$77.841M

FY2018 will procure four (4) RQ-21A systems with associated ancillary equipment, one (1) ship install, and Interim Contractor Support.

The funding decrease from FY17 to FY18 is due to a realignment of Interim Contractor Support (ICS) into the PMC Spares line as well as decreased requirement in the Ancillary Equipment line.

In FY 2019, the program is transitioning to Blue In Support Of Green (BISOG) Aircraft Procurement, Navy (AP,N).

**OCO:**

FY2018 Overseas Contingency Operations (OCO) Request: \$8.4M

Funding will procure replacements for 7 AVs lost during OCO operations.

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<b>Exhibit P-5, Cost Analysis: PB 2019 Navy</b>													<b>Date: February 2018</b>						
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 1109N / 04 / 15				<b>P-1 Line Item Number / Title:</b> 4737 / RQ-21 UAS									<b>Item Number / Title [DODIC]:</b> 1 / RQ-21A UAS						
<b>ID Code (A=Service Ready, B=Not Service Ready) :</b>													<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>				
Procurement Quantity ( <i>Units in Each</i> )							6		4		4		-		-		-		
Gross/Weapon System Cost (\$ in Millions)							227.220		87.177		86.241		0.000		0.000		0.000		
Less PY Advance Procurement (\$ in Millions)							-		-		-		-		-		-		
Net Procurement (P-1) (\$ in Millions)							227.220		87.177		86.241		0.000		0.000		0.000		
Plus CY Advance Procurement (\$ in Millions)							-		-		-		-		-		-		
<b>Total Obligation Authority (\$ in Millions)</b>							<b>227.220</b>		<b>87.177</b>		<b>86.241</b>		<b>0.000</b>		<b>0.000</b>		<b>0.000</b>		
(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)																			
Initial Spares (\$ in Millions)							-		15.012		11.027		-		-		-		
Gross/Weapon System Unit Cost (\$ in Dollars)							37,870K		21,794K		21,560K		-		-		-		
Note: Subtotals or Totals in this Exhibit P-5 may not be exact or sum exactly due to rounding.																			
<b>Cost Elements</b>	<b>Prior Years</b>			<b>FY 2017</b>			<b>FY 2018</b>			<b>FY 2019 Base</b>			<b>FY 2019 OCO</b>			<b>FY 2019 Total</b>			
	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	
Flyaway Cost																			
Recurring Cost																			
1.1.1) RQ-21A Prior Years <sup>(1)</sup>	8,500K	1	8.500	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
1.1.2) RQ-21A Systems <sup>(†)(2)</sup>	11,351K	9	102.157	11,259K	4	45.037	12,872K	4	51.490	-	-	-	-	-	-	-	-	-	
1.1.3) Ancillary Equipment <sup>(3)</sup>	-	-	14.342	-	-	14.664	-	-	4.610	-	-	-	-	-	-	-	-	-	
1.1.4) ECO <sup>(4)</sup>	-	-	4.516	-	-	1.158	-	-	0.742	-	-	-	-	-	-	-	-	-	
<i>Subtotal: Recurring Cost</i>	-	-	<b>129.515</b>	-	-	<b>60.859</b>	-	-	<b>56.842</b>	-	-	-	-	-	-	-	-	-	
Non Recurring Cost																			
1.2.1) ICS <sup>(5)</sup>	-	-	45.480	-	-	16.568	-	-	6.553	-	-	-	-	-	-	-	-	-	
1.2.2) Ship Installation <sup>(6)</sup>	-	-	15.097	-	-	2.616	-	-	2.311	-	-	-	-	-	-	-	-	-	
<i>Subtotal: Non Recurring Cost</i>	-	-	<b>60.577</b>	-	-	<b>19.184</b>	-	-	<b>8.864</b>	-	-	-	-	-	-	-	-	-	
<i>Subtotal: Flyaway Cost</i>	-	-	<b>190.092</b>	-	-	<b>80.043</b>	-	-	<b>65.706</b>	-	-	-	-	-	-	-	-	-	
Hardware Cost																			
Non Recurring Cost																			
2.1.1) Attrition Air Vehicles <sup>(†)(7)</sup>	-	-	-	-	-	-	1,200K	10	12.000	-	-	-	-	-	-	-	-	-	
<i>Subtotal: Non Recurring Cost</i>	-	-	-	-	-	-	-	-	<b>12.000</b>	-	-	-	-	-	-	-	-	-	

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<b>Exhibit P-5, Cost Analysis:</b> PB 2019 Navy													<b>Date:</b> February 2018													
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 1109N / 04 / 15				<b>P-1 Line Item Number / Title:</b> 4737 / RQ-21 UAS									<b>Item Number / Title [DODIC]:</b> 1 / RQ-21A UAS													
<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.																										
<b>Cost Elements</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>Unit Cost</b> (\$)	<b>Qty</b> (Each)	<b>Total Cost</b> (\$ M)	<b>Unit Cost</b> (\$)	<b>Qty</b> (Each)	<b>Total Cost</b> (\$ M)	<b>Unit Cost</b> (\$)	<b>Qty</b> (Each)	<b>Total Cost</b> (\$ M)	<b>Unit Cost</b> (\$)	<b>Qty</b> (Each)	<b>Total Cost</b> (\$ M)	<b>Unit Cost</b> (\$)	<b>Qty</b> (Each)	<b>Total Cost</b> (\$ M)	<b>Unit Cost</b> (\$)	<b>Qty</b> (Each)	<b>Total Cost</b> (\$ M)								
<i>Subtotal: Hardware Cost</i>	-	-	-	-	-	-	-	-	<b>12.000</b>	-	-	-	-	-	-	-	-									
<b>Support Cost</b>																										
3.1) Product Engineering Support	-	-	24.378	-	-	4.606	-	-	5.955	-	-	-	-	-	-	-	-									
3.2) Other ILS	-	-	12.750	-	-	2.528	-	-	2.580	-	-	-	-	-	-	-	-									
<i>Subtotal: Support Cost</i>	-	-	<b>37.128</b>	-	-	<b>7.134</b>	-	-	<b>8.535</b>	-	-	-	-	-	-	-	-									
<b>Gross/Weapon System Cost</b>	<b>37,870K</b>	<b>6</b>	<b>227.220</b>	<b>21,794K</b>	<b>4</b>	<b>87.177</b>	<b>21,560K</b>	<b>4</b>	<b>86.241</b>	-	-	<b>0.000</b>	-	-	<b>0.000</b>	-	-	<b>0.000</b>								

(†) indicates the presence of a P-5a

**Footnotes:**

(1) In FY13 the program procured one system based on the 2008 Insitu Commercial Integrator baseline cost. System costs increased from FY13 costs due to upgrades from the 2008 Commercial Integrator baseline. Upgrades included a communications relay package, EMI hardening, turret upgrades, C2 encryption, and additional datalink, and reliability upgrades.

(2) An RQ-21A system consists of five air vehicles, two ground control stations, multi-mission (plug and play) payloads, one launcher and recovery system, and peculiar support equipment. Air Vehicles are procured with an Electro Optical / Infrared turret. Additional payloads are carried within the payload bay and include a communications relay package and automated identification system. Launch and recovery systems are procured with associated peculiar support equipment. Peculiar support equipment includes the AV fueling system, AV starter, battery charging station, transportation assemblies, cooling systems, shore power assemblies, AV scale system, and associated cabling. Marine Corps unit costs increase in FY18 as Navy completes procurement eliminating the cost sharing benefits between services combined with material costs increases associated with capability enhancements. In FY18 RQ-21 systems are procured with an upgraded EO/IR turret which provides a National Image Interpretability Rating Scale (NIIRS) rating of 7.0 or better at altitudes above 7,000 feet. The incorporation of the improved turret corrects the major IOT&E deficiency for the RQ-21 Blackjack program. Unit cost increase in FY18 is due to USN not procuring any systems, which aided with cost sharing, and also due to the fact of increased cost related to the updated EO/IR Turret.

(3) Ancillary equipment includes all program procured equipment to support a Marine Corps RQ-21A system. This equipment includes, but is not limited to: ITEG II 25kw generators, MEP 531A 2kw generators, the Mission Training Device, Tactical Intelligence, Surveillance and Reconnaissance Processing Exploitation and Dissemination System (TIPS), Wireless Communication System, DAGRs, PRC-117G radios, X203 tents, and associated lights and cables. Ship installation equipment and labor is captured in a separate non-recurring flyaway cost element. In the FY15 President's Budget and prior, ship installation equipment was included within ancillary equipment. FY18 is the last year of TIPS procurement. In prior years each RQ-21 system was procured with two TIPS systems. In FY16 the Marine Corps changed the TIPS procurement strategy and intends to procure a fixed number of TIPS systems Marine Unmanned Aerial Vehicle Squadron (VMU), reducing the number of systems the RQ-21 program procures. The Marine Corps updated RQ-21 Concept of Operations to focus primarily on support for Marine Expeditionary Unit (MEU) deployments. The shift to MEU focused operations facilitated the reduction in the number of TIPS systems procured.

(4) Engineering Change Orders (ECO) represent program office estimates for diminishing manufacturing sources associated with component obsolescence and funds the integration of updated components into the RQ-21A system.

(5) RQ-21 utilizes an Interim Contractor Support (ICS) strategy to sustain RQ-21A systems prior to material support date (MSD) in accordance with Financial Management Regulations. ICS is funded within procurement appropriation prior to MSD. ICS includes logistics support for existing and newly procured RQ-21A systems and funds prime contractor logistics support, field service representatives, repair of repairables, and mobile training teams. ICS transitions to organic support in 4QFY18 after which logistics support for fielded systems will be funded with O&M.

(6) Ship Installation includes the procurement of infrastructure hardware and equipment, and labor costs associated with actual amphibious ship class installations in support of the RQ-21A program. Ship hardware and equipment consists of directional and omni-directional antennas, amplifiers, antenna interface modules, monitors, cross domain solution, power distribution panels, associated cables and fiber optics lines, operational system racks, cabinets, and connectors. Labor associated with ship installation includes the contracted Alteration Installation Team conducting the ship installation and OEM post install

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<b>Exhibit P-5, Cost Analysis:</b> PB 2019 Navy		<b>Date:</b> February 2018		
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 1109N / 04 / 15	<b>P-1 Line Item Number / Title:</b> 4737 / RQ-21 UAS	<b>Item Number / Title [DODIC]:</b> 1 / RQ-21A UAS		
<b>ID Code</b> (A=Service Ready, B=Not Service Ready) :	<b>MDAP/MAIS Code:</b>			
system integration test support. In FY18 RQ-21 program will complete installations onboard LPD 27 in FY18. During a comprehensive review of Marine Expeditionary Unit (MEU) operations, the Marine Corps determined that RQ-21 Blackjack can satisfy all MEU requirements while operating solely from the LPD class ship, reducing costs associated with ship installation.				
(7) Procures air vehicles with EO/IR turret to replace air vehicles lost during operations. Attrition rates were estimated based on actual attrition from a similar system combined with RQ-21A flight hour and reliability estimates. OCO represents actual losses and the base represent expected losses based on estimates. FY18 procures 3 attrition air vehicles (baseline) and 7 (OCO).				

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Exhibit P-5a, Procurement History and Planning: PB 2019 Navy								Date: February 2018				
Appropriation / Budget Activity / Budget Sub Activity: 1109N / 04 / 15			P-1 Line Item Number / Title: 4737 / RQ-21 UAS					Item Number / Title [DODIC]: 1 / RQ-21A UAS				
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 (\$)	Specs Avail Now?	Date Revision Available	RFP Issue Date
1.1.2) RQ-21A Systems <sup>(†)</sup>		2016 <sup>(8)</sup>	INSITU, Inc / Bingen, WA	SS / FFP	NAVAIR Patuxent River, MD	May 2016	Dec 2016	3	10,782K	Y		Sep 2015
1.1.2) RQ-21A Systems <sup>(†)</sup>		2017 <sup>(9)</sup>	INSITU, Inc / Bingen, WA	SS / FFP	NAVAIR Patuxent River, MD	Jan 2017	Aug 2017	4	11,259K	Y		Sep 2015
1.1.2) RQ-21A Systems <sup>(†)</sup>		2018 <sup>(10)</sup>	INSITU, Inc / Bingen, WA	SS / FFP	NAVAIR Patuxent River, MD	Mar 2018	Oct 2018	4	12,872K	Y		Sep 2015
2.1.1) Attrition Air Vehicles <sup>(†)</sup>		2018 <sup>(11)</sup>	INSITU, Inc / Bingen, WA	SS / FFP	NAVAIR Patuxent River, MD	Mar 2018	Feb 2019	3	1,200K	Y		Sep 2017
2.1.1) Attrition Air Vehicles <sup>(†)</sup>	✓	2018	INSITU, Inc / Bingen, WA	SS / FFP	NAVAIR Patuxent River, MD	Mar 2018	Feb 2019	7	1,200K	Y		Sep 2017

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

**Footnotes:**

(8) Combined contract with Navy for a total of 6 systems.

(9) Combined contract with Navy for a total of 8 systems.

(10) The Prime Contractor's minimum sustainment rate is six (6). Due to current program level funding; RQ-21A is procuring below minimum sustainment. The Prime Contractor is looking at Direct Commercial Sales to make up the delta.

(11) FY18 Attrition Air Vehicles will award on the FY18 Full Rate Production Contract.

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Exhibit P-21, Production Schedule: PB 2019 Navy																				Date: February 2018															
Appropriation / Budget Activity / Budget Sub Activity:																				Item Number / Title [DODIC]:															
1109N / 04 / 15																				1 / RQ-21A UAS															
Cost Elements (Units in Each)																				Fiscal Year 2016															
O C R O #	M F R Y	SERVICE	PROC QTY	ACCEPT PRIOR TO 1 OCT 2015	BAL DUE AS OF 1 OCT	Fiscal Year 2016																				Fiscal Year 2017									
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	B A L A N C E											
1.1.2) RQ-21A Systems <sup>(2)</sup>																																			
Prior Years Deliveries: 6																																			
1	2016	NAVY	3	0	3																1	1	1							0					
1	2017	NAVY	4	0	4																A	-	-	-	-	-				2					
1	2018	NAVY	4	<sup>(12)</sup>	0	4																								4					
2.1.1) Attrition Air Vehicles <sup>(7)</sup>																																			
2	2018	NAVY	3	0	3																									3					
✓	2	2018	NAVY		7	0	7														O	N	D	J	F	M	A	M	J	7					
																				C	O	V	E	A	R	P	Y	U							
																				T															

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Exhibit P-21, Production Schedule: PB 2019 Navy																					Date: February 2018																			
Appropriation / Budget Activity / Budget Sub Activity:																					Item Number / Title [DODIC]:																			
1109N / 04 / 15																					1 / RQ-21A UAS																			
Cost Elements (Units in Each)																					Fiscal Year 2018																			
O C R O #	M F R Y	SERVICE	PROC QTY	ACCEPT PRIOR TO 1 OCT 2017	BAL DUE AS OF 1 OCT	Fiscal Year 2018																			Fiscal Year 2019															B A L A N C E
						O C T	N O V	D E C	J A N	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											
1.1.2) RQ-21A Systems <sup>(2)</sup>																																								
Prior Years Deliveries: 6																																								
1	2016	NAVY	3	3	0																										0									
1	2017	NAVY	4	2	2	1	1																								0									
1	2018	NAVY	4 <sup>(12)</sup>	0	4																1	1	1	1							0									
2.1.1) Attrition Air Vehicles <sup>(7)</sup>																															0									
✓	2	2018	NAVY	7	0	7															A -	-	-	-	-	-	-	-	-	-	3									
							O C T	N O V	D E C	J A N	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	0									

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<b>Exhibit P-21, Production Schedule: PB 2019 Navy</b>								<b>Date:</b> February 2018
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 1109N / 04 / 15			<b>P-1 Line Item Number / Title:</b> 4737 / RQ-21 UAS					<b>Item Number / Title [DODIC]:</b> 1 / RQ-21A UAS

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	INSITU, Inc - Bingen, WA	6	8	12	0	6	10	16	0	0	7	7
2	INSITU, Inc - Bingen, WA	30	40	60	0	6	6	12	0	4	10	14

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

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

**Footnotes:**

(12) The Prime Contractor's minimum sustainment rate is six (6). Due to current program level funding; RQ-21A is procuring below minimum sustainment. The Prime Contractor is looking at Direct Commercial Sales to make up the delta.

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<b>Exhibit P-40, Budget Line Item Justification: PB 2019 Navy</b>										<b>Date:</b> February 2018							
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 1109N: Procurement, Marine Corps / BA 04: Communications and Electronics Equipment / BSA 16: Intell/Comm Equipment (Non-Tel)						<b>P-1 Line Item Number / Title:</b> 4616 / GCSS-MC											
<b>ID Code</b> (A=Service Ready, B=Not Service Ready): A			<b>Program Elements for Code B Items:</b> N/A						<b>Other Related Program Elements:</b> N/A								
<b>Line Item MDAP/MAIS Code:</b> N/A																	
<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 (\$ in Millions)	0.000	0.871	1.990	1.187	0.000	1.187	4.484	1.214	1.239	1.266	Continuing	Continuing					
Less PY Advance Procurement (\$ in Millions)	-	-	-	-	-	-	-	-	-	-	-	-					
Net Procurement (P-1) (\$ in Millions)	0.000	0.871	1.990	1.187	0.000	1.187	4.484	1.214	1.239	1.266	Continuing	Continuing					
Plus CY Advance Procurement (\$ in Millions)	-	-	-	-	-	-	-	-	-	-	-	-					
<b>Total Obligation Authority (\$ in Millions)</b>	<b>0.000</b>	<b>0.871</b>	<b>1.990</b>	<b>1.187</b>	<b>0.000</b>	<b>1.187</b>	<b>4.484</b>	<b>1.214</b>	<b>1.239</b>	<b>1.266</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 (\$ in Millions)	-	-	-	-	-	-	-	-	-	-	-	-					
Flyaway Unit Cost (\$ in Dollars)	-	-	-	-	-	-	-	-	-	-	-	-					
Gross/Weapon System Unit Cost (\$ in Dollars)	-	-	-	-	-	-	-	-	-	-	-	-					
<b>Description:</b> Global Combat Support System - Marine Corps/Logistics Chain Management (GCSS-MC/LCM) Family of Systems (FoS) serves as primary technology enabler for the Marine Corps Logistics Modernization strategy. GCSS-MC/LCM provides the backbone for all logistics information required by the Marine Forces and the Supporting Establishment. The core for GCSS-MC/LCM Increment 1 is a modern, commercial-off-the-shelf enterprise resource planning software (Oracle e-Business Suite). The Increment 1 design focused on enabling the warfighter to operate while deployed with reach back from the battlefield. Increment 1 replaced 5 legacy supply and maintenance information technology systems and currently supports ~22,000 users world-wide. The focus of future functions will be enhancing capabilities in the areas of warehousing, distribution, logistics planning, decision support, depot maintenance, and integration with emerging technologies to improve asset visibility.																	

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Exhibit P-40, Budget Line Item Justification: PB 2019 Navy							Date: February 2018		
Appropriation / Budget Activity / Budget Sub Activity: 1109N: Procurement, Marine Corps / BA 04: Communications and Electronics Equipment / BSA 16: Intell/Comm Equipment (Non-Tel)				P-1 Line Item Number / Title: 4616 / GCSS-MC					
ID Code (A=Service Ready, B=Not Service Ready): A		Program Elements for Code B Items: N/A			Other Related Program Elements: N/A				
Line Item MDAP/MAIS Code: N/A									
Exhibits Schedule				Prior Years	FY 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)
P-5	1 / Global Combat Support System Marine Corps (GCSS-MC)				- / 0.000	- / 0.871	- / 1.990	- / 1.187	- / 0.000
P-40	Total Gross/Weapon System Cost				- / 0.000	- / 0.871	- / 1.990	- / 1.187	- / 0.000

\*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:**

FY2018 Base Appropriation Request: \$1.990M Funding will continue to support the ongoing need for technology refresh of hardware and software in support of the sustainment of GCSS-MC/LCM Increment 1. Funding increase from FY2017 to FY2018 for hardware and software tech refresh.

FY2019 Base Appropriation Request: \$1.187M Funding will continue to support the the ongoing need for technology refresh of hardware and software in support of the sustainment of GCSS-MC/LCM Increment 1. Funding decrease from FY2018 to FY2019 of \$0.803M in accordance with the Service Cost Position and the reduced requirement of refreshed hardware and software for FY2019.

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<b>Exhibit P-5, Cost Analysis:</b> PB 2019 Navy												<b>Date:</b> February 2018						
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 1109N / 04 / 16				<b>P-1 Line Item Number / Title:</b> 4616 / GCSS-MC								<b>Item Number / Title [DODIC]:</b> 1 / Global Combat Support System Marine Corps (GCSS-MC)						
<b>ID Code</b> (A=Service Ready, B=Not Service Ready) :												<b>MDAP/MAIS Code:</b>						
<b>Resource Summary</b>				<b>Prior Years</b>			<b>FY 2017</b>		<b>FY 2018</b>		<b>FY 2019 Base</b>		<b>FY 2019 OCO</b>		<b>FY 2019 Total</b>			
Procurement Quantity ( <i>Units in Each</i> )							-		-		-		-		-			
Gross/Weapon System Cost (\$ in Millions)							0.000		0.871		1.990		1.187		0.000		1.187	
Less PY Advance Procurement (\$ in Millions)							-		-		-		-		-		-	
Net Procurement (P-1) (\$ in Millions)							0.000		0.871		1.990		1.187		0.000		1.187	
Plus CY Advance Procurement (\$ in Millions)							-		-		-		-		-		-	
<b>Total Obligation Authority</b> (\$ in Millions)							<b>0.000</b>		<b>0.871</b>		<b>1.990</b>		<b>1.187</b>		<b>0.000</b>		<b>1.187</b>	
(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)																		
Initial Spares (\$ in Millions)							-		-		-		-		-		-	
Gross/Weapon System Unit Cost (\$ in Dollars)							-		-		-		-		-		-	
Note: Subtotals or Totals in this Exhibit P-5 may not be exact or sum exactly due to rounding.																		
<b>Cost Elements</b>	<b>Prior Years</b>			<b>FY 2017</b>			<b>FY 2018</b>			<b>FY 2019 Base</b>			<b>FY 2019 OCO</b>			<b>FY 2019 Total</b>		
	<b>Unit Cost</b> (\$)	<b>Qty</b> ( <i>Each</i> )	<b>Total Cost</b> (\$ M)	<b>Unit Cost</b> (\$)	<b>Qty</b> ( <i>Each</i> )	<b>Total Cost</b> (\$ M)	<b>Unit Cost</b> (\$)	<b>Qty</b> ( <i>Each</i> )	<b>Total Cost</b> (\$ M)	<b>Unit Cost</b> (\$)	<b>Qty</b> ( <i>Each</i> )	<b>Total Cost</b> (\$ M)	<b>Unit Cost</b> (\$)	<b>Qty</b> ( <i>Each</i> )	<b>Total Cost</b> (\$ M)	<b>Unit Cost</b> (\$)	<b>Qty</b> ( <i>Each</i> )	<b>Total Cost</b> (\$ M)
Hardware - GCSS-MC/LCM Hardware Cost																		
Recurring Cost																		
1.1.1) Tech Refresh	-	-	-	-	-	0.291	-	-	0.930	-	-	0.460	-	-	-	-	-	0.460
<i>Subtotal: Recurring Cost</i>	-	-	-	-	-	0.291	-	-	0.930	-	-	0.460	-	-	-	-	-	0.460
<i>Subtotal: Hardware - GCSS-MC/LCM Hardware Cost</i>	-	-	-	-	-	0.291	-	-	0.930	-	-	0.460	-	-	-	-	-	0.460
Software - GCSS-MC/LCM Software Cost																		
Recurring Cost																		
2.1.1) Tech Refresh	-	-	-	-	-	0.450	-	-	0.820	-	-	0.477	-	-	-	-	-	0.477
<i>Subtotal: Recurring Cost</i>	-	-	-	-	-	0.450	-	-	0.820	-	-	0.477	-	-	-	-	-	0.477
<i>Subtotal: Software - GCSS-MC/LCM Software Cost</i>	-	-	-	-	-	0.450	-	-	0.820	-	-	0.477	-	-	-	-	-	0.477
Support - GCSS-MC/LCM HW/SW Engineering Cost																		
3.1) Tech Refresh	-	-	-	-	-	0.130	-	-	0.240	-	-	0.250	-	-	-	-	-	0.250
<i>Subtotal: Support - GCSS-MC/LCM HW/SW Engineering Cost</i>	-	-	-	-	-	0.130	-	-	0.240	-	-	0.250	-	-	-	-	-	0.250
<b>Gross/Weapon System Cost</b>	-	-	-	<b>0.000</b>	-	<b>0.871</b>	-	-	<b>1.990</b>	-	-	<b>1.187</b>	-	-	<b>0.000</b>	-	-	<b>1.187</b>

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Exhibit P-40, Budget Line Item Justification: PB 2019 Navy										<b>Date:</b> February 2018		
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 1109N: Procurement, Marine Corps / BA 04: Communications and Electronics Equipment / BSA 16: Intell/Comm Equipment (Non-Tel)					<b>P-1 Line Item Number / Title:</b> 4733 / Fire Support System							
ID Code (A=Service Ready, B=Not Service Ready): A			Program Elements for Code B Items: N/A				Other Related Program Elements: 0206623M					
<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 (\$ in Millions)	346.320	13.060	22.310	60.189	5.583	65.772	35.501	26.426	69.438	70.165	Continuing	Continuing
Less PY Advance Procurement (\$ in Millions)	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) (\$ in Millions)	346.320	13.060	22.310	60.189	5.583	65.772	35.501	26.426	69.438	70.165	Continuing	Continuing
Plus CY Advance Procurement (\$ in Millions)	-	-	-	-	-	-	-	-	-	-	-	-
<b>Total Obligation Authority (\$ in Millions)</b>	<b>346.320</b>	<b>13.060</b>	<b>22.310</b>	<b>60.189</b>	<b>5.583</b>	<b>65.772</b>	<b>35.501</b>	<b>26.426</b>	<b>69.438</b>	<b>70.165</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 (\$ in Millions)	-	-	-	-	-	-	-	-	-	-	-	-
Flyaway Unit Cost (\$ in Dollars)	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost (\$ in Dollars)	-	-	-	-	-	-	-	-	-	-	-	-
<b>Description:</b>												
Fire Support System (FSS) provides the United States Marine Corps (USMC) critical operational and logistics capabilities in artillery weapons, fire direction and targeting systems. This includes the following projects:												
Fire Support Mods (FSM): FSM supports a set of Joint Service and Marine Corps unique efforts to address critical operational and logistics deficiencies in existing fielded artillery fire weapons and fire direction control systems and equipment such as Ground Counter Fire System (GCFS), Improved Position and Azimuth Determining Systems (IPADS), Joint Terminal Attack Controller Laser Target Designator (JTAC LTD), Global Positioning System Survey Replacement (GPSSR), Portable Lightweight Designator Rangefinder (PLDR), Thermal Laser Spot Imager (TLSI), Marine Artillery Survey Set (MASS), the Modeled Meteorological Information Manager (MMIM), and Lethal Miniature Aerial Munition System (LMAMS).												
Common Laser Range Finder (CLRF): The CLRF Integrated Capability (CLRF IC) integrates laser targeting capabilities to provide lightweight man portable targeting systems consistent with Strategy & Vision 2025 and the Commandant's Planning Guidance. The CLRF IC strategy includes replacement of the AN/PEQ-13, the AN/PEQ-17, and the AN/PEQ-25 into a single hand held targeting system. This strategy will result in two affordable systems, a target locating system for the joint fires observer, and a laser designator for the joint terminal attack controller that will support operational targeting requirements well into the 2030 timeframe and provide significant reductions in weight and power requirements.												
Family of Target Acquisition Systems (FTAS): The FTAS provides the Marine Air-Ground Task Force (MAGTF) the capability to locate, identify, and attack enemy indirect fire weapons systems and observe and direct friendly artillery fire. The FTAS consists of the AN/TPQ-46 Firefinder Radar, the AN/TPQ-49 Lightweight Counter Mortar Radar, and the AN/TSQ-267 Target Processing Set. The FTAS is critical in the execution of counterfire and the integration of target acquisition information enabling attack by MAGTF assets. The FTAS also provides artillery firing units the ability to conduct artillery registration and other friendly fire missions. The FTAS encompasses the equipment required to support target acquisition within the target acquisition platoon and is resident in the headquarters battery of each artillery regiment. The program will continue to address system issues that arise due to Diminishing Manufacturing Sources and Material Shortages (DMSMS) items within the FTAS. The USMC assumed the role of Primary Inventory Control Activity (PICA) for the AN/TPQ-49 in FY15 when the Army divested itself from the system.												
Target Hand-Off System (THS): The THS addresses a Marine Corps operational requirement for a lightweight, handheld, and digital target acquisition engagement coordination system. The THS is interoperable with all Fire Support platforms and Target Locating Devices designed for the Forward Air Controllers (FACs), Forward Observers (FOs), Fire Support Teams (FSTs), Firepower Control Teams (FCTs), Tactical Air Control Parties (TACPs), and Reconnaissance Teams. The THS provides the ability to quickly acquire and digitally prosecute targets in day, night, and near-all-weather visibility conditions, in order to conduct precise and rapid indirect surface fire support, Naval Surface Fire Support (NSFS) and Close Air Support (CAS).												

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<b>Exhibit P-40, Budget Line Item Justification: PB 2019 Navy</b>							<b>Date:</b> February 2018									
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 1109N: Procurement, Marine Corps / BA 04: Communications and Electronics Equipment / BSA 16: Intell/Comm Equipment (Non-Tel)					<b>P-1 Line Item Number / Title:</b> 4733 / Fire Support System											
<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> 0206623M									
<b>Line Item MDAP/MAIS Code:</b> N/A																
<p>Advanced Field Artillery Tactical Data Family of Systems (AFATDS FoS): AFATDS FoS consists of three programs: AFATDS, Back Up Computer System (BUCS) and Mobile Tactical Shelter (MTS). The AFATDS automates the fire planning, tactical fire direction, and fire support coordination required to support maneuver from the sea and subsequent operations ashore. AFATDS integrates all supporting arms assets within the MAGTF such as mortars, cannon artillery, rockets and missiles, close air support, and naval surface fire support systems. BUCS is a hand-held computer system designed to provide a backup to the AFATDS in computing ballistic firing solutions, as well as provide survey and meteorological functions in support of artillery. Additionally, BUCS is the primary ballistic firing solution system during Ship To Objective Maneuver (STOM) and for the Expeditionary Fire Support System (EFSS). The MTS is a Lightweight Multi-purpose Shelter (LMS) mounted on a High Mobility Multipurpose Wheeled Vehicle (HMMWV) which protects both the AFATDS and operators from the environment. MTS enables rapid emplacement and displacement of fire support elements and provides networked communications on the move.</p> <p>Lethal Miniature Aerial Missile System (LMAMS): LMAMS is a loitering, precision-guided missile that is man-portable, single-use, and organic at the small unit level. LMAMS provides precise lethal fires beyond reach of organic direct-fire weapon systems and perform target attack against personnel in the open or in defilade as well as soft-skinned vehicles during offensive, defensive, stability, and civil support operations. LMAMS provides precision lethality, while minimizing collateral damage in complex and cluttered operational areas.</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>						
Navy	Quantity	-	-	-	-	-	-	-	-	-						
	Total Obligation Authority	10.536	21.642	58.837	5.583	64.420	34.507	25.411	68.410	69.117						
NR	Quantity	-	-	-	-	-	-	-	-	-						
	Total Obligation Authority	2.524	0.668	1.352	-	1.352	0.994	1.015	1.028	1.048						
<b>Total: Secondary Distribution</b>	Quantity	-	-	-	-	-	-	-	-	-						
	Total Obligation Authority	<b>13.060</b>	<b>22.310</b>	<b>60.189</b>	<b>5.583</b>	<b>65.772</b>	<b>35.501</b>	<b>26.426</b>	<b>69.438</b>	<b>70.165</b>						

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Exhibit P-40, Budget Line Item Justification: PB 2019 Navy							Date: February 2018			
Appropriation / Budget Activity / Budget Sub Activity:				P-1 Line Item Number / Title:						
1109N: Procurement, Marine Corps / BA 04: Communications and Electronics Equipment / BSA 16: Intell/Comm Equipment (Non-Tel)				4733 / Fire Support System						
ID Code (A=Service Ready, B=Not Service Ready): A		Program Elements for Code B Items: N/A				Other Related Program Elements: 0206623M				
<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)	
P-40a	Fire Support System	P-5a, P-21			- / 346.320	- / 13.060	- / 22.310	- / 60.189	- / 5.583	- / 65.772
<b>P-40</b>	<b>Total Gross/Weapon System Cost</b>				<b>- / 346.320</b>	<b>- / 13.060</b>	<b>- / 22.310</b>	<b>- / 60.189</b>	<b>- / 5.583</b>	<b>- / 65.772</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. Title represents the P-40a Title when only the P-40a Summary/Total is shown.										
Note: Totals in this Exhibit P-40 set may not be exact or sum exactly due to rounding.										
<b>Justification:</b>										
Beginning in FY19, AFATDS and THS funding has been realigned from BLI 4631, COMMAND POST SYSTEMS to BLI 4733, FIRE SUPPORT SYSTEMS. Beginning in FY19, FTAS funding has been realigned from BLI 4650, RADAR SYSTEMS to BLI 4733, FIRE SUPPORT SYSTEMS.										
FY 2018 Base Appropriation Request: \$22.260M										
FSM - \$4.064M IPADS - funding procures IPADS replacement systems. Funding provides support for modernization and upgrades to currently fielded systems. These systems are fielded to both the active (\$3.396M) and reserve (\$0.668M) components.										
CLRF - \$18.196M Funding will continue to procure and field CLRF Integrated Capability (IC), full rate production systems to replace the current capability with enhanced targeting abilities and reduced system weight.										
FY 2019 Base Appropriation Request: \$60.189M										
FSM - \$4.158M Funding provides support for modernization and upgrades to currently fielded systems. These systems are fielded to both the active (\$3.099M) and reserve (\$1.059M) components. The increase of \$0.094M from FY18 to FY19 will support procurement of IPADS replacement systems.										
FTAS - \$2.867M Funding will procure ECP Modification Kits and will continue to address DMSMS issues within the FTAS. These kits are fielded to both the active (\$2.574M) and reserve (\$0.293M) components. Beginning in FY19, FTAS funding has been realigned from BLI 4650, RADAR SYSTEMS to BLI 4733, FIRE SUPPORT SYSTEMS. Realignment of effort to new BLI in FY 19 and beyond reflects USMC Program Management Office (PMO) reorganization to improve support of USMC OPFOR.										
AFATDS - \$12.521M Funds will continue to procure a modernized, common shelter that will fulfill the requirements of the Mobile Tactical Shelter (MTS) and the Target Processing Set (TPS). Beginning in FY19, AFATDS funding has been realigned from BLI 4631, COMMAND POST SYSTEMS to BLI 4733, FIRE SUPPORT SYSTEMS. Realignment of effort to new BLI in FY 19 and beyond reflects USMC Program Management Office (PMO) reorganization to improve support of USMC OPFOR.										
THS - \$24.739M Budget increase of \$2.389M for THS (previously BLI 4631) from FY18 to FY19 is due to procurement of VHF radios required to support digital transmission of targeting and fires data. Funds will also be used to procure THS end user devices to support a scheduled hardware refresh. Beginning in FY19, THS funding has been realigned from BLI 4631, COMMAND POST SYSTEMS to BLI 4733, FIRE SUPPORT SYSTEMS. Realignment of effort to new BLI in FY 19 and beyond reflects USMC Program Management Office (PMO) reorganization to improve support of USMC OPFOR.										
CLRF - \$15.904M Funding will continue to procure and field CLRF Integrated Capability (IC), full rate production systems to replace the current capability with enhanced targeting abilities and reduced system weight. ECPs will be conducted to increase operational availability and increase system longevity. Decrease of \$2.292M from FY18 funding is due to a decrease in the spare parts requirement.										

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<b>Exhibit P-40, Budget Line Item Justification:</b> PB 2019 Navy		<b>Date:</b> February 2018
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 1109N: Procurement, Marine Corps / BA 04: Communications and Electronics Equipment / BSA 16: Intell/Comm Equipment (Non-Tel)		<b>P-1 Line Item Number / Title:</b> 4733 / Fire Support System
<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> 0206623M
<b>Line Item MDAP/MAIS Code:</b> N/A		
OCO: FY 2018 Overseas Contingency Operations (OCO) Request: \$0.050M Funding resets 1 MMIM system (\$0.034M) and resets 4 Aiming Circles (\$0.016M) for Special Purpose Marine Air Ground Task Force Crisis Response.  FY 2019 Overseas Contingency Operations (OCO) Request: \$5.583M LMAMS - \$5.583M Funding will procure 100 Lethal Miniature Aerial Missile System (LMAMS) All-up-Rounds (AUR).		

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Exhibit P-40a, Budget Item Justification For Aggregated Items: PB 2019 Navy														Date: February 2018						
Appropriation / Budget Activity / Budget Sub Activity: 1109N / 04 / 16					P-1 Line Item Number / Title: 4733 / Fire Support System									Aggregated Items Title: Fire Support System						
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 (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)
<b>1) CLRF</b>																				
1.1) CLRF - FRP Units Active <sup>(1)</sup>	A		37,796.61	118	4.460	37,500.00	161	6.038	37,500.00	420	15.750	37,500.00	196	7.350	-	-	-	37,500.00	196	7.350
1.2) CLRF - Active Procurement Support	A		-	-	7.313	-	-	0.979	-	-	2.446	-	-	0.147	-	-	-	-	-	0.147
1.3) CLRF Active LRIP	A		48,557.69	104	5.050	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1.4) CLRF - Reserve LRIP	A		48,543.48	46	2.233	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1.5) CLRF - ECPs <sup>(1)</sup>	A		-	-	-	-	-	-	-	-	-	-	-	8.407	-	-	-	-	-	8.407
<i>Subtotal: 1) CLRF</i>			-	-	<b>19.056</b>	-	-	<b>7.017</b>	-	-	<b>18.196</b>	-	-	<b>15.904</b>	-	-	-	-	-	<b>15.904</b>
<b>2) FSM</b>																				
2.1) FSM - Active	A		-	-	56.702	-	-	5.114	-	-	3.446	-	-	3.099	-	-	-	-	-	3.099
2.2) FSM - Reserve	A		-	-	3.606	-	-	0.533	-	-	0.668	-	-	1.059	-	-	-	-	-	1.059
<i>Subtotal: 2) FSM</i>			-	-	<b>60.308</b>	-	-	<b>5.647</b>	-	-	<b>4.114</b>	-	-	<b>4.158</b>	-	-	-	-	-	<b>4.158</b>
<b>3) MMIM</b>																				
3.1) MMIM - Active	A		-	-	9.165	-	-	0.277	-	-	-	-	-	-	-	-	-	-	-	-
3.2) MMIM - Reserve	A		-	-	0.078	-	-	0.119	-	-	-	-	-	-	-	-	-	-	-	-
<i>Subtotal: 3) MMIM</i>			-	-	<b>9.243</b>	-	-	<b>0.396</b>	-	-	-	-	-	-	-	-	-	-	-	-
<b>4) Prior Year Cumulative Funding</b>																				
4.1) Prior Year Cum Funding	A		-	-	257.713	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
<i>Subtotal: 4) Prior Year Cumulative Funding</i>			-	-	<b>257.713</b>	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
<b>5) FTAS</b>																				
5.1) FTAS Upgrades and Installation	A		-	-	-	-	-	-	-	-	-	-	-	-	2.574	-	-	-	-	2.574
5.2) FTAS Upgrades and Installation (Reserve)	A		-	-	-	-	-	-	-	-	-	-	-	-	0.293	-	-	-	-	0.293
<i>Subtotal: 5) FTAS</i>			-	-	<b>0.000</b>	-	-	-	-	-	-	-	-	-	<b>2.867</b>	-	-	-	-	<b>2.867</b>
<b>6) AFATDS FoS</b>																				
6.1) Fielding Support	A		-	-	-	-	-	-	-	-	-	-	-	-	0.880	-	-	-	-	0.880
6.2) Mobile Tactical Shelter Modernization	A		-	-	-	-	-	-	-	-	-	-	-	-	2.938	-	-	-	-	2.938
6.3) Hardware Refresh <sup>(2)</sup>	A		-	-	-	-	-	-	-	-	-	-	-	-	6.203	-	-	-	-	6.203
6.4) Ancillary Hardware Components <sup>(3)</sup>	A		-	-	-	-	-	-	-	-	-	-	-	-	2.500	-	-	-	-	2.500

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Exhibit P-40a, Budget Item Justification For Aggregated Items: PB 2019 Navy														Date: February 2018						
Appropriation / Budget Activity / Budget Sub Activity: 1109N / 04 / 16					P-1 Line Item Number / Title: 4733 / Fire Support System									Aggregated Items Title: Fire Support System						
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 (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Total Cost (\$ M)	
<i>Subtotal: 6) AFATDS FoS</i>			-	-	0.000	-	-	-	-	-	-	-	-	12.521	-	-	-	-	12.521	
<b>7) THS</b>																				
7.1) Hardware/ Software Integration	A		-	-	-	-	-	-	-	-	-	-	-	1.400	-	-	-	-	1.400	
7.2) Hardware Refresh	A		-	-	-	-	-	-	-	-	-	-	-	2.498	-	-	-	-	2.498	
7.3) Hardware Procurement <sup>(4)(t)</sup>	A		-	-	-	-	-	-	-	-	-	47,365.91	440	20.841	-	-	-	47,365.91	440	20.841
<i>Subtotal: 7) THS</i>			-	-	0.000	-	-	-	-	-	-	-	-	24.739	-	-	-	-	24.739	
<b>8) LMAMS</b>																				
8.1) Hardware Procurement <sup>(t)</sup>	A		-	-	-	-	-	-	-	-	-	-	-	0.000	55,830.00	100	5.583	55,830.00	100	5.583
<i>Subtotal: 8) LMAMS</i>			-	-	0.000	-	-	-	-	-	-	-	-	0.000	-	-	5.583	-	5.583	
<b>Total</b>			-	-	346.320	-	-	13.060	-	-	22.310	-	-	60.189	-	-	5.583	-	65.772	

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

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

**Footnotes:**

- (1) Increase of \$8.407M from FY 18 to FY19 is to support planned ECPs to increase the availability of the CLRF capability which extends the life of the system for an additional 7 to 10 years. The ECP includes an improved digital magnetic compass and a software enhancement that improves the night recognition range by approximately 500 meters.
- (2) The hardware refresh is to procure new laptops that can support OS Windows 10 Enterprise as directed by DoD CIO.
- (3) This ancillary hardware components are to support the Mobile Tactical Shelter cables, raceways, and other infrastructure enhancements.
- (4) THS: FY19 funds will continue replacing AN/PRC-117F radios with AN/PRC-117G radios.

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Exhibit P-5a, Procurement History and Planning: PB 2019 Navy									<b>Date:</b> February 2018			
Appropriation / Budget Activity / Budget Sub Activity: 1109N / 04 / 16				P-1 Line Item Number / Title: 4733 / Fire Support System					<b>Aggregated Items:</b> Fire Support System			
Item Number / Title [DODIC]	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 (\$)	Specs Avail Now?	Date Revision Available	RFP Issue Date
<b>1) CLRF</b>												
1.1) CLRF - FRP Units Active <sup>(†)</sup>		2017	Kollsman, Inc. / Manchester, NH	C / FFP	Quantico, VA	Mar 2017	Aug 2017	161	37,500.00	Y		Jul 2014
1.1) CLRF - FRP Units Active <sup>(†)</sup>		2018	Kollsman, Inc. / Manchester, NH	C / FFP	Quantico, VA	Feb 2018	Jul 2018	420	37,500.00	Y		Jul 2014
1.1) CLRF - FRP Units Active <sup>(†)</sup>		2019	Kollsman, Inc. / Manchester, NH	C / FFP	Quantico, VA	Mar 2019	Aug 2019	196	37,500.00	N		Jul 2014
<b>7) THS</b>												
7.3) Hardware Procurement <sup>(4)</sup>		2019	Harris Corp @Rochester, NY / rochester, NY	C / FFP	Quantico, VA	Dec 2018	Jun 2019	440	47,365.91	Y		Oct 2017
<b>8) LMAMS</b>												
8.1) Hardware Procurement <sup>(†)</sup>	✓	2019	AeroVironment Inc. @Simi Valley, CA / Simi, CA	C / TBD	Simi Valley, CA	Nov 2018	Aug 2019	100	55,830.00	Y		

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

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Exhibit P-21, Production Schedule: PB 2019 Navy																			Date: February 2018																					
Appropriation / Budget Activity / Budget Sub Activity: 1109N / 04 / 16										P-1 Line Item Number / Title: 4733 / Fire Support System										Aggregated Items: Fire Support System																				
Items (Units in Each)							Fiscal Year 2017												Fiscal Year 2018																					
O C R O #	M F R Y	SERVICE	PROC QTY	ACCEPT PRIOR TO 1 OCT 2016	BAL DUE AS OF 1 OCT	FY	Calendar Year 2017												Calendar Year 2018												B A L A N C E									
O C R O #	M F R Y	SERVICE	PROC QTY	ACCEPT PRIOR TO 1 OCT 2016	BAL DUE AS OF 1 OCT	FY	O C T	N O V	D E C	J A N	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										
1) CLRF																																								
1.1) CLRF - FRP Units Active																																								
Prior Years Deliveries: 118																																								
10	2017	NAVY	161	0	161																											0								
10	2018	NAVY	420	0	420																											315								
10	2019	NAVY	196	0	196																											196								
8) LMAMS																																								
8.1) Hardware Procurement																																								
✓	11	2019	NAVY	100	0	100																										100								
							O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P	O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P										

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Exhibit P-21, Production Schedule: PB 2019 Navy																				Date: February 2018																				BALANCE
Appropriation / Budget Activity / Budget Sub Activity: 1109N / 04 / 16										P-1 Line Item Number / Title: 4733 / Fire Support System										Aggregated Items: Fire Support System																				BALANCE
Items (Units in Each)							Fiscal Year 2019												Fiscal Year 2020											BALANCE										
O C R O #	M F R Y	SERVICE	PROC QTY	ACCEPT PRIOR TO 1 OCT 2018	BAL DUE AS OF 1 OCT	O C T	N O V	D E C	J A N	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											
1) CLRF																																								
1.1) CLRF - FRP Units Active																																								
Prior Years Deliveries: 118																																								
10	2017	NAVY	161	161	0																																	0		
10	2018	NAVY	420	105	315	35	35	35	35	35	35	35	35	35	35	35	35	35	35	35	35	35	35	35	35	35	35	35	35	35	35	35	35	35	35	35	0			
10	2019	NAVY	196	0	196																																	0		
8) LMAMS																																								
8.1) Hardware Procurement																																						0		
							O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P	O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P										

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Exhibit P-21, Production Schedule: PB 2019 Navy								Date: February 2018				
Appropriation / Budget Activity / Budget Sub Activity: 1109N / 04 / 16			P-1 Line Item Number / Title: 4733 / Fire Support System					Aggregated Items: Fire Support System				
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	Kollsman, Inc. - Manchester, NH	80	300	500	2	2	9	11	2	2	5	7
2	AeroVironment Inc. @ Simi Valley, CA - Simi, CA				0	0	9	9	0	0	0	0

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

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

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Exhibit P-40, Budget Line Item Justification: PB 2019 Navy										Date: February 2018					
Appropriation / Budget Activity / Budget Sub Activity:					P-1 Line Item Number / Title:										
1109N: Procurement, Marine Corps / BA 04: Communications and Electronics Equipment / BSA 16: Intell/Comm Equipment (Non-Tel)					4747 / Intelligence Support Equipment										
ID Code (A=Service Ready, B=Not Service Ready): A			Program Elements for Code B Items: N/A					Other Related Program Elements: 0206625M, 0502511M, 0506625M							
<b>Line Item MDAP/MAIS Code: N/A</b>															
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 (\$ in Millions)	435.037	108.588	58.759	73.848	0.000	73.848	64.387	50.715	49.839	54.974	-	896.147			
Less PY Advance Procurement (\$ in Millions)	-	-	-	-	-	-	-	-	-	-	-	-			
Net Procurement (P-1) (\$ in Millions)	435.037	108.588	58.759	73.848	0.000	73.848	64.387	50.715	49.839	54.974	-	896.147			
Plus CY Advance Procurement (\$ in Millions)	-	-	-	-	-	-	-	-	-	-	-	-			
<b>Total Obligation Authority (\$ in Millions)</b>	<b>435.037</b>	<b>108.588</b>	<b>58.759</b>	<b>73.848</b>	<b>0.000</b>	<b>73.848</b>	<b>64.387</b>	<b>50.715</b>	<b>49.839</b>	<b>54.974</b>	-	<b>896.147</b>			
<i>(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)</i>															
Initial Spares (\$ in Millions)	-	0.265	0.356	0.421	-	0.421	0.366	0.371	0.378	0.386	Continuing	Continuing			
Flyaway Unit Cost (\$ in Dollars)	-	-	-	-	-	-	-	-	-	-	-	-			
Gross/Weapon System Unit Cost (\$ in Dollars)	-	-	-	-	-	-	-	-	-	-	-	-			
<b>Description:</b>															
This budget line item includes Military Intelligence Program (MIP) funds for Marine Corps Intelligence capabilities necessary to support Marines and Marine Air-Ground Task Forces (MAGTFs) through all phases of operation.															
Terrestrial Collection provides a tactical ground sensor Family of Systems (FoS) that are organic to the MAGTF and facilitate near-real time PISR sensing to MAGTF decision-makers and users. Sensors are networked to the maximum extent possible to enable the sharing of standard data and information to support all six Marine Corps warfighting functions (C2, Intelligence, Operations, Protection, Fires, and Maneuver) with both targeting and battlespace awareness. An array of sensor delivery methods, and a variety of sensor characteristics enable the MAGTF to sense air (low altitude), land (surface, underground), sea (surface and subsurface), environmental effects (weather), and man-made objects (e.g. inside buildings) to determine threat location, disposition, movement and direction. Ground Based Operational Surveillance System (G-BOSS), MAGTF Secondary Imagery Dissemination System (MSIDS) and Tactical Remote Sensor System (TRSS) transition to Terrestrial Collection in FY19.															
Ground Based Operational Surveillance System (G-BOSS) is an expeditionary, ground-based, self-contained, multi-spectral sensor-oriented, persistent surveillance system used to observe, collect, detect, identify, classify, track, and report on contacts, objects of interest, and assessed threats twenty-four hours a day utilizing a fused video and sensor data display. System variants will allow mobility, transportability, scalability and modularity, and will be capable of independent employment or as part of a network. All G-BOSS variants may be integrated into mutually supporting, closed networks. The G-BOSS variants are: G-BOSS Light (GBL): A tripod-mounted variant that provides short-range surveillance support. It is employed when surveillance support is required, but location and operational requirements are impractical to employ either of the two other variants. G-BOSS Medium (GBM): A trailer-mounted variant that provides longer range surveillance and is transported using a light trailer and tactical vehicle while in support of mobile combat operations, convoy security, temporary security operations, etc. G-BOSS Heavy (GBH): The 80-foot tall tower configuration, Heavy variant provides surveillance support of a more permanent nature. It is employed when operations are static, displacements are few, and longer surveillance ranges are desired. G-BOSS transitions to Terrestrial Collection in FY19.															
MAGTF Secondary Imagery Dissemination System (MSIDS) provides organic tactical digital imagery collection, transmission and receiving capability to the MAGTF Commander. MSIDS is comprised of components necessary to enable Marines to capture, manipulate, annotate, transmit or receive images in Near Real Time (NRT), internally with subordinate commands that are widely separated throughout the area of operations and externally with higher and adjacent commands. The MSIDS capability resides with the Marine Air-Ground Task Force (MAGTF) Intelligence sections and Ground Reconnaissance Battalions, Infantry Battalion Scout Snipers Platoons and Marine Corps Forces Special Operations Command. The MSIDS Family of Systems (FoS) extends the digital imaging capability to all echelons within the Marine Expeditionary Force (MEF), down to and including battalions and squadrons. Captured images can be forwarded throughout the MAGTF through the use of Base Station Workstation/Communication Interface (BW/CI), Outstation Workstation/Communication Interface (OW/CI) or existing C4ISR architecture. Images can also be transmitted to DCGS-MC for more detailed processing and analysis. The Video															

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<b>Exhibit P-40, Budget Line Item Justification: PB 2019 Navy</b>		<b>Date:</b> February 2018
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 1109N: Procurement, Marine Corps / BA 04: Communications and Electronics Equipment / BSA 16: Intell/Comm Equipment (Non-Tel)	<b>P-1 Line Item Number / Title:</b> 4747 / Intelligence Support Equipment	
<b>ID Code</b> (A=Service Ready, B=Not Service Ready): A	<b>Program Elements for Code B Items:</b> N/A	<b>Other Related Program Elements:</b> 0206625M, 0502511M, 0506625M
<b>Line Item MDAP/MAIS Code:</b> N/A		
Exploitation Workstation (VEW) is used to import, manipulate, annotate still and video imagery, create intelligence products, lift still frames from video, view multi-format TV signals and provide a field briefing capability. MSIDS transitions to Terrestrial Collection in FY19.		
Tactical Remote Sensor System (TRSS) provides all-weather direction, location determination, targeting, and tactical indications and warning of enemy activity in the MAGTF Commander's Area of Interest. Upgrades to the system provide imagers with a remotely changeable field of view; more reliable, networked communications that provide higher-quality imagery; and smaller, power-efficient, magnetic detectors with improved target-detection range. The cumulative impact of these changes enable the system to provide higher discrimination of threats in a more reliable and timely manner. As the program proceeds, the upgrade of individual system components will continue to occur as needed as threats, technologies, and system requirements evolve. Enhancements to the current baseline will improve sensor monitoring systems and include a magnetic sensor upgrade. It will also provide for a Common Sensor Radio, self-networking communications for sensors and retransmission devices. TRSS transitions to Terrestrial Collection in FY19.		
PERSISTENT INTELLIGENCE, SURVEILLANCE AND RECONNAISSANCE (PISR) GROUND COLLECTION SYSTEMS: PISR is a comprehensive strategy that synchronizes organic and external ISR assets in support of MAGTF operations. This capability involves sensing the operational environment through a variety of systems, from satellites overhead to reconnaissance Marines on the ground. PISR incorporates terrestrial sensing capability from the following ground collection systems.		
Communication Emitter Sensing and Attacking System (CESAS) is the sole Marine Corps high power, man-packable, and ground mobile Electronic Attack (EA) asset. CESAS supports the MAGTF Commander in the execution of his Electronic Warfare (EW) operations and Information Operations, by detecting, denying, and disrupting hostile communication emitters across a broad range of communication frequencies. CESAS covers the High Frequency (HF), Very High Frequency (VHF), and Ultra High Frequency (UHF) frequency ranges against enemy emitters using modern modulation schemes. CESAS allows flexible employment to conduct EA while on the move or in a stationary position, thus optimizing the Commander's ability to employ this asset for the greatest success of the mission.		
Counter Intelligence and Human Intelligence (CI/HUMINT) Equipment Program (CIHEP) provides each Marine CI/HUMINT Company within the Marine Corps Intelligence, Surveillance, and Reconnaissance Enterprise (MCISRE) with an integrated, standardized, and interoperable suite of information and communication systems. The CIHEP program provides specialized equipment that is lightweight, modular, and tailorable, in deployable packages to conduct full spectrum, tactical CI and HUMINT activities, to include Technical Surveillance Countermeasures (TSCM) operations. TSCM operations use techniques to detect, neutralize, and exploit hostile technical surveillance technologies and hazards that permit the unauthorized access to or removal of information. CI/HUMINT elements are generally task-organized in support of a MAGTF or other supported commanders, providing them the capability to rapidly collect, process, and disseminate counterintelligence and human intelligence information in support of military planning and operations. CIHEP is comprised of ten modules of commercial and government off-the-shelf equipment. Different components are selected for refresh each year in order to maintain current capabilities and ensure interoperability and standardization with related systems. This results in an equipment suite that enhances the operating force's CI/HUMINT capabilities, while maintaining interoperability within the USMC and joint CI/HUMINT communities. The modularity of the CIHEP program allows Marines to perform a variety of missions in support of commanders, while carrying only those items necessary to accomplish the mission. CIHEP provides state-of-the-art mission critical information protection capabilities, as well as the ability to detect, identify, and locate specific technical threats.		
Tactical Signal Intelligence (SIGINT) Collection System (TSCS) provides modular, lightweight and team/man transportable/portable systems and components which provide signal intercept, collection, Direction-Finding (DF), reporting and collection management capability to the MAGTF Commander. It provides the MAGTF Commander with a modular and scalable carry on/carry off suite of equipment which exploits information from more technically advanced target sets. TSCS uses rapid technology insertion processes and procedures to incorporate advanced SIGINT technology to allow the MAGTF Commander to maintain technological parity with the adversary.		
PROCESSING, EXPLOITATION, ANALYSIS AND PRODUCTION SYSTEMS: Processing, exploitation, analysis and production actions of the Intelligence process enables us to understand the all-source information/data revealed by PISR. The Distributed Common Ground System - Marine Corps (DCGS-MC) Enterprise (BLI 4767) will serve as the Marine Corps ISR Enterprise (MCISRE) backbone, migrating select capabilities into a single, integrated, net-centric baseline via clearly defined capability drops.		
Intelligence Analysis System (IAS) FoS is the All-Source Fusion Center that provides interoperable, scalable, semi-automated capabilities to receive, analyze, display, and disseminate all-source intelligence, including imagery, to support timely, tactical decision-making across the MAGTF. IAS will transition to DCGS-MC as the All Source Fusion capability.		

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Exhibit P-40, Budget Line Item Justification: PB 2019 Navy							Date: February 2018				
Appropriation / Budget Activity / Budget Sub Activity:			P-1 Line Item Number / Title:								
1109N: Procurement, Marine Corps / BA 04: Communications and Electronics Equipment / BSA 16: Intell/Comm Equipment (Non-Tel)			4747 / Intelligence Support Equipment								
ID Code (A=Service Ready, B=Not Service Ready): A	Program Elements for Code B Items: N/A				Other Related Program Elements: 0206625M, 0502511M, 0506625M						
<b>Line Item MDAP/MAIS Code:</b> N/A											
<p>Technical Control Analysis Center (TCAC) FoS consists of the AN/UYQ-83 TCAC Remote Analysis Workstation (RAWS), AN/MYQ-9 TCAC Transportable Workstation, and Cross Domain Solution (CDS), and is the focal point of Radio Battalions (RADBN), Marine Corps Forces Special Operations Command (MARFORSOC), and Fixed Wing Marine EA Squadron (VMAQ) SIGINT operations. TCAC automatically collects, stores, retrieves and plays back digital audio signals, and fuses and analyzes SIGINT data from tactical, theater and national collectors and databases for dissemination to tactical commanders. TCAC provides SIGINT analysis applications to deployable MAGTF units capable of directing and managing the technical and operational functions of other RADBN SIGINT/EW assets. TCAC provides termination of national, theater and tactical data networks for data exchange with tactical SIGINT/EW assets, the IAS and national databases. TCAC will enable the transfer of USMC tactical SIGINT collection and analytical data into the Real-Time Regional Gateway (RT-RG) and also by producing DCGS-MC Integrated Backbone (DIB) enabled products that will be discoverable by any DCGS enabled Marine. The system provides ground processing of EW information, including EW Support and EA data collected by the RADBN and VMAQ-EA-6B aircraft. The system is capable of correlating, fusing, and evaluating radar emitter identification and location data from the EA-6B with other National and theater sources. TCAC will transition to DCGS-MC as the Signals Intelligence capability.</p> <p><b>INTELLIGENCE DISSEMINATION AND UTILIZATION (IDU) SYSTEMS:</b> The IDU capability set performs the dissemination and integration functions of the Intelligence process. Dissemination connects the Intelligence product to the Commander who "operationalizes" these products through informed decisions.</p> <p>The Intelligence Broadcast Receiver (IBR) acquisition program is a family of terminals that conform to the Department of Defense (DoD) Integrated Broadcast Service (IBS) objectives of interoperability and commonality to receive and process near-real time multi-intelligence data. The IBR family of terminals provide MAGTF Commanders with the only direct access to IBS data via UHF Satellite Communications (SATCOM) broadcast channels. The IBR program is an evolving, multi-Service architecture designed to keep pace with Commanders' targeting and information requirements and conforms to the DoD IBS objectives of interoperability and commonality, which is currently accomplished using the Universal Serial Bus (USB) Embedded National Tactical Receiver (ENTR). The ENTR Version 4 (V4) will supplement and replace the USB ENTR which is no longer in production. The ENTR V4 provides a 50% weight reduction and doubles the life expectancy of the battery compared to the USB ENTR. The IBR family of terminals receive Blue Force Tracker data, which is a key element in developing and maintaining situational awareness as it relates to the common threat/common operating picture. The IBR provides NRT strategic, theater, and tactical sensor-to-shooter connectivity as well as NRT Theater Missile Defense indications and warnings. Additionally, the IBR provides connectivity to IBS Common Interactive Broadcast and IBS Alternative Path.</p> <p>Intelligence Equipment Readiness (IER) project provides a responsive capability to alleviate MCISRE systems shortfalls as a result of rapidly evolving missions and threats associated with overseas contingency operations (OCO) and expeditionary military, humanitarian assistance, and disaster relief operations. IER's primary effort is the horizontal integration of Marine Corps intelligence systems to achieve interoperability and integration into the DCGS-MC framework. In FY19, Intelligence Equipment Readiness fielding support transitions to BLI 4767, DCGS - Marine Corps (DCGS-MC).</p> <p>Joint Worldwide Intelligence Communications System (JWICS) is the Top Secret Sensitive Compartmented Information (TS/SCI) portion of the Defense Information System Network. It incorporates advanced networking technologies that permit point-to-point or multi-point information exchange involving voice, text, graphics, data and video teleconferencing within the DoD Intelligence Community. JWICS provides Marine Forces with special intelligence that significantly enhances the detail and quality of intelligence support that intelligence organizations provide to operating forces.</p> <p>Sensitive Compartmented Information Communications (SCI COMMS) - is a Super-High Frequency multi-band satellite communications Family of Systems (FoS), that provides a tactical capability at the Top Secret (TS)/SCI and Secret Collateral levels to USMC intelligence units. The SCI COMMS FoS is the only deployable communications system that is dedicated for TS/SCI data and voice communications that can receive, transmit and disseminate bulk data and imagery products to and from national tactical intelligence sources. The FoS consists of palletized, team level, and man-packable systems - TROJAN SPIRIT, High Bandwidth Special Intelligence-Palletized Terminal (HBSI-PT), and Sensitive Compartmented Intelligence Kit (SCIKit) - which provide USMC tactical commanders with high-capacity, near-real-time access to intelligence from national agencies, joint, coalition, service activities, intelligence producers, and other tactical units via connectivity to Joint Worldwide Intelligence Communications System, National Security Agency (NSA) Network, coalition networks, and Secret Internet Protocol Router Network.</p>											
Secondary Distribution		FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	
Navy	Quantity	-	-	-	-	-	-	-	-	-	
	Total Obligation Authority	108.588	57.753	73.319	-	73.319	63.848	50.164	49.279	54.402	

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Exhibit P-40, Budget Line Item Justification: PB 2019 Navy							Date: February 2018			
Appropriation / Budget Activity / Budget Sub Activity: 1109N: Procurement, Marine Corps / BA 04: Communications and Electronics Equipment / BSA 16: Intell/Comm Equipment (Non-Tel)				P-1 Line Item Number / Title: 4747 / Intelligence Support Equipment						
ID Code (A=Service Ready, B=Not Service Ready): A		Program Elements for Code B Items: N/A			Other Related Program Elements: 0206625M, 0502511M, 0506625M					
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
NR	Quantity	-	-	-	-	-	-	-	-	-
	Total Obligation Authority	-	1.006	0.529	-	0.529	0.539	0.551	0.560	0.572
Total: Secondary Distribution	Quantity	-	-	-	-	-	-	-	-	-
	Total Obligation Authority	108.588	58.759	73.848	-	73.848	64.387	50.715	49.839	54.974

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<b>Exhibit P-40, Budget Line Item Justification: PB 2019 Navy</b>							<b>Date:</b> February 2018		
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 1109N: Procurement, Marine Corps / BA 04: Communications and Electronics Equipment / BSA 16: Intell/Comm Equipment (Non-Tel)				<b>P-1 Line Item Number / Title:</b> 4747 / Intelligence Support Equipment					
<b>ID Code</b> (A=Service Ready, B=Not Service Ready): A		<b>Program Elements for Code B Items:</b> N/A				<b>Other Related Program Elements:</b> 0206625M, 0502511M, 0506625M			
<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>
P-40a	Intelligence Support Equipment	P-5a, P-21			- / 435.037	- / 108.588	- / 58.759	- / 73.848	- / -
<b>P-40</b>	<b>Total Gross/Weapon System Cost</b>				<b>- / 435.037</b>	<b>- / 108.588</b>	<b>- / 58.759</b>	<b>- / 73.848</b>	<b>- / 0.000</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. Title represents the P-40a Title when only the P-40a Summary/Total is shown.									
Note: Totals in this Exhibit P-40 set may not be exact or sum exactly due to rounding.									
<b>Justification:</b> The FY 2019 funding request was reduced by (\$.313) million to reflect the Department of Navy's effort to support the Office of Management and Budget directed reforms for Efficiency and Effectiveness that include a lean, accountable, more efficient government.									
FY 2018 Base Appropriation Request: \$55.759M (\$54.753M Active; \$1.006M Reserve)									
CESAS: \$9.223M will procure Communication Emitter Sensing and Attacking System (CESAS II) ground electronic attack systems, Electromagnetic Spectrum Operations Range (EMSOR) hardware, Light Armored Vehicle Electronic Warfare (LAV-EW) Platform Integration Kit (PIK) components and initial support. These procurements will provide required ground mobile electronic attack capability and a unit-employable capability that replicates a radio frequency portion of the electromagnetic operating environment at training ranges to meet planned production schedule. Decrease of \$3.020M from FY17 to FY18 aligns funding to procurement schedule for CESAS II.									
CIHEP: \$3.525M will procure equipment such as components for the Tactical Surveillance Counter Measures (TSCM), Commercial SATCOM Set (CSCS) equipment and Broadband Global Area Network (BGAN) Antenna. Decrease of \$15.747M from FY17 to FY18 reflects completed procurement of Data Processing Module components and aligns funding to the procurement plan for TSCM.									
G-BOSS: \$1.200M will provide sensors and other hardware in support of the tech refresh for current systems. This refresh address portions of all three G-BOSS variants (G-BOSS Light (GBL), G-BOSS Medium (GBM), G-BOSS Heavy (GBH). Prior to FY2018, GBOSS had Overseas Contingency Operations PMC funding for FY2012, FY2013, and FY2016 in BLI 6438, Physical Security Equipment. Funding changes after FY18 reflect the merging of GBOSS to Terrestrial Collection.									
IAS: \$8.396M (\$7.390M Active; \$1.006M Reserves) will procure fielding and technical support for the Tier III Intelligence Workstation and complete procurement of software enhancements for the Advanced Analytics capability. The Intelligence Workstation is required for receiving, parsing, analyzing and disseminating fused all-source intelligence data. Decrease \$8.764M from FY17 to FY18 reflects completion of Tier III Workstation refresh and software enhancements for Advanced Analytics capability in FY18.									
IBR: \$6.697M will procure Embedded National Tactical Receiver (ENTR) Version 4 systems, components, software and support. These systems, supporting eight (8) battalions, will be fielded to the company-level, and provide the capability of strategic, theater and tactical sensor-to-shooter intelligence data to the tactical edge of the battlefield. Increase of \$5.277M from FY17 to FY18 procures ENTR v4 systems to support increase AAO for intelligence collection and fusion at the tactical level.									
JWICS: \$4.098M will procure garrison and tactical equipment and integration costs for SCI Enterprise Office (SEO) and the Marine Corps Intelligence, Surveillance and Reconnaissance Enterprise (MCISRE) Fixed Site located at the Marine Corps Intelligence Activity (MCIA). Funding will procure garrison hardware such as desktops, laptops, servers, routers, switches, maintenance of equipment, technical refreshes of hardware, Electronic Key Management System (EKMS) for SEO services and Storage Area Network (SAN/NAS). Decrease from FY17 to FY18 is primarily due to FY17 RAA funding.									

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<b>Exhibit P-40, Budget Line Item Justification: PB 2019 Navy</b>		<b>Date:</b> February 2018
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 1109N: Procurement, Marine Corps / BA 04: Communications and Electronics Equipment / BSA 16: Intell/Comm Equipment (Non-Tel)		<b>P-1 Line Item Number / Title:</b> 4747 / Intelligence Support Equipment
<b>ID Code</b> (A=Service Ready, B=Not Service Ready): A	<b>Program Elements for Code B Items:</b> N/A	<b>Other Related Program Elements:</b> 0206625M, 0502511M, 0506625M
<b>Line Item MDAP/MAIS Code:</b> N/A		
MSIDS: \$2.503M will procure imagery transmission components such as laptops, ancillary equipment, and support to comply with the Microsoft Windows 10 DoD mandate in providing MAGTF commander the ability to transmit video and still imagery from eyes-on-target ashore in remote/austere locations from MSIDS outstation terminals to the Command Operations Center to support intelligence imagery gathering requirements. Increase \$1.003M from FY17 to FY18 for imagery transmission components, new equipment training and fielding support.		
SCI COMMS: \$6.402M will procure updated network packages and monitoring and configuration devices as part of the security-based product improvements for the Sensitive Compartmented Information Kit. Decrease of \$.734M from FY17 to FY18 reflects completion of HBSI-PT AAO procurement.		
TRSS: \$2.638M will provide for the initial procurement of the Common Sensor Radio (CSR), which will allow for sensors to be interoperable with other Marine Corps sensors (such as GBOSS) and Joint sensors. Funding will also provide for the initial procurement of Air Delivered Unattended Ground Sensors (ADUGS) components. Increase of \$1.102M from FY17 to FY18 procures CSRs and ADUGS components.		
TCAC: \$4.581M will provide for delivery and new equipment training in support of TCAC v4.6 (RAWS/CDS) hardware refresh to all three MEFs (Radio Battalions), MARSOC, and VMAQ. Decrease of \$3.293M from FY17 base to FY18 base aligns with procurement schedule.		
TSCS: \$9.496M will procure Legacy Signals of Interest (SOI) capability enhancements such as Digital Network Intelligence (DNI)/Dual Receiver Replacement (DRR) receiver upgrades and technology inserts. Legacy SOI will provide increased capability to SIGINT units while DNI/DRR enhancements will expand the software defined radio capability making use of common hardware. Decrease of \$3.988M from FY17 to FY18 reflects funding aligned with procurement plan and refresh schedule.		
FY 2019 Base Appropriation Request: \$73.848M (\$73.319M Active; \$0.529M Reserve)		
CESAS: \$5.556M will procure Communication Emitter Sensing and Attacking System (CESAS II) ground electronic attack systems, CESAS Next Generation advanced digital payload Engineering Development Models (EDMs) and Mods Case 2.0, Joint Light Tactical Vehicle (JLTV) Platform Integration Kit (PIK) components, and initial support. These procurements will provide required ground mobile electronic attack capability to meet planned production schedule. Decrease of \$3.667M from FY18 to FY19 aligns funding to procurement schedule for CESAS II.		
CIHEP: \$6.066M will procure licenses and components for Media Exploitation (MEDEX)suites which will maintain Authority To Operate and keep pace with industry standard technology ; will procure Data Processing Module software to interface with the new Mobile user Objective System waveform which will increase the capability to transmit intelligence data over tactical radios; will continue to procure components for the Tactical Surveillance Counter Measures (TSCM) which will modernize current capability and provide one new system. Increase of \$2.541M from FY18 to FY19 reflects funding aligned to procurement schedule of components for the TSCM.		
IAS: \$9.570M (\$9.041M Active; \$.529M Reserves) will support the procurement of hardware associated with the Tier I server refresh, Tier II common components and Tier III technical fielding support. Increase of \$1.174M from FY18 to FY19 supports the Tier I server procurement.		
IBR: \$4.352M will procure Embedded National Tactical Receiver (ENTR) Version 4 systems, components and support. These systems, supporting five (5) battalions, will be fielded to the company-level, and provide the capability of strategic, theater and tactical sensor-to-shooter intelligence data to the tactical edge of the battlefield. Decrease of \$2.345M from FY18 to FY19 reflects funding aligned with procurement plan and support schedule.		
JWICS: \$4.615M will procure garrison and tactical equipment and integration costs for SCI Enterprise Office (SEO) and the Marine Corps Intelligence, Surveillance and Reconnaissance Enterprise (MCISRE) Fixed Site located at the Marine Corps Intelligence Activity (MCIA). Funding will procure garrison hardware such as desktops, laptops, servers, routers, switches, maintenance of equipment, technical refreshes of hardware, Electronic Key Management System (EKMS) for SEO services and Storage Area Network (SAN/NAS). Reduction to the JWICS program constricts access to National intelligence data, services and assets in support of current and future operations of the Marine Corps Leaders. Reduction puts the primary conduit for national-to-tactical SCI integration, network operations, specialized capabilities, remote production, exploitation, and dissemination across all intelligence domains at risk.		

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<b>Exhibit P-40, Budget Line Item Justification: PB 2019 Navy</b>		<b>Date:</b> February 2018
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 1109N: Procurement, Marine Corps / BA 04: Communications and Electronics Equipment / BSA 16: Intell/Comm Equipment (Non-Tel)	<b>P-1 Line Item Number / Title:</b> 4747 / Intelligence Support Equipment	
<b>ID Code</b> (A=Service Ready, B=Not Service Ready): A	<b>Program Elements for Code B Items:</b> N/A	<b>Other Related Program Elements:</b> 0206625M, 0502511M, 0506625M
<b>Line Item MDAP/MAIS Code:</b> N/A		
SCI COMMS: \$7.325M will procure modification kits and upgrades such as, modernized SCIK Controlled Cryptographic Items (CCI), upgraded modems for HBSI-PT, updated test measurement and diagnostic equipment; and fielding and initial support. Increase of \$.923M reflects modification and upgrades which will increase security and mitigate obsolescence.		
TCAC: \$6.749M will procure RAWS Server Hardware Refresh, CDS fielding support, software baseline fielding, and software for RAMSHEAD Human Language Translation (HLT) Voice Analytics Program. Increase of \$5.168M from FY18 base to FY19 base reflects funding aligned with procurement plan and refresh schedule.		
TSCS: \$23.173M will procure Software Defined Receivers (SDRs), additional required servers, and Aviation Platform Kits. Increase of \$13.677M from FY18 to FY19 reflects funding aligned with procurement plan and refresh schedule.		
Terrestrial Collection: \$6.442M supports the procurement of Advanced Network upgrade kits for fielded G-BOSS systems to increase network and computing performance for systems currently fielded in support of combat operations directly resulting in increased ability to conduct force protection and intelligence collections functions. Additionally, funds provide for the continued procurement of TRSS Common Sensor Radio (CSR) and hardware components toward a full networking capability to form wireless networks across multiple CSRs. Funds also support the procurement of MSIDS imagery transmission components providing the MAGTF commander the ability to transmit video and still imagery from eyes-on-target ashore in remote/austere locations from MSIDS outstation terminal to the Command Operations Center (COC) to support intelligence imagery gathering requirements. In FY19, GBOSS, MSIDS, and TRSS transition to Terrestrial Collection.		
G-BOSS: Funding changes after FY18 reflect the transition of Ground Based Operational Surveillance (GBOSS) to Terrestrial Collection.		
MSIDS: Funding changes after FY18 reflect the transition of MAGTF Secondary Imagery Dissemination System (MSIDS) to Terrestrial Collection.		
TRSS: Funding changes after FY18 reflect the transition of Tactical Remote Sensor System (TRSS) to Terrestrial Collection.		
OCO: FY 2018 Overseas Contingency Operations (OCO) Request: \$3.000M		
TCAC: \$3.000M will provide training, labor, and logistics support enabling a complete refresh of the Transportable Workstation (TWS) AAO in support of Radio Battalions support to OEF and OIR as well as MARSOC support to OEF and OIR.		

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Exhibit P-40a, Budget Item Justification For Aggregated Items: PB 2019 Navy														Date: February 2018						
Appropriation / Budget Activity / Budget Sub Activity: 1109N / 04 / 16					P-1 Line Item Number / Title: 4747 / Intelligence Support Equipment									Aggregated Items Title: Intelligence Support Equipment						
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 (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)
<b>1) Intelligence Analysis System (IAS) (122398) - Hardware</b>																				
1.1) Command System, Tactical Tier I (MEF IAS)	A		-	-	-	-	-	-	-	-	-	-	-	4.748	-	-	-	-	4.748	
1.2) Command System, Tactical Tier II	A		-	-	-	-	-	-	-	-	-	-	-	2.398	-	-	-	-	2.398	
1.3) Command System, Tactical Tier III <sup>(1)</sup>	A		-	-	7.461	1,781.95	2,715	4.838	-	-	-	-	-	-	-	-	-	-	-	
1.4) Command System, Tactical Tier II (Reserve)	A		-	-	-	-	-	-	-	-	-	-	-	0.400	-	-	-	-	0.400	
<i>Subtotal: 1) Intelligence Analysis System (IAS) (122398) - Hardware</i>			-	-	7.461	-	-	4.838	-	-	-	-	-	7.546	-	-	-	-	7.546	
<b>2) Intelligence Analysis System (IAS) (122398) - Software</b>																				
2.1) Software Enhancement (Reserve)	A		-	-	-	-	-	-	-	-	0.741	-	-	-	-	-	-	-	-	
2.2) Software Enhancement	A		-	-	12.112	-	-	10.031	-	-	5.006	-	-	-	-	-	-	-	-	
<i>Subtotal: 2) Intelligence Analysis System (IAS) (122398) - Software</i>			-	-	12.112	-	-	10.031	-	-	5.747	-	-	-	-	-	-	-	-	
<b>3) Intelligence Analysis System (IAS) (122398) - Support</b>																				
3.1) Fielding Support			-	-	7.759	-	-	-	-	-	0.898	-	-	0.563	-	-	-	-	0.563	
3.2) Program Technical Support			-	-	21.337	-	-	2.291	-	-	1.486	-	-	1.327	-	-	-	-	1.327	
3.3) Program Technical Support (Reserves)	A		-	-	0.775	-	-	-	-	-	0.265	-	-	0.134	-	-	-	-	0.134	
<i>Subtotal: 3) Intelligence Analysis System (IAS) (122398) - Support</i>			-	-	29.871	-	-	2.291	-	-	2.649	-	-	2.024	-	-	-	-	2.024	
<b>4) Intelligence Broadcast Receiver (IBR) (122700) - Hardware</b>																				
4.1) IBR ENTR Version 4 <sup>(1)(t)</sup>	A		-	-	-	38,000.00	10	0.380	38,000.00	100	3,800	38,760.00	58	2,248	-	-	-	38,760.00	58	2,248
4.2) IBR ENTR Version 4 Components and Accessories	A		-	-	-	-	-	0.140	-	-	1,400	-	-	1,400	-	-	-	-	1,400	
<i>Subtotal: 4) Intelligence Broadcast Receiver (IBR) (122700) - Hardware</i>			-	-	0.000	-	-	0.520	-	-	5.200	-	-	3.648	-	-	-	-	3.648	
<b>5) Intelligence Broadcast Receiver (IBR) (122700) - Software</b>																				
5.1) Software	A		-	-	-	-	-	-	-	-	0.697	-	-	-	-	-	-	-	-	

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Exhibit P-40a, Budget Item Justification For Aggregated Items: PB 2019 Navy														<b>Date:</b> February 2018						
Appropriation / Budget Activity / Budget Sub Activity: 1109N / 04 / 16						P-1 Line Item Number / Title: 4747 / Intelligence Support Equipment								Aggregated Items Title: Intelligence Support Equipment						
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 (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)
<i>Subtotal: 5) Intelligence Broadcast Receiver (IBR) (122700) - Software</i>			-	-	<b>0.000</b>	-	-	-	-	-	<b>0.697</b>	-	-	-	-	-	-	-	-	-
<b>6) Intelligence Broadcast Receiver (IBR) (122700) - Support</b>																				
6.1) Program Support IBR (2)			-	-	3.276	-	-	0.900	-	-	0.800	-	-	0.704	-	-	-	-	-	0.704
<i>Subtotal: 6) Intelligence Broadcast Receiver (IBR) (122700) - Support</i>			-	-	<b>3.276</b>	-	-	<b>0.900</b>	-	-	<b>0.800</b>	-	-	<b>0.704</b>	-	-	-	-	-	<b>0.704</b>
<b>7) Technical Control and Analysis Center (TCAC) (120698) - Hardware</b>																				
7.1) RAWS Server	A		-	-	4.084	-	-	-	-	-	-	-	-	4.672	-	-	-	-	-	4.672
7.2) Cross Domain Solution (CDS)	A		-	-	3.409	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
7.3) Peripherals/ Printers/Monitor Refresh	A		6,194.44	72	0.446	-	-	0.685	-	-	-	-	-	-	-	-	-	-	-	-
<i>Subtotal: 7) Technical Control and Analysis Center (TCAC) (120698) - Hardware</i>			-	-	<b>7.939</b>	-	-	<b>0.685</b>	-	-	-	-	-	<b>4.672</b>	-	-	-	-	-	<b>4.672</b>
<b>8) Technical Control and Analysis Center (TCAC) (120698) - Support</b>																				
8.1) Contractor Engineering, Tech and Mgmt Support			-	-	17.585	-	-	1.834	-	-	3.000	-	-	-	-	-	-	-	-	-
<i>Subtotal: 8) Technical Control and Analysis Center (TCAC) (120698) - Support</i>			-	-	<b>17.585</b>	-	-	<b>1.834</b>	-	-	<b>3.000</b>	-	-	-	-	-	-	-	-	-
<b>9) Technical Control and Analysis Center (TCAC) (120698) - Software</b>																				
9.1) TCAC v4.6 and SW Baseline Fielding	A		-	-	-	-	-	-	-	-	-	-	-	0.047	-	-	-	-	-	0.047
9.2) CDS Fielding	A		-	-	-	-	-	-	-	-	-	-	-	1.120	-	-	-	-	-	1.120
9.3) RAWS, CDS, TWS SW Fielding	A		-	-	1.506	-	-	2.355	-	-	1.581	-	-	-	-	-	-	-	-	-
9.4) SW for RAMSHEAD Human Language Translation (HLT) Voice Analytics	A		-	-	-	-	-	-	-	-	-	-	-	0.910	-	-	-	-	-	0.910
<i>Subtotal: 9) Technical Control and Analysis Center (TCAC) (120698) - Software</i>			-	-	<b>1.506</b>	-	-	<b>2.355</b>	-	-	<b>1.581</b>	-	-	<b>2.077</b>	-	-	-	-	-	<b>2.077</b>
<b>10) Sensitive Compartmented Information Communications (SCI COMMS) (120398) - Hardware</b>																				
10.1) HBSI-PT (Palletized) <sup>(†)</sup>	A		343,871.79	39	13,411	347,154.00	13	4,513	-	-	-	-	-	-	-	-	-	-	-	-
10.2) HBSI-PT Crypto	A		-	-	-	-	-	0.440	-	-	-	-	-	-	-	-	-	-	-	-
10.3) Modification Kits & Upgrades	A		-	-	-	-	-	-	-	-	-	-	-	3.903	-	-	-	-	-	3.903

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Exhibit P-40a, Budget Item Justification For Aggregated Items: PB 2019 Navy														Date: February 2018						
Appropriation / Budget Activity / Budget Sub Activity: 1109N / 04 / 16					P-1 Line Item Number / Title: 4747 / Intelligence Support Equipment									Aggregated Items Title: Intelligence Support Equipment						
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 (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ M)	Qty (Each)	Total Cost (\$ M)
10.4) Network Package Refresh	A		-	-	-	-	-	1.687	-	-	2.311	-	-	-	-	-	-	-	-	-
10.5) Coalition Network Packages	A		-	-	-	-	-	-	-	-	3.279	-	-	-	-	-	-	-	-	-
10.6) Controlled Cryptographic Item Refresh (SCIK)	A		-	-	-	-	-	-	-	-	-	-	-	3.019	-	-	-	-	-	3.019
<i>Subtotal: 10) Sensitive Compartmented Information Communications (SCI COMMS) (120398) - Hardware</i>			-	-	13.411	-	-	6.640	-	-	5.590	-	-	6.922	-	-	-	-	-	6.922
<b>11) SCI COMMS (120398) - Support</b>																				
11.1) Fielding and Initial Support			-	-	1.834	-	-	0.496	-	-	0.812	-	-	0.403	-	-	-	-	-	0.403
<i>Subtotal: 11) SCI COMMS (120398) - Support</i>			-	-	1.834	-	-	0.496	-	-	0.812	-	-	0.403	-	-	-	-	-	0.403
<b>12) Communication Emitter Sensing and Attacking System (CESAS) (360204) - Hardware</b>																				
12.1) Ground Electronic Attack System (3)(t)	A		-	-	2.767	686,112.00	7	4.803	635,000.00	8	5.080	635,000.00	6	3.810	-	-	-	635,000.00	6	3.810
12.2) FY17 Amended Ground Electronic Attack System(t)	A		-	-	-	686,112.00	10	6.861	-	-	-	-	-	-	-	-	-	-	-	-
12.4) Component Parts for JLTV PIKs	A		-	-	-	-	-	-	-	-	-	-	-	0.634	-	-	-	-	-	0.634
12.5) LAV-EW PIK Components	A		-	-	-	-	-	-	-	-	1.280	-	-	-	-	-	-	-	-	-
12.6) Electromagnetic Spectrum Operations Range (EMSOR)	A		-	-	-	-	-	-	-	-	2.500	-	-	-	-	-	-	-	-	-
12.7) Component Parts for Next Generation Mods Case 2.0 and EDMs	A		-	-	-	-	-	-	-	-	-	-	-	0.750	-	-	-	-	-	0.750
<i>Subtotal: 12) Communication Emitter Sensing and Attacking System (CESAS) (360204) - Hardware</i>			-	-	2.767	-	-	11.664	-	-	8.860	-	-	5.194	-	-	-	-	-	5.194
<b>13) Communication Emitter Sensing and Attacking System (CESAS) (360204) - Support</b>																				
13.1) Program Support			-	-	0.645	-	-	0.284	-	-	-	-	-	-	-	-	-	-	-	
13.2) Fielding, Initial & Production Support			-	-	0.965	-	-	0.102	-	-	0.350	-	-	0.362	-	-	-	-	-	0.362
13.3) FY17 Amended Fielding, Initial & Production Support			-	-	-	-	-	0.193	-	-	0.013	-	-	-	-	-	-	-	-	

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Exhibit P-40a, Budget Item Justification For Aggregated Items: PB 2019 Navy														Date: February 2018						
Appropriation / Budget Activity / Budget Sub Activity: 1109N / 04 / 16						P-1 Line Item Number / Title: 4747 / Intelligence Support Equipment								Aggregated Items Title: Intelligence Support Equipment						
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 (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)
<i>Subtotal: 13) Communication Emitter Sensing and Attacking System (CESAS) (360204) - Support</i>			-	-	1.610	-	-	0.579	-	-	0.363	-	-	0.362	-	-	-	-	-	0.362
<b>14) Counter Intelligence and Human Intelligence (CI/HUMINT) Equip. Progam (CIHEP) (122698) - H</b>																				
14.1) CIHEP Data Processing Module (DPM) Components	A		-	-	-	-	-	2.279	-	-	-	-	-	-	-	-	-	-	-	-
14.2) CIHEP Technical Surveillance Countermeasures Equipment Components	A		-	-	1.415	-	-	1.080	-	-	1.867	-	-	4.800	-	-	-	-	-	4.800
14.4) CIHEP Technical Surveillance Module (TSM)	A		59,461.54	13	0.773	-	-	0.025	-	-	-	-	-	-	-	-	-	-	-	-
14.5) CIHEP MEDEX-Light	A		33,536.23	69	2.314	-	-	0.384	-	-	-	-	-	0.825	-	-	-	-	-	0.825
14.6) CIHEP Commercial Satellite Communication Set (CSCS) Components	A		-	-	-	-	-	0.200	-	-	1.125	-	-	-	-	-	-	-	-	-
14.8) CIHEP Technical Surveillance Countermeasures (TSCM) Equipment(t)	A		-	-	-	2,530K	5	12.650	-	-	-	-	-	-	-	-	-	-	-	-
14.9) CIHEP Broadband Global Area Network Antenna	A		-	-	-	-	-	-	-	-	0.533	-	-	-	-	-	-	-	-	-
<i>Subtotal: 14) Counter Intelligence and Human Intelligence (CI/HUMINT) Equip. Progam (CIHEP) (122698) - H</i>			-	-	4.502	-	-	16.618	-	-	3.525	-	-	5.625	-	-	-	-	-	5.625
<b>15) Counter Intelligence and Human Intelligence (CI/HUMINT) Equip. Program (CIHEP) (122698) - S</b>																				
15.1) Software	A		-	-	0.378	-	-	-	-	-	-	-	-	0.441	-	-	-	-	-	0.441
<i>Subtotal: 15) Counter Intelligence and Human Intelligence (CI/HUMINT) Equip. Program (CIHEP) (122698) - S</i>			-	-	0.378	-	-	-	-	-	-	-	-	0.441	-	-	-	-	-	0.441
<b>16) Counter Intelligence and Human Intelligence (CI/HUMINT) Equip. Progam (CIHEP) (122698) - S</b>																				
16.1) CIHEP Technical/Logistics Support			-	-	4.146	-	-	1.212	-	-	-	-	-	-	-	-	-	-	-	
<i>Subtotal: 16) Counter Intelligence and Human Intelligence (CI/HUMINT) Equip. Progam (CIHEP) (122698) - S</i>			-	-	4.146	-	-	1.212	-	-	-	-	-	-	-	-	-	-	-	
<b>17) JWICS (120206) - Hardware</b>																				

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Exhibit P-40a, Budget Item Justification For Aggregated Items: PB 2019 Navy														Date: February 2018						
Appropriation / Budget Activity / Budget Sub Activity: 1109N / 04 / 16					P-1 Line Item Number / Title: 4747 / Intelligence Support Equipment									Aggregated Items Title: Intelligence Support Equipment						
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 (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)
17.1) Servers, Storage and Network equipment	A		934,500.00	6	5.607	-	-	4.549	-	-	1.601	-	-	2.388	-	-	-	-	-	2.388
17.2) JPED - Servers, Storage and Network Equipment	A		-	-	-	-	-	12.500	-	-	-	-	-	-	-	-	-	-	-	-
<i>Subtotal: 17) JWICS (120206) - Hardware</i>			-	-	<b>5.607</b>	-	-	<b>17.049</b>	-	-	<b>1.601</b>	-	-	<b>2.388</b>	-	-	-	-	-	<b>2.388</b>
<b>18) JWICS (120206) - Software</b>																				
18.1) JPED - Software	A		-	-	-	-	-	3.190	-	-	-	-	-	-	-	-	-	-	-	-
18.2) Software	A		-	-	11.668	-	-	3.693	-	-	1.632	-	-	-	-	-	-	-	-	-
<i>Subtotal: 18) JWICS (120206) - Software</i>			-	-	<b>11.668</b>	-	-	<b>6.883</b>	-	-	<b>1.632</b>	-	-	-	-	-	-	-	-	-
<b>19) JWICS (120206) - Support</b>																				
19.1) Hardware & Software Integration			-	-	6.158	-	-	5.031	-	-	0.865	-	-	2.227	-	-	-	-	-	2.227
19.2) JPED - Hardware & Software Integration			-	-	-	-	-	1.000	-	-	-	-	-	-	-	-	-	-	-	-
<i>Subtotal: 19) JWICS (120206) - Support</i>			-	-	<b>6.158</b>	-	-	<b>6.031</b>	-	-	<b>0.865</b>	-	-	<b>2.227</b>	-	-	-	-	-	<b>2.227</b>
<b>20) Tactical SIGINT Collection System (TSCS) (120514) - Hardware</b>																				
20.1) TPCS Mods Block 0 - Workstation <sup>(†)</sup>	A		-	-	1.462	6,666.67	3	0.020	-	-	-	-	-	-	-	-	-	-	-	-
20.2) TPCS Modular Case - Combat Equipment Replacement <sup>(†)</sup>	A		-	-	-	100,000.00	1	0.100	-	-	-	-	-	-	-	-	-	-	-	-
20.3) TPCS Special Purpose Receiver Refresh <sup>(†)</sup>	A		-	-	-	81,477.52	29	2.363	82,000.00	18	1.476	-	-	-	-	-	-	-	-	-
20.4) RREP Special Purpose Receiver Refresh <sup>(†)</sup>	A		-	-	-	81,750.00	42	3.434	-	-	-	-	-	-	-	-	-	-	-	-
20.5) TPCS Server Sleeves <sup>(†)</sup>	A		-	-	-	100,000.00	69	6.900	-	-	1.836	-	-	-	-	-	-	-	-	-
20.6) TPCS Legacy Signals of Interest	A		-	-	-	-	-	-	-	-	1.715	-	-	-	-	-	-	-	-	-
20.7) TPCS Locate Case <sup>(†)</sup>	A		-	-	-	84,000.00	1	0.084	-	-	-	-	-	-	-	-	-	-	-	-
20.8) TPCS Wide Band Receiver <sup>(†)</sup>	A		-	-	-	49,000.00	1	0.049	-	-	-	-	-	-	-	-	-	-	-	-

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Exhibit P-40a, Budget Item Justification For Aggregated Items: PB 2019 Navy														Date: February 2018						
Appropriation / Budget Activity / Budget Sub Activity: 1109N / 04 / 16					P-1 Line Item Number / Title: 4747 / Intelligence Support Equipment									Aggregated Items Title: Intelligence Support Equipment						
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 (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)
20.9) Modular Case 2.0 Refresh <sup>(4)(t)</sup>	A		-	-	-	-	-	-	145,000.00	28	4,060	-	-	-	-	-	-	-	-	-
20.10) TSCS DNI Carrier <sup>(t)</sup>	A		-	-	-	109,000.00	1	0.109	-	-	-	-	-	-	-	-	-	-	-	-
20.11) TSCS Increment 1 <sup>(5)</sup>	A		-	-	-	-	-	-	-	-	-	-	-	22.744	-	-	-	-	-	22.744
<i>Subtotal: 20) Tactical SIGINT Collection System (TSCS) (120514) - Hardware</i>			-	-	1.462	-	-	13.059	-	-	9.087	-	-	22.744	-	-	-	-	-	22.744
<b>21) Tactical SIGINT Collection System (TSCS) (120514) - Support</b>																				
21.1) Program Support			-	-	0.266	-	-	0.097	-	-	0.150	-	-	0.103	-	-	-	-	-	0.103
21.2) Fielding and Initial Support			-	-	0.699	-	-	0.328	-	-	0.259	-	-	0.326	-	-	-	-	-	0.326
<i>Subtotal: 21) Tactical SIGINT Collection System (TSCS) (120514) - Support</i>			-	-	0.965	-	-	0.425	-	-	0.409	-	-	0.429	-	-	-	-	-	0.429
<b>22) Ground Based Operational Surveillance (G-BOSS) (500308) - Hardware</b>																				
22.1) Cameras, Radar, and Support Equipment <sup>(6)</sup>	A		-	-	-	-	-	-	-	-	1.200	-	-	-	-	-	-	-	-	-
<i>Subtotal: 22) Ground Based Operational Surveillance (G-BOSS) (500308) - Hardware</i>			-	-	0.000	-	-	-	-	-	1.200	-	-	-	-	-	-	-	-	
<b>23) MAGTF Secondary Imagery Dissemination System (MSIDS) - 122198 - Hardware<sup>(7)</sup></b>																				
23.1) MSIDS Imagery Transmission Components	A		-	-	-	-	-	2.942	-	-	1.599	-	-	-	-	-	-	-	-	
<i>Subtotal: 23) MAGTF Secondary Imagery Dissemination System (MSIDS) - 122198 - Hardware</i>			-	-	0.000	-	-	2.942	-	-	1.599	-	-	-	-	-	-	-	-	
<b>24) MAGTF Secondary Imagery Dissemination System (MSIDS) - 122198 - Support</b>																				
24.1) MSIDS New Equipment Training and Fielding Support			-	-	-	-	-	-	-	-	0.904	-	-	-	-	-	-	-	-	
<i>Subtotal: 24) MAGTF Secondary Imagery Dissemination System (MSIDS) - 122198 - Support</i>			-	-	0.000	-	-	-	-	-	0.904	-	-	-	-	-	-	-	-	
<b>25) Tactical Remote Sensor System (TRSS) (121198) - Hardware<sup>(8)</sup></b>																				
25.1) TRSS Components - Common Sensor Radio (CSR) <sup>(t)</sup>	A		-	-	-	-	-	-	2,500.00	1,000	2,500	-	-	-	-	-	-	-	-	

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Exhibit P-40a, Budget Item Justification For Aggregated Items: PB 2019 Navy														Date: February 2018						
Appropriation / Budget Activity / Budget Sub Activity: 1109N / 04 / 16					P-1 Line Item Number / Title: 4747 / Intelligence Support Equipment									Aggregated Items Title: Intelligence Support Equipment						
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 (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)
25.2) TRSS Air Delivered Unattended Ground Sensors (ADUGS) Components	A		-	-	-	-	-	-	-	-	0.138	-	-	-	-	-	-	-	-	-
25.3) TRSS Hardware Components (various)	A		-	-	0.671	-	-	1.511	-	-	-	-	-	-	-	-	-	-	-	-
<i>Subtotal: 25) Tactical Remote Sensor System (TRSS) (121198) - Hardware</i>			-	-	<b>0.671</b>	-	-	<b>1.511</b>	-	-	<b>2.638</b>	-	-	-	-	-	-	-	-	-
<b>26) Tactical Remote Sensor System (TRSS) (121198) - Support</b>																				
26.1) TRSS Program Support			-	-	0.177	-	-	0.025	-	-	-	-	-	-	-	-	-	-	-	-
<i>Subtotal: 26) Tactical Remote Sensor System (TRSS) (121198) - Support</i>			-	-	<b>0.177</b>	-	-	<b>0.025</b>	-	-	-	-	-	-	-	-	-	-	-	
<b>27) Terrestrial Collection (121019) - Hardware <sup>(9)</sup></b>																				
27.1) GBOSS Advanced Network Components	A		-	-	-	-	-	-	-	-	-	-	-	-	1.826	-	-	-	-	1.826
27.2) MSIDS Imagery Transmission Components	A		-	-	-	-	-	-	-	-	-	-	-	-	1.558	-	-	-	-	1.558
27.3) TRSS Components - Common Sensor Radio (CSR) <sup>(1)</sup>	A		-	-	-	-	-	-	-	-	-	2,500.00	600	1.500	-	-	-	2,500.00	600	1.500
27.4) TRSS Hardware Components (Various)	A		-	-	-	-	-	-	-	-	-	-	-	-	1.558	-	-	-	-	1.558
<i>Subtotal: 27) Terrestrial Collection (121019) - Hardware</i>			-	-	<b>0.000</b>	-	-	-	-	-	-	-	-	-	<b>6.442</b>	-	-	-	-	<b>6.442</b>
<b>28) Prior Years Cumulative Funding</b>																				
28.1) Prior Years Cumulative Funding	A		-	-	299.931	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
<i>Subtotal: 28) Prior Years Cumulative Funding</i>			-	-	<b>299.931</b>	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
<b>Total</b>			-	-	<b>435.037</b>	-	-	<b>108.588</b>	-	-	<b>58.759</b>	-	-	<b>73.848</b>	-	-	-	-	-	<b>73.848</b>

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

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

**Footnotes:**

(1) IBR: FY17-F18 unit cost updated to current contract volume discounted price.

(2) IBR: FY18 Program Support updated to current plan.

(3) CESAS: FY18 decrease for CESAS II unit cost is based on most current activity estimate for new contract award expected Feb 2018.

(4) TSCS: FY18 unit cost for Mod Case 2.0 refresh reflects current procuring activity estimate.

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<b>Exhibit P-40a, Budget Item Justification For Aggregated Items:</b> PB 2019 Navy	<b>Date:</b> February 2018
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 1109N / 04 / 16	<b>P-1 Line Item Number / Title:</b> 4747 / Intelligence Support Equipment

(5) TSCS: TSCS Increment 1 comprises consolidation of previous receivers into a common software defined receiver and procurement of Tactical Servers towards the AAO.

(6) G-BOSS: Funding changes after FY18 reflect the transition of Ground Based Operational Surveillance (GBOSS) to Terrestrial Collection.

(7) MSIDS: Funding changes after FY18 reflect the transition of MAGTF Secondary Imagery Dissemination System (MSIDS) - 122198 to Terrestrial Collection - 121019.

(8) TRSS: Funding changes after FY18 reflect the transition of Tactical Remote Sensor System (TRSS)- 121198 to Terrestrial Collection - 121019.

(9) Terrestrial Collection: In FY19, GBOSS, MSIDS, and TRSS transition to Terrestrial Collection.

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Exhibit P-5a, Procurement History and Planning: PB 2019 Navy									Date: February 2018			
Appropriation / Budget Activity / Budget Sub Activity: 1109N / 04 / 16			P-1 Line Item Number / Title: 4747 / Intelligence Support Equipment					Aggregated Items: Intelligence Support Equipment				
Item Number / Title [DODIC]	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 (\$)	Specs Avail Now?	Date Revision Available	RFP Issue Date
<b>1) Intelligence Analysis System (IAS) (122398) - Hardware</b>												
1.3) Command System, Tactical Tier III <sup>(†)</sup>		2017	SPAWAR / Charleston, SC	C / FFP	Charleston SC	Aug 2017	Aug 2018	2,715	1,781.95	Y		Oct 2016
<b>4) Intelligence Broadcast Receiver (IBR) (122700) - Hardware</b>												
4.1) IBR ENTR Version 4 <sup>(1)</sup>		2017	Army Special Projects Office / Alexandria, VA	MIPR	Alexandria	Mar 2017	Apr 2018	10	38,000.00	Y		Oct 2016
4.1) IBR ENTR Version 4 <sup>(1)</sup>		2018	Army Special Projects Office / Alexandria, VA	MIPR	Alexandria	Dec 2017	Mar 2019	100	38,000.00	Y		Oct 2017
4.1) IBR ENTR Version 4 <sup>(1)</sup>		2019	Army Special Projects Office / Alexandria, VA	MIPR	Alexandria	Dec 2018	Mar 2020	58	38,760.00	Y		Oct 2018
<b>10) Sensitive Compartmented Information Communications (SCI COMMS) (120398) - Hardware</b>												
10.1) HBSI-PT (Palletized)		2017	GATR Technologies / Huntsville, AL	C / FFP	CECOM, Aberdeen, MD	Sep 2017	Jul 2018	11	347,154.00	Y		
10.1) HBSI-PT (Palletized)	✓	2017	GATR Technologies / Huntsville, AL	C / FFP	CECOM, Aberdeen, MD	Sep 2017	Jul 2018	2	347,154.00	Y		
<b>12) Communication Emitter Sensing and Attacking System (CESAS) (360204) - Hardware</b>												
12.1) Ground Electronic Attack System <sup>(3)(†)</sup>		2017	SPAWAR Charleston / Charleston, SC	C / FFP	Charleston, SC	Feb 2017	Sep 2017	7	686,112.00	Y		Aug 2016
12.1) Ground Electronic Attack System <sup>(3)(†)</sup>		2018	SPAWAR Charleston / Charleston, SC	C / FFP	Charleston, SC	Dec 2017	Jul 2018	8	635,000.00	Y		Aug 2017
12.1) Ground Electronic Attack System <sup>(3)</sup>		2019	SPAWAR Charleston / Charleston, SC	C / FFP	Charleston, SC	Feb 2019	Sep 2019	6	635,000.00	Y		Aug 2018
12.2) FY17 Amended Ground Electronic Attack System <sup>(†)</sup>		2017	SPAWAR Charleston / Charleston, SC	C / FFP	Charleston, SC	Sep 2017	Apr 2018	10	686,112.00	Y		
<b>14) Counter Intelligence and Human Intelligence (CI/HUMINT) Equip. Progam (CIHEP) (122698) - H</b>												
14.8) CIHEP Technical Surveillance Countermeasures (TSCM) Equipment		2017	Various / Various	C / CPFF	Various	Aug 2017	May 2018	5	2,530K	Y		
<b>20) Tactical SIGINT Collection System (TSCS) (120514) - Hardware</b>												
20.1) TPCS Mods Block 0 - Workstation		2017	PAWAR / Charleston, SC	C / FFP	Charleston SC	Mar 2017	Jul 2017	3	6,666.67	Y		Jan 2017
20.2) TPCS Modular Case - Combat Equipment Replacement	✓	2017	SPAWAR @Charleston, SC / Charleston, SC	C / FFP	Charleston SC	Apr 2017	Oct 2017	1	100,000.00	Y		Nov 2016
20.3) TPCS Special Purpose Receiver Refresh		2017	SPAWAR @Charleston, SC / Charleston, SC	C / FFP	Charleston SC	Apr 2017	Sep 2017	27	81,477.52	Y		Nov 2016
20.3) TPCS Special Purpose Receiver Refresh	✓	2017	SPAWAR @Charleston, SC / Charleston, SC	C / FFP	Charleston SC	Apr 2017	Sep 2017	2	81,477.52	Y		Nov 2016
20.3) TPCS Special Purpose Receiver Refresh		2018	SPAWAR @Charleston, SC / Charleston, SC	C / FFP	Charleston SC	Mar 2018	Aug 2018	18	82,000.00	Y		Nov 2017

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Exhibit P-5a, Procurement History and Planning: PB 2019 Navy								Date: February 2018				
Appropriation / Budget Activity / Budget Sub Activity: 1109N / 04 / 16			P-1 Line Item Number / Title: 4747 / Intelligence Support Equipment					Aggregated Items: Intelligence Support Equipment				
Item Number / Title [DODIC]	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 (\$)	Specs Avail Now?	Date Revision Available	RFP Issue Date
20.4) RREP Special Purpose Receiver Refresh		2017	SPAWAR @Charleston, SC / Charleston, SC	C / FFP	Charleston SC	Apr 2017	Sep 2017	42	81,750.00	Y		Nov 2016
20.5) TPCS Server Sleeves		2017	SPAWAR @Charleston, SC / Charleston, SC	C / FFP	Charleston SC	Jun 2017	Nov 2017	25	100,000.00	Y		Nov 2016
20.5) TPCS Server Sleeves	✓	2017	SPAWAR @Charleston, SC / Charleston, SC	C / FFP	Charleston SC	Jun 2017	Nov 2017	44	100,000.00	Y		Nov 2016
20.7) TPCS Locate Case	✓	2017	SPAWAR @Charleston, SC / Charleston, SC	C / FFP	Charleston SC	Jan 2017	Jul 2017	1	84,000.00	Y		Jan 2017
20.8) TPCS Wide Band Receiver	✓	2017	SPAWAR @Charleston, SC / Charleston, SC	C / FFP	Charleston SC	Feb 2017	Aug 2017	1	49,000.00	Y		Jan 2017
20.9) Modular Case 2.0 Refresh <sup>(4)</sup>		2018	SPAWAR / Charleston, SC / Charleston, SC	C / FFP	Charleston SC	Apr 2018	Oct 2018	28	145,000.00	Y		Nov 2017
20.10) TSRS DNI Carrier	✓	2017	SPAWAR @Charleston, SC / Charleston, SC	C / FFP	Charleston SC	Feb 2017	Aug 2017	1	109,000.00	Y		Jan 2017
<b>25) Tactical Remote Sensor System (TRSS) (121198) - Hardware</b>												
25.1) TRSS Components - Common Sensor Radio (CSR)		2018	Army Research Lab / Adelphi, MD	C / FFP	Adelphi, MD	Mar 2018	Jun 2018	1,000	2,500.00	Y		Mar 2018
<b>27) Terrestrial Collection (121019) - Hardware</b>												
27.3) TRSS Components - Common Sensor Radio (CSR)		2019	TBD / TBD	C / FFP	TBD	Jun 2019	Sep 2019	600	2,500.00	Y		Mar 2018

(†) indicates the presence of a P-21

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Exhibit P-21, Production Schedule: PB 2019 Navy																					Date: February 2018																
Appropriation / Budget Activity / Budget Sub Activity: 1109N / 04 / 16										P-1 Line Item Number / Title: 4747 / Intelligence Support Equipment										Aggregated Items: Intelligence Support Equipment																	
Items (Units in Each)						Fiscal Year 2017												Fiscal Year 2018																			
O C R O #	M F R Y	SERVICE	PROC QTY	ACCEPT PRIOR TO 1 OCT 2016	BAL DUE AS OF 1 OCT	Calendar Year 2017												Calendar Year 2018												B A L A N C E							
O C R O #	FY					O C T	N O V	D E C	J A N	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								
1) Intelligence Analysis System (IAS) (122398) - Hardware																																					
1.3) Command System, Tactical Tier III																																					
12	2017	NAVY	2,715	0	2,715																									453	453	1,809					
12) Communication Emitter Sensing and Attacking System (CESAS) (360204) - Hardware																																					
12.1) Ground Electronic Attack System <sup>(3)</sup>																															0						
13	2017	NAVY	7	0	7																												0				
13	2018	NAVY	8	0	8																												3	3	2		
12.2) FY17 Amended Ground Electronic Attack System																																0					
						O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P	O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P								

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## **Exhibit P-21, Production Schedule: PB 2019 Navy**

Date: February 2018

**Appropriation / Budget Activity / Budget Sub Activity:**  
1109N / 04 / 16

**P-1 Line Item Number / Title:**  
4747 / Intelligence Support Equipment

### **Aggregated Items:** Intelligence Support Equipment

Items (Units in Each)					Fiscal Year 2019												Fiscal Year 2020												B A L A N C E						
O C O #	M F R #	FY	SERVICE	PROC QTY	ACCEPT PRIOR TO 1 OCT 2018	BAL DUE AS OF 1 OCT	Calendar Year 2019												Calendar Year 2020												B A L A N C E				
							O C T	N O V	D E C	J A N	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					
1) Intelligence Analysis System (IAS) (122398) - Hardware																																			
1.3) Command System, Tactical Tier III																																			
12	2017	NAVY	2,715	906	1,809	453	453	453	450																					0					
12) Communication Emitter Sensing and Attacking System (CESAS) (360204) - Hardware																																			
12.1) Ground Electronic Attack System <sup>(3)</sup>																													0						
13	2017	NAVY	7	7	0																										0				
13	2018	NAVY	8	8	0																										0				
12.2) FY17 Amended Ground Electronic Attack System																														0					
14	2017	NAVY	10	10	0																										0				
						O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P	O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P						

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Exhibit P-21, Production Schedule: PB 2019 Navy										Date: February 2018							
Appropriation / Budget Activity / Budget Sub Activity: 1109N / 04 / 16				P-1 Line Item Number / Title: 4747 / Intelligence Support Equipment						Aggregated Items: Intelligence Support Equipment							
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	SPAWAR - Charleston, SC				0	0	6	6	0	0	0	0	0				
2	SPAWAR Charleston - Charleston, SC		8	15	0	0	7	7	0	0	0	7	7				
3	SPAWAR Charleston - Charleston, SC		8	15	0	0	7	7	0	0	0	7	7				

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

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

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Exhibit P-40, Budget Line Item Justification: PB 2019 Navy										Date: February 2018			
Appropriation / Budget Activity / Budget Sub Activity: 1109N: Procurement, Marine Corps / BA 04: Communications and Electronics Equipment / BSA 16: Intell/Comm Equipment (Non-Tel)					P-1 Line Item Number / Title: 4757 / Unmanned Air Systems								
ID Code (A=Service Ready, B=Not Service Ready): A			Program Elements for Code B Items: N/A				Other Related Program Elements: 0305232M						
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 (\$ in Millions)	110.300	5.793	10.154	3.848	0.000	3.848	34.711	39.845	30.623	21.949	Continuing	Continuing	
Less PY Advance Procurement (\$ in Millions)	-	-	-	-	-	-	-	-	-	-	-	-	
Net Procurement (P-1) (\$ in Millions)	110.300	5.793	10.154	3.848	0.000	3.848	34.711	39.845	30.623	21.949	Continuing	Continuing	
Plus CY Advance Procurement (\$ in Millions)	-	-	-	-	-	-	-	-	-	-	-	-	
<b>Total Obligation Authority (\$ in Millions)</b>	<b>110.300</b>	<b>5.793</b>	<b>10.154</b>	<b>3.848</b>	<b>0.000</b>	<b>3.848</b>	<b>34.711</b>	<b>39.845</b>	<b>30.623</b>	<b>21.949</b>	<b>Continuing</b>	<b>Continuing</b>	
(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)													
Initial Spares (\$ in Millions)	-	-	-	-	-	-	-	-	-	-	-	-	
Flyaway Unit Cost (\$ in Dollars)	-	-	-	-	-	-	-	-	-	-	-	-	
Gross/Weapon System Unit Cost (\$ in Dollars)	-	-	-	-	-	-	-	-	-	-	-	-	
<b>Description:</b>													
The Small Unit Remote Scouting System (SURSS) - The SURSS program procures unmanned aircraft systems (UAS) to provide battalion/company/detachment level units with scalable airborne reconnaissance and surveillance capabilities to aid in detecting, identifying, engaging, or avoiding enemy units. Multiple systems, to include RQ-12 Wasp, RQ-11 Raven, RQ-20 Puma and various Nano/VTOL UAS's are required to meet operational requirements delineated in the Operational Requirements Document. The SURSS program also conducts Field User Evaluations (FUEs) to support Universal Urgent Needs Statements (UUNS) that inform future USMC system procurement and ensure Marines have the most current technology available.													
RQ-12 Wasp (Block 0) - Wasp is a small, all environment UAS with a wingspan of 3.3 feet weight of 2.25 pounds and endurance of 60 minutes. The payload consists of a gimbaled turret with Electro Optical/ Infrared (EO/IR) sensor. It allows maximum portability and provides near real time reconnaissance required by the platoon and rifle squad which reduces the Intelligence, Surveillance, and Reconnaissance (ISR) request-to-response timeframe and eliminates delays or denials for coverage due to an imbalance of unmanned air systems to requests. Wasp is used for remote reconnaissance and surveillance, force protection, convoy security, target acquisition, and battle damage assessment. A Wasp system consists of two air vehicles, two Ground Control Stations (GCSs), and one reconnaissance, surveillance, and target acquisition (RSTA) kit.													
RQ-11 Raven (Block 1) - Raven is a small UAS with a wingspan of 4.6 feet, weight of 5 pounds and endurance of 90 minutes. The Raven employs a gimbaled EO/IR sensor. The Raven can be carried by personnel on foot and provides the company level unit an organic near real time ISR capability that facilitates rapid battlefield decision making. A Raven system consists of three air vehicles, two GCS, and one RSTA kit.													
RQ-20 Puma (Block 2) - Puma is an all environment UAS with a wingspan of 9.2 feet, weight of 13 pounds and endurance of 2.5 hours. The PUMA has demonstrated ranges up to 28 kilometers. The standard payload consists of a gimbaled turret with an EO/IR sensor. A Signals Intelligence payload is also available. The PUMA provides an organic, persistent ISR capability to battalion level units. Additionally, it has been used extensively by Route Clearance Platoons (RCP) and Combat Logistics Patrols (CLP) to enhance force protection and detect Improvised Explosive Devices (IEDs). A Puma system consists of two air vehicles, two GCSs, and one RSTA kit.													
Long Endurance Small UAS - LE SUAS is an organic Group 1-2 UAS operated and maintained by a ground or similar tactical unit. It includes Vertical Take Off and Landing (VTOL) kit capability, quiet electric motor/hybrid fuel cell technology, high definition electro optic/infrared/laser (marker or designator) payload, and long range antenna kit. The air vehicle travels at an altitude of about 500-1000 feet about ground level at an approximate speed													

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<b>Exhibit P-40, Budget Line Item Justification:</b> PB 2019 Navy		<b>Date:</b> February 2018
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 1109N: Procurement, Marine Corps / BA 04: Communications and Electronics Equipment / BSA 16: Intell/Comm Equipment (Non-Tel)		<b>P-1 Line Item Number / Title:</b> 4757 / Unmanned Air Systems
<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> 0305232M
<b>Line Item MDAP/MAIS Code:</b> N/A		
of 35 knots with an endurance of greater than eight hours with a fuel cell, and four hours with battery. It can be launched with an optional VTOL kit or with a launcher system. Mission sets include real-time full motion video for airborne intelligence, surveillance, reconnaissance (AISR), force protection, targeting, pattern of life observation, high value target tracking, control of indirect fires, full motion video to support target analysis, target package development, counter small UAS, spectrum operations (e.g. SIGINT/Cyber/EW) and communications relay/extension. A system consists of three air vehicles, one ground control station, and associated equipment. Additionally, this system and similar organic small UAS require system modifications and integration to adapt for Field User Evaluations (FUE).		

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Exhibit P-40, Budget Line Item Justification: PB 2019 Navy							Date: February 2018		
Appropriation / Budget Activity / Budget Sub Activity:				P-1 Line Item Number / Title:					
1109N: Procurement, Marine Corps / BA 04: Communications and Electronics Equipment / BSA 16: Intell/Comm Equipment (Non-Tel)				4757 / Unmanned Air Systems					
ID Code (A=Service Ready, B=Not Service Ready): A		Program Elements for Code B Items: N/A				Other Related Program Elements: 0305232M			
Line Item MDAP/MAIS Code: 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)
P-5	1 / RQ-11 UAV	P-5a, P-21			- / 110.300	- / 5.793	- / 10.154	- / 3.848	- / 0.000
P-40	Total Gross/Weapon System Cost				- / 110.300	- / 5.793	- / 10.154	- / 3.848	- / 0.000
*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.									
<b>Justification:</b> FY 2018 Base Appropriation Request: \$10.154M \$6.605M procures 26 RQ-20 PUMA systems. \$0.529M procures 31 Single Operator Man-Portable Ground Control Stations, also known as Target Handoff Systems (THS). \$3.020M procures 40 Laser Markers.									
FY 2019 Base Appropriation Request: \$3.848M The FY19 funding will procure the following items: \$2.895M will procure 100 NextGen VTOL Systems, \$.503M will procure 27 Single Operator Man Portable Ground Control Station (SOMGCS/THS), and \$.450M will procure 3 Laser Markers.									
The decrease of \$6.246M from FY18 to FY19 is due to the completion of the RQ-20 Puma AAO (from 26 quantity buys in FY18 to 0 in FY19) and subsequent reduced purchases of integrated Laser Marker components (from 20 quantity buys in FY18 to 3 in FY19) within the Electro-Optical Infrared (EO/IR) payload.									

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<b>Exhibit P-5, Cost Analysis:</b> PB 2019 Navy													<b>Date:</b> February 2018					
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 1109N / 04 / 16			<b>P-1 Line Item Number / Title:</b> 4757 / Unmanned Air Systems										<b>Item Number / Title [DODIC]:</b> 1 / RQ-11 UAV					
<b>ID Code</b> (A=Service Ready, B=Not Service Ready) :													<b>MDAP/MAIS Code:</b>					
<b>Resource Summary</b>				<b>Prior Years</b>			<b>FY 2017</b>		<b>FY 2018</b>		<b>FY 2019 Base</b>		<b>FY 2019 OCO</b>		<b>FY 2019 Total</b>			
Procurement Quantity ( <i>Units in Each</i> )				-			-		-		-		-		-			
Gross/Weapon System Cost (\$ in Millions)				110.300			5.793		10.154		3.848		0.000		3.848			
Less PY Advance Procurement (\$ in Millions)				-			-		-		-		-		-			
Net Procurement (P-1) (\$ in Millions)				110.300			5.793		10.154		3.848		0.000		3.848			
Plus CY Advance Procurement (\$ in Millions)				-			-		-		-		-		-			
<b>Total Obligation Authority</b> (\$ in Millions)				110.300			5.793		10.154		3.848		0.000		3.848			
(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 Dollars)				-			-		-		-		-		-			
Note: Subtotals or Totals in this Exhibit P-5 may not be exact or sum exactly due to rounding.																		
<b>Cost Elements</b>	<b>Prior Years</b>			<b>FY 2017</b>			<b>FY 2018</b>			<b>FY 2019 Base</b>			<b>FY 2019 OCO</b>			<b>FY 2019 Total</b>		
	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)
Hardware - RQ-11 UAV Cost																		
Recurring Cost																		
1.1.1) RQ-20 PUMA <sup>(†)</sup>	-	-	19.664	254,316.00	13	3.306	254,038.50	26	6.605	-	-	-	-	-	-	-	-	
1.1.2) RQ-12 WASP <sup>(†)</sup>	-	-	-	246,239.00	5	1.231	-	-	-	-	-	-	-	-	-	-	-	
1.1.3) Vertical Takeoff and Landing (VTOL) System <sup>(†) (1)</sup>	-	-	-	-	-	-	-	-	28,950.00	100	2.895	-	-	-	28,950.00	100	2.895	
1.1.4) Single Operator Man Portable Ground Control Station (SOMGCS/THS) <sup>(†) (2)</sup>	-	-	-	15,983.33	60	0.959	17,064.52	31	0.529	18,629.63	27	0.503	-	-	-	18,629.63	27	0.503
1.1.5) PUMA SIGINT Payloads <sup>(†)</sup>	-	-	-	74,250.00	4	0.297	-	-	-	-	-	-	-	-	-	-	-	
1.1.6) Laser Marker <sup>(†) (3)</sup>	-	-	-	-	-	-	75,500.00	40	3.020	150,000.00	3	0.450	-	-	-	150,000.00	3	0.450
1.1.7) WASP IV Components	-	-	3.185	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
1.1.8) PUMA Components	-	-	12.425	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
1.1.9) Prior Year Cumulative Funding	-	-	75.026	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
<i>Subtotal: Recurring Cost</i>	-	-	110.300	-	-	5.793	-	-	10.154	-	-	3.848	-	-	-	-	-	3.848
<i>Subtotal: Hardware - RQ-11 UAV Cost</i>	-	-	110.300	-	-	5.793	-	-	10.154	-	-	3.848	-	-	-	-	-	3.848

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Exhibit P-5, Cost Analysis: PB 2019 Navy												Date: February 2018												
Appropriation / Budget Activity / Budget Sub Activity: 1109N / 04 / 16				P-1 Line Item Number / Title: 4757 / Unmanned Air Systems								Item Number / Title [DODIC]: 1 / RQ-11 UAV												
ID Code (A=Service Ready, B=Not Service Ready) :												MDAP/MAIS Code:												
Note: Subtotals or Totals in this Exhibit P-5 may not be exact or sum exactly due to rounding.																								
Cost Elements	Prior Years			FY 2017			FY 2018			FY 2019 Base			FY 2019 OCO			FY 2019 Total								
	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)						
Gross/Weapon System Cost	-	-	110.300	-	-	5.793	-	-	10.154	-	-	3.848	-	-	0.000	-	-	3.848						

(†) indicates the presence of a P-5a

**Footnotes:**

(1) The commercial off the shelf (COTS) VTOL system will provide dispersed Marine Corps units (Companies, Platoons, and Squads) an organic capability to operate in combat zones with significant vertical obstructions such as urban, jungle, and rugged terrains. The Marine Corps is evaluating a series of material solutions via field user assessments and seeks to transition the VTOL capability into the SURSS program of record. Future budget submissions will breakout specific material solutions by quantity and system type.

(2) The Single Operator Man-Portable Ground Control System/Target Handoff System(SOMGCS/THS) provides enhanced opportunities to detect irregular and asymmetric threats in a variety of domains, to include urban domains, providing the warfighter with enhanced situational awareness and understanding. SOMGCS/THS reduces the size, weight, and man power required to operate a SURSS GCS, increases the mobility of the operator, and improves digital interoperability. SOMGCS/THS is fully mobile and can be attached to the operator while the fielded GCS requires setup at a static location. Unit Cost increases from FY18 to FY19 due to technology upgrades in the controller tablets and radio cabling components within the SOMGCS/THS system.

(3) Procures a laser marker integrated within the EO/IR gimbaled payload utilized by the RQ-20 PUMA Block II system as cited in the SURSS ORD dated 9 August 2004. Unit Cost growth is due to the laser marker identified in the PB-18 budget not meeting requirements. This required a different laser marker to be procured. Final cost points are based on total procurement units across DoD services.

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Exhibit P-5a, Procurement History and Planning: PB 2019 Navy								Date: February 2018				
Appropriation / Budget Activity / Budget Sub Activity: 1109N / 04 / 16			P-1 Line Item Number / Title: 4757 / Unmanned Air Systems					Item Number / Title [DODIC]: 1 / RQ-11 UAV				
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 (\$)	Specs Avail Now?	Date Revision Available	RFP Issue Date
1.1.1) RQ-20 PUMA <sup>(†)</sup>		2017	AeroVironment Inc. / Simi Valley, CA	C / IDQ	DLA Troop Support, Philadelphia, PA	Feb 2017	Aug 2017	4	254,316.00	Y		Nov 2016
1.1.1) RQ-20 PUMA <sup>(†)</sup>	✓	2017	AeroVironment Inc. / Simi Valley, CA	C / IDIQ	DLA Troop Support, Philadelphia, PA	Feb 2017	Aug 2017	9	254,316.00	Y		Nov 2016
1.1.1) RQ-20 PUMA <sup>(†)</sup>		2018	AeroVironment Inc. / Simi Valley, CA	C / IDQ	DLA Troop Support, Philadelphia, PA	Feb 2018	Aug 2018	26	254,038.50	Y		Nov 2017
1.1.2) RQ-12 WASP	✓	2017	AeroVironment Inc. / Simi Valley, CA	SS / IDIQ	DLA Troop Support, Philadelphia, PA	Feb 2017	Aug 2017	5	246,239.00	Y		Jan 2017
1.1.3) Vertical Takeoff and Landing (VTOL) System		2019	Physical Science Inc / Andover, MA	C / IDIQ	DLA Troop Support, Philadelphia, PA	Dec 2018	Feb 2019	100	28,950.00	Y		
1.1.4) Single Operator Man Portable Ground Control Station (SOMGCS/THS)		2017 <sup>(4)</sup>	NAWC WD / China Lake, CA	WR	China Lake, CA	Mar 2017	Sep 2017	60	15,983.33	Y		Nov 2016
1.1.4) Single Operator Man Portable Ground Control Station (SOMGCS/THS)		2018	NAWC WD / China Lake, CA	WR	China Lake, CA	Mar 2018	Sep 2018	31	17,064.52	Y		Nov 2017
1.1.4) Single Operator Man Portable Ground Control Station (SOMGCS/THS)		2019	NAWC WD / China Lake, CA	C / TBD	** NO PCO **	Oct 2018	Apr 2019	27	18,629.63	N		
1.1.5) PUMA SIGINT Payloads	✓	2017	Lucent Government Systems / Florham Park, NJ	MIPR	AFRL, Dayton, OH	Feb 2017	Aug 2017	4	74,250.00	Y		Nov 2016
1.1.6) Laser Marker		2018	Controps / Israel	C / IDIQ	DLA Troop Support, Philadelphia, PA	Feb 2018	Aug 2018	40	75,500.00	Y		Sep 2017
1.1.6) Laser Marker		2019	Controps / Israel	C / TBD	** NO PCO **	Oct 2018	Apr 2019	3	150,000.00	N		

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

**Footnotes:**

<sup>(4)</sup> Naval Air Warfare Center, Weapons Division acts as the system integrator. NAWC WD will procure COTS equipment from various vendors and integrate the hardware with the government developed SOMGCS software solution.

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Exhibit P-21, Production Schedule: PB 2019 Navy																				Date: February 2018															
Appropriation / Budget Activity / Budget Sub Activity: 1109N / 04 / 16																				Item Number / Title [DODIC]: 1 / RQ-11 UAV															
Cost Elements (Units in Each)																				Fiscal Year 2017															
O C R O #	M F Y	SERVICE	PROC QTY	ACCEPT PRIOR TO 1 OCT 2016	BAL DUE AS OF 1 OCT	Calendar Year 2017																				Fiscal Year 2018									
1.1.1) RQ-20 PUMA																				Calendar Year 2017															
	1	2017	NAVY	4	0	4		A -	-	-	-	-	-	-	4																	0			
✓	1	2017	NAVY	9	0	9		A -	-	-	-	-	-	-	9																	0			
	1	2018	NAVY	26	0	26																											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 Navy																			Date: February 2018										
Appropriation / Budget Activity / Budget Sub Activity: 1109N / 04 / 16																			P-1 Line Item Number / Title: 4757 / Unmanned Air Systems										
Item Number / Title [DODIC]: 1 / RQ-11 UAV																													
Cost Elements (Units in Each)																			Fiscal Year 2019										
																			Calendar Year 2019										
O C R O #	M F R Y	SERVICE	PROC QTY	ACCEPT PRIOR TO 1 OCT 2018	BAL DUE AS OF 1 OCT	O C T	N O V	D E C	J A N	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
1.1.1) RQ-20 PUMA																													
✓	1	2017	NAVY	4	4	0																							0
	1	2017	NAVY	9	9	0																							0
	1	2018	NAVY	26	26	0																							0

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<b>Exhibit P-21, Production Schedule: PB 2019 Navy</b>								<b>Date:</b> February 2018				
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 1109N / 04 / 16			<b>P-1 Line Item Number / Title:</b> 4757 / Unmanned Air Systems					<b>Item Number / Title [DODIC]:</b> 1 / RQ-11 UAV				
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 Inc. - Simi Valley, CA	6	12	64	0	2	6	8	0	2	6	8

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

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

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Exhibit P-40, Budget Line Item Justification: PB 2019 Navy										Date: February 2018					
Appropriation / Budget Activity / Budget Sub Activity:					P-1 Line Item Number / Title:										
1109N: Procurement, Marine Corps / BA 04: Communications and Electronics Equipment / BSA 16: Intell/Comm Equipment (Non-Tel)					4767 / Distributed Common Ground System (DCGS-MC)										
ID Code (A=Service Ready, B=Not Service Ready): A			Program Elements for Code B Items: N/A					Other Related Program Elements: 0505208M, 0206625M							
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 (\$ in Millions)		47.459	12.531	13.462	16.081	0.000	16.081	16.792	14.230	12.883	15.279	Continuing	Continuing		
Less PY Advance Procurement (\$ in Millions)		-	-	-	-	-	-	-	-	-	-	-	-		
Net Procurement (P-1) (\$ in Millions)		47.459	12.531	13.462	16.081	0.000	16.081	16.792	14.230	12.883	15.279	Continuing	Continuing		
Plus CY Advance Procurement (\$ in Millions)		-	-	-	-	-	-	-	-	-	-	-	-		
<b>Total Obligation Authority (\$ in Millions)</b>		<b>47.459</b>	<b>12.531</b>	<b>13.462</b>	<b>16.081</b>	<b>0.000</b>	<b>16.081</b>	<b>16.792</b>	<b>14.230</b>	<b>12.883</b>	<b>15.279</b>	<b>Continuing</b>	<b>Continuing</b>		
(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)															
Initial Spares (\$ in Millions)		-	-	-	-	-	-	-	-	-	-	-	-		
Flyaway Unit Cost (\$ in Dollars)		-	-	-	-	-	-	-	-	-	-	-	-		
Gross/Weapon System Unit Cost (\$ in Dollars)		-	-	-	-	-	-	-	-	-	-	-	-		
<b>Description:</b>															
Distributed Common Ground/Surface System Marine Corps (DCGS-MC) is a Family of Systems (FoS) providing analysis and production within garrison and deployed Marine Corps organizations. DCGS-MC will comply with the Department of Defense (DoD) DCGS Enterprise interoperability and information sharing requirements by migrating select processing, exploitation, analysis, and production capabilities into a single, integrated, net-centric baseline within the Marine Corps Intelligence, Surveillance and Reconnaissance Enterprise (MCISRE). This baseline will enable MCISRE analysts to deliver tactically focused, operational and strategic intelligence at the tactical edge throughout all phases of operations and will provide relevant, precise decision support for Joint Task Force (JTF), Marine Air Ground Task Force (MAGTF), and subordinate Marine units. The DoD DCGS Enterprise provides worldwide garrison, and forward projection of tactical ISR capabilities at the Joint Task Force (JTF) level and below. The DoD DCGS Enterprise enhances intelligence sharing within the Joint Services, the Intelligence Community, and Coalition Forces throughout all phases of operations. Each individual Military Service DCGS Program of Record provides unique and distinct capabilities to the overall DoD DCGS Enterprise. The DCGS-MC FoS currently consists of Enterprise DCGS Integration Backbone Services (EDS), Tactical Exploitation Group (TEG), Virtual Imagery Processing - Marine Corps (VIP-MC), and Topographic Production Capability (TPC). These capabilities will provide the USMC Geospatial Intelligence (GEOINT) analysts with the ability to process, disseminate, exploit, analyze, and produce intelligence for discoverability via EDS on the DCGS Integrated Backbone (DIB). Future enhancements will include All Source Fusion (ASF) and Signals Intelligence (SIGINT) capabilities. The specific content of each enhancement will be determined by an integrated assessment of user needs, technology readiness, risk mitigation, and affordability.															
Secondary Distribution			FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023				
Navy	Quantity		-	-	-	-	-	-	-	-	-	-			
	Total Obligation Authority		11.998	13.462	16.081	-	16.081	16.792	14.230	12.883	15.279				
NR	Quantity		-	-	-	-	-	-	-	-	-	-			
	Total Obligation Authority		0.533	-	-	-	-	-	-	-	-	-			
Total: Secondary Distribution	Quantity		-	-	-	-	-	-	-	-	-	-			
	Total Obligation Authority		12.531	13.462	16.081	-	16.081	16.792	14.230	12.883	15.279				

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Exhibit P-40, Budget Line Item Justification: PB 2019 Navy							Date: February 2018		
Appropriation / Budget Activity / Budget Sub Activity:				P-1 Line Item Number / Title:					
1109N: Procurement, Marine Corps / BA 04: Communications and Electronics Equipment / BSA 16: Intell/Comm Equipment (Non-Tel)				4767 / Distributed Common Ground System (DCGS-MC)					
ID Code (A=Service Ready, B=Not Service Ready): A			Program Elements for Code B Items: N/A				Other Related Program Elements: 0505208M, 0206625M		
Line Item MDAP/MAIS Code: 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)
P-5	1 / Distributed Common Ground Surface System (DCGS) (120306)				- / 47.459	- / 12.531	- / 13.462	- / 16.081	- / 0.000
P-40	Total Gross/Weapon System Cost				- / 47.459	- / 12.531	- / 13.462	- / 16.081	- / 0.000
*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.									
<b>Justification:</b> FY 2018 Base Appropriation Request: \$13.462M (active)									
Funding will procure a subset of Geospatial (TPC) and Imagery (TEG) hardware assets as part of an incremental equipment refresh. Funding also supports efforts such as Geodetic Survey Sets (GSS) fielding, Commercial Joint Mapping Tool Kit (CJMTK) software integration into DCGS-MC Servers, Advanced Imagery Exploitation Software capability enhancements, as well as ECP's across the DCGS-MC portfolio of systems. Increase of \$.931M from FY17 to FY18 reflects fielding support for GSS and GEOINT hardware and software consolidation efforts.									
FY 2019 Base Appropriation Request: \$16.081M (active)									
Funding is necessary to support GSS fielding and its geospatial intelligence peripheral components, software integration into DCGS-MC Servers, and Common Geospatial Intelligence (GEOINT) hardware and software consolidation efforts as well as ECP's across the DCGS-MC portfolio of systems. Increase of \$2.619M from FY18 to FY19 reflects the procurement of common GEOINT hardware and software consolidation efforts and initial fielding support.									

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<b>Exhibit P-5, Cost Analysis: PB 2019 Navy</b>													<b>Date:</b> February 2018					
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 1109N / 04 / 16			<b>P-1 Line Item Number / Title:</b> 4767 / Distributed Common Ground System (DCGS-MC)										<b>Item Number / Title [DODIC]:</b> 1 / Distributed Common Ground Surface System (DCGS) (120306)					
<b>ID Code</b> (A=Service Ready, B=Not Service Ready) :													<b>MDAP/MAIS Code:</b>					
<b>Resource Summary</b>			<b>Prior Years</b>			<b>FY 2017</b>		<b>FY 2018</b>		<b>FY 2019 Base</b>		<b>FY 2019 OCO</b>		<b>FY 2019 Total</b>				
Procurement Quantity ( <i>Units in Each</i> )			-			-		-		-		-		-				
Gross/Weapon System Cost (\$ in Millions)			47.459			12.531		13.462		16.081		0.000		16.081				
Less PY Advance Procurement (\$ in Millions)			-			-		-		-		-		-				
Net Procurement (P-1) (\$ in Millions)			47.459			12.531		13.462		16.081		0.000		16.081				
Plus CY Advance Procurement (\$ in Millions)			-			-		-		-		-		-				
<b>Total Obligation Authority</b> (\$ in Millions)			<b>47.459</b>			<b>12.531</b>		<b>13.462</b>		<b>16.081</b>		<b>0.000</b>		<b>16.081</b>				
(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)																		
Initial Spares (\$ in Millions)			-			-		-		-		-		-				
Gross/Weapon System Unit Cost (\$ in Dollars)			-			-		-		-		-		-				
Note: Subtotals or Totals in this Exhibit P-5 may not be exact or sum exactly due to rounding.																		
<b>Cost Elements</b>	<b>Prior Years</b>			<b>FY 2017</b>			<b>FY 2018</b>			<b>FY 2019 Base</b>			<b>FY 2019 OCO</b>			<b>FY 2019 Total</b>		
	<b>Unit Cost</b> (\$)	<b>Qty</b> ( <i>Each</i> )	<b>Total Cost</b> (\$ M)	<b>Unit Cost</b> (\$)	<b>Qty</b> ( <i>Each</i> )	<b>Total Cost</b> (\$ M)	<b>Unit Cost</b> (\$)	<b>Qty</b> ( <i>Each</i> )	<b>Total Cost</b> (\$ M)	<b>Unit Cost</b> (\$)	<b>Qty</b> ( <i>Each</i> )	<b>Total Cost</b> (\$ M)	<b>Unit Cost</b> (\$)	<b>Qty</b> ( <i>Each</i> )	<b>Total Cost</b> (\$ M)	<b>Unit Cost</b> (\$)	<b>Qty</b> ( <i>Each</i> )	<b>Total Cost</b> (\$ M)
Hardware Cost																		
Recurring Cost																		
1.1.1) GEOINT H/W VIP-MC	-	-	-	-	-	-	-	-	0.300	-	-	-	-	-	-	-	-	
1.1.2) Enterprise DIB Service (EDS) Solution	-	-	8.492	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
1.1.3) GEOINT H/W	-	-	-	-	-	-	-	-	9.578	-	-	9.935	-	-	-	-	9.935	
1.1.4) (PB17-A) TPC Hardware	-	-	-	-	-	2.500	-	-	-	-	-	-	-	-	-	-	-	
1.1.5) TEG RWS HW	-	-	-	-	-	3.154	-	-	-	-	-	-	-	-	-	-	-	
1.1.6) Prior Year Funding Total	-	-	8.951	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
<i>Subtotal: Recurring Cost</i>	-	-	<b>17.443</b>	-	-	<b>5.654</b>	-	-	<b>9.878</b>	-	-	<b>9.935</b>	-	-	-	-	<b>9.935</b>	
<i>Subtotal: Hardware Cost</i>	-	-	<b>17.443</b>	-	-	<b>5.654</b>	-	-	<b>9.878</b>	-	-	<b>9.935</b>	-	-	-	-	<b>9.935</b>	
Software Cost																		
Recurring Cost																		
2.1.1) GEOINT Software	-	-	-	-	-	-	-	-	1.728	-	-	2.532	-	-	-	-	2.532	
2.1.2) EDS Software	-	-	-	-	-	0.610	-	-	0.250	-	-	-	-	-	-	-	-	
2.1.3) TEG RWS SW	-	-	-	-	-	3.875	-	-	-	-	-	-	-	-	-	-	-	
2.1.4) Prior Years Funding Total	-	-	2.866	-	-	-	-	-	-	-	-	-	-	-	-	-	-	

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<b>Exhibit P-5, Cost Analysis:</b> PB 2019 Navy													<b>Date:</b> February 2018													
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 1109N / 04 / 16				<b>P-1 Line Item Number / Title:</b> 4767 / Distributed Common Ground System (DCGS-MC)									<b>Item Number / Title [DODIC]:</b> 1 / Distributed Common Ground Surface System (DCGS) (120306)													
<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.																										
<b>Cost Elements</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>Unit Cost</b> (\$)	<b>Qty</b> (Each)	<b>Total Cost</b> (\$ M)	<b>Unit Cost</b> (\$)	<b>Qty</b> (Each)	<b>Total Cost</b> (\$ M)	<b>Unit Cost</b> (\$)	<b>Qty</b> (Each)	<b>Total Cost</b> (\$ M)	<b>Unit Cost</b> (\$)	<b>Qty</b> (Each)	<b>Total Cost</b> (\$ M)	<b>Unit Cost</b> (\$)	<b>Qty</b> (Each)	<b>Total Cost</b> (\$ M)	<b>Unit Cost</b> (\$)	<b>Qty</b> (Each)	<b>Total Cost</b> (\$ M)								
<i>Subtotal: Recurring Cost</i>	-	-	2.866	-	-	4.485	-	-	1.978	-	-	2.532	-	-	-	-	-	2.532								
<i>Subtotal: Software Cost</i>	-	-	2.866	-	-	4.485	-	-	1.978	-	-	2.532	-	-	-	-	-	2.532								
Support Cost																										
3.1) Contractor Support - EDS <sup>(1)</sup>	-	-	5.712	-	-	0.600	-	-	-	-	-	0.750	-	-	-	-	-	0.750								
3.2) Contractor Support - GEOINT <sup>(2)</sup>	-	-	3.573	-	-	-	-	-	-	-	-	2.000	-	-	-	-	-	2.000								
3.3) Support - TPC <sup>(3)</sup>	-	-	3.709	-	-	0.706	-	-	1.606	-	-	0.864	-	-	-	-	-	0.864								
3.4) Contractor Support - VIP-MC	-	-	-	-	-	0.541	-	-	-	-	-	-	-	-	-	-	-	-								
3.5) EDS-Support	-	-	-	-	-	0.545	-	-	-	-	-	-	-	-	-	-	-	-								
3.6) Prior Years Funding Total	-	-	14.156	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-								
<i>Subtotal: Support Cost</i>	-	-	27.150	-	-	2.392	-	-	1.606	-	-	3.614	-	-	-	-	-	3.614								
<b>Gross/Weapon System Cost</b>	-	-	47.459	-	-	12.531	-	-	13.462	-	-	16.081	-	-	-	0.000	-	16.081								

**Footnotes:**

(1) Contractor Support - EDS funding increase of \$0.750 from FY18 to FY19 is required for software integration into DCGS-MC Servers.

(2) Contractor Support - GEOINT funding increase \$2.000M from FY18 to FY19 is required to support GEOINT hardware and software consolidation and fielding efforts.

(3) Support - TPC funding decrease of \$0.742M from FY18 to FY19 reflects fielding schedule of the Geodetic Survey Sets (GSS) in FY18 and FY19. FY19 funds fielding support for remaining GSS and peripherals.

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Exhibit P-40, Budget Line Item Justification: PB 2019 Navy										Date: February 2018					
Appropriation / Budget Activity / Budget Sub Activity:					P-1 Line Item Number / Title:										
1109N: Procurement, Marine Corps / BA 04: Communications and Electronics Equipment / BSA 16: Intell/Comm Equipment (Non-Tel)					4787 / UAS Payloads										
ID Code (A=Service Ready, B=Not Service Ready): A			Program Elements for Code B Items: N/A					Other Related Program Elements: 0305242M							
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 (\$ in Millions)	0.000	14.471	14.193	0.000	0.000	0.000	0.000	0.000	0.000	0.000	-	28.664			
Less PY Advance Procurement (\$ in Millions)	-	-	-	-	-	-	-	-	-	-	-	-			
Net Procurement (P-1) (\$ in Millions)	0.000	14.471	14.193	0.000	0.000	0.000	0.000	0.000	0.000	0.000	-	28.664			
Plus CY Advance Procurement (\$ in Millions)	-	-	-	-	-	-	-	-	-	-	-	-			
<b>Total Obligation Authority (\$ in Millions)</b>	<b>0.000</b>	<b>14.471</b>	<b>14.193</b>	<b>0.000</b>	<b>0.000</b>	<b>0.000</b>	<b>0.000</b>	<b>0.000</b>	<b>0.000</b>	<b>0.000</b>	-	<b>28.664</b>			
(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)															
Initial Spares (\$ in Millions)	-	-	-	-	-	-	-	-	-	-	-	-			
Flyaway Unit Cost (\$ in Dollars)	-	-	-	-	-	-	-	-	-	-	-	-			
Gross/Weapon System Unit Cost (\$ in Dollars)	-	-	-	-	-	-	-	-	-	-	-	-			
<b>Description:</b>															
In FY19, this effort is being consolidated into Program of Record (POR) RQ-21A Blackjack. Funding for BLI 4787 Procurement Marine Corps transitions to BLI 0444 Aircraft Procurement, Navy (AP,N).															
The Unmanned Aerial Systems (UAS) Payloads integration program will alleviate Marine Corps Intelligence, Surveillance and Reconnaissance (ISR) capability gaps caused by rapidly changing missions, threats and technologies. It will provide responsive capability to integrate and support rapid fielding of ISR payloads for all UAS within the Marine Corps. Sensor payloads will increase the effectiveness and versatility of the Marine Corps UAS currently planned to have the Electro-Optic(EO) / Infrared (IR) collection, communications relay, and automatic identification capabilities. Upgrades include, but are not limited to, Signals Intelligence (SIGINT)/ Electronic Warfare Support (ES), Synthetic Aperture Radar (SAR) / Moving Target Indicator (MTI), and Wide Area and Hyperspectral Imagery collection.															
In FY18 the UAS Payloads procurement line was expanded to include funding for Marine Corps Group I UAS system intelligence payloads. P-5 cost elements were broken out to reflect the payload procurement in support of Group III and Group I UAS.															
Group I and III SIGINT/ES payloads will fill current capability gaps for the Marine Corps Intelligence, Surveillance and Reconnaissance (ISR) mission and is required as part of the Marine Corps mission to locate and target adversary Signals of Interest (SOI).															
Group I Mobile Ad-hoc Networks (MANET) provide the RQ-11 RAVEN and the RQ-20 PUMA extended communications and data relay, utilizing radios such as the AN/PRC-117G and the ANW2 waveform. MANET provides Marine Corps ground units an organic airborne communication relay which allows the transmission of mission critical intelligence.															
Group III Synthetic Aperture Radar (SAR) with Moving Target Indicator (MTI) will be integrated for Marine Corps small tactical UAS. This capability fills current capability gaps for the ISR mission and will allow Marine Corps ISR assets to locate and track ground targets that cannot effectively be located or tracked with the current ground based sensor technology. The ability to locate and track moving ground targets from small tactical UAVs is an essential capability that facilitates the six functions of Marine Corps Aviation and the Marine Corps ISR Enterprise across the range of military operations.															
Group III Wide Area Persistent Surveillance (WAS) provides the Marine Air Ground Task Force (MAGTF) with organic airborne Wide Area Surveillance. The Wide Area Surveillance (WAS) payload collects and records Electro Optical / Infrared (EO/IR) images over a wide area in order to conduct persistent surveillance of large areas of interest, in near real time, while recording data to enable forensics. The WAS payload will provide the Marine Corps the ability to disseminate multiple high resolution sub-sampled imagery windows to multiple users.															

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<b>Exhibit P-40, Budget Line Item Justification: PB 2019 Navy</b>							<b>Date:</b> February 2018		
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 1109N: Procurement, Marine Corps / BA 04: Communications and Electronics Equipment / BSA 16: Intell/Comm Equipment (Non-Tel)				<b>P-1 Line Item Number / Title:</b> 4787 / UAS Payloads					
<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> 0305242M		
<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>
P-5	1 / UAS Payloads	P-5a			- / 0.000	- / 14.471	- / 14.193	- / 0.000	- / 0.000
P-40	<b>Total Gross/Weapon System Cost</b>				- / 0.000	- / 14.471	- / 14.193	- / 0.000	- / 0.000

\*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:**

FY2018 Base Appropriation Request: \$14.193M

\$14.193M procures 8 Group III Spectral Bat Signals Intelligence (SIGINT) payloads, 6 Group III UAS Synthetic Aperture Radar/Moving Target Indicator (SAR/MTI), 50 Group I UAS SIGINT payloads, and 345 Group I UAS Mobile Ad-Hoc Network (MANET) payloads. The increase of \$11.222M from FY2017 to FY2018 provides newly developed payloads to address capability gaps caused by rapidly changing missions, threats, and technologies. In addition, there was an increase due to the expansion of this BLI to include Group I payloads realigned from BLI 4757 (\$3.951M).

In FY19, this effort is being consolidated into Program of Record (POR) RQ-21A Blackjack. Funding for BLI 4787 Procurement Marine Corps transitions to BLI 0444 Aircraft Procurement, Navy (AP,N).

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Exhibit P-5, Cost Analysis: PB 2019 Navy													Date: February 2018					
Appropriation / Budget Activity / Budget Sub Activity: 1109N / 04 / 16				P-1 Line Item Number / Title: 4787 / UAS Payloads									Item Number / Title [DODIC]: 1 / UAS Payloads					
ID Code (A=Service Ready, B=Not Service Ready) :													MDAP/MAIS Code:					
<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>			
Procurement Quantity ( <i>Units in Each</i> )				-			-		-		-		-		-			
Gross/Weapon System Cost (\$ in Millions)				0.000			14.471		14.193		0.000		0.000		0.000			
Less PY Advance Procurement (\$ in Millions)				-			-		-		-		-		-			
Net Procurement (P-1) (\$ in Millions)				0.000			14.471		14.193		0.000		0.000		0.000			
Plus CY Advance Procurement (\$ in Millions)				-			-		-		-		-		-			
<b>Total Obligation Authority (\$ in Millions)</b>				<b>0.000</b>			<b>14.471</b>		<b>14.193</b>		<b>0.000</b>		<b>0.000</b>		<b>0.000</b>			
(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)																		
Initial Spares (\$ in Millions)				-			-		-		-		-		-			
Gross/Weapon System Unit Cost (\$ in Dollars)				-			-		-		-		-		-			
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 (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)
Hardware Cost																		
Recurring Cost																		
1.1.1) UAS Group I - SIGINT <sup>(†) (1)</sup>	-	-	-	-	-	-	54,240.00	50	2.712	-	-	-	-	-	-	-	-	
1.1.2) UAS Group I - Mobile AdHoc Network (MANET) <sup>(†) (2)</sup>	-	-	-	-	-	-	7,501.45	345	2.588	-	-	-	-	-	-	-	-	
1.1.3) UAS Group III - SIGINT Block 0 <sup>(†) (4)</sup>	-	-	-	495,166.67	6	2.971	-	-	-	-	-	-	-	-	-	-	-	
1.1.4) UAS Group III - SIGINT Block 1 <sup>(†) (3)</sup>	-	-	-	-	-	-	530,833.33	8	4.247	-	-	-	-	-	-	-	-	
1.1.5) UAS Group III - SAR/MTI Payload Block 0 <sup>(†)</sup>	-	-	-	-	-	-	774,400.00	6	4.646	-	-	-	-	-	-	-	-	
1.1.6) Project Minotaur <sup>(4)</sup>	-	-	-	-	-	-	11.500	-	-	-	-	-	-	-	-	-	-	
<i>Subtotal: Recurring Cost</i>	-	-	-	-	-	-	14.471	-	-	14.193	-	-	-	-	-	-	-	
<i>Subtotal: Hardware Cost</i>	-	-	-	-	-	-	<b>14.471</b>	-	-	<b>14.193</b>	-	-	-	-	-	-	-	
<b>Gross/Weapon System Cost</b>	-	-	<b>0.000</b>	-	-	<b>14.471</b>	-	-	<b>14.193</b>	-	-	<b>0.000</b>	-	-	<b>0.000</b>	-	<b>0.000</b>	
(†) indicates the presence of a P-5a																		
Footnotes:																		

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<b>Exhibit P-5, Cost Analysis:</b> PB 2019 Navy		<b>Date:</b> February 2018
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 1109N / 04 / 16	<b>P-1 Line Item Number / Title:</b> 4787 / UAS Payloads	<b>Item Number / Title [DODIC]:</b> 1 / UAS Payloads
<b>ID Code</b> (A=Service Ready, B=Not Service Ready) :		<b>MDAP/MAIS Code:</b>
(1) Group I SIGINT payloads provide the RQ-20 PUMA the capability to locate and target an adversary signal of interest.		
(2) Mobile Ad-Hoc Network (MANET) provide the RQ-11 RAVEN and RQ-20 PUMA extended communications and data relay utilizing radios such as the AN/PRC-117G and the ANW2 waveform. MANET provides the Marine Corps ground units an organic airborne communication relay which allows the transmission of mission critical intelligence.		
(3) The SIGINT Block 1 payload is an incremental capability increase over the Block 0 payload procured in FY17. The Block 1 payload expands the number of signals of interest that can be interrogated at once and increases the frequency range collected.		
(4) Minotaur is a software package that provides multi-intelligence sensor fusion and is integrated on the Tactical Intelligence, Surveillance and Reconnaissance Processing Exploitation and Dissemination System (TIPS) to provide increased capability to TUAVs.		

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Exhibit P-5a, Procurement History and Planning: PB 2019 Navy								Date: February 2018				
Appropriation / Budget Activity / Budget Sub Activity: 1109N / 04 / 16			P-1 Line Item Number / Title: 4787 / UAS Payloads					Item Number / Title [DODIC]: 1 / UAS Payloads				
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 (\$)	Specs Avail Now?	Date Revision Available	RFP Issue Date
1.1.1) UAS Group I - SIGINT		2018	Lucent Government Systems / Florham Park, NJ	MIPR	AFRL, Dayton, OH	Feb 2018	May 2018	50	54,240.00	Y		
1.1.2) UAS Group I - Mobile AdHoc Network (MANET)		2018	Harris Corp / Rochester, NY	MIPR	Army Contracting Command Natick, MA	Apr 2018	Oct 2018	345	7,501.45	Y		Jul 2017
1.1.3) UAS Group III - SIGINT Block 0		2017	Lucent Government Systems / Florham Park, NJ	MIPR	AFRL, Dayton, OH	Jul 2017	Jul 2018	6	495,166.67	Y		
1.1.4) UAS Group III - SIGINT Block 1		2018	Lucent Government Systems / Florham Park, NJ	MIPR	AFRL, Dayton, OH	May 2018	Nov 2018	8	530,833.33	Y		
1.1.5) UAS Group III - SAR/MTI Payload Block 0		2018	ImSAR, LLC / Springville, UT	MIPR	Natick, MA	Apr 2018	Oct 2018	6	774,400.00	Y		

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Exhibit P-40, Budget Line Item Justification: PB 2019 Navy										Date: February 2018					
Appropriation / Budget Activity / Budget Sub Activity:					P-1 Line Item Number / Title:										
1109N: Procurement, Marine Corps / BA 04: Communications and Electronics Equipment / BSA 19: Other Support (Non-Tel)					4625 / Next Generation Enterprise Service										
ID Code (A=Service Ready, B=Not Service Ready): B			Program Elements for Code B Items: N/A					Other Related Program Elements: 0208550M, 0505550M, 0206313M, 0206312M							
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 (\$ in Millions)	119.085	90.180	98.511	87.120	0.000	87.120	84.857	78.967	84.469	86.350	Continuing	Continuing			
Less PY Advance Procurement (\$ in Millions)	-	-	-	-	-	-	-	-	-	-	-	-			
Net Procurement (P-1) (\$ in Millions)	119.085	90.180	98.511	87.120	0.000	87.120	84.857	78.967	84.469	86.350	Continuing	Continuing			
Plus CY Advance Procurement (\$ in Millions)	-	-	-	-	-	-	-	-	-	-	-	-			
<b>Total Obligation Authority (\$ in Millions)</b>	<b>119.085</b>	<b>90.180</b>	<b>98.511</b>	<b>87.120</b>	<b>0.000</b>	<b>87.120</b>	<b>84.857</b>	<b>78.967</b>	<b>84.469</b>	<b>86.350</b>	<b>Continuing</b>	<b>Continuing</b>			
(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)															
Initial Spares (\$ in Millions)	-	-	-	-	-	-	-	-	-	-	-	-			
Flyaway Unit Cost (\$ in Dollars)	-	-	-	-	-	-	-	-	-	-	-	-			
Gross/Weapon System Unit Cost (\$ in Dollars)	-	-	-	-	-	-	-	-	-	-	-	-			
<b>Description:</b>															
Next Generation Enterprise Network (NGEN) is a Department of the Navy (DON) enterprise program (ACAT IAC) which provides secure, net-centric data and services to Navy and Marine Corps personnel. NGEN forms the foundation for the DON's future Naval Networking Environment (NNE), is interoperable with and leverages other DOD provided Net-Centric Enterprise Services and supports the Joint Information Environment (JIE). For the Marine Corps, NGEN is a Government Owned/Government Operated (GO/GO) model augmented by NGEN contractors with the garrison Marine Corps Enterprise Network (MCEN) representing NGEN Marine Corps management domain. NGEN (USMC) supports the Marine Corps Enterprise Network (MCEN) using a regionalized model, executed through Marine Forces Cyberspace Command, Marine Corps Cyberspace Operations Group (formerly Marine Corps Network Operations and Support Center (MCNOSC) and MAGTF IT Support Centers (MITSCs)). The NGEN (USMC) program provides personnel to the field through contractor support for the operation and support of the MCEN Non-secure Internet Protocol Router Network (MCEN-N) and the use of multiple contracts that provide support to the MCEN-N through equipment technical refresh and hardware/software license and warranty generating lifecycle support services enabling Cyber/Information Technology (CYBER/IT) capabilities in accordance with the NGEN Acquisition Strategy. This includes enterprise infrastructure, end-user workstations, service desk, and network operations centers at Marine Corps base/post/stations and regional installation commands CONUS and OCONUS (Hawaii, Japan, Germany, and Korea). The NGEN period of performance began April 2014 and coordination activities are underway for the follow on contract which will begin in FY 2018.															
NGEN will deliver an end-to-end hosting solution to consolidate and replace End-Of-Life (EOL) Hardware/Software (HW/SW) and infrastructure that currently provides enterprise network services (email, file storage, security services, identity management, etc.) to the Marine Corps Enterprise Network NIPRNet (MCEN-N) users (CONUS and OCONUS) and to provide High Availability/Disaster Recovery (HA/DR) capabilities that are not currently available in support of USMC Continuity of Operations requirements. The requirement also includes the delivery of a Wide Area Network (WAN) transport solution based upon the JIE and Joint Regional Security Stack (JRSS) construct to consolidate and replace EOL HW/SW, and infrastructure that currently provides enterprise network WAN transport services to the MCEN-N network users. As the consolidated upgraded solution is developed the program will continue to tech refresh end user devices, servers, routers, switches, network storage, software, initial equipment warranties, and defensive cyberspace capabilities (intrusion prevention systems, firewalls, etc.). The hardware and software for this refresh differs in quantities and costs based on varying requirements including the current pricing, the quantities that are ordered based on hardware/software end of service/life and the operational balance between security and risk management. Tech Refresh includes the design, configuration, functional testing and integration of commercial or non-developmental network solutions to resolve and mitigate network security vulnerabilities in conjunction with insertion of newer technology to improve reliability, improve maintainability, reduce cost, and/or add minor performance enhancement.															
The below descriptions are of each of the cost elements found in the P-5 exhibit, details on the annual increases or decreases can be found in the footnotes for each cost element.															

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<b>Exhibit P-40, Budget Line Item Justification: PB 2019 Navy</b>		<b>Date:</b> February 2018
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 1109N: Procurement, Marine Corps / BA 04: Communications and Electronics Equipment / BSA 19: Other Support (Non-Tel)		<b>P-1 Line Item Number / Title:</b> 4625 / Next Generation Enterprise Service
<b>ID Code</b> (A=Service Ready, B=Not Service Ready): B	<b>Program Elements for Code B Items:</b> N/A	<b>Other Related Program Elements:</b> 0208550M, 0505550M, 0206313M, 0206312M
<b>Line Item MDAP/MAIS Code:</b> N/A		
[P5 / End User Devices Tech Refresh]: The End User Device consists of a laptop for the end user.		
[P5 / Network Equipment Tech Refresh]: Network Equipment Tech Refresh consists of all network and server hardware and software to support the 142,511 end user devices on Next Generation Enterprise Network (NGEN). This includes the design, configuration, functional testing and integration of commercial or non-developmental network solutions to resolve and mitigate network security vulnerabilities. In addition, this cost element includes the insertion of newer technology to improve reliability and maintainability, reduce cost, and/or add minor performance enhancement. The specific quantities and unit prices are determined at the time of procurement during the year of execution and these figures are based on availability of specific end-item warranties and compliance with the Defense Information Systems Agency (DISA) approved products list.		
[P5 / Enterprise Infrastructure Modernization (EIM)]: The EIM project, is a multi-year configuration and integration effort resulting in the technical modernization and consolidation of the enterprise services and transport boundaries for the Marine Corps Enterprise Network (MCEN) for both the NIPR and SIPR environments by conducting incremental implementation of refreshed components and design. EIM will assist in the domain consolidation effort which will assist in reducing the IT footprint for the Marine Corps.		
[P5 / Wireless Local Area Network]: Wireless LAN provides wireless access to MCEN services across hangers and maintenance bays in order to increase readiness across the Marine Corps. Wireless will increase operational readiness of operating forces and decrease maintenance time by allowing the maintainers to connect to technical manuals and maintenance systems while they are working. Currently maintainers must leave their work and go to a kiosk where there is a wired connection. This task starts in FY 2018 and will be completed in three fiscal years.		
[P5 / Network Access Control, Compliance and Remediation (NACCR)]: NACCR is an Abbreviated Acquisition Program (AAP) modification to the NGEN and SONIC Programs of Record (PORs) supporting network access control concept on the MCEN. The NACCR end state solution will provide an integrated capability allowing only authorized and compliant assets connection to the garrison enterprise network. This solution will detect assets in the environment, use 802.1x and Active Directory authentication protocols, as well as a series of compliance checks to ensure that critical software patches, anti-virus/anti-malware definitions and other established compliance criteria are current, generate trouble tickets as required and report compliance standards. Any asset found to be non-compliant of the established criteria will be forced into a partially isolated network segment, where required remediation corrective actions will be taken. Should the automated remediation efforts prove unsuccessful after the prescribed number of attempts; the asset will be forced into a completely isolated network segment until it can be manually brought to the required level of compliance.		

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<b>Exhibit P-40, Budget Line Item Justification: PB 2019 Navy</b>							<b>Date:</b> February 2018																																										
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 1109N: Procurement, Marine Corps / BA 04: Communications and Electronics Equipment / BSA 19: Other Support (Non-Tel)				<b>P-1 Line Item Number / Title:</b> 4625 / Next Generation Enterprise Service																																													
<b>ID Code</b> (A=Service Ready, B=Not Service Ready): B				<b>Program Elements for Code B Items:</b> N/A																																													
<b>Line Item MDAP/MAIS Code:</b> N/A				<b>Other Related Program Elements:</b> 0208550M, 0505550M, 0206313M, 0206312M																																													
<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th colspan="4">Exhibits Schedule</th> <th>Prior Years</th> <th>FY 2017</th> <th>FY 2018</th> <th>FY 2019 Base</th> <th>FY 2019 OCO</th> <th>FY 2019 Total</th> </tr> <tr> <th>Exhibit Type</th> <th>Title*</th> <th>Subexhibits</th> <th>ID CD</th> <th>MDAP/MAIS Code</th> <th>Quantity / Total Cost (Each) / (\$ M)</th> </tr> </thead> <tbody> <tr> <td>P-5</td> <td>1 / Next Generation Enterprise Service</td> <td>P-5a, P-21</td> <td></td> <td></td> <td>- / 119.085</td> <td>- / 90.180</td> <td>- / 98.511</td> <td>- / 87.120</td> <td>- / 0.000</td> <td>- / 87.120</td> </tr> <tr> <td><b>P-40</b></td> <td><b>Total Gross/Weapon System Cost</b></td> <td></td> <td></td> <td></td> <td><b>- / 119.085</b></td> <td><b>- / 90.180</b></td> <td><b>- / 98.511</b></td> <td><b>- / 87.120</b></td> <td><b>- / 0.000</b></td> <td><b>- / 87.120</b></td> </tr> </tbody> </table>								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)	P-5	1 / Next Generation Enterprise Service	P-5a, P-21			- / 119.085	- / 90.180	- / 98.511	- / 87.120	- / 0.000	- / 87.120	<b>P-40</b>	<b>Total Gross/Weapon System Cost</b>				<b>- / 119.085</b>	<b>- / 90.180</b>	<b>- / 98.511</b>	<b>- / 87.120</b>	<b>- / 0.000</b>	<b>- / 87.120</b>
Exhibits Schedule				Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total																																								
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P-5	1 / Next Generation Enterprise Service	P-5a, P-21			- / 119.085	- / 90.180	- / 98.511	- / 87.120	- / 0.000	- / 87.120																																							
<b>P-40</b>	<b>Total Gross/Weapon System Cost</b>				<b>- / 119.085</b>	<b>- / 90.180</b>	<b>- / 98.511</b>	<b>- / 87.120</b>	<b>- / 0.000</b>	<b>- / 87.120</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>FY18 Baseline Appropriation Request: \$98.511M funding will procure services, hardware and software supporting end user devices, network infrastructure technical refresh and procurement of Wireless Local Area Network (LAN) equipment. Tech refresh supports the MCEN Unification Campaign Plan, Cyberspace Operations requirements, the Marine Corps' implementation of the Joint Information Environment (JIE), which includes NIPR Installation Processing Nodes (IPN) critical design and site configuration. Tech Refresh includes the design, configuration, functional testing and integration of commercial or non-developmental network solutions to resolve and mitigate network security vulnerabilities in conjunction with insertion of newer technology to improve reliability, improve maintainability, reduce cost, and/or add minor performance enhancement.</p> <p>FY 2019 Baseline Appropriation Request: \$87.120M will ensure the Marine Corps is defending and protecting the Marine Corps Enterprise Network against cyber attacks and vulnerabilities. Funding will procure services, hardware and software supporting end user devices and network infrastructure technical refresh. Tech refresh supports the MCEN Unification Campaign Plan, Cyberspace Operations requirements, the Marine Corps' implementation of the Joint Information Environment (JIE), which includes Enterprise Infrastructure Modernization (EIM) critical design and site configuration. Tech Refresh includes the design, configuration, functional testing and integration of commercial or non-developmental network solutions to resolve and mitigate network security vulnerabilities in conjunction with insertion of newer technology to improve reliability, improve maintainability, reduce cost, and/or add minor performance enhancement. In addition, FY 2019 efforts include the continuation of wireless implementation which will increase operational readiness of operating forces and decrease maintenance time by allowing the maintainers to connect to technical manuals and maintenance systems while they are working. Currently maintainers must leave their work and go to a kiosk where there is a wired connection.</p> <p>Funding decreased \$11.391M from FY 2018 to FY 2019. The Wireless effort decreased by \$2.000M because fewer sites will be outfitted with the wireless capability in FY 2019. In addition there was a net decrease of \$9.391M which was absorbed within the Network Equipment Tech Refresh cost element to reflect the Marine Corps decision to align resources to other requirements.</p> <p>Details for the increase and decreases for each cost element are described in the cost element footnotes.</p>																																																	

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<b>Exhibit P-5, Cost Analysis:</b> PB 2019 Navy												<b>Date:</b> February 2018						
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 1109N / 04 / 19			<b>P-1 Line Item Number / Title:</b> 4625 / Next Generation Enterprise Service									<b>Item Number / Title [DODIC]:</b> 1 / Next Generation Enterprise Service						
<b>ID Code</b> (A=Service Ready, B=Not Service Ready) :												<b>MDAP/MAIS Code:</b>						
<b>Resource Summary</b>				<b>Prior Years</b>		<b>FY 2017</b>		<b>FY 2018</b>		<b>FY 2019 Base</b>		<b>FY 2019 OCO</b>		<b>FY 2019 Total</b>				
Procurement Quantity ( <i>Units in Each</i> )				-		-		-		-		-		-				
Gross/Weapon System Cost (\$ in Millions)				119.085		90.180		98.511		87.120		0.000		87.120				
Less PY Advance Procurement (\$ in Millions)				-		-		-		-		-		-				
Net Procurement (P-1) (\$ in Millions)				119.085		90.180		98.511		87.120		0.000		87.120				
Plus CY Advance Procurement (\$ in Millions)				-		-		-		-		-		-				
<b>Total Obligation Authority</b> (\$ in Millions)				119.085		90.180		98.511		87.120		0.000		87.120				
(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 Dollars)				-		-		-		-		-		-				
Note: Subtotals or Totals in this Exhibit P-5 may not be exact or sum exactly due to rounding.																		
<b>Cost Elements</b>	<b>Prior Years</b>			<b>FY 2017</b>			<b>FY 2018</b>			<b>FY 2019 Base</b>			<b>FY 2019 OCO</b>			<b>FY 2019 Total</b>		
	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)
Hardware Cost																		
Recurring Cost																		
1.1.1) End User Devices Tech Refresh <sup>(1)</sup>	1,050.72	40,970	43.048	1,075.57	33,872	36.432	1,096.51	23,500	25.768	1,287.50	35,628	45.871	-	-	-	1,287.50	35,628	45.871
1.1.2) End User Device Fielding Support <sup>(2)</sup>	-	-	2.924	-	-	3.548	-	-	3.035	-	-	2.525	-	-	-	-	-	2.525
1.1.3) Network Equipment Tech Refresh <sup>(3)</sup>	-	-	49.497	-	-	40.908	-	-	22.781	-	-	0.305	-	-	-	-	-	0.305
1.1.4) Enterprise Infrastructure Modernization (EIM) <sup>(4)</sup>	-	-	11.029	-	-	7.085	-	-	24.421	-	-	21.919	-	-	-	-	-	21.919
1.1.5) Wireless Local Area Network <sup>(5)</sup>	-	-	-	-	-	1.858	-	-	18.000	-	-	16.000	-	-	-	-	-	16.000
<i>Subtotal: Recurring Cost</i>	-	-	106.498	-	-	89.831	-	-	94.005	-	-	86.620	-	-	-	-	-	86.620
Non Recurring Cost																		
1.2.1) Network Access Control, Compliance and Remediation (NACCR) <sup>(6)</sup>	-	-	12.587	-	-	0.349	-	-	4.006	-	-	-	-	-	-	-	-	
<i>Subtotal: Non Recurring Cost</i>	-	-	12.587	-	-	0.349	-	-	4.006	-	-	-	-	-	-	-	-	

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Exhibit P-5, Cost Analysis: PB 2019 Navy													Date: February 2018													
Appropriation / Budget Activity / Budget Sub Activity: 1109N / 04 / 19				P-1 Line Item Number / Title: 4625 / Next Generation Enterprise Service									Item Number / Title [DODIC]: 1 / Next Generation Enterprise Service													
ID Code (A=Service Ready, B=Not Service Ready) :													MDAP/MAIS Code:													
Note: Subtotals or Totals in this Exhibit P-5 may not be exact or sum exactly due to rounding.																										
Cost Elements	Prior Years			FY 2017			FY 2018			FY 2019 Base			FY 2019 OCO			FY 2019 Total										
	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)								
<i>Subtotal: Hardware Cost</i>	-	-	<b>119.085</b>	-	-	<b>90.180</b>	-	-	<b>98.011</b>	-	-	<b>86.620</b>	-	-	-	-	<b>86.620</b>									
Software Cost																										
Recurring Cost																										
2.1.1) Technology Refresh/Software Purchases <sup>(7)</sup>	-	-	-	-	-	-	-	-	0.500	-	-	0.500	-	-	-	-	0.500									
<i>Subtotal: Recurring Cost</i>	-	-	-	-	-	-	-	-	<b>0.500</b>	-	-	<b>0.500</b>	-	-	-	-	<b>0.500</b>									
<i>Subtotal: Software Cost</i>	-	-	-	-	-	-	-	-	<b>0.500</b>	-	-	<b>0.500</b>	-	-	-	-	<b>0.500</b>									
<b>Gross/Weapon System Cost</b>	-	-	<b>119.085</b>	-	-	<b>90.180</b>	-	-	<b>98.511</b>	-	-	<b>87.120</b>	-	-	<b>0.000</b>	-	<b>87.120</b>									

(†) indicates the presence of a P-5a

**Footnotes:**

- (1) Funding increased \$20.103M from FY 2018 to FY 2019 to procure 12,128 additional end user devices. The increase in end user devices (EUD) was caused by the consolidation of all USMC EUDs under the NGEN program of record, the quantity procured starting in FY 2019 (35,628) is representative of one fourth of the entire AAO for USMC EUDs (142,511). Unit costs increase reflects the change from spindle drive to solid state drive, the switch to a solid state drive will increase the reliability of end user devices. FY 2017 increase from PB 2018 to PB 2019 of \$22.489M is due to receipt of an Above Threshold Reprogramming (ATR)for procurement of EUDs in support of WIN 10 implementation.
- (2) Funding decreased \$0.510M from FY 2018 to FY 2019 due decreases in required monthly throughput.
- (3) Funding decreased \$22.781M from FY 2018 to FY 2019 due to the reduction in procuring network infrastructure and shifting resources to higher priority requirements within the program to ensure the network is safe and secure.
- (4) Funding decreased \$2.502M from FY 2018 to FY 2019 due to the shift from hardware procurement to testing.
- (5) Funding decreased \$2.000M from FY 2018 to FY 2019 due to wireless implementation occurring in fewer sites than what occurred in FY 2018.
- (6) Funding decreased \$4.006M from FY 2018 to FY 2019 due to the up front procurement of hardware in FY 2018, NACCR sustainment efforts begin in FY 2019.
- (7) Due to the consolidation of all USMC End User Devices (EUD) under NGEN, NGEN will be required to procure additional software licenses during the tech refresh cycles starting in FY 2018.

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Exhibit P-5a, Procurement History and Planning: PB 2019 Navy								Date: February 2018				
Appropriation / Budget Activity / Budget Sub Activity: 1109N / 04 / 19			P-1 Line Item Number / Title: 4625 / Next Generation Enterprise Service					Item Number / Title [DODIC]: 1 / Next Generation Enterprise Service				
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 (\$)	Specs Avail Now?	Date Revision Available	RFP Issue Date
1.1.1) End User Devices Tech Refresh <sup>(†)</sup>		2017 <sup>(8)</sup>	CDW Government LLC / Vernon Hills, IL	C / FFP	MCSC, Quantico, VA	Feb 2017	Mar 2017	33,872	1,075.57	Y		Feb 2016
1.1.1) End User Devices Tech Refresh <sup>(†)</sup>		2018 <sup>(9)</sup>	TBD <sup>(10)</sup> / TBD	C / FFP	MCSC, Quantico, VAMCSC, Quantico, VA	May 2018	Jun 2018	23,500	1,096.51	Y		
1.1.1) End User Devices Tech Refresh <sup>(†)</sup>		2019 <sup>(11)</sup>	TBD <sup>(10)</sup> / TBD	C / FFP	MCSC, Quantico, VA	Feb 2019	Mar 2019	35,628	1,287.50	Y		

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

**Footnotes:**

(8) Unit cost has been updated to actuals after contract award.

(9) Unit costs have decreased to match the actuals in FY 2016 plus inflation.

(10) The vendor for the FY 2019 tech refresh has not been determined, the vendor will be decided as part of the recompete effort.

(11) Unit costs increase reflects the change from spindle drive to solid state drive, the switch to a solid state drive will increase the reliability of end user devices.

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Exhibit P-21, Production Schedule: PB 2019 Navy																			Date: February 2018															
Appropriation / Budget Activity / Budget Sub Activity:																			Item Number / Title [DODIC]:															
1109N / 04 / 19																			1 / Next Generation Enterprise Service															
Cost Elements (Units in Thousands)																			Fiscal Year 2017															
O C R O #	M F R Y	SERVICE	PROC QTY	ACCEPT PRIOR TO 1 OCT 2016	BAL DUE AS OF 1 OCT	Fiscal Year 2017																			Fiscal Year 2018									
Calendar Year 2017																			Calendar Year 2018															
O C R O #	M F R Y	SERVICE	PROC QTY	ACCEPT PRIOR TO 1 OCT 2016	BAL DUE AS OF 1 OCT	O C T	N O V	D E C	J A N	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	B A L A N C E				
1.1.1) End User Devices Tech Refresh (1)																																		
Prior Years Deliveries: 40970																																		
1	2017	NAVY	33.872	.000	33.872					A -	1.633	1.633	1.634	1.634	1.634	1.634	1.634	5.000	10.000	7.436										.000				
2	2018	NAVY	23.500	.000	23.500																									14.100				
2	2019	NAVY	35.628	.000	35.628																									35.628				

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Exhibit P-21, Production Schedule: PB 2019 Navy																			Date: February 2018																																																																																												
Appropriation / Budget Activity / Budget Sub Activity: 1109N / 04 / 19																			Item Number / Title [DODIC]: 1 / Next Generation Enterprise Service																																																																																												
Cost Elements (Units in Thousands)																			Fiscal Year 2019																																																																																												
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O C R O #	M F R Y	SERVICE	PROC QTY	ACCEPT PRIOR TO 1 OCT 2018	BAL DUE AS OF 1 OCT	Fiscal Year 2019												Fiscal 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																																																																																		
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Prior Years Deliveries: 40970																																																																																																															
1	2017	NAVY	33.872	33.872	.000																									.000																																																																																	
2	2018	NAVY	23.500	9.400	14.100	2.350	2.350	2.350	2.350	2.350	2.350																		.000																																																																																		
2	2019	NAVY	35.628	.000	35.628							A -	2.969	2.969	2.969	2.969	2.969	2.969	2.969	2.969	2.969	2.969	2.969	2.969	2.969	2.969	2.969	.000																																																																																			
O C R O #	M F R Y	SERVICE	PROC QTY	ACCEPT PRIOR TO 1 OCT 2018	BAL DUE AS OF 1 OCT	Fiscal Year 2019												Fiscal 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																																																																																		
1.1.1) End User Devices Tech Refresh (1)																			Calendar Year 2019																																																																																												

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Exhibit P-21, Production Schedule: PB 2019 Navy								Date: February 2018				
Appropriation / Budget Activity / Budget Sub Activity: 1109N / 04 / 19			P-1 Line Item Number / Title: 4625 / Next Generation Enterprise Service					Item Number / Title [DODIC]: 1 / Next Generation Enterprise Service				
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	CDW Government LLC - Vernon Hills, IL				0	0	0	0	0	0	0	0
2	TBD <sup>(10)</sup> - TBD				0	0	0	0	0	0	0	0

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

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

**Footnotes:**

(10) The vendor for the FY 2019 tech refresh has not been determined, the vendor will be decided as part of the recompete effort.

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Exhibit P-40, Budget Line Item Justification: PB 2019 Navy										Date: February 2018					
Appropriation / Budget Activity / Budget Sub Activity:					P-1 Line Item Number / Title:										
1109N: Procurement, Marine Corps / BA 04: Communications and Electronics Equipment / BSA 19: Other Support (Non-Tel)					4630 / Common Computer Resources										
ID Code (A=Service Ready, B=Not Service Ready): A			Program Elements for Code B Items: 0206313M, 0206623M, 0206624M, 0303150M, 0604766M					Other Related Program Elements: N/A							
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 (\$ in Millions)	336.971	43.903	66.894	68.914	0.000	68.914	61.196	47.859	52.880	50.390	Continuing	Continuing			
Less PY Advance Procurement (\$ in Millions)	-	-	-	-	-	-	-	-	-	-	-	-			
Net Procurement (P-1) (\$ in Millions)	336.971	43.903	66.894	68.914	0.000	68.914	61.196	47.859	52.880	50.390	Continuing	Continuing			
Plus CY Advance Procurement (\$ in Millions)	-	-	-	-	-	-	-	-	-	-	-	-			
<b>Total Obligation Authority (\$ in Millions)</b>	<b>336.971</b>	<b>43.903</b>	<b>66.894</b>	<b>68.914</b>	<b>0.000</b>	<b>68.914</b>	<b>61.196</b>	<b>47.859</b>	<b>52.880</b>	<b>50.390</b>	<b>Continuing</b>	<b>Continuing</b>			
(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)															
Initial Spares (\$ in Millions)	-	-	-	-	-	-	-	-	-	-	-	-			
Flyaway Unit Cost (\$ in Thousands)	-	-	-	-	-	-	-	-	-	-	-	-			
Gross/Weapon System Unit Cost (\$ in Thousands)	-	-	-	-	-	-	-	-	-	-	-	-			
<b>Description:</b>															
MARINE CORPS COMMON HARDWARE SUITE (MCHS) provides Commercial-Off-The-Shelf (COTS) laptops, workstations, software, servers and other information technology (IT) hardware to support the Operating Forces and other Marine Corps customers. MCHS provides support for two principal groups: 1) United States Marine Corps (USMC) Tactical and Functional Programs of Record that use COTS IT hardware as part of their fielded systems; and 2) tactical and other Marine Corps customers not supported by Next Generation Enterprise Network (NGEN) such as Marine Corps Forces, Europe; Marine Corps Forces, Korea; Marine Corps Forces, Africa; and stand-alone Marine Corps units and schoolhouses.															
FY17 Programs of Record rolled under MCHS that include: Marine Corps Common Hardware Suite (MCHS), Organization Messaging Service (OMS), AN/TPS-59 Mods, General Purpose Tools and Test Systems (GPTTS), M88A2 Hercules Mod (IRV) (Baseline and Reserves), Formal Schools Technical Refresh (FSTR), Marine Air Ground Task Force (MAGTF) Tactical Warfare Simulation (MTWS), MC Training Info Management System (MCTIMS), Marine Corps Distance Learning (MCDL), Paperless Office/Acquisition (PA, Marine Corps Recruiting Info Support Sys (MCRISS), Specialized Skills Training (SST), Technology Services Organization (TSO).															
Beginning in FY18, the Programs of Record listed above have been moved to their respective BLI's for execution and will not be included under the MCHS Program of Requirements (POR) in this exhibit.															
FORMALIZED SCHOOLS TECHNICAL REFRESH (FSTR) funds and manages the software and IT hardware required to provide a robust and reliable Computer-Based Training (CBT) capability for TECOM schools. Computers used in TECOM classrooms are not funded or managed by HQMC as part of the Marine Corps Enterprise Network (MCEN), and must therefore be funded and managed by the FSTR program. This program standardizes IT equipment for the 812 classrooms throughout TECOM and formalizes the upgrade and refresh process. In order to maintain adequate reliability and software compliance, computers need to be refreshed every four years. FSTR provides reliable hardware, software and network resources to support Marine Corps Programs of Instruction and curriculum, delivered in TECOM formal classrooms. The FSTR program is foundational to realizing the Commandant of the Marine Corps vision of exploiting technology as an enabler to advance Training & Education capabilities.															
MARINE CORPS ENTERPRISE INFORMATION TECHNOLOGY SERVICES (MCEITS) provides an overarching portfolio of capabilities to deliver "Power to the Edge" for the Marine Corps. Born from an effort to establish a Continuity of Operations Plan of Headquarters Marine Corps (HQMC) Automated Information Systems, MCEITS is a unifying framework of both the Net-Centric Enterprise Services to be delivered, and the infrastructure and systems which must be deployed to enable delivery of those services. MCEITS realigns the existing USMC environment of applications, databases, networks, and facilities into an integrated architecture and provides the environment to access enterprise shared data and services while improving operational flexibility responsiveness and effectiveness) to operating forces and the supporting establishment based on a common infrastructure and shared services. MCEITS allows for achievement of architectural standardization, consolidated management, seamless interoperability, and access to															

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<b>Exhibit P-40, Budget Line Item Justification: PB 2019 Navy</b>		<b>Date:</b> February 2018
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 1109N: Procurement, Marine Corps / BA 04: Communications and Electronics Equipment / BSA 19: Other Support (Non-Tel)		<b>P-1 Line Item Number / Title:</b> 4630 / Common Computer Resources
<b>ID Code</b> (A=Service Ready, B=Not Service Ready): A	<b>Program Elements for Code B Items:</b> 0206313M, 0206623M, 0206624M, 0303150M, 0604766M	<b>Other Related Program Elements:</b> N/A
<b>Line Item MDAP/MAIS Code:</b> N/A		
the data residing in our currently fielded applications (business and tactical). MCEITS enables access to enterprise information and provides the ability to collaborate and share information across the business and warfighter domains. MCEITS includes work to rationalize, modernize, virtualize, migrate, and host systems and applications residing in the Marine Corps enterprise information technology center (i.e., data center) located in Kansas City, Missouri. Additionally, MCEITS has a secondary, fail-over site located in Camp Lejeune, North Carolina, a System Integration Environment (SIE), and two Distributed Platforms. Procurement funding provides for various computers, network gear, racks, etc., and associated installation costs.		
MARINE CORPS RECRUITING INFORMATION SUPPORT SYSTEM (MCRISS) is an enterprise level system to automate administrative procedures for the recruiting station operations. This customized automated System, centered on procedures in the Guidebook for Recruiters, Volume I, dramatically improves efficiency and effectiveness in Marine Corps recruiting. Furthermore, Military Entrance Processing Command requires Marine Corps recruiting to provide information in electronic format only. MCRISS is the Marine Corps Recruiting Command's program to manage applicant processing from commitment to accession/commission into the Marine Corps and Marine Corps Reserve. This enterprise approach allows for efficient sharing of information about potential recruits and recruiter screening efforts, yielding a more cost effective process.		
MARINE CORPS CYBERSPACE OPERATIONS GROUP (MCCOG) (formerly MCNOSC) executes Marine Corps Global Information Grid Operations and Marine Corps Defensive Cyber Operations in support of Marine Corps operational requirements in order to enhance freedom of action across all warfighting domains, while denying the efforts of adversaries to degrade or disrupt this advantage through cyberspace. MCCOG is the Network Operations (NETOPS) component of Marine Corps Forces Cyberspace Command and provides network situational awareness, command and control, and technical support to Marine Corps operating forces and supporting establishment organizations, both in garrison and while deployed. MCCOG is the primary DOD Computer Network Defense Service Provider for the U.S. Marine Corps and directs Service actions to prevent and respond to security incidents. The MCCOG delivers numerous enterprise services for the Marine Corps, to include mainframe computer services management, Defense Message System (DMS), DOD Public Key Infrastructure (PKI), and Active Directory/Global Address List. The MCCOG is responsible for the operations and defense of MCEITS, which delivers data center services to the Marine Corps. Finally, MCCOG provides technical expertise to HQMC, Marine Corps Combat Development Command (MCCDC), Marine Corps Systems Command (MCSC), and Marine Corps organizations around the world in support of Information Technology initiatives undertaken within the Marine Corps and DOD. The PMC funding will support Core Competencies in the Computer Networks Defense and Network Ops areas with skilled cyber-warriors (24x7x365). The added responsibilities and network security events have required continued operational employment of current assets and personnel. PMC funding is based on increased mission requirements dictated by DoD/USSTRATCOM/USCYBERCOM Operations to defend the network. The procurement funding will be used to refresh the MCCOG Alternate Network Operations Security Center, USMC Site R refresh, Network Common Operational Picture Tools, Host Based Security Systems, Secure Configuration Compliance Validation Initiative and Secure Configuration Remediation Initiative (SCCVI/SCRI), Intrusion Prevention and scanning tools, Virtual Private Network, and other operations and defense tools.		
SECURE OPERATIONAL NETWORK INFRASTRUCTURE AND COMMUNICATIONS (SONIC) program provides funding to procure and support hardware, software, infrastructure and services necessary to support and improve critical C2 network operations. This funding enables central management of refresh and sustainment of hardware, software, and infrastructure necessary to provide network services on the USMC Garrison SIPRNET. This ensures enterprise architecture goals and standards are established and maintained and takes advantage of quantity-related discounts. The SIPRNET provides Marine Corps garrison forces with a secure digital means to communicate and share data, information, and knowledge at the secret level with dispersed organizations located around the world. SONIC resources the tech refresh of technologically obsolete equipment, shortfalls in network operational capabilities, solutions to resolve and mitigate network security vulnerabilities, and technology insertion for increased SIPRNET capability as expressed by the Marine Corps Forces (MARFORRs). Tech Refresh includes the design, configuration, functional testing and integration of commercial or non-developmental network solutions to resolve and mitigate network security vulnerabilities.		
MARINE CORPS INFORMATION OPERATION PROGRAM (MCIOP) supports DOD capabilities based analysis (CBA) to address emerging Marine Air Ground Task Force C2 program and cyberspace requirements. MCIOP supports Information Operations (IO) Range research/modeling/simulation conducted by Marine Corps Warfighting Lab (MCWL), industry, and/or academia to explore existing and emergent Information Operations initiatives and cyber technologies.		
UNITED STATES MARINE CORPS FORCES CYBERSPACE COMMAND (MARFORCYBER) will procure hardware and software for Deployable Mission Support Systems (DMSS), DMSS kits are maintained with hardware support and software renewals, and refresh perpetual software licenses for DMSS kits.		

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<b>Exhibit P-40, Budget Line Item Justification: PB 2019 Navy</b>							<b>Date:</b> February 2018									
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 1109N: Procurement, Marine Corps / BA 04: Communications and Electronics Equipment / BSA 19: Other Support (Non-Tel)					<b>P-1 Line Item Number / Title:</b> 4630 / Common Computer Resources											
<b>ID Code</b> (A=Service Ready, B=Not Service Ready): A			<b>Program Elements for Code B Items:</b> 0206313M, 0206623M, 0206624M, 0303150M, 0604766M					<b>Other Related Program Elements:</b> N/A								
<b>Line Item MDAP/MAIS Code:</b> N/A																
PAPERLESS ACQUISITION (PA) SYSTEMS is comprised of two programs, Purchase Request Builder (PR Builder) and Standard Procurement System / Procurement Desktop Defense (SPS/PD2). PR Builder is a fully web-based, Mission Assurance Category (MAC) III sensitive business system and SPS/PD2, part of the Joint SPS Acquisition Program, is the USMC's authoritative contracting generation system within the Marine Corps' electronic Systems Business Enterprise. Both of these systems provide system-to-system interface with other DoD financial management systems, which include Standard Accounting, Budgeting, and Reporting System (SABRS), Federal Government's Electronic Document Access system (EDA), and Invoice, Receipt Acceptance and Property Transfer.																
TECHNOLOGY SERVICES ORGANIZATION (TSO):provides development, testing and production hosting environments in support of the Marine Corps enterprise pay, personnel,accounting and financial management systems, to include Marine Corps Total Force System (MCTFS), Marine Online, Marine Corps Orders Resource System (MCORS), Standards Accounting, Budgeting and Reporting System (SABRS) and the Marine Corps Financial Integrated Analysis System (MCFIAS). The TSO also provides complete SDLC activities for these systems as well as development of the Navy, Air Guard and Air Force Reserve Order Writing Systems. The TSO is implementing the Marine Corp's SABRS application to the Department of the Navy.																
<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>						
Navy	Quantity	-	-	-	-	-	-	-	-	-						
	Total Obligation Authority	43.893	66.894	68.914	-	68.914	61.196	47.859	52.880	50.390						
NR	Quantity	-	-	-	-	-	-	-	-	-						
	Total Obligation Authority	0.010	-	-	-	-	-	-	-	-						
<b>Total: Secondary Distribution</b>	<b>Quantity</b>	-	-	-	-	-	-	-	-	-						
	<b>Total Obligation Authority</b>	<b>43.903</b>	<b>66.894</b>	<b>68.914</b>	<b>-</b>	<b>68.914</b>	<b>61.196</b>	<b>47.859</b>	<b>52.880</b>	<b>50.390</b>						

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Exhibit P-40, Budget Line Item Justification: PB 2019 Navy							Date: February 2018		
Appropriation / Budget Activity / Budget Sub Activity:				P-1 Line Item Number / Title:					
1109N: Procurement, Marine Corps / BA 04: Communications and Electronics Equipment / BSA 19: Other Support (Non-Tel)				4630 / Common Computer Resources					
ID Code (A=Service Ready, B=Not Service Ready): A		Program Elements for Code B Items: 0206313M, 0206623M, 0206624M, 0303150M, 0604766M				Other Related Program Elements: N/A			
Line Item MDAP/MAIS Code: 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)
P-40a	Common Computer Resources	P-5a, P-21			- / 336.971	- / 43.902	- / 66.894	- / 68.914	- / -
<b>P-40</b>	<b>Total Gross/Weapon System Cost</b>				<b>- / 336.971</b>	<b>- / 43.903</b>	<b>- / 66.894</b>	<b>- / 68.914</b>	<b>- / 0.000</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. Title represents the P-40a Title when only the P-40a Summary/Total is shown.									
Note: Totals in this Exhibit P-40 set may not be exact or sum exactly due to rounding.									
<b>Justification:</b>									
FY18 Justifications:									
MARINE CORPS COMMON HARDWARE SUITE (MCHS) Programs of Record listed in the description have been moved to their respective BLIs starting in FY18 for execution and will not be included under the MCHS POR in this exhibit (See Program Description for full list of programs).									
Marine Corps Common Hardware (MCHS) FY18 Base Appropriation Request: \$1.514M supports the purchase of Hardware/Software for Marine Forces Europe/Marine Forces Korea (MARFOR/E/MARFOR/K) and the Enterprise Staging & Warehousing effort (ES&W) that includes the receipt, inventory, imaging, kitting and shipping (RIIKS) of IT hardware to MFE/MFA, MFK and OPFORs (shipped in a standard configuration ready to use).									
FORMALIZED SCHOOLS TECHNICAL REFRESH (FSTR) FY18 Base Appropriation Request: \$6.551M funding will support TECOM classroom refresh and tablet procurement. In FY17 funding for Specialized Skill Training (SST) and Formal School Tech Refresh (FSTR) was requested under the MCHS POR in this budget line item.									
SECURE OPERATIONAL NETWORK INFRASTRUCTURE AND COMMUNICATIONS (SONIC) FY18 Base Appropriation Request: \$25.017M will support the refresh of end user equipment and system level infrastructure. Tech refresh of existing equipment including workstations, servers, routers, switches, encryptors and software will be accomplished across the Marine Corps SIPRNET environment and infrastructure.									
MARINE CORPS ENTERPRISE IT SERVICES (MCEITS) FY18 Base Appropriation Request: \$11.036M will continue to support scaling of 1st and 2nd MCEITS IT Center infrastructures to host additional applications planned for migration and to procure hardware for an Application and Development/test environment. Funding will also support Engineering Change Proposal (ECP) procurements for both MCEITS IT Centers.									
MARINE CORPS RECRUITING INFORMATION SUPPORT SYSTEM (MCRISS) FY18 Base Appropriation Request: \$0.049M will provide mission critical software required to support the needs of Marine Corps Recruiting Information Support System.									
MARINE CORPS INFORMATION OPERATION PROGRAM (MCIOP) FY18 Base Appropriation Request: \$0.398M will provide mission critical hardware and software that is specific to the needs of the intelligence environment. Modeling and simulation explores existing and emergent Information Operations (IO) initiatives and cyber technologies.									
PAPERLESS ACQUISITION (PA) SYSTEMS									

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<b>Exhibit P-40, Budget Line Item Justification: PB 2019 Navy</b>		<b>Date:</b> February 2018
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 1109N: Procurement, Marine Corps / BA 04: Communications and Electronics Equipment / BSA 19: Other Support (Non-Tel)		<b>P-1 Line Item Number / Title:</b> 4630 / Common Computer Resources
<b>ID Code</b> (A=Service Ready, B=Not Service Ready): A	<b>Program Elements for Code B Items:</b> 0206313M, 0206623M, 0206624M, 0303150M, 0604766M	<b>Other Related Program Elements:</b> N/A
<b>Line Item MDAP/MAIS Code:</b> N/A		
FY18 Base Appropriation Request: \$0.122M will provide mission critical hardware required to support the needs of Paperless Acquisition Systems such as Standard Procurement System (SPS), Electronic Procurement System (EPS), and Purchase Request Builder (PRB).		
TECHNOLOGY SERVICES ORGANIZATION (TSO) FY18 Base Appropriation request: \$1.305M will support laptop and server refresh to include hardware and software supporting the development of Marine Corps enterprise HRM and Financial Management systems. This Technical refresh/upgrade of SABRS database technology from ADABAS to a newer database architecture provides a modern and well-supported database technology that ultimately enables the normalization of Marine Corps financial data in a true relational database.		
MARINE CORPS CYBERSPACE OPERATIONS GROUP (MCCOG): FY18 Base Appropriation Request: \$3.228M will procure hardware and software for Defensive Cyber Operations Support remote forensics solutions and Hunt Deployable suites. It will also complete the USMC Unified Communications project items such as Distributed Computing Equipment, Video Teleconferencing and Multi-Media Equipment, Network Hardware, Telephone Equipment, and Telepresence Content Server.		
MARFORCYBER: FY18 Base Appropriation Request: \$17.674M of which \$10.022M will complete MARFORCYBER's headquarters MILCON facility on the East Campus at Fort Meade. It will also complete the FY14 MILCON project number P001 items such as Distributed Computing Equipment, Video Teleconferencing and Multi-media Equipment, Network Hardware, Telephone Equipment, Cable Infrastructure, Wireless Center and Operations Center. \$7.652M will procure hardware and software for Deployable Mission Support Systems (DMSS). DMSS kits are maintained with hardware support, software renewals, and refresh perpetual software licenses. DMSS kits are required in order for MARFORCYBER to support Marine units all across the globe.		
The FY 2019 funding request was reduced by (\$.222) million to reflect the Department of Navy's effort to support the Office of Management and Budget directed reforms for Efficiency and Effectiveness that include a lean, accountable, more efficient government.		
FY 2019 Justifications:		
Marine Corps Common Hardware (MCHS) FY19 Base Appropriation Request: \$.934M supports the purchase of Hardware/Software for Marine Forces Europe/Marine Forces Korea (MARFORE/MARFORK)and the Enterprise Staging & Warehousing effort (ES&W) that includes the receipt, inventory, imaging, kitting and shipping (RIIKS) of IT hardware to MFE/MFA, MFK and OPFORs (shipped in a standard configuration ready to use).		
FORMALIZED SCHOOLS TECHNICAL REFRESH (FSTR) FY19 Base Appropriation Request: \$6.764M funding will support TECOM classroom refresh and tablet procurements.		
SECURE OPERATIONAL NETWORK INFRASTRUCTURE AND COMMUNICATIONS (SONIC) FY 2019 Base Appropriation Request: \$13.285M will support the refresh of end user equipment and system level infrastructure. Tech refresh of existing equipment including workstations, servers, routers, switches, encryptors and software will be accomplished across the Marine Corps SIPRNET environment and infrastructure. The \$11.732M decrease from FY 2018 to FY 2019 is due to decrease in hardware tech refresh along with completing the requirement to procure the Classification Marking Tool and Software associated with the increase in End User Devices.		
MARINE CORPS ENTERPRISE IT SERVICES (MCEITS) FY19 Base Appropriation Request: \$25.128M will support technical refresh and domain consolidation for all MCEITS IT Center infrastructures hosting environments. Funding supports additional application migrations and hardware/software procurements for the Application and Development/test environment and sustainment engineering changes. The \$14.092M increase from FY18 to FY19 enables capacity		

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<b>Exhibit P-40, Budget Line Item Justification: PB 2019 Navy</b>		<b>Date:</b> February 2018
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 1109N: Procurement, Marine Corps / BA 04: Communications and Electronics Equipment / BSA 19: Other Support (Non-Tel)		<b>P-1 Line Item Number / Title:</b> 4630 / Common Computer Resources
<b>ID Code</b> (A=Service Ready, B=Not Service Ready): A	<b>Program Elements for Code B Items:</b> 0206313M, 0206623M, 0206624M, 0303150M, 0604766M	<b>Other Related Program Elements:</b> N/A
<b>Line Item MDAP/MAIS Code:</b> N/A		
expansion of the Zone B Application Development and Test environment for Non-MCEITS Hosted applications and systems. It also supports domain consolidation, which will reduce the number of network domains within the Marine Corps Enterprise Network (MCEN), this will increase security and reduce overall operations and sustainment costs.		
<b>MARINE CORPS RECRUITING INFORMATION SUPPORT SYSTEM (MCRISS)</b> FY19 Base Appropriation Request: \$0.362M; Increase in funding (\$0.313M) from FY18 supports mission critical software licenses required to support the Modernization of Marine Corps Recruiting Information Support System.		
<b>MARINE CORPS INFORMATION OPERATION PROGRAM (MCIOP)</b> FY19 Base Appropriation Request: \$0.408M will provide mission critical hardware and software that is specific to the needs of the intelligence environment. Modeling and simulation explores existing and emergent Information Operations (IO) initiatives and cyber technologies. The \$0.010M increase in funding from FY18 to FY19 is due to the hardware refresh schedule.		
<b>PAPERLESS ACQUISITION (PA) SYSTEMS</b> FY19 Base Appropriation Request: \$0.124M will provide mission critical hardware required to support the needs of Paperless Acquisition Systems such as Standard Procurement System (SPS), Electronic Procurement System (EPS), and Purchase Request Builder (PRB).		
<b>TECHNOLOGY SERVICES ORGANIZATION (TSO)</b> FY19 Base Appropriation request: \$0.878M will support laptop and server refresh to include hardware and software supporting the development of Marine Corps enterprise HRM and Financial Management systems.		
<b>MARFORCYBER:</b> FY19 Base Appropriation Request: \$13.348M will procure hardware and software for Deployable Mission Support Systems (DMSS). DMSS kits are maintained with hardware support, software renewals, and refresh perpetual software licenses. DMSS kits are required in order for MARFORCYBER to support Marine Corps units all across the globe. \$8.488M will procure DMSS for MARFORCYBER and \$4.860M will procure DMSS for the Marine Corps Operating Forces. The \$4.326M decrease from FY18 to FY19 is a result of the completion of the MARFORCYBER Headquarters Building, FY14 MILCON Project P001.		

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Exhibit P-40a, Budget Item Justification For Aggregated Items: PB 2019 Navy														Date: February 2018						
Appropriation / Budget Activity / Budget Sub Activity: 1109N / 04 / 19					P-1 Line Item Number / Title: 4630 / Common Computer Resources									Aggregated Items Title: Common Computer Resources						
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 (\$ K)	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)			
<b>1) MARINE CORPS COMMON HARDWARE SUITE (MCHS) &amp; Programs of Record</b>																				
1.1) MCHS End User Devices (1)(†)	A		1.217	58,865	71.635	1.595	9,225	14.714	1.595	435	0.694	1.287	553	0.712	-	-	-	1.287	553	0.712
1.2) MCHS Workstations (†)	A		1.179	18,370	21.667	1.413	1,221	1.725	-	-	-	-	-	-	-	-	-	-	-	
1.3) MCHS Servers (†)	A		8.628	2,396	20.672	7.751	303	2.349	-	-	-	-	-	-	-	-	-	-	-	
1.4) MCHS Other IT Equipment (cables, infrastructure, storage devices, etc) (†)	A		2.630	865	2.275	2.632	112	0.295	-	-	-	-	-	-	-	-	-	-	-	
1.5) Enterprise Staging & Warehousing (ES&W)	A		-	-	0.188	-	-	0.254	-	-	0.220	-	-	0.222	-	-	-	-	0.222	
1.6) MCHS 5th Gen MAGTF Wargaming Devices	A		-	-	-	-	-	-	-	-	0.600	-	-	-	-	-	-	-	-	
<b>Subtotal: 1) MARINE CORPS COMMON HARDWARE SUITE (MCHS) &amp; Programs of Record</b>			-	-	<b>116.437</b>	-	-	<b>19.337</b>	-	-	<b>1.514</b>	-	-	<b>0.934</b>	-	-	-	-	<b>0.934</b>	
<b>2) Formal Schools Technical Refresh (FSTR)</b>																				
2.1) FSTR Refresh (2)	A		-	-	-	-	-	-	-	-	2.551	-	-	2.634	-	-	-	-	2.634	
2.2) FSTR Tablets/ Modernization (3)	A		-	-	-	-	-	-	-	-	4.000	-	-	4.130	-	-	-	-	4.130	
<b>Subtotal: 2) Formal Schools Technical Refresh (FSTR)</b>			-	-	<b>0.000</b>	-	-	-	-	-	<b>6.551</b>	-	-	<b>6.764</b>	-	-	-	-	<b>6.764</b>	
<b>3) MARINE CORPS ENTERPRISE INFORMATION TECHNOLOGY SERVICES (MCEITS) (4)</b>																				
3.1) Kansas City Sys Integration Env (SIE) Scaling (5)	A		-	-	8.477	-	-	0.501	-	-	8.971	-	-	-	-	-	-	-		
3.2) Kansas City Enterprise IT Center Scaling (6)	A		-	-	8.958	-	-	0.700	-	-	0.709	-	-	-	-	-	-	-		
3.3) Kansas City Sys Integration Env (SIE) Refresh (7)	A		-	-	6.166	-	-	0.801	-	-	0.235	-	-	-	-	-	-	-		
3.4) Kansas City Enterprise IT Center Refresh (8)	A		-	-	19.953	-	-	0.400	-	-	0.465	-	-	-	-	-	-	-		
3.5) 2nd Enterprise IT Center Procurement/ Scaling (9)	A		-	-	20.027	-	-	0.552	-	-	0.533	-	-	-	-	-	-	-		

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Exhibit P-40a, Budget Item Justification For Aggregated Items: PB 2019 Navy														Date: February 2018						
Appropriation / Budget Activity / Budget Sub Activity: 1109N / 04 / 19					P-1 Line Item Number / Title: 4630 / Common Computer Resources									Aggregated Items Title: Common Computer Resources						
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)
3.6) 2nd Enterprise IT Center Refresh <sup>(10)</sup>	A		-	-	1.382	-	-	-	-	-	0.123	-	-	-	-	-	-	-	-	-
3.7) Data Center Tech Refresh <sup>(11)</sup>	A		-	-	-	-	-	-	-	-	-	-	-	15.068	-	-	-	-	-	15.068
3.8) Data Center Domain Consolidation <sup>(12)</sup>	A		-	-	-	-	-	-	-	-	-	-	-	10.060	-	-	-	-	-	10.060
<b>Subtotal: 3) MARINE CORPS ENTERPRISE INFORMATION TECHNOLOGY SERVICES (MCEITS)</b>			-	-	<b>64.963</b>	-	-	<b>2.954</b>	-	-	<b>11.036</b>	-	-	<b>25.128</b>	-	-	-	-	-	<b>25.128</b>
<b>4) Marine Corps Cyberspace Operations Group</b>																				
4.1) DMSS	A		1,009.500	2	2.019	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
4.2) Network Operations Infrastructure(Refresh/ Upgrades) <sup>(13)</sup>	A		-	-	50.644	-	-	0.687	-	-	0.028	-	-	3.499	-	-	-	-	-	3.499
4.3) Computer Network Defense	A		-	-	9.473	-	-	1.500	-	-	3.200	-	-	4.184	-	-	-	-	-	4.184
4.4) AltNOSC Infrastructure Upgrade	A		-	-	5.233	-	-	0.467	-	-	-	-	-	-	-	-	-	-	-	
4.5) Command IT Refresh	A		-	-	5.080	-	-	0.643	-	-	-	-	-	-	-	-	-	-	-	
<b>Subtotal: 4) Marine Corps Cyberspace Operations Group</b>			-	-	<b>72.449</b>	-	-	<b>3.297</b>	-	-	<b>3.228</b>	-	-	<b>7.683</b>	-	-	-	-	-	<b>7.683</b>
<b>5) Secure Operational Network Infrastructure and Communications (SONIC) <sup>(14)</sup></b>																				
5.1) End User Devices (15)(t)	A		-	-	12.694	1.075	12,273	13.193	1.097	11,226	12.315	1.287	2,877	3.703	-	-	-	1.287	2,877	3.703
5.2) End User Device Fielding Support	A		-	-	-	-	-	0.289	-	-	0.643	-	-	0.678	-	-	-	-	-	0.678
5.3) Network Devices (16)	A		-	-	-	-	-	-	-	-	2.385	-	-	-	-	-	-	-	-	-
5.4) Network Infrastructure <sup>(17)</sup>	A		-	-	8.007	-	-	0.090	-	-	4.125	-	-	2.061	-	-	-	-	-	2.061
5.5) Cryptographic Equipment <sup>(18)</sup>	A		-	-	0.159	-	-	0.420	-	-	2.228	-	-	-	-	-	-	-	-	-
5.6) Network Modernization <sup>(19)</sup>	A		-	-	23.546	-	-	4.000	-	-	1.000	-	-	6.843	-	-	-	-	-	6.843
5.7) Various Software (20)	A		-	-	0.627	-	-	-	-	-	2.321	-	-	-	-	-	-	-	-	-
<b>Subtotal: 5) Secure Operational Network Infrastructure and Communications (SONIC)</b>			-	-	<b>45.033</b>	-	-	<b>17.992</b>	-	-	<b>25.017</b>	-	-	<b>13.285</b>	-	-	-	-	-	<b>13.285</b>

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Exhibit P-40a, Budget Item Justification For Aggregated Items: PB 2019 Navy															Date: February 2018					
Appropriation / Budget Activity / Budget Sub Activity: 1109N / 04 / 19						P-1 Line Item Number / Title: 4630 / Common Computer Resources									Aggregated Items Title: Common Computer Resources					
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)
<b>6) MARINE CORPS INFORMATION OPERATION PROGRAM (MCIOP)</b>																				
6.1) Workstations	A		-	-	5.345	-	-	0.322	-	-	0.398	-	-	0.408	-	-	-	-	-	0.408
<i>Subtotal: 6) MARINE CORPS INFORMATION OPERATION PROGRAM (MCIOP)</i>			-	-	<b>5.345</b>	-	-	<b>0.322</b>	-	-	<b>0.398</b>	-	-	<b>0.408</b>	-	-	-	-	-	<b>0.408</b>
<b>7) MARINE FORCES CYBER COMMAND</b>																				
7.1) Deployable Mission Support Systems (DMSS) <sup>(21)</sup>	A		-	-	-	-	-	-	-	-	7.652	-	-	13.348	-	-	-	-	-	13.348
7.2) Distributed Computing Equipment	A		-	-	3.518	-	-	-	-	-	1.210	-	-	-	-	-	-	-	-	-
7.3) Video Teleconferencing and Multi-media Equipment	A		-	-	5.946	-	-	-	-	-	2.026	-	-	-	-	-	-	-	-	-
7.4) Network Hardware	A		-	-	6.050	-	-	-	-	-	2.070	-	-	-	-	-	-	-	-	-
7.5) Telephone Equipment	A		-	-	0.230	-	-	-	-	-	0.080	-	-	-	-	-	-	-	-	-
7.6) Cable Infrastructure	A		-	-	3.612	-	-	-	-	-	1.230	-	-	-	-	-	-	-	-	-
7.7) Wireless Center IT Equipment	A		-	-	2.093	-	-	-	-	-	0.710	-	-	-	-	-	-	-	-	-
7.8) Operations Center IT Equipment	A		-	-	-	-	-	-	-	-	2.696	-	-	-	-	-	-	-	-	-
<i>Subtotal: 7) MARINE FORCES CYBER COMMAND</i>			-	-	<b>21.449</b>	-	-	-	-	-	<b>17.674</b>	-	-	<b>13.348</b>	-	-	-	-	-	<b>13.348</b>
<b>8) Paperless Acquisition (PA) Systems</b>																				
8.1) WebMethod Licenses	A		-	-	3.105	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
8.2) Hardware	A		-	-	-	-	-	-	-	-	0.122	-	-	0.124	-	-	-	-	-	0.124
<i>Subtotal: 8) Paperless Acquisition (PA) Systems</i>			-	-	<b>3.105</b>	-	-	-	-	-	<b>0.122</b>	-	-	<b>0.124</b>	-	-	-	-	-	<b>0.124</b>
<b>9) Marine Corps Recruiting Information Support System (MCRISS)</b>																				
9.1) Software	A		-	-	-	-	-	-	-	-	0.049	-	-	0.362	-	-	-	-	-	0.362
<i>Subtotal: 9) Marine Corps Recruiting Information Support System (MCRISS)</i>			-	-	<b>0.000</b>	-	-	-	-	-	<b>0.049</b>	-	-	<b>0.362</b>	-	-	-	-	-	<b>0.362</b>
<b>10) Technology Services Organization (TSO)</b>																				
10.1) Hardware	A		-	-	-	-	-	-	-	-	0.250	-	-	0.250	-	-	-	-	-	0.250
10.2) Laptop Refresh	A		-	-	-	-	-	-	-	-	0.132	-	-	0.132	-	-	-	-	-	0.132
10.3) Tech Refresh	A		-	-	-	-	-	-	-	-	0.468	-	-	0.231	-	-	-	-	-	0.231

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Exhibit P-40a, Budget Item Justification For Aggregated Items: PB 2019 Navy														Date: February 2018						
Appropriation / Budget Activity / Budget Sub Activity: 1109N / 04 / 19					P-1 Line Item Number / Title: 4630 / Common Computer Resources									Aggregated Items Title: Common Computer Resources						
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)
10.4) Various Software	A		-	-	-	-	-	-	-	-	0.455	-	-	0.265	-	-	-	-	-	0.265
<i>Subtotal: 10) Technology Services Organization (TSO)</i>			-	-	0.000	-	-	-	-	-	1.305	-	-	0.878	-	-	-	-	-	0.878
<b>11) Prior Year Cumulative</b>																				
11.1) Prior Year	A		-	-	8.190	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
<i>Subtotal: 11) Prior Year Cumulative</i>			-	-	8.190	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
<b>Total</b>			-	-	<b>336.971</b>	-	-	<b>43.902</b>	-	-	<b>66.894</b>	-	-	<b>68.914</b>	-	-	-	-	-	<b>68.914</b>

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

(†) indicates the presence of a P-5a

**Footnotes:**

- (1) Starting in FY 2019, this cost element was updated to the name End User Devices and the unit costs were updated for FY 2019 to reflect the updated estimate for solid state drive End User Devices.
- (2) Prior to FY18, funding was captured under MCHS cost element.
- (3) Prior to FY18, funding was captured under MCHS cost element.
- (4) Funding in FY 2018 was broken into multiple cost elements for tech refresh for the Kansas City IT Center, starting in FY 2019 these cost elements will be consolidated into a singular tech refresh line.
- (5) In FY19, funding for Kansas City Sys Integration Env (SIE) Scaling is being consolidated into the Data Center Tech Refresh cost element.
- (6) In FY19, funding for Kansas City Sys Integration Env (SIE) Scaling is being consolidated into the Data Center Tech Refresh cost element.
- (7) In FY19, funding for Kansas City Sys Integration Env (SIE) Refresh is being consolidated into the Data Center Tech Refresh cost element.
- (8) In FY19, funding for Kansas City IT Center Refresh is being consolidated into the Data Center Tech Refresh cost element.
- (9) In FY19, funding for 2nd Enterprise IT Center Procurement Scaling is being consolidated into the Data Center Tech Refresh cost element.
- (10) In FY19, funding for 2nd Enterprise IT Center Refresh is being consolidated into the Data Center Tech Refresh cost element.
- (11) In FY 2018 funding was spread across multiple cost elements for tech refresh; however, starting in FY 2019, funding was consolidated into one cost element for tech refresh. Funding increased from FY 2018 to FY 2019, due to the refresh of servers, blades, spares, and increasing of capacity for the data center in Kansas City (EITC1) and Camp Lejeune (EITC2).
- (12) In FY 2019, funding will support domain consolidation in the Kansas City IT Center (KCITC). This will reduce the number of discrete network domains within the Marine Corps Enterprise Network (MCEN), which will increase security and reduce operations and sustainment costs. Funding will procure the infrastructure required to support this effort.
- (13) Increase from FY18 to FY19 is due to increased equipment procurement and technology insertion for defensive cyberspace operations capabilities, DOD Information Network operations and continuity of operations requirements.
- (14) Funds support regular hardware refresh and emerging hardware requirements.
- (15) Starting in FY 2019 the End User Device cost element was broken out to have unit costs along with quantities. The decrease in funding from FY 2018 to FY 2019 was due to the reduction in End User Devices. Unit costs increase reflects the change from spindle drive to solid state drive. Solid state drives will increase the reliability of end user devices.
- (16) Starting in FY 2019, funding which was previously under this cost element was consolidated under the Network Modernization cost element.
- (17) Funding decreased \$2.064M from FY 2018 to FY 2019 due to the schedule of Network Modernization efforts.
- (18) Starting in FY 2019, funding which was previously under this cost element was consolidated under the Network Modernization cost element.
- (19) Funding increased \$5.843M from FY 2018 to FY 2019 is due to the tech refresh of Web Application Firewall and the Outer Router.
- (20) Starting in FY 2019, funding which was previously under this cost element was consolidated under the Network Modernization cost element.
- (21) \$13.348M will procure hardware and software for Deployable Mission Support Systems (DMSS). DMSS kits are maintained with hardware support, software renewals, and refresh perpetual software licenses. DMSS kits are required in order for MARFORCYBER to support Marine Corps units all across the globe. \$8,488 will procure DMSS for MARFORCYBER and \$4,860 will procure DMSS for the Marine Corps Operating Forces.

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Exhibit P-5a, Procurement History and Planning: PB 2019 Navy								Date: February 2018				
Appropriation / Budget Activity / Budget Sub Activity: 1109N / 04 / 19			P-1 Line Item Number / Title: 4630 / Common Computer Resources					Aggregated Items: Common Computer Resources				
Item Number / Title [DODIC]	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
<b>1) MARINE CORPS COMMON HARDWARE SUITE (MCHS) &amp; Programs of Record</b>												
1.1) MCHS End User Devices <sup>(1)</sup>		2016	Various / Various	C / FFP	MCSC, Quantico, VA	Aug 2016	Sep 2016	1,994	1.595	Y		
1.1) MCHS End User Devices <sup>(1)</sup>		2017	Various / Various	C / FFP	MCSC, Quantico, VA	Aug 2017	Sep 2017	7,595	1.595	Y		
1.1) MCHS End User Devices <sup>(1)</sup>	✓	2017	Various / Various	C / FFP	MCSC, Quantico, VA	Aug 2017	Sep 2017	1,630	1.595	Y		
1.1) MCHS End User Devices <sup>(1)</sup>		2018	Various / Various	C / FFP	MCSC, Quantico, VAMCSC, Quantico, VAMCSC, Quantico	Aug 2018	Sep 2018	435	1.595	Y		
1.1) MCHS End User Devices <sup>(1)</sup>		2019 <sup>(22)</sup>	Various / Various	C / TBD	MCSC, Quantico, VAMCSC, Quantico, VA	Aug 2019	Sep 2019	553	1.287	Y		
1.2) MCHS Workstations		2016	Various / Various	C / TBD	MCSC, Quantico, VA	Aug 2016	Sep 2016	825	1.413	N		
1.2) MCHS Workstations		2017	Various / Various	C / TBD	MCSC, Quantico, VA	Aug 2017	Sep 2017	1,221	1.413	N		
1.3) MCHS Servers		2016	Various / Various	C / FFP	MCSC, Quantico, VA	Aug 2016	Sep 2016	306	7.751	Y		
1.3) MCHS Servers		2017	Various / Various	C / FFP	MCSC, Quantico, VA	Aug 2017	Sep 2017	303	7.751	Y		
1.4) MCHS Other IT Equipment (cables, infrastructure, storage devices, etc)		2016	Various / Various	C / FFP	MCSC, Quantico, VA	Aug 2016	Sep 2016	119	2.632	Y		
1.4) MCHS Other IT Equipment (cables, infrastructure, storage devices, etc)		2017	Various / Various	C / FFP	MCSC, Quantico, VA	Aug 2017	Sep 2017	112	2.632	Y		
<b>5) Secure Operational Network Infrastructure and Communications (SONIC)</b>												
5.1) End User Devices <sup>(15)</sup>		2017	TBD <sup>(23)</sup> / TBD	C / TBD	** NO PCO **	Oct 2016	Oct 2016	12,273	1.075	N		
5.1) End User Devices <sup>(15)</sup>		2018	TBD <sup>(23)</sup> / TBD	C / TBD	** NO PCO **	Oct 2017	Oct 2017	11,226	1.097	N		
5.1) End User Devices <sup>(15)(†)</sup>		2019	TBD <sup>(23)</sup> / TBD	C / IDIQ	MCSC, Quantico, VA	Feb 2019	Mar 2019	2,877	1.287	Y		

(†) indicates the presence of a P-21

**Footnotes:**

(22) Unit cost updated to reflects updates to the current unit cost estimate to include the change from spindle drive (status quo) to solid state drive. The switch to a solid state drive will increase the reliability of end user devices.

(23) Vendor will be determined as part of the NGEN recompete scheduled to award in FY 2018.

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Exhibit P-21, Production Schedule: PB 2019 Navy																					Date: February 2018														
Appropriation / Budget Activity / Budget Sub Activity: 1109N / 04 / 19										P-1 Line Item Number / Title: 4630 / Common Computer Resources											Aggregated Items: Common Computer Resources														
Items (Units in Each)						Fiscal Year 2016												Fiscal Year 2017																	
O C R O #	M F R Y	SERVICE	PROC QTY	ACCEPT PRIOR TO 1 OCT 2015	BAL DUE AS OF 1 OCT	O C T	N O V	D E C	J A N	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	B A L A N C E					
5) Secure Operational Network Infrastructure and Communications (SONIC)																																			
5.1) End User Devices (15)						15	2019	NAVY	2,877	0	2,877	2,877																							
						O C T	N O V	D E C	J A N	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 Navy																				Date: February 2018																																						
Appropriation / Budget Activity / Budget Sub Activity: 1109N / 04 / 19										P-1 Line Item Number / Title: 4630 / Common Computer Resources										Aggregated Items: Common Computer Resources																																						
Items (Units in Each)					Fiscal Year 2020															Fiscal Year 2021																																						
O C R O #	M F R Y	SERVICE	PROC QTY	ACCEPT PRIOR TO 1 OCT 2019	BAL DUE AS OF 1 OCT	Calendar Year 2020										Calendar Year 2021										B A L A N C E																																
15	2019	NAVY	2,877	2,013	864	288	288	288		O C T	N O V	D E C	J A N	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	0																								
5) Secure Operational Network Infrastructure and Communications (SONIC)																																																										
5.1) End User Devices (15)																																																										

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<b>Exhibit P-21, Production Schedule: PB 2019 Navy</b>								<b>Date:</b> February 2018				
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 1109N / 04 / 19			<b>P-1 Line Item Number / Title:</b> 4630 / Common Computer Resources					<b>Aggregated Items:</b> Common Computer Resources				
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	TBD <sup>(23)</sup> - TBD				0	0	0	0	0	0	0	0

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

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

**Footnotes:**

(23) Vendor will be determined as part of the NGEN recompete scheduled to award in FY 2018.

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Exhibit P-40, Budget Line Item Justification: PB 2019 Navy										Date: February 2018							
Appropriation / Budget Activity / Budget Sub Activity:					P-1 Line Item Number / Title:												
1109N: Procurement, Marine Corps / BA 04: Communications and Electronics Equipment / BSA 19: Other Support (Non-Tel)					4631 / Command Post Systems												
ID Code (A=Service Ready, B=Not Service Ready): A			Program Elements for Code B Items: N/A					Other Related Program Elements: 0206313M, 0506313M									
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 (\$ in Millions)	720.883	105.153	192.689	124.838	0.000	124.838	108.546	83.407	35.365	35.961	Continuing	Continuing					
Less PY Advance Procurement (\$ in Millions)	-	-	-	-	-	-	-	-	-	-	-	-					
Net Procurement (P-1) (\$ in Millions)	720.883	105.153	192.689	124.838	0.000	124.838	108.546	83.407	35.365	35.961	Continuing	Continuing					
Plus CY Advance Procurement (\$ in Millions)	-	-	-	-	-	-	-	-	-	-	-	-					
<b>Total Obligation Authority (\$ in Millions)</b>	<b>720.883</b>	<b>105.153</b>	<b>192.689</b>	<b>124.838</b>	<b>0.000</b>	<b>124.838</b>	<b>108.546</b>	<b>83.407</b>	<b>35.365</b>	<b>35.961</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 (\$ in Millions)	-	-	-	-	-	-	-	-	-	-	-	-					
Flyaway Unit Cost (\$ in Dollars)	-	-	-	-	-	-	-	-	-	-	-	-					
Gross/Weapon System Unit Cost (\$ in Dollars)	-	-	-	-	-	-	-	-	-	-	-	-					
<b>Description:</b>																	
Networking On The Move (NOTM) - Provides a command and control (C2) capability by integrating tactical data systems with on the move satellite communications (SATCOM) for beyond line-of-sight ability that allows battlefield commanders to have uninterrupted two-way access to digital data, anywhere on the battlefield. NOTM provides Marine Air-Ground Task Force (MAGTF) commanders and staffs with full Common Operational Picture (COP) access, virtually unlimited situational awareness and a powerful ability to issue digital orders (fires, maneuver, planning) to Ground Combat Element (GCE), Air Combat Element (ACE) and Logistics Combat Element (LCE) units at all echelons while on-the-move or at-the-halt. NOTM also provides Marine units the capability to link with and extend Defense Information System Network (DISN) services; SIPRNet, NIPRNet, and Defense Switched Networks (DSN). Integrated full motion video (receipt and retransmission), tactical voice communications plus three options for secure wireless local area network (LAN) connectivity between staff members makes this amphibious capability a crucial asset to all elements of the MAGTF. Currently the USMC has three variants depending on the type of transportation being used; the NOTM, NOTM-Internally Transportable Vehicle (NOTM-ITV), and NOTM-Airborne (NOTM-A).																	
Joint Battle Command - Platform (JBC-P) Family of Systems (FoS) - JBC-P FoS is an Army led ACAT II program of Joint Requirements Oversight Council (JROC) interest formerly known as the Blue Force Tracker (BFT) FoS. It is comprised of L-Band Satellite Communications (SATCOM) and is a digital, battle command information FoS that provides integrated, on the move, timely, relevant Command and Control Situational Awareness (C2SA) information to tactical combat, combat support and combat service support commanders, leaders, and key C2 nodes. JBC-P FoS will provide JROC mandated C2SA convergence across Combat Operations Centers (COC), ground vehicles and dismounted personnel.																	
Global Command and Control System - Tactical Combat Operations System (GCCS-TCO) is the principal tool within the MAGTF for situational awareness through distribution of the Common Tactical Picture (CTP). It supports tactical operations providing information via high speed computer systems in a timely manner and includes the Tactical COP Workstations/Servers. Procurement funding allows for system refresh and replacements to match the program's acquisition objective.																	
Advanced Field Artillery Tactical Data Family of Systems (AFATDS FoS) - AFATDS FoS consists of three programs: AFATDS, Back Up Computer System (BUCS) and Mobile Tactical Shelter (MTS). The AFATDS automates the fire planning, tactical fire direction, and fire support coordination required to support maneuver from the sea and subsequent operations ashore. AFATDS integrates all supporting arms assets within the MAGTF such as mortars, cannon artillery, rockets and missiles, close air support, and naval surface fire support systems. BUCS is a hand-held computer system designed to provide a backup to the AFATDS in computing ballistic firing solutions, as well as provide survey and meteorological functions in support of artillery. Additionally, BUCS is the primary ballistic firing solution system during Ship To Objective Maneuver (STOM) and for the Expeditionary Fire Support System (EFSS). The MTS is a Lightweight Multi-purpose Shelter (LMS) mounted on a High Mobility Multipurpose Wheeled Vehicle (HMMWV) which protects both the AFATDS and operators from the environment. MTS enables rapid emplacement and displacement of fire support elements and provides networked communications on the move. Transition to BLI 4733 in FY19.																	

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<b>Exhibit P-40, Budget Line Item Justification: PB 2019 Navy</b>		<b>Date:</b> February 2018
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 1109N: Procurement, Marine Corps / BA 04: Communications and Electronics Equipment / BSA 19: Other Support (Non-Tel)		<b>P-1 Line Item Number / Title:</b> 4631 / Command Post Systems
<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> 0206313M, 0506313M
<b>Line Item MDAP/MAIS Code:</b> N/A		

Target Hand-Off System (THS) - The THS addresses a Marine Corps operational requirement for a lightweight, handheld, and digital target acquisition engagement coordination system. The THS is interoperable with all Fire Support platforms and Target Locating Devices designed for the Forward Air Controllers (FACs), Forward Observers (FOs), Fire Support Teams (FSTs), Firepower Control Teams (FCTs), Tactical Air Control Parties (TACPs), and Reconnaissance Teams. The THS provides the ability to quickly acquire and digitally prosecute targets in day, night, and near-all-weather visibility conditions, in order to conduct precise and rapid indirect surface fire support, Naval Surface Fire Support (NSFS) and Close Air Support (CAS). Transition to BLI 4733 in FY19.

Marine Corps Information Operation Program (MCIOP) - provides MAGTF commanders and the Marine Corps a responsive and effective full-spectrum information operations (IO) planning and psychological operations delivery capability by means of deployable support teams and a comprehensive general support IO reach-back capability in order to integrate IO into Marine Corps operations. Multiple classification levels require separate Information Technology (IT) infrastructure to support each classification level in accordance with National Security Agency and Defense Intelligence Agency standards. This includes equipment necessary for connecting internal MCIOC IT infrastructure (voice, video, and data) with the existing Marine Corps Base Quantico support infrastructure. Transition to BLI 4620 in FY19.

Combat Operations Center (COC) - AN/TSQ-239(V)1/2/3/4 is a deployable, self-contained, modular, centralized and scalable facility ((V)1 MEF-size, (V)2 MSC/Div-size, (V)3 Regiment-size, (V)4 Battalion-size) which provides digital, shared Command and Control/Situational Awareness functionalities to enhance the Common Operational Picture (COP) for the Command Element, Ground Command Element, Air Combat Element, and Logistics Combat Element. It is a commercial-off-the-shelf integrated hardware solution using unit provided radios, re-hosted tactical data systems, and available Marine Corps prime movers to transport the system.

<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>
Navy	Quantity	-	-	-	-	-	-	-	-	-
	Total Obligation Authority	102.696	191.240	122.680	-	122.680	106.348	80.431	33.086	33.630
NR	Quantity	-	-	-	-	-	-	-	-	-
	Total Obligation Authority	2.457	1.449	2.158	-	2.158	2.198	2.976	2.279	2.331
<b>Total: Secondary Distribution</b>	<b>Quantity</b>	-	-	-	-	-	-	-	-	-
	<b>Total Obligation Authority</b>	<b>105.153</b>	<b>192.689</b>	<b>124.838</b>	<b>-</b>	<b>124.838</b>	<b>108.546</b>	<b>83.407</b>	<b>35.365</b>	<b>35.961</b>

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Exhibit P-40, Budget Line Item Justification: PB 2019 Navy							Date: February 2018			
Appropriation / Budget Activity / Budget Sub Activity: 1109N: Procurement, Marine Corps / BA 04: Communications and Electronics Equipment / BSA 19: Other Support (Non-Tel)				P-1 Line Item Number / Title: 4631 / Command Post Systems						
ID Code (A=Service Ready, B=Not Service Ready): A		Program Elements for Code B Items: N/A			Other Related Program Elements: 0206313M, 0506313M					
<b>Line Item MDAP/MAIS Code:</b> N/A										
<b>Exhibits Schedule</b>				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)	
P-40a	Command Post Systems	P-5a, P-21			- / 720.883	- / 105.153	- / 192.689	- / 124.838	- / -	- / 124.838
<b>P-40</b>	<b>Total Gross/Weapon System Cost</b>				<b>- / 720.883</b>	<b>- / 105.153</b>	<b>- / 192.689</b>	<b>- / 124.838</b>	<b>- / 0.000</b>	<b>- / 124.838</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. Title represents the P-40a Title when only the P-40a Summary/Total is shown.

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

**Justification:**

The FY 2019 funding request was reduced by (\$.250) million to reflect the Department of Navy's effort to support the Office of Management and Budget directed reforms for Efficiency and Effectiveness that include a lean, accountable, more efficient government.

Beginning in FY19, AFATDS and THS funding has been realigned from BLI 4631, COMMAND POST SYSTEMS to BLI 4733, FIRE SUPPORT SYSTEMS. MCIOP funding has been realigned from BLI 4631, COMMAND POST SYSTEMS to BLI 4620, ITEMS UNDER \$5 MILLION (COMM & ELEC). Realignment of efforts to new BLIs in FY 19 and beyond reflects USMC Program Management Office (PMO) reorganization to improve support of USMC OPFOR.

FY2018 Base Appropriation Request: \$186.912M (\$185.463M Active; \$1.449M Reserves)

Networking On The Move (NOTM) \$105.739M Active; \$0.001M Reserves - FY18 funding will support procuring additional follow-on production systems to satisfy the revised Approved Acquisition Objective (AAO) that was approved in the 1st QTR of FY15. In addition, funding will be used for to procure production systems, NOTM-A systems and ancillary equipment, system refreshes, equipment upgrades and production/fielding support.

Global Command and Control System - Tactical Combat Operations (GCCS-TCO) \$2.875M Active; \$0.389M Reserves - FY17 funding will procure 100% technical refresh of "servers" across the operational forces whereas FY18 funding will procure 100% technical refresh of "workstations" (laptops) across the operational forces.

Joint Battle Command - Platform Family of Systems (JBC-P FoS) \$29.740M - FY18 funding continues to provide support for items such as, software and hardware integration, hardware refresh, ancillary equipment, New Equipment Training (NET) and field support, and procures mounted family of computer systems (MFoCS).

Advanced Field Artillery Tactical Data Systems (AFATDS) \$15.520M - FY18 funds procure a modernized, common shelter that fulfills the requirements of the Mobile Tactical Shelter (MTS) and the Target Processing Set (TPS). Funds support critical hardware refresh for a laptop procurement which is essential to ensure AFATDS is windows 10 compliant.

Target Hand-off System (THS) \$22.350M - FY18 will be used to replace AN/PRC-117F radios with AN/PRC-117G radios. This upgrade will enable THS to operate on the ANW2 network providing THS digital interoperability with AFATDS and multiple air platforms that will enable Fires Controllers to perform target acquisition, location, and digital hand-off of targets to air and ground weapon platforms. Realignment of effort to new Budget Line Item (4733) in FY 19 and beyond reflects USMC Program Management Office (PMO) reorganization to improve support of USMC OPFOR.

Marine Corps Information Operation Program (MCIOP) \$0.110M - FY18 funding will provide tactical server refresh.

Combat Operations Center (COC) - \$9.129M Active; \$1.059M Reserves - FY18 funds required for fielding the (V)1-4 hardware refresh in support of a common hardware baseline. Funding will also be used to align the COC software baseline with systems currently hosted within the COC (AFATDS, DDS-M) in order to manage software growth and interoperability. Supporting the existing software baseline is necessary

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<b>Exhibit P-40, Budget Line Item Justification: PB 2019 Navy</b>		<b>Date:</b> February 2018
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 1109N: Procurement, Marine Corps / BA 04: Communications and Electronics Equipment / BSA 19: Other Support (Non-Tel)		<b>P-1 Line Item Number / Title:</b> 4631 / Command Post Systems
<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> 0206313M, 0506313M
<b>Line Item MDAP/MAIS Code:</b> N/A  to maintain Authority To Operate (ATO) and integration with Tactical Service Oriented Architecture (TSOA), Joint Tactical Command Operational Picture (COP) Workstation (JTCW) and Command and Control Personal Computer (C2PC).		
  <b>FY2019 Base Appropriation Request: \$124.838M</b>  Networking On The Move (NOTM) \$92.662M Active; \$0.007M Reserves - Decrease of \$13.071M from FY18 to FY19 is due to completion of System Refresh/Equipment upgrades including Size, Weight, and Power (SWaP) retrofit and Encrypted Full Motion Video Intelligence-Surveillance-Reconnaissance (ISR) Receiver. FY19 procures NOTM production systems, NOTM-A systems, NOTM-ITV systems, system refreshes, equipment upgrades and production/fielding support.  Global Command and Control System - Tactical Combat Operations (GCCS-TCO) \$0.380M Active - Decrease of \$2.884M funding from FY18 to FY19 aligns to procurement schedule. FY19 funding will procure a 3yr JavaBeans Open Source Software (JBoss) software subscription for the Tactical Common Operational Picture (COP) Servers (TCS) which is required for the TCS 6.X software baseline and deployed across the operational forces.  Joint Battle Command - Platform Family of Systems (JBC-P FoS) \$26.021M - FY19 funds will continue support for items such as, software and hardware integration, hardware refresh, ancillary equipment, NET and field support, and procures Mounted Family of Computer Systems (MFoCS). Decrease of \$3.719M from FY18 to FY19 is aligned to the schedule for MFoCS, hardware refresh, and associated fielding support.  Advanced Field Artillery Tactical Data Systems (AFATDS) \$0.000M - FY19 decrease is due to a realignment from Budget Line Item (BLI) 4631 to BLI 4733. Realignment of effort to new BLI in FY 19 and beyond reflects USMC Program Management Office (PMO) reorganization to improve support of USMC OPFOR.  Target Hand-off System (THS) \$0.000M - FY19 decrease is due to a realignment from Budget Line Item (BLI) 4631 to BLI 4733. Realignment of effort to new BLI in FY 19 and beyond reflects USMC Program Management Office (PMO) reorganization to improve support of USMC OPFOR.  Marine Corps Information Operation Program (MCIOP) \$0.000M - FY19 decrease is due to a realignment from Budget Line Item (BLI) 4631 to BLI 4620. Realignment of effort to new BLI in FY 19 and beyond reflects USMC Program Management Office (PMO) reorganization to improve support of USMC OPFOR.  Combat Operations Center (COC) - \$3.617M Active; \$2.151M Reserves - FY19 funds required for hardware refresh supporting existing software baseline. Decrease of \$4.420M from FY18 to FY19 is due to completion of server refresh procurement.  <b>OCO:</b> FY2018 Overseas Contingency Operations (OCO) Request: \$5.777M  Advanced Field Artillery Tactical Data Systems (AFATDS) - \$0.177M - FY18 OCO funds will procure replacement assets pulled from artillery units to be prepositioned on ships.  Networking On The Move (NOTM) \$5.600M - FY18 OCO funds procure NOTM-ITV systems. This equipment is being used in a forward deployed environment as a result of the new Special Purpose Marine Air Ground Task Force (SPMAGTF) Crisis Response mission set. Funds will be used to procure (5) NOTM-ITV variants for use overseas in U.S. Central Command (CENTCOM) and Horn of Africa.		

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Exhibit P-40a, Budget Item Justification For Aggregated Items: PB 2019 Navy														Date: February 2018						
Appropriation / Budget Activity / Budget Sub Activity: 1109N / 04 / 19					P-1 Line Item Number / Title: 4631 / Command Post Systems									Aggregated Items Title: Command Post Systems						
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 (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)
<b>1) MCIOP</b>																				
1.1) Tactical Server Refresh	A		-	-	1.247	-	-	-	-	-	0.110	-	-	-	-	-	-	-	-	
1.2) FABS	A		-	-	-	-	-	1.383	-	-	-	-	-	-	-	-	-	-	-	
<i>Subtotal: 1) MCIOP</i>			-	-	<b>1.247</b>	-	-	<b>1.383</b>	-	-	<b>0.110</b>	-	-	-	-	-	-	-	-	
<b>2) AFATDS</b>																				
2.1) Fielding Support			-	-	7.650	-	-	0.669	-	-	0.800	-	-	-	-	-	-	-	-	
2.2) Mobile Tactical Shelter Modernization	A		-	-	41.955	-	-	1.535	-	-	6.200	-	-	-	-	-	-	-	-	
2.3) Hardware Refresh - Active	A		-	-	9.273	-	-	-	-	-	6.390	-	-	-	-	-	-	-	-	
2.4) Ancillary Hardware Components	A		-	-	1.995	-	-	1.392	-	-	2.307	-	-	-	-	-	-	-	-	
<i>Subtotal: 2) AFATDS</i>			-	-	<b>60.873</b>	-	-	<b>3.596</b>	-	-	<b>15.697</b>	-	-	-	-	-	-	-	-	
<b>3) THS</b>																				
3.1) Hardware Refresh	A		-	-	10.200	-	-	-	-	-	21.770	-	-	-	-	-	-	-	-	
3.2) Hardware/ Software Integration	A		-	-	3.771	-	-	-	-	-	0.580	-	-	-	-	-	-	-	-	
<i>Subtotal: 3) THS</i>			-	-	<b>13.971</b>	-	-	<b>3.596</b>	-	-	<b>22.350</b>	-	-	-	-	-	-	-	-	
<b>4) JBC-P</b>																				
4.1) Mounted Family of Computer Systems (MFoCS) <sup>(1)</sup>	A		-	-	8.083	-	-	23.365	-	-	16.160	-	-	2.932	-	-	-	-	2.932	
4.2) Ancillary Hardware Components	A		-	-	3.204	-	-	2.226	-	-	0.500	-	-	0.500	-	-	-	-	0.500	
4.3) Hardware/ Software Integration, NET and Fielding Support <sup>(2)</sup>			-	-	13.654	-	-	9.767	-	-	8.839	-	-	4.659	-	-	-	-	4.659	
4.4) Hardware Refresh	A		-	-	-	-	-	-	-	-	4.241	-	-	-	-	-	-	-	-	
4.5) Handheld End User Device (HHEUD) Early Capability Release (ECR)	A		-	-	-	-	-	4.954	-	-	-	-	-	-	-	-	-	-	-	
4.7) Joint Light Tactical Vehicle (JLTV) B-Kits <sup>(3)</sup>	A		-	-	-	-	-	-	-	-	-	-	-	17.930	-	-	-	-	17.930	
<i>Subtotal: 4) JBC-P</i>			-	-	<b>24.941</b>	-	-	<b>40.312</b>	-	-	<b>29.740</b>	-	-	<b>26.021</b>	-	-	-	-	<b>26.021</b>	
<b>5) GCCS-TCO</b>																				

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Exhibit P-40a, Budget Item Justification For Aggregated Items: PB 2019 Navy														Date: February 2018						
Appropriation / Budget Activity / Budget Sub Activity: 1109N / 04 / 19					P-1 Line Item Number / Title: 4631 / Command Post Systems									Aggregated Items Title: Command Post Systems						
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 (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)
5.1) Refresh-Reserves	A		-	-	0.253	-	-	0.338	-	-	0.389	-	-	-	-	-	-	-	-	-
5.2) Hardware/Software Refresh	A		-	-	10.159	-	-	5.667	-	-	2.875	-	-	0.380	-	-	-	-	-	0.380
<b>Subtotal: 5) GCCS-TCO</b>			-	-	<b>10.412</b>	-	-	<b>6.005</b>	-	-	<b>3.264</b>	-	-	<b>0.380</b>	-	-	-	-	-	<b>0.380</b>
<b>6) NOTM</b>																				
6.1) NOTM Reserves Refresh	A		-	-	-	-	-	-	-	-	0.001	-	-	0.007	-	-	-	-	-	0.007
6.2) System Refresh/Equipment Upgrades (4)	A		-	-	32.166	-	-	26.033	-	-	34.454	-	-	6.218	-	-	-	-	-	6.218
6.3) Production Systems (5)(t)	A		1,479K	10	14.792	1,513K	17	25.721	1,507K	20	30.140	1,507K	24	36.168	-	-	-	1,507K	24	36.168
6.4) NOTM-A Systems(t)	A		2,154K	4	8.616	-	-	-	2,198K	10	21.980	2,198K	10	21.980	-	-	-	2,198K	10	21.980
6.5) NOTM-A Ancillary Equipment	A		-	-	-	-	-	-	-	-	19.165	-	-	17.096	-	-	-	-	-	17.096
6.6) NOTM-ITV Systems(t)	A		-	-	-	-	-	-	1,120K	5	5.600	1,120K	10	11.200	-	-	-	1,120K	10	11.200
<b>Subtotal: 6) NOTM</b>			-	-	<b>55.574</b>	-	-	<b>51.754</b>	-	-	<b>111.340</b>	-	-	<b>92.669</b>	-	-	-	-	-	<b>92.669</b>
<b>7) COC</b>																				
7.1) Program Management Support (V1-4)			-	-	-	-	-	0.126	-	-	2.051	-	-	2.176	-	-	-	-	-	2.176
7.2) COC Refresh(6)	A		-	-	-	-	-	1.357	-	-	7.078	-	-	1.441	-	-	-	-	-	1.441
7.3) Reserves COC Refresh	A		-	-	-	-	-	0.620	-	-	1.059	-	-	2.151	-	-	-	-	-	2.151
<b>Subtotal: 7) COC</b>			-	-	<b>0.000</b>	-	-	<b>2.103</b>	-	-	<b>10.188</b>	-	-	<b>5.768</b>	-	-	-	-	-	<b>5.768</b>
<b>9) Prior Year Cumulative Funding</b>																				
9.1) Prior Year Cumulative Funding	A		-	-	553.865	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
<b>Subtotal: 9) Prior Year Cumulative Funding</b>			-	-	<b>553.865</b>	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
<b>Total</b>			-	-	<b>720.883</b>	-	-	<b>105.153</b>	-	-	<b>192.689</b>	-	-	<b>124.838</b>	-	-	-	-	-	<b>124.838</b>

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

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

**Footnotes:**

(1) JBC-P: MFoCS \$13.228M decrease from FY18 to FY19 aligns to procurement schedule.

(2) JBC-P: The HW/SW Integration, New Equipment Training and Fielding Support decrease of \$4.180M from FY18 to FY19 reflects completion of refresh fielding.

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<b>Exhibit P-40a, Budget Item Justification For Aggregated Items:</b> PB 2019 Navy		<b>Date:</b> February 2018
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 1109N / 04 / 19	<b>P-1 Line Item Number / Title:</b> 4631 / Command Post Systems	<b>Aggregated Items Title:</b> Command Post Systems
(3) JBC-P increase of \$17.930M outfits JLTV's with B kits required to use JBC-P in JLTVs.		
(4) NOTM: System Refresh/Equipment Upgrades funding increase from FY17 to FY18 reflects Size Weight and Power (SWaP) retrofits and equipment upgrades and engineering change proposals (ECPs) for fielded systems. Decrease from FY18 to FY19 reflects completion of SWaP retrofit and equipment upgrades including Encrypted Full Motion Video Intelligence-Surveillance-Reconnaissance (ISR) Receiver.		
(5) NOTM Production Systems unit cost includes costs associated with Hardware Integration, New Equipment Training and Fielding Support supported via SSC-Lant Atlantic		
(6) COC: Refresh decrease of \$5.637M from FY18 to FY19 reflects completion of server refresh in FY18.		

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Exhibit P-5a, Procurement History and Planning: PB 2019 Navy								Date: February 2018				
Appropriation / Budget Activity / Budget Sub Activity: 1109N / 04 / 19			P-1 Line Item Number / Title: 4631 / Command Post Systems					Aggregated Items: Command Post Systems				
Item Number / Title [DODIC]	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 (\$)	Specs Avail Now?	Date Revision Available	RFP Issue Date
<b>6) NOTM</b>												
6.3) Production Systems <sup>(5)(t)</sup>		2017	Defense Logistic Agency / Philadelphia, PA	Various	Philadelphia, PA	Sep 2017	Dec 2017	17	1,513K	Y		
6.3) Production Systems <sup>(5)(t)</sup>		2018	Defense Logistic Agency / Philadelphia, PA	Various	Philadelphia, PA	Feb 2018	Aug 2018	20	1,507K	N	Jan 2018	
6.3) Production Systems <sup>(5)(t)</sup>		2019	Defense Logistic Agency / Philadelphia, PA	Various	Philadelphia, PA	Feb 2019	Jun 2019	24	1,507K	N	Sep 2018	
6.4) NOTM-A Systems <sup>(†)</sup>		2018	Defense Logistic Agency / Philadelphia, PA	Various	Philadelphia, PA	Mar 2018	Oct 2018	10	2,198K	N	Jan 2018	
6.4) NOTM-A Systems <sup>(†)</sup>		2019	Defense Logistic Agency / Philadelphia, PA	Various	Philadelphia, PA	Mar 2019	Oct 2019	10	2,198K	N	Jan 2018	
6.6) NOTM-ITV Systems <sup>(†)</sup>	✓	2018	Defense Logistic Agency / Philadelphia, PA	Various	Philadelphia, PA	Aug 2018	Apr 2019	5	1,120K	N	Jan 2018	
6.6) NOTM-ITV Systems <sup>(†)</sup>		2019	Defense Logistic Agency / Philadelphia, PA	Various	Philadelphia, PA	Mar 2019	Nov 2019	10	1,120K	N	Jan 2018	

(†) indicates the presence of a P-21

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Exhibit P-21, Production Schedule: PB 2019 Navy																				Date: February 2018																																																																																														
Appropriation / Budget Activity / Budget Sub Activity: 1109N / 04 / 19																				P-1 Line Item Number / Title: 4631 / Command Post Systems																																																																																														
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Exhibit P-21, Production Schedule: PB 2019 Navy																				Date: February 2018																																																																																													
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Exhibit P-21, Production Schedule: PB 2019 Navy									Date: February 2018			
Appropriation / Budget Activity / Budget Sub Activity: 1109N / 04 / 19			P-1 Line Item Number / Title: 4631 / Command Post Systems					Aggregated Items: Command Post Systems				
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		
1	Defense Logistic Agency - Philadelphia, PA		23	40	0	0	3	3	0	0	3	3
2	Defense Logistic Agency - Philadelphia, PA		10	10	0	0	7	7	0	0	7	7
3	Defense Logistic Agency - Philadelphia, PA		10	10	0	0	8	8	0	0	8	8

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

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

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Exhibit P-40, Budget Line Item Justification: PB 2019 Navy										Date: February 2018					
Appropriation / Budget Activity / Budget Sub Activity:					P-1 Line Item Number / Title:										
1109N: Procurement, Marine Corps / BA 04: Communications and Electronics Equipment / BSA 19: Other Support (Non-Tel)					4633 / Radio Systems										
ID Code (A=Service Ready, B=Not Service Ready): A			Program Elements for Code B Items: N/A					Other Related Program Elements: 0206313M, 0605873M, 0506313M							
<b>Line Item MDAP/MAIS Code: 000</b>															
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 (\$ in Millions)	625.088	56.471	38.951	279.680	0.000	279.680	219.930	359.629	509.193	517.817	Continuing	Continuing			
Less PY Advance Procurement (\$ in Millions)	-	-	-	-	-	-	-	-	-	-	-	-			
Net Procurement (P-1) (\$ in Millions)	625.088	56.471	38.951	279.680	0.000	279.680	219.930	359.629	509.193	517.817	Continuing	Continuing			
Plus CY Advance Procurement (\$ in Millions)	-	-	-	-	-	-	-	-	-	-	-	-			
<b>Total Obligation Authority (\$ in Millions)</b>	<b>625.088</b>	<b>56.471</b>	<b>38.951</b>	<b>279.680</b>	<b>0.000</b>	<b>279.680</b>	<b>219.930</b>	<b>359.629</b>	<b>509.193</b>	<b>517.817</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 (\$ in Millions)	-	0.201	0.205	0.207	-	0.207	0.212	0.216	0.220	0.225	Continuing	Continuing			
Flyaway Unit Cost (\$ in Dollars)	-	-	-	-	-	-	-	-	-	-	-	-			
Gross/Weapon System Unit Cost (\$ in Dollars)	-	-	-	-	-	-	-	-	-	-	-	-			
<b>Description:</b>															
This budget line item procures radios, radio systems, satellite communications systems and associated equipment.															
Global Broadcast Service (GBS): GBS is a smart-push/user-pull Satellite Communication (SATCOM) system that provides large volumes of information to deployed, or garrison forces. The AN/TSR-9 receives and disseminates GBS broadcasts at up to 45 Mbps, and is capable of processing both classified and unclassified information products such as: Imagery, Intelligence, Video (NTSC and Digital), Theater message traffic, Joint and service-unique news, Weather and MWR programming. Each Transportable Ground Receive Suite (TGRS) consists of a Receive Terminal (including a 1-meter parabolic dish antenna), Receive Broadcast Manager Server, Power Controller Unit, Crypto (KG-250), Integrated Receiver- Decoder (for NTSC video), Managed Ethernet Switch, Unmanaged Ethernet Switch, Video Converter, and transit cases.															
Very Small Aperture Terminal (VSAT): VSAT provides wideband beyond line-of-sight (BLOS), low-cost satellite communications to Marine Air-Ground Task Force (MAGTF) commands at the Major Subordinate Commands to the Battalion levels. VSAT enables critical voice, video, and data for Command and Control (C2), Fires, Logistics, and Intelligence. VSAT fills a void of BLOS, high bandwidth capability throughout the MAGTF. VSAT systems already support operations on commercial SATCOM bandwidth (Ku). Additional military SATCOM frequencies (Ka-band) have already been incorporated into the large, trailer mounted VSAT systems to alleviate reliance on commercial SATCOM bandwidth. This effort was recently expanded to include Ka-band upgrades for small and medium variants and X-band kits for the VSAT-Large (VSAT-L). As legacy systems reach obsolescence, VSAT systems have been identified as the platform supporting continued BLOS SATCOM operations in conjunction with equipment consolidation efforts. Future modifications will be required to support the obsolescence of three other programs of record PHOENIX and LMST, and the realignment of ECCS under the VSAT program. These efforts include the development and integration of an external antenna with the VSAT-L trailer. In order to subsume the capabilities lost in the phase out of the obsolete systems, VSAT systems require ECPs to incorporate the WAN optimization, COMSEC modernization, VSAT-E network equipment refreshes, and external antenna, in addition to upgrades to ancillary subsystems.															
Secure Mobile Anti-Jam Reliable Tactical-Terminal (SMART-T): SMART-T provides tactical users with protected data and voice via Advanced Extremely High Frequency (AEHF) satellite communications. The SMART-T system is transported on High Mobility Multipurpose Wheeled Vehicles (HMMWVs), providing MAGTF Commanders a secure, survivable, long-haul, low/medium data rate communications link not subject to terrain masking and horizon limitations. The SMART-T is also capable of operation when removed from the HMMWV.															
Military Global Positioning System (GPS) User Equipment (MGUE) (formerly DAGR): The MGUE is a small-form-factor or handheld receiver that is a self-contained device capable of independently providing the user, or external system interface, with positioning, velocity, navigation and precise time information derived from the GPS precise positioning service (PPS).															

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<b>Exhibit P-40, Budget Line Item Justification: PB 2019 Navy</b>							<b>Date:</b> February 2018													
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 1109N: Procurement, Marine Corps / BA 04: Communications and Electronics Equipment / BSA 19: Other Support (Non-Tel)				<b>P-1 Line Item Number / Title:</b> 4633 / Radio Systems																
<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> 0206313M, 0605873M, 0506313M														
<b>Line Item MDAP/MAIS Code:</b> 000																				
<p>Tactical Communications Modernization (TCM): TCM is established to procure or assist in the procurement of tactical communication systems across the Marine Corps. The program schedule and budget profile for TCM procures multiple families of radio systems to support the primary operational voice and data communications requirements for mounted and dismounted forces. TCM procurements enable joint interoperability, mobile networking and support National Security Agency (NSA) Communications Security (COMSEC) Modernization requirements.</p> <p>Terrestrial Wideband Transmission Systems (TWTS): TWTS is a capabilities portfolio that includes Beyond Line of Sight (BLOS) system (AN/TRC-170A) and Line of Sight (LOS) systems AN/MRC-142 Family of Systems (FoS). The AN/TRC-170A is a transportable BLOS, terrestrial, self-enclosed troposcatter terminal (multichannel) capable of transmitting and receiving digital data over varying distances up to 100 miles. Next Generation Troposcatter (NGT) is a transit case solution which will replace the AN/TRC-170A. AN/MRC-142B provides ship to shore communication. AN/MRC-142C FoS provides LOS, two-way, secure voice and data communications up to 35 miles.</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>										
Navy	Quantity	-	-	-	-	-	-	-	-	-										
	Total Obligation Authority	55.928	38.951	279.680	-	279.680	219.930	359.629	509.193	517.817										
NR	Quantity	-	-	-	-	-	-	-	-	-										
	Total Obligation Authority	0.543	-	-	-	-	-	-	-	-										
<b>Total: Secondary Distribution</b>		<b>Quantity</b>	-	-	-	-	-	-	-	-										
<b>Total Obligation Authority</b>		<b>56.471</b>	<b>38.951</b>	<b>279.680</b>	<b>-</b>	<b>279.680</b>	<b>219.930</b>	<b>359.629</b>	<b>509.193</b>	<b>517.817</b>										

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Exhibit P-40, Budget Line Item Justification: PB 2019 Navy							Date: February 2018			
Appropriation / Budget Activity / Budget Sub Activity:				P-1 Line Item Number / Title:						
1109N: Procurement, Marine Corps / BA 04: Communications and Electronics Equipment / BSA 19: Other Support (Non-Tel)				4633 / Radio Systems						
<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> 0206313M, 0605873M, 0506313M				
<b>Line Item MDAP/MAIS Code:</b> 000										
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)	
P-40a	Radio Systems	P-5a, P-21			- / 625.088	- / 56.471	- / 38.951	- / 279.680	- / -	- / 279.680
<b>P-40</b>	<b>Total Gross/Weapon System Cost</b>				<b>- / 625.088</b>	<b>- / 56.471</b>	<b>- / 38.951</b>	<b>- / 279.680</b>	<b>- / 0.000</b>	<b>- / 279.680</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. Title represents the P-40a Title when only the P-40a Summary/Total is shown.										
Note: Totals in this Exhibit P-40 set may not be exact or sum exactly due to rounding.										
<b>Justification:</b>										
FY2018 Base Appropriation Request: \$38.951M										
Global Broadcast Service (GBS): \$1.655M - Funding will procure hardware to support planned tech refresh efforts.										
Very Small Aperture Terminal (VSAT): \$2.068M - Funding enables the procurement and integration of the VSAT-L external antenna effort, and refresh and upgrade of components which are end-of-life/end-of-support such as server upgrades. In addition funding provides for fielding and program support.										
Secure Mobile Anti-Jam Reliable Tactical-Terminal (SMART-T): \$.549M - Funding will procure program support and software upgrades to the AN/PYQ-17 Network Planning Tool.										
Tactical Communications Modernization (TCM): \$17.852M - Funding provides for the procurement of Mobile User Objective System (MUOS) capability to include antennas, and additional ancillary components (\$15.986M), procurement of Application Program Set (APS) to support TCM's family of systems (FoS)II maintenance (\$.366M) and program support (\$.1500M).										
Terrestrial Wideband Transmission Systems (TWTS): FY18 procures 8% of AAO (172). Funds also provide for program support.										
The FY 2019 funding request was reduced by (\$.411) million to reflect the Department of Navy's effort to support the Office of Management and Budget directed reforms for Efficiency and Effectiveness that include a lean, accountable, more efficient government.										
FY2019 Base Appropriation Request: \$279.680M										
Global Broadcast Service (GBS): \$1.815M - Funding will procure planned hardware tech refresh efforts to mitigate obsolescence issues. Increase of \$.160M from FY18 to FY19 will support tech refresh efforts such as crypto modernization.										
Very Small Aperture Terminal (VSAT): \$7.567M - Funding provides for system tech refreshes and upgrades to mitigate end-of-life/end-of-support and obsolescence issues; and program support. Increase of \$5.499M from FY18 to FY19 will support procurement and integration of components such as the Master Reference Terminal (MRT), servers, and switches.										
Secure Mobile Anti-Jam Reliable Tactical-Terminal (SMART-T): \$.571M - Funding will continue to support tech refresh of items such as the Terminal Operating Unit (TOU) and program support.										
Tactical Communications Modernization (TCM): \$204.285M - Funds continue to provide for procurement of multiple families of radio systems which support the primary voice and data communication requirements for the operational forces, fielding requirements, and program support. Increase of \$186.433M will support completion of the MUOS and MUOS antenna procurements (\$.56.739M), procurement										

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<b>Exhibit P-40, Budget Line Item Justification: PB 2019 Navy</b>		<b>Date:</b> February 2018
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 1109N: Procurement, Marine Corps / BA 04: Communications and Electronics Equipment / BSA 19: Other Support (Non-Tel)		<b>P-1 Line Item Number / Title:</b> 4633 / Radio Systems
<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> 0206313M, 0605873M, 0506313M
<b>Line Item MDAP/MAIS Code:</b> 000		
of High Frequency Radio II (HFR II) capabilities (\$123.444M), and initial Multi-Channel Man Pack (MCMP) capabilities (\$6.250M). The MUOS capability and MUOS antennas replaces aging Ultra High Frequency (UHF) tactical satellite systems. HFR II replaces aging legacy HFR radios to meet the National Security Agency (NSA) mandate for Communications Security (COMSEC) modernization with approved cryptographic products. MCMP replaces legacy single channel radios which do not currently provide high-frequency communication capability and are required to be replaced due to the NSA mandate for COMSEC modernization.		
Terrestrial Wideband Transmission System (TWTS): \$64.911M - Funding supports the procurement of test assets for the NGT X-band variant, and the Marine Corps Line Of Sight (LOS) replacement systems to mitigate sustainment issues and increasing readiness concerns due to component obsolescence and end-of-life/end-of-sale (EOL/EOS). \$11.900M supports procurement of NGT X-band variant which provides alternate troposcatter capabilities in Overseas Continental United States (OCONUS) locations. \$51.360M supports the LOS radio procurement to replace the aging legacy systems, such as AN/MRC-142C and Wireless Point-to-Point (WPPL), which have increasing readiness concerns due to obsolescence and lack of depot repair support. The LOS radio procurement enables the Marine Corps to replace existing unsupportable radios, with an Army compatible radio to ensure service interoperability; and procures initial issue spares. \$1.650M is required to support the engineering analysis, documentation development, and system evaluation of the TWTS portfolio required to support the developmental and sustainment engineering for Marine Corps LOS and troposcatter systems.		
Military Global Positioning System (GPS) User Equipment (MGUE): \$.531M - Funding supports transition from DAGR to MGUE adding the capability of M-Code. Increase of \$.531M from FY18 to FY19 reflects the procurement of MGUE, procurement of ancillary components, and program support.		
OCO: FY2018 Overseas Contingency Operations (OCO) Request: \$4.590M		
Very Small Aperture Terminal (VSAT): \$4.590M - Funding will support the procurement of an additional (10) VSAT-E Rapid Response Kits (RRKs) to support High Demand/Low Density equipment employed by forward units to include the Special Purpose-Marine Air Ground Task Forces, Marine Expeditionary Units, and Marine Expeditionary Brigades.		

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Exhibit P-40a, Budget Item Justification For Aggregated Items: PB 2019 Navy														Date: February 2018						
Appropriation / Budget Activity / Budget Sub Activity: 1109N / 04 / 19					P-1 Line Item Number / Title: 4633 / Radio Systems									Aggregated Items Title: Radio Systems						
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 (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)
<b>1) Global Broadcast Service (GBS)</b>																				
1.1) Program /Training Support			-	-	0.842	-	-	0.224	-	-	0.859	-	-	0.855	-	-	-	-	-	0.855
1.2) Tech Refresh	A		-	-	0.709	-	-	-	-	-	-	-	-	0.960	-	-	-	-	-	0.960
1.3) PRS 11	A		94,238.10	21	1.979	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1.4) TSR-11(†)	A		-	-	-	145,000.00	8	1.160	-	-	-	-	-	-	-	-	-	-	-	-
1.5) TSR 11 Retrofit(†)	A		-	-	-	60,000.00	92	5.520	-	-	-	-	-	-	-	-	-	-	-	-
1.6) TSR 11 Retrofit (Reserves)(†)	A		-	-	-	60,000.00	5	0.300	-	-	-	-	-	-	-	-	-	-	-	-
1.7) Program/Training Support (Reserves)			-	-	-	-	-	0.008	-	-	-	-	-	-	-	-	-	-	-	-
1.8) Ancillary Components	A		-	-	0.376	-	-	1.048	-	-	-	-	-	-	-	-	-	-	-	-
1.9) Fielding Support			-	-	-	-	-	0.195	-	-	0.796	-	-	-	-	-	-	-	-	-
<i>Subtotal: 1) Global Broadcast Service (GBS)</i>			-	-	<b>3.906</b>	-	-	<b>8.455</b>	-	-	<b>1.655</b>	-	-	<b>1.815</b>	-	-	-	-	-	<b>1.815</b>
<b>2) Very Small Aperture Terminal (VSAT)</b>																				
2.1) Modem Upgrades	A		-	-	1.192	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2.2) VSAT Tech Refresh and Upgrade (1)	A		-	-	4.679	-	-	1.748	-	-	1.200	-	-	6.710	-	-	-	-	-	6.710
2.3) VSAT-E Rapid Response Kit (RRK) Network Packages (2)	A		-	-	-	-	-	4.010	-	-	-	-	-	-	-	-	-	-	-	-
2.4) VSAT-E Rapid Response Kit (RRK) Netwk Pkg Integration and Fielding	A		-	-	-	-	-	0.590	-	-	-	-	-	-	-	-	-	-	-	-
2.5) VSAT-E Rapid Response Kit (RRK) Systems(†)	A		-	-	-	-	-	-	459,000.00	10	4.590	-	-	-	-	-	-	-	-	-
2.6) Logistics/Fielding/ Training Support			-	-	0.174	-	-	0.241	-	-	0.868	-	-	0.857	-	-	-	-	-	0.857
<i>Subtotal: 2) Very Small Aperture Terminal (VSAT)</i>			-	-	<b>6.045</b>	-	-	<b>6.589</b>	-	-	<b>6.658</b>	-	-	<b>7.567</b>	-	-	-	-	-	<b>7.567</b>
<b>3) Secure Mobile Anti-Jam Reliable Tactical - Terminal (SMART-T)</b>																				
3.1) Tech Refresh <sup>(3)</sup>	A		-	-	0.517	-	-	0.262	-	-	-	-	-	0.529	-	-	-	-	-	0.529
3.2) Tech Refresh (Reserves)	A		-	-	0.244	-	-	0.235	-	-	-	-	-	-	-	-	-	-	-	-
3.3) TMPS SW Refresh	A		-	-	-	-	-	-	-	-	-	-	-	0.507	-	-	-	-	-	-

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Exhibit P-40a, Budget Item Justification For Aggregated Items: PB 2019 Navy														Date: February 2018						
Appropriation / Budget Activity / Budget Sub Activity: 1109N / 04 / 19					P-1 Line Item Number / Title: 4633 / Radio Systems									Aggregated Items Title: Radio Systems						
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 (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)
3.4) Program Support			-	-	5.024	-	-	0.040	-	-	0.042	-	-	0.042	-	-	-	-	-	0.042
<i>Subtotal: 3) Secure Mobile Anti-Jam Reliable Tactical - Terminal (SMART-T)</i>			-	-	<b>5.785</b>	-	-	<b>0.537</b>	-	-	<b>0.549</b>	-	-	<b>0.571</b>	-	-	-	-	-	<b>0.571</b>
<b>4) Military GPS User Equipment (MGUE)</b>																				
4.1) DAGRs <sup>(†)</sup>	A		3,517.53	1,882	6.620	2,822.22	90	0.254	-	-	-	-	-	-	-	-	-	-	-	-
4.2) Ancillary Components (cables, power adapters) <sup>(4)</sup>	A		-	-	1.230	-	-	0.239	-	-	-	-	-	0.180	-	-	-	-	-	0.180
4.3) MGUE ECPs	A		-	-	-	-	-	-	-	-	-	-	-	0.170	-	-	-	-	-	0.170
4.4) Engineering/ Program Support			-	-	-	-	-	-	-	-	-	-	-	0.181	-	-	-	-	-	0.181
<i>Subtotal: 4) Military GPS User Equipment (MGUE)</i>			-	-	<b>7.850</b>	-	-	<b>0.493</b>	-	-	<b>0.531</b>	-	-	<b>0.531</b>	-	-	-	-	-	<b>0.531</b>
<b>5) Tactical Communications Modernization (TCM)</b>																				
5.1) Engineering & Program Support			-	-	36.228	-	-	1.512	-	-	1.500	-	-	2.010	-	-	-	-	-	2.010
5.2) TCM Fielding Support			-	-	-	-	-	-	-	-	-	-	-	0.610	-	-	-	-	-	0.610
5.3) Ancillary Components	A		-	-	6.312	-	-	0.342	-	-	1.970	-	-	1.839	-	-	-	-	-	1.839
5.4) MBR II MUOS (5) <sup>(†)</sup>	A		8,000.00	17	0.136	-	-	-	8,000.00	247	1.976	8,000.00	6,727	53.816	-	-	-	8,000.00	6,727	53.816
5.5) MUOS Antennas (6) <sup>(†)</sup>	A		-	-	-	-	-	-	3,452.00	3,594	12.406	3,181.75	5,128	16.316	-	-	-	3,181.75	5,128	16.316
5.6) MBR II MUOS Capable AN/ PRC-117G <sup>(†)</sup>	A		38,400.72	559	21.466	36,949.00	337	12.452	-	-	-	-	-	-	-	-	-	-	-	
5.7) MCMP (formerly MBR Replacement) (7) <sup>(†)</sup>	A		-	-	-	-	-	-	-	-	50,000.00	125	6.250	-	-	-	50,000.00	125	6.250	
5.12) HFR II Manpack (8) <sup>(†)</sup>	A		-	-	-	-	-	-	-	-	27,000.00	4,572	123.444	-	-	-	27,000.00	4,572	123.444	
5.15) AN/ PRC-117G <sup>(†)</sup>	A		-	-	-	27,715.00	92	2.550	-	-	-	-	-	-	-	-	-	-	-	
5.16) AN/ VRC-114V1 <sup>(†)</sup>	A		-	-	-	52,467.00	3	0.157	-	-	-	-	-	-	-	-	-	-	-	
5.17) Squad Level Radios (RFES USON)	A		-	-	-	1.379	-	-	-	-	-	-	-	-	-	-	-	-	-	
5.18) RAA 2 for USMC Grp 2 Unmanned	A		-	-	-	-	-	21.490	-	-	-	-	-	-	-	-	-	-	-	

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Exhibit P-40a, Budget Item Justification For Aggregated Items: PB 2019 Navy														Date: February 2018						
Appropriation / Budget Activity / Budget Sub Activity: 1109N / 04 / 19					P-1 Line Item Number / Title: 4633 / Radio Systems									Aggregated Items Title: Radio Systems						
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 (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)
Aerial System (UAS) (9)																				
<i>Subtotal: 5) Tactical Communications Modernization (TCM)</i>	-	-	65.521	-	-	38.503	-	-	17.852	-	-	204.285	-	-	-	-	-	-	204.285	
<b>6) Terrestrial Wideband Transmission Systems (TWTS)</b>																				
6.1) Engineering and Program Support			-	-	2.849	-	-	0.980	-	-	0.337	-	-	1.650	-	-	-	-	1.650	
6.2) Next Generation Troposcatter (NGT) X Band <sup>(10)(†)</sup>	A		-	-	-	-	-	-	-	-	-	850,000.00	14	11.900	-	-	-	850,000.00	14	11.900
6.3) Next Generation Troposcatter (NGT) C Band <sup>(†)</sup>	A		-	-	-	-	-	-	850,000.00	14	11.900	-	-	-	-	-	-	-	-	
6.4) AN/MRC-142C ECP Integration			-	-	2.803	-	-	0.705	-	-	-	-	-	-	-	-	-	-	-	
6.5) AN/MRC-142C HW/cable procurement	A		-	-	0.150	-	-	0.209	-	-	-	-	-	-	-	-	-	-	-	
6.6) Line of Sight (LOS) System Replacements <sup>(11)</sup>	A		-	-	-	-	-	-	-	-	-	-	-	46.186	-	-	-	-	46.186	
6.7) Ancillary Components <sup>(12)</sup>	A		-	-	-	-	-	-	-	-	-	-	-	5.175	-	-	-	-	5.175	
<i>Subtotal: 6) Terrestrial Wideband Transmission Systems (TWTS)</i>	-	-	5.802	-	-	1.894	-	-	12.237	-	-	64.911	-	-	-	-	-	-	64.911	
<b>7) Prior Year Cumulative Funding</b>																				
7.1) Prior Year Cumulative Funding			-	-	530.179	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
<i>Subtotal: 7) Prior Year Cumulative Funding</i>	-	-	530.179	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
<b>Total</b>	-	-	-	-	625.088	-	-	56.471	-	-	38.951	-	-	279.680	-	-	-	-	-	279.680
Note: Subtotals or Totals in this Exhibit P-40a may not be exact or sum exactly, due to rounding.																				
(†) indicates the presence of a P-5a																				
<b>Footnotes:</b>																				
(1) VSAT: Tech refresh and upgrade efforts consist of multiple components with varying quantities and unit prices as components reach end-of-life/end-of-sale (EOL/EOS). Increase of \$5.510M in FY19 supports procurements of items such as Master Reference Terminals (MRT) and replacement for VSAT-Medium (VSAT-M) systems.																				
(2) VSAT-E - Rapid Response Kit (RRK) Network Packages are comprised of multiple components with various unit costs.																				
(3) SMART-T Tech Refresh: Terminal Operating Unit (TOU) procurement will leverage the Army's new contract in 3QFY18																				
(4) DAGR: In FY19 ancillary components transition from supporting DAGR to supporting MGUE equipment.																				

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<b>Exhibit P-40a, Budget Item Justification For Aggregated Items:</b> PB 2019 Navy		<b>Date:</b> February 2018
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 1109N / 04 / 19	<b>P-1 Line Item Number / Title:</b> 4633 / Radio Systems	<b>Aggregated Items Title:</b> Radio Systems
(5) TCM MBR II MUOS: Army Forces Strategic Command (ARSTRAT) certification and subsequent testing for MUOS firmware delayed procurement from FY16 to FY18. FY16/FY18/FY19 PMC funds will procure MUOS Firmware in Jul 2018, to support replacement of aging UHF tactical satellite systems. TCM MBR II MUOS estimated cost has been revised due to updated cost estimate; reduced from \$0.010M to \$0.008M.		
(6) TCM: FY18/FY19 funds will procure MUOS Antennas solution which consists of three different variants; each with different unit costs; the unit cost shown is an average of the three Antenna variants. MUOS antennas provide the operational forces with improved satellite communication capability.		
(7) TCM: Increase of \$6.250M in FY19 reflects first year of Multi-Channel Man Pack (MCMP) radio procurement.		
(8) TCM: FY19 funds of \$123.444M procures full Approved Acquisition Objective (AAO) for the High Frequency Radio II (HFR II) radio procurement. The HFR II replaces the legacy HFR systems, and provides improved cryptographic capabilities to meet the NSA mandate for Crypto Modernization.		
(9) TCM RAA for USMC Grp 2 UAS: Per Memorandum for the Secretary of the Navy, 1 Sep 2017, Rapid Acquisition Authority Determination in Support of USMC Group 2 Unmanned Aerial System (UAS) provides ten UAS to U.S. Marine Corps Forces, Special Operations Command units in three theatres. Source of funds is MBR II MUOS, MUOS Antenna, Ancillary Components and Engineering & Program Support cost elements.		
(10) TWTS: Increase of \$11.900M supports procurement of NGT X-band variant which provides alternate troposcatter capabilities in Overseas Continental United States (OCONUS) locations.		
(11) TWTS: Increase of \$46.186M supports procurement of LOS systems such as, the AN/MRC-142C and WPPL, due to obsolescence and end-of-life/end-of-sale components. Unit cost and quantities will be updated upon contract award.		
(12) TWTS: Increase of \$5.175M supports procurement ancillary components, such as initial issues spares for the LOS replacement systems.		

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Exhibit P-5a, Procurement History and Planning: PB 2019 Navy									Date: February 2018			
Appropriation / Budget Activity / Budget Sub Activity: 1109N / 04 / 19				P-1 Line Item Number / Title: 4633 / Radio Systems					Aggregated Items: Radio Systems			
Item Number / Title [DODIC]	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 (\$)	Specs Avail Now?	Date Revision Available	RFP Issue Date
<b>1) Global Broadcast Service (GBS)</b>												
1.4) TSR-11 <sup>(†)</sup>	✓	2017	General Dynamics / Taunton, MA	C / IDIQ	Colorado Springs, CO	Feb 2018	May 2018	8	145,000.00	Y		
1.5) TSR 11 Retrofit <sup>(†)</sup>	✓	2017	General Dynamics / Taunton, MA	C / IDIQ	Colorado Springs, CO	Feb 2018	May 2018	92	60,000.00	Y		
1.6) TSR 11 Retrofit (Reserves) <sup>(†)</sup>		2017	General Dynamics / Taunton, MA	C / IDIQ	Colorado Springs, CO	Feb 2018	May 2018	5	60,000.00	Y		
<b>2) Very Small Aperture Terminal (VSAT)</b>												
2.5) VSAT-E Rapid Response Kit (RRK) Systems	✓	2018	PM-WIN T - CECOM / Aberdeen, MD	C / FFP	Aberdeen, MD	Jun 2018	Oct 2018	10	459,000.00	Y		
<b>4) Military GPS User Equipment (MGUE)</b>												
4.1) DAGRs		2017	Rockwell Collins Inc. / Cedar Rapids IA	C / IDIQ	GPS Directorate, LA AFB, CA	Aug 2017	Apr 2018	90	2,822.22	Y		
<b>5) Tactical Communications Modernization (TCM)</b>												
5.4) MBR II MUOS <sup>(5)(†)</sup>		2016	Harris Corp / Rochester, NY	C / FFP	MCSC	Jul 2018	Oct 2018	17	8,000.00	Y		Oct 2015
5.4) MBR II MUOS <sup>(5)(†)</sup>		2018	Harris Corp / Rochester, NY	C / FFP	MCSC	Jul 2018	Oct 2018	247	8,000.00	Y		Oct 2015
5.4) MBR II MUOS <sup>(5)(†)</sup>		2019 <sup>(13)</sup>	Harris Corp / Rochester, NY	C / FFP	MCSC	Mar 2019	Jun 2019	6,727	8,000.00	Y		Oct 2015
5.5) MUOS Antennas <sup>(6)(†)</sup>		2018	Harris Corp / Rochester, NY	C / IDIQ	SSC-PAC	Jul 2018	Oct 2018	3,594	3,452.00	Y		
5.5) MUOS Antennas <sup>(6)(†)</sup>		2019	TBD / TBD	C / TBD	TBD	Jun 2019	Jun 2019	5,128	3,181.75	Y		
5.6) MBR II MUOS Capable AN/ PRC-117G <sup>(†)</sup>		2016	Harris Corp / Rochester, NY	C / IDIQ	SSC-PAC	Aug 2017	Dec 2017	559	38,400.00	Y		
5.6) MBR II MUOS Capable AN/ PRC-117G <sup>(†)</sup>		2017	Harris Corp / Rochester, NY	C / IDIQ	SSC-PAC	Aug 2017	Dec 2017	337	36,949.00	Y		
5.7) MCMP (formerly MBR Replacment) <sup>(7)(†)</sup>		2019	TBD / MARCORSYSCOM, Quantico, VA	C / IDIQ	TBD	Jun 2019	Sep 2019	125	50,000.00	Y		
5.12) HFR II Manpack <sup>(8)(†)</sup>		2019	TBD / MARCORSYSCOM, Quantico, VA	C / FFP	TBD	Aug 2019	Oct 2019	4,572	27,000.00	Y		
5.15) AN/PRC-117G	✓	2017	Harris Corp / Rochester, NY	C / IDIQ	SSC-PAC	Apr 2017	Jul 2017	92	27,715.00	Y		
5.16) AN/VRC-114V1	✓	2017	Harris Corp / Rochester, NY	C / FFP	SSC-PAC	Apr 2017	Jul 2017	3	52,467.00	Y		
<b>6) Terrestrial Wideband Transmission Systems (TWTS)</b>												
6.2) Next Generation Troposcatter (NGT) X Band <sup>(10)</sup>		2019	TBD / TBD	C / TBD	** NO PCO **	Jul 2019	Jul 2020	14	850,000.00	Y		
6.3) Next Generation Troposcatter (NGT) C Band		2018	TBD / TBD	C / TBD	** NO PCO **	Sep 2018	Sep 2018	14	850,000.00	Y		

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

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<b>Exhibit P-5a, Procurement History and Planning: PB 2019 Navy</b>		<b>Date:</b> February 2018
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 1109N / 04 / 19	<b>P-1 Line Item Number / Title:</b> 4633 / Radio Systems	<b>Aggregated Items:</b> Radio Systems
<p><b>Footnotes:</b> <sup>(13)</sup> 20</p>		

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Exhibit P-21, Production Schedule: PB 2019 Navy																				Date: February 2018																			
Appropriation / Budget Activity / Budget Sub Activity: 1109N / 04 / 19										P-1 Line Item Number / Title: 4633 / Radio Systems										Aggregated Items: Radio Systems																			
Items (Units in Each)							Fiscal Year 2017												Fiscal Year 2018																				
O C R O #	M F R Y	SERVICE	PROC QTY	ACCEPT PRIOR TO 1 OCT 2016	BAL DUE AS OF 1 OCT	FY	Fiscal Year 2017												Fiscal Year 2018																				
							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									
1) Global Broadcast Service (GBS)																				B A L A N C E																			
1.4) TSR-11																				A - - - 8 0																			
✓	19	2017	NAVY		8	0	8														A - - - 8 0																		
1.5) TSR 11 Retrofit																				A - - - 92 0																			
✓	20	2017	NAVY		92	0	92														A - - - 92 0																		
1.6) TSR 11 Retrofit (Reserves)																				A - - - 5 0																			
✓	21	2017	NAVY		5	0	5														A - - - 5 0																		
5) Tactical Communications Modernization (TCM)																				5.4) MBR II MUOS (5)																			
✓	22	2016	NAVY		17	0	17														A - - - - 17																		
✓	22	2018	NAVY		247	0	247														A - - - - 247																		
✓	22	2019	NAVY		6,727	0	6,727																									6,727							
5.5) MUOS Antennas (6)																				A - - - - 3,594 3,594																			
✓	23	2018	NAVY		3,594	0	3,594														A - - - - 3,594 3,594																		
✓	24	2019	NAVY		5,128	0	5,128																									5,128							
5.6) MBR II MUOS Capable AN/PRC-117G																				A - - - - 559 0																			
✓	25	2016	NAVY		559	0	559														A - - - - 337 0																		
✓	25	2017	NAVY		337	0	337																									0							
5.7) MCMP (formerly MBR Replacement) (7)																				A - - - - 125 125																			
✓	26	2019	NAVY		125	0	125																									125							
5.12) HFR II Manpack (8)																				A - - - - 4,572 4,572																			
							O C T	N O V	D E C	J A N	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 Navy																				Date: February 2018																					
Appropriation / Budget Activity / Budget Sub Activity: 1109N / 04 / 19										P-1 Line Item Number / Title: 4633 / Radio Systems										Aggregated Items: Radio Systems																					
Items (Units in Each)					Fiscal Year 2019												Fiscal Year 2020																								
O C R O #	M F R Y	SERVICE	PROC QTY	ACCEPT PRIOR TO 1 OCT 2018	BAL DUE AS OF 1 OCT	O C T	N O V	D E C	J A N	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	B A L A N C E											
1) Global Broadcast Service (GBS)																																									
1.4) TSR-11																																									
✓	19	2017	NAVY		8	8	0																													0					
1.5) TSR 11 Retrofit																																				0					
✓	20	2017	NAVY		92	92	0																													0					
1.6) TSR 11 Retrofit (Reserves)																																				0					
5) Tactical Communications Modernization (TCM)																																									
5.4) MBR II MUOS <sup>(5)</sup>																																				0					
22	2016	NAVY		17	0	17	17																														0				
22	2018	NAVY		247	0	247	247																													0					
22	2019	NAVY		6,727	0	6,727																														0					
5.5) MUOS Antennas <sup>(6)</sup>																																				0					
23	2018	NAVY		3,594	0	3,594	3,594																												0						
24	2019	NAVY		5,128	0	5,128																														0					
5.6) MBR II MUOS Capable AN/PRC-117G																																				0					
25	2016	NAVY		559	559	0																															0				
25	2017	NAVY		337	337	0																															0				
5.7) MCMP (formerly MBR Replacement) <sup>(7)</sup>																																				0					
26	2019	NAVY		125	0	125																															0				
5.12) HFR II Manpack <sup>(8)</sup>																																				0					

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<b>Exhibit P-21, Production Schedule: PB 2019 Navy</b>								<b>Date:</b> February 2018			
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 1109N / 04 / 19			<b>P-1 Line Item Number / Title:</b> 4633 / Radio Systems						<b>Aggregated Items:</b> Radio Systems		

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	General Dynamics - Taunton, MA	11,000	11,000	11,000	0	5	3	8	0	5	3	8
2	General Dynamics - Taunton, MA	11,000	11,000	11,000	0	5	3	8	0	5	3	8
3	General Dynamics - Taunton, MA	11,000	11,000	11,000	0	5	3	8	0	5	3	8
4	Harris Corp - Rochester, NY	1,200	12,000	24,000	0	4	3	7	0	2	3	5
5	Harris Corp - Rochester, NY	1,200	4,200	7,200	0	20	3	23	0	0	0	0
6	TBD - TBD				0	0	0	0	0	0	0	0
7	Harris Corp - Rochester, NY	1,200	12,000	24,000	0	4	3	7	0	2	3	5
8	TBD - MARCORSYSCOM, Quantico, VA				0	0	0	0	0	0	0	0
9	TBD - MARCORSYSCOM, Quantico, VA				0	0	0	0	0	0	0	0

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

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

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Exhibit P-40, Budget Line Item Justification: PB 2019 Navy										Date: February 2018							
Appropriation / Budget Activity / Budget Sub Activity:					P-1 Line Item Number / Title:												
1109N: Procurement, Marine Corps / BA 04: Communications and Electronics Equipment / BSA 19: Other Support (Non-Tel)					4634 / Comm Switching & Control Systems												
ID Code (A=Service Ready, B=Not Service Ready): A			Program Elements for Code B Items: N/A					Other Related Program Elements: 0206313M, 0506213M									
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 (\$ in Millions)	427.831	33.417	54.615	36.649	0.000	36.649	31.685	37.508	37.366	38.148	Continuing	Continuing					
Less PY Advance Procurement (\$ in Millions)	-	-	-	-	-	-	-	-	-	-	-	-					
Net Procurement (P-1) (\$ in Millions)	427.831	33.417	54.615	36.649	0.000	36.649	31.685	37.508	37.366	38.148	Continuing	Continuing					
Plus CY Advance Procurement (\$ in Millions)	-	-	-	-	-	-	-	-	-	-	-	-					
<b>Total Obligation Authority (\$ in Millions)</b>	<b>427.831</b>	<b>33.417</b>	<b>54.615</b>	<b>36.649</b>	<b>0.000</b>	<b>36.649</b>	<b>31.685</b>	<b>37.508</b>	<b>37.366</b>	<b>38.148</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 (\$ in Millions)	-	-	-	-	-	-	-	-	-	-	-	-					
Flyaway Unit Cost (\$ in Dollars)	-	-	-	-	-	-	-	-	-	-	-	-					
Gross/Weapon System Unit Cost (\$ in Dollars)	-	-	-	-	-	-	-	-	-	-	-	-					
<b>Description:</b>																	
Communications Security (COMSEC): COMSEC is the USMC Commodities Management Office (CMO) providing support for installations and designated acquisition program COMSEC requirements, intermediate logistics, and configuration management. COMSEC provides support for Protected Secure Voice and Data transmissions, the Electronic Key Management Systems (EKMS) transition to the Key Management Infrastructure (KMI), the National Security Agency (NSA) directed Cryptographic Modernization of the COMSEC infrastructure, Installations (base, posts, and station), and platforms. CMO ensures the protection of Marine Corps and joint cyberspace systems from exploitation and attack. Cyberspace systems include wired and wireless telecommunications systems, Information Technology (IT) systems, and the content processed, stored, or transmitted therein. Rapid changes in the underlying commercial and government cyber infrastructures makes cyber security an increasingly complex and dynamic problem. CMO provides the Warfighter the essential information trust characteristics of availability, confidentiality, integrity, authentication, and non-repudiation.																	
Joint Communications Support Element (JCSE): Joint Communications Support Element (JCSE), headquartered at MacDill Air Force Base, Fla., rapidly delivers secure, reliable and scalable command, control, communications, and computer capabilities (C4) ranging from small mobile team missions to full-sized joint task force headquarters (JTF HQ) deployments.																	
Combat Data Network (CDN) (formerly Tactical Data Network (TDN) Data Distribution System - Modular (DDS-M)): The CDN provides the commander a modular, integrated, and interoperable Internet Protocol (IP)- based LAN and WAN data networking capability that forms the data communications backbone and data communications support to organizations within a MAGTF. The CDN provides extension of the Defense Information System Network (DISN), Secret Internet Protocol Router Network (SIPRNet), Sensitive But Unclassified (SBU), Non-secure Internet Protocol Router Network (NIPRNet) as well as a Coalition networking capability and access to strategic, supporting establishments, joint and other service component tactical data networks for Marine Corps Tactical Data Systems (TDSs) and other DDS-Ms. The CDN provides Marine Corps maneuver elements with a modular and scalable IP data transport capability that will replace, supplement and be used with existing legacy data systems through the integration of computers, routers, data switches and cabling, Enhanced Position Location and Reporting System (EPLRS) radio net interface units, modems, link encryption devices, and patch panels. Uninterrupted Power Supplies (UPS) provide for emergency power and continuity of operations. The CDN can operate from the SBU up to the Top Secret/Sensitive Compartmented Information (TS/SCI) level and contains integral In-line Network Encryption (INE) device supporting IP Security (IPSec) and Virtual Private Networking (VPN).																	
Tactical Voice Switching System (TVSS): The TVSS is a modular ISDN circuit switch capable system that combines voice and Voice Over Internet Protocol telecommunications, multiplexing, transmission encryption, and group modem capabilities in one system for command, control, administrative, and logistic voice communications. Facilitates secure and non-secure voice, circuit switching functions, and network routing and management functions with current fielded tactical systems of the military services. Interoperates with joint, coalition, and host nation networks, and operates in unclassified and classified environments.																	

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Exhibit P-40, Budget Line Item Justification: PB 2019 Navy							Date: February 2018							
Appropriation / Budget Activity / Budget Sub Activity: 1109N: Procurement, Marine Corps / BA 04: Communications and Electronics Equipment / BSA 19: Other Support (Non-Tel)				P-1 Line Item Number / Title: 4634 / Comm Switching & Control Systems										
ID Code (A=Service Ready, B=Not Service Ready): A		Program Elements for Code B Items: N/A			Other Related Program Elements: 0206313M, 0506213M									
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					
Navy	Quantity	-	-	-	-	-	-	-	-	-				
	Total Obligation Authority	29.245	52.175	34.201	-	34.201	27.186	32.908	32.671	33.354				
NR	Quantity	-	-	-	-	-	-	-	-	-				
	Total Obligation Authority	4.172	2.440	2.448	-	2.448	4.499	4.600	4.695	4.794				
<b>Total:</b> <b>Secondary Distribution</b>	<b>Quantity</b>	-	-	-	-	-	-	-	-	-				
	<b>Total Obligation Authority</b>	<b>33.417</b>	<b>54.615</b>	<b>36.649</b>	<b>-</b>	<b>36.649</b>	<b>31.685</b>	<b>37.508</b>	<b>37.366</b>	<b>38.148</b>				

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Exhibit P-40, Budget Line Item Justification: PB 2019 Navy							Date: February 2018		
Appropriation / Budget Activity / Budget Sub Activity:				P-1 Line Item Number / Title:					
1109N: Procurement, Marine Corps / BA 04: Communications and Electronics Equipment / BSA 19: Other Support (Non-Tel)				4634 / Comm Switching & Control Systems					
ID Code (A=Service Ready, B=Not Service Ready): A		Program Elements for Code B Items: N/A				Other Related Program Elements: 0206313M, 0506213M			
<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)
P-40a	Comm Switching & Control Systems				- / 427.831	- / 33.417	- / 54.615	- / 36.649	- / -
<b>P-40</b>	<b>Total Gross/Weapon System Cost</b>				<b>- / 427.831</b>	<b>- / 33.417</b>	<b>- / 54.615</b>	<b>- / 36.649</b>	<b>- / 0.000</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. Title represents the P-40a Title when only the P-40a Summary/Total is shown.									
Note: Totals in this Exhibit P-40 set may not be exact or sum exactly due to rounding.									
<b>Justification:</b>									
The FY 2019 funding request was reduced by (\$.659) million to reflect the Department of Navy's effort to support the Office of Management and Budget directed reforms for Efficiency and Effectiveness that include a lean, accountable, more efficient government. Additionally, the FY 2019 funding request was reduced by (\$.399) million to account for the availability of prior year execution balances.									
FY2018 Base Appropriation Request: \$54.615M									
COMSEC: \$1.163M. (\$0.908M Active, \$0.255M Reserve). Funding continues to provide items such as procurements and replacements of damaged COMSEC equipment and ancillary devices.									
JCSE: \$0.474M Active. FY18 funds reflects the Marine Corps mandated share of efforts to keep the JCSE equipped with the latest state-of-the-art equipment to accomplish its Joint Staff Mission. The specific purpose will be determined at the annual JCSE modernization review.									
CDN: \$44.628M (\$42.443M Active, \$2.185M Reserves). FY18 funds will support Engineering Change Proposals, procurement and fielding for the CDN networking equipment technology refresh to include the Network Optimization and reconfiguration efforts to reduce size, weight, and power (SWaP) requirements of the CDN systems. Funds will also support management, acquisition, logistics, Manpower support, Personnel and Training Analysis and Training Plan development and support.									
TVSS: \$8.350M Active. FY18 funds will support addition of video teleconference equipment and modifications to the system to ensure viable voice communication capability for all echelons of the MAGTF.									
FY2019 Base Appropriation Request: \$36.649M									
COMSEC: \$0.324M. (\$0.066M Active, \$0.258M Reserve). Decrease of \$0.839M from FY18 to FY19 reflects restructure of COMSEC modernization in support of Expeditionary Force 21 and National Security Agency guidelines. Funding provides items such as procurements and replacements of damaged COMSEC equipment and ancillary devices.									
JCSE: \$0.481M Active. Increase of \$0.007M from FY18 to FY19 reflects the Marine Corps mandated share of efforts to keep the JCSE equipped with the latest state-of-the-art equipment to accomplish its Joint Staff Mission. The specific purpose will be determined at the annual JCSE modernization review.									
CDN: \$35.844M (\$33.654M Active, \$2.190M Reserves). Decrease of \$8.784M from FY18 to FY19. FY19 funds will support Engineering Change Proposals, procurement and fielding for the CDN networking equipment technology refresh including the continuation of Small Form Factor to reduce size, weight, and power (SWaP) and tech refresh of Virtualization equipment. Funds will also support management, acquisition, logistics, Manpower support, Personnel and Training Analysis and Training Plan development and support.									

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Exhibit P-40a, Budget Item Justification For Aggregated Items: PB 2019 Navy														Date: February 2018						
Appropriation / Budget Activity / Budget Sub Activity: 1109N / 04 / 19					P-1 Line Item Number / Title: 4634 / Comm Switching & Control Systems									Aggregated Items Title: Comm Switching & Control Systems						
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 (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)
<b>1) Communications Security (COMSEC)</b>																				
1.1) Program/ Production Support	A		-	-	-	-	-	0.493	-	-	0.196	-	-	-	-	-	-	-	-	-
1.2) COMSEC Hardware <sup>(1)</sup>	A		-	-	9.141	-	-	1.860	-	-	0.712	-	-	0.066	-	-	-	-	-	0.066
1.3) COMSEC Hardware (Reserves)	A		-	-	0.461	-	-	0.252	-	-	0.255	-	-	0.258	-	-	-	-	-	0.258
<i>Subtotal: 1) Communications Security (COMSEC)</i>			-	-	9.602	-	-	2.605	-	-	1.163	-	-	0.324	-	-	-	-	-	0.324
<b>2) Joint Communications Support Equipment (JCSE)</b>																				
2.1) USMC contribution to JCSE			-	-	2.373	-	-	0.467	-	-	0.474	-	-	0.481	-	-	-	-	-	0.481
<i>Subtotal: 2) Joint Communications Support Equipment (JCSE)</i>			-	-	2.373	-	-	0.467	-	-	0.474	-	-	0.481	-	-	-	-	-	0.481
<b>3) Combat Data Network (CDN)</b>																				
3.1) Program Support/ Fielding/CLS/Training <sup>(2)</sup>			-	-	32.596	-	-	3.231	-	-	6.200	-	-	4.455	-	-	-	-	-	4.455
3.2) Network Optimization <sup>(3)</sup>	A		-	-	7.057	-	-	7.466	-	-	9.600	-	-	3.816	-	-	-	-	-	3.816
3.3) ECP Network Equipment <sup>(4)</sup>	A		-	-	73.552	-	-	4.840	-	-	26.643	-	-	3.462	-	-	-	-	-	3.462
3.4) ECP Small Form Factor <sup>(5)</sup>	A		-	-	-	-	-	-	-	-	-	-	-	21.895	-	-	-	-	-	21.895
3.7) ECP Server Tech Refresh	A		-	-	-	-	-	7.510	-	-	-	-	-	-	-	-	-	-	-	-
3.8) ECP Laptops	A		-	-	0.789	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
3.9) ECP Network Equipment (Reserves)	A		-	-	5.117	-	-	-	-	-	2.185	-	-	2.216	-	-	-	-	-	2.216
3.10) ECP Server Tech Refresh (Reserves)	A		-	-	-	-	-	3.920	-	-	-	-	-	-	-	-	-	-	-	-
3.11) ECP Laptops (Reserves)	A		-	-	0.005	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
<i>Subtotal: 3) Combat Data Network (CDN)</i>			-	-	119.116	-	-	26.967	-	-	44.628	-	-	35.844	-	-	-	-	-	35.844
<b>4) Tactical Voice Switching System (TVSS)</b>																				
4.1) TVSS Obsolete ECPs <sup>(6)</sup>	A		-	-	2.156	-	-	3.378	-	-	7.920	-	-	-	-	-	-	-	-	-
4.2) Program Support <sup>(7)</sup>			-	-	7.515	-	-	-	-	-	0.430	-	-	-	-	-	-	-	-	-

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Exhibit P-40a, Budget Item Justification For Aggregated Items: PB 2019 Navy													Date: February 2018							
Appropriation / Budget Activity / Budget Sub Activity: 1109N / 04 / 19					P-1 Line Item Number / Title: 4634 / Comm Switching & Control Systems								Aggregated Items Title: Comm Switching & Control Systems							
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 (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)			
<i>Subtotal: 4) Tactical Voice Switching System (TVSS)</i>			-	-	9.671	-	-	3.378	-	-	8.350	-	-	-	-	-	-	-		
<b>5) Prior Year Cumulative Funding</b>																				
5.1) Prior Year Funding			-	-	287.069	-	-	-	-	-	-	-	-	-	-	-	-	-		
<i>Subtotal: 5) Prior Year Cumulative Funding</i>			-	-	287.069	-	-	-	-	-	-	-	-	-	-	-	-	-		
<b>Total</b>			-	-	427.831	-	-	33.417	-	-	54.615	-	-	36.649	-	-	-	36.649		

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

**Footnotes:**

- (1) COMSEC: Hardware \$.839M decrease from FY18 to FY19 aligns to procurement schedule. Hardware procurements include ancillary items such as cables.
- (2) CDN: Program Spt/Fielding/CLS/Training decrease of \$1.745M from FY18 to FY19 aligns with the completion of firewall and VMware procurement and fielding of servers.
- (3) CDN: Network Optimization decrease of \$5.784M from FY18 to FY19 reflects completion of VMware Production and Integration activities. CDN technology refresh cycle procures different components each year.
- (4) CDN: ECP Network Equipment decrease of \$23.181M from FY18 to FY19 reflects completion of Firewall procurement and transition to upgrades of Small Form Factor, Cryptographic equipment and Sessions Boundary Controller.
- (5) CDN: ECP Small Form Factor increase of \$21.895M from FY18 to FY19 reflects technology refresh cycle to upgrade equipment to reduce size, weight and power (SWaP) requirements.
- (6) TVSS: Obsolete ECPs decrease \$7.920M from FY18 to FY19 reflects completion of the server solution procurement and transition TVSS to Voice over Internet Protocol (VoIP).
- (7) TVSS: Program Support decrease of \$.430M from FY18 to FY19 reflects program transition to Voice over Internet Protocol (VoIP).

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Exhibit P-40, Budget Line Item Justification: PB 2019 Navy										Date: February 2018							
Appropriation / Budget Activity / Budget Sub Activity:					P-1 Line Item Number / Title:												
1109N: Procurement, Marine Corps / BA 04: Communications and Electronics Equipment / BSA 19: Other Support (Non-Tel)					4635 / Comm & Elec Infrastructure Supt												
ID Code (A=Service Ready, B=Not Service Ready): A			Program Elements for Code B Items: N/A					Other Related Program Elements: 0206313M, 0605013M									
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 (\$ in Millions)	231.822	25.329	44.455	83.971	0.000	83.971	30.204	77.570	82.956	93.354	Continuing	Continuing					
Less PY Advance Procurement (\$ in Millions)	-	-	-	-	-	-	-	-	-	-	-	-					
Net Procurement (P-1) (\$ in Millions)	231.822	25.329	44.455	83.971	0.000	83.971	30.204	77.570	82.956	93.354	Continuing	Continuing					
Plus CY Advance Procurement (\$ in Millions)	-	-	-	-	-	-	-	-	-	-	-	-					
<b>Total Obligation Authority (\$ in Millions)</b>	<b>231.822</b>	<b>25.329</b>	<b>44.455</b>	<b>83.971</b>	<b>0.000</b>	<b>83.971</b>	<b>30.204</b>	<b>77.570</b>	<b>82.956</b>	<b>93.354</b>	<b>Continuing</b>	<b>Continuing</b>					
(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)																	
Initial Spares (\$ in Millions)	-	-	-	-	-	-	-	-	-	-	-	-					
Flyaway Unit Cost (\$ in Dollars)	-	-	-	-	-	-	-	-	-	-	-	-					
Gross/Weapon System Unit Cost (\$ in Dollars)	-	-	-	-	-	-	-	-	-	-	-	-					
<b>Description:</b>																	
BASE TELECOMMUNICATIONS INFRASTRUCTURE (BTI) provides all Marine Corps installations with the base area network communications infrastructure that connects the end-user to the DISA network. BTI modernizes, sustains, upgrades and enhances the telecommunications systems infrastructure for all Marine Corps Installations in order to meet the demands required to support the 5th Element of the Marine Air Ground Task Force (MAGTF). BTI is designed to maintain current industry standards as they relate to technological capabilities for all voice, video and data services and are transported via each installation's infrastructure. These data services include, support for but are not limited to: Enhanced 911 (E911), Video-Teleconferencing, Integrated Services Digital Network, Marine Corps Enterprise Network, Energy Monitoring Control Systems, Intrusion Detection Systems, Access Control Systems, Fire Alarm Control Networks and Fleet Training Systems. This includes supporting systems such as optical networks, telecommunications management systems, primary power, voice mail, teleconferencing, and outside plant infrastructure. The ongoing focus is technology refresh and standardization on DISA Unified Capabilities (UC) (voice, video, collaboration, and data) through modernization of installation infrastructure in order to maintain connection to the DISA network.																	
PUBLIC KEY INFRASTRUCTURE (PKI) is a framework of laws, policies, procedures, and technologies for the use of digital credentials, which provide confidentiality, integrity, authenticity, and non-repudiation in electronic communications and transactions. PKI allows secure access to IT systems. PKI has the ability to electronically sign documents, encrypt messages and documents, and to authenticate and protect web access... In compliance with DOD policy and direction, the USMC Public Key Infrastructure Program (PKI) program provides the resources, manpower and equipment (hardware and software), dedicated to the management (i.e.: generation, production, distribution, control, accounting and destruction) of keys and certificates used by public key-based security services to include NIPRNet and SIPRNet both garrison and deployed. The PKI program operates the USMC Certificate Validation Infrastructure necessary to ensure that only authorized users and server based applications are allowed to operate on the Marine Corps Enterprise Network (MCEN). These services are required for user access to all information system components on the MCEN including network accounts, applications and web sites. PKI must be operable in garrison and tactical/deployed environments.																	
CONSOLIDATED EMERGENCY RESPONSE SYSTEM (CERS) is a centrally managed program to field a technology solution in support of emergency dispatch personnel that facilitates timely responses when emergency calls for service are received. CERS provides command and coordination dispatch functions for first responders to support All-Hazard missions. It standardizes Emergency Dispatch Centers to provide notification functions, resource management and situational awareness in order to increase efficient emergency and day-to-day first responder operations. CERS capability is achieved through delivery of Enhanced 911 (E911) and emergency dispatch capabilities consisting of Computer Aided Dispatch (CAD), Fire Station Alerting (FSA) and Mobile Data Computers (MDC) for first responder's vehicles.																	
ENTERPRISE LAND MOBILE RADIOS (E-LMR): E-LMR is a modern, digital, Association of Public Safety Communications Officials Project 25 Trunked radio system at all Marine Corps Bases, Posts and Stations (BPS). It provides the wireless Radio Frequency (RF) communications that are required to support the Consolidated Emergency Response System and First Responders (i.e. Police, Fire, Emergency Medical Services) as part of the Emergency Management Command and Coordination initiative. Specifically, the radio system provides RF coverage to BPS populated areas and roads in-between, permitting																	

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<b>Exhibit P-40, Budget Line Item Justification: PB 2019 Navy</b>		<b>Date:</b> February 2018
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 1109N: Procurement, Marine Corps / BA 04: Communications and Electronics Equipment / BSA 19: Other Support (Non-Tel)		<b>P-1 Line Item Number / Title:</b> 4635 / Comm & Elec Infrastructure Supt
<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> 0206313M, 0605013M
<b>Line Item MDAP/MAIS Code:</b> N/A	positive command and coordination between Dispatchers and First Responders and enables their ability to respond to incidents during normal, crisis, and recovery operations. In the wake of 9/11 and the Ft. Hood incident, DoD recognized that effective emergency communications and mutual aid support operation are key elements in providing homeland security, reducing the loss of life and the preservation of property. Thus, the objective for the E-LMR acquisition is to bring forth a reliable interoperability wireless communication system with a limited data capability.	
<p>TEST, EVALUATION, &amp; ENGINEER ENVIRONMENT: Marine Corps Tactical Systems Support Activity (MCTSSA) provides the only Marine Corps organic, operationally relevant, MAGTF Command, Control, Communications, Computers, and Intelligence (C4I) architecture for testing and engineering tasks. This environment is the sole organic solution in the Marine Corps for Link-16 Tactical Data Link Networks for air-to- air, ship, and shore targeting and messaging, validated at MCTSSA before Marine/Navy use in theater. The environment also provides Marine Corps organic equipment, environments, operators, and testers for Joint Communications Exercises, Joint Interoperability Testing, and Systems of System testing. Funding supports modernization and expansion of the MAGTF Systems Integration Environment at MCTSSA for non-Table of Equipment items: Communications Backbone, Test Tool/Data Collection Hardware/Software, and Computers. The environment is essential to operating forces support for fielded C4I systems, as well as evaluating USMC and Joint C4I systems in a controlled, repeatable, and re-configurable manner that reduces program risk and identifies significant deficiencies prior to fielding to the operating forces. More than forty Marine Corps C4I programs and systems rely on MCTSSA support.</p> <p>MARINE CORPS INFORMATION OPERATIONS PROGRAM (MCIOP) provides MAGTF commanders and the Marine Corps a responsive and effective full-spectrum information operations (IO) planning and psychological operations delivery capability by means of deployable support teams and a comprehensive general support IO reach-back capability in order to integrate IO into Marine Corps operations. Multiple classification levels require separate Information Technology (IT) infrastructure to support each classification level in accordance with National Security Agency and Defense Intelligence Agency standards. This includes equipment necessary for connecting internal MCIOP IT infrastructure (voice, video, and data) with the existing Marine Corps Base Quantico support infrastructure.</p>		

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Exhibit P-40, Budget Line Item Justification: PB 2019 Navy							Date: February 2018		
Appropriation / Budget Activity / Budget Sub Activity:				P-1 Line Item Number / Title:					
1109N: Procurement, Marine Corps / BA 04: Communications and Electronics Equipment / BSA 19: Other Support (Non-Tel)				4635 / Comm & Elec Infrastructure Supt					
ID Code (A=Service Ready, B=Not Service Ready): A			Program Elements for Code B Items: N/A				Other Related Program Elements: 0206313M, 0605013M		
<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)
P-40a	Comm & Elec Infrastructure Supt				- / 231.822	- / 25.329	- / 44.455	- / 83.971	- / -
<b>P-40</b>	<b>Total Gross/Weapon System Cost</b>				<b>- / 231.822</b>	<b>- / 25.329</b>	<b>- / 44.455</b>	<b>- / 83.971</b>	<b>- / 0.000</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. Title represents the P-40a Title when only the P-40a Summary/Total is shown.									
Note: Totals in this Exhibit P-40 set may not be exact or sum exactly due to rounding.									
<b>Justification:</b>									
Beginning in FY19, MCIOP and TEEE funding has been realigned from BLI 4635 COMM & ELEC INFRASTRUCTURE SUPT, to BLI 4620, ITEMS UNDER \$5 MILLION (COMM & ELEC).									
FY2018 Justifications: \$44.455M									
BASE TELECOMMUNICATIONS INFRASTRUCTURE (BTI) \$32.893M:									
\$10.110M will support DPRI. FY18 funding is required to install base telecommunications infrastructure for two Japanese funded MILCON projects in Guam. These projects will establish a non-live fire training area in Andersen South and a waterfront headquarters facility in Apra Harbor. The Andersen South training facility will provide Marines with the ability to maintain readiness by conducting convoys, military operations on urbanized terrain, and breaching. The waterfront headquarters facility is required for the mobilization and de-mobilization of cargo and personnel in/out of Guam. These requirements are directly related to the relocation of Marines from Okinawa to Guam.									
\$22.783M will support the technology refresh and standardization of DISA Unified Capabilities (voice, video, collaboration, and data) through UC/DWDM modernization at two Marine Corps installations. The funding increase of \$13.582M from FY17 to FY18 is due to the increase in the number of installations receiving the UC/DWDM upgrade and the alignment of the DPRI BTI installation schedule with the Guam construction schedule.									
PUBLIC KEY INFRASTRUCTURE (PKI):									
\$1.409M funding will support the continuation of PKI hardware and software implementation across the (NIPRNet and SIPRNet) for both garrison and deployed networks in order to meet CYBERCOM's Tasking Order requiring the use of hardware tokens for access to networks, network resources and secure email in accordance with DODI 8520.02 and DODI 8520.03. Funding will also be utilized to procure necessary tokens and equipment for SIPRNet Token issuance across the MCEN as well as implementation of the DOD PKI NIPRNet Enterprise Alternate Token Management System.									
CONSOLIDATED EMERGENCY RESPONSE SYSTEM (CERS):									
\$4.709M will support network connection, procurement and fielding of emergency dispatch systems to MCAS Iwakuni and MCB Camp LeJeune.									
ENTERPRISE LAND MOBILE RADIOS (E-LMR):									
\$4.272M funding will support the completion of E-LMR Western Region Infrastructure contract to include network connection and implementation at Marine Corps Mountain Warfare Training Center-Bridgeport (MWTC).									
TEST, EVALUATION, & ENGINEERING ENVIRONMENT - EQUIPMENT & TECHNICAL SERVICES (TEEE):									
\$0.921M Funding supports maintenance and expansion of the MAGTF Systems Integration Environment at MCTSSA for non-Table of Equipment Items: Communications Backbone, Test Tool/Data Collection Hardware/Software, and Computers. Realignment of effort to new BLI 4620 in FY19 and beyond reflects USMC Program Management Office (PMO) reorganization to improve support of USMC OPFOR.									

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<b>Exhibit P-40, Budget Line Item Justification: PB 2019 Navy</b>		<b>Date:</b> February 2018		
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 1109N: Procurement, Marine Corps / BA 04: Communications and Electronics Equipment / BSA 19: Other Support (Non-Tel)		<b>P-1 Line Item Number / Title:</b> 4635 / Comm & Elec Infrastructure Supt		
<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> 0206313M, 0605013M		
<b>Line Item MDAP/MAIS Code:</b> N/A				
MARINE CORPS INFORMATION OPERATIONS PROGRAM (MCIOP): \$0.251M Funding is for the refresh of hardware required on both the classified Joint Worldwide Intelligence Communications System (JWICS) and unclassified Open Source Information System (OSIS) networks. JWICS and OSIS are both provided by the Office of the Director of National Intelligence (ODNI) through Marine Corps Intelligence Activity (MCIA). JWICS provides MCIOC with classified network connectivity and OSIS provides MCIOC with unclassified network connectivity.				
The FY 2019 funding request was reduced by (\$.648) million to reflect the Department of Navy's effort to support the Office of Management and Budget directed reforms for Efficiency and Effectiveness that include a lean, accountable, more efficient government.				
FY2019 Justifications: \$83.971M				
BASE TELECOMMUNICATIONS INFRASTRUCTURE (BTI) \$54.349M: Growth from FY18 to FY19 is due to the BTI Defense Policy Review Initiative (DPRI) install schedule and UC/DWDM schedule. The funding increase of \$21.456M from FY18 to FY19 is due to greater size, scope and complexity of completing the modernizations at the installations receiving the UC/DWDM upgrade in FY19 and the alignment of the DPRI BTI installation schedule with the Guam construction schedule.				
DPRI BTI (\$30.630M): FY19 Funding, executed by Space and Naval Warfare Center (SPAWAR), will procure, install and accredit, Information Technology (IT) systems. The scope of the work will support the ongoing eight MILCON projects. Of which, there are two Japanese funded MILCON projects ( J-007 Waterfront HQ and J-755 Urban Combat Trng) and six U.S. funded MILCON projects (P-250 MALS Fac, P-260 Corrosion Ctrl Hangar, P-270 ACE Gym & Dining, P-295 Ordnance Ops, P-601 Aircraft Maintenance #2, and P-715 KD Ranges). The IT systems are integral to making the facilities complete and useable. All projects are vital to supporting the relocation of Marines from Okinawa to Guam.				
UC/DWDM Upgrades(\$23.719M): FY 19 Funding will support the upgrade and standardization of DISA Unified Capabilities (voice, video, collaboration, and data) through UC/DWDM modernization at one large Marine Corps installation. Modernization and upgrade of the network telecommunications infrastructure is necessary to ensure the delivery of voice, video, and data services that support the day-to-day operations of the Base, Post, and Station. These services impact unit coordination (deploying personnel/organizations), Base operations (air operations, live fire ranges, First Responders, Force Protection, etc.), and critical life safety (i.e. E911, Fire Alarm Control, Intrusion Detection, and Access Control Systems).				
PUBLIC KEY INFRASTRUCTURE (PKI): \$.119M funding will support the continuation of PKI hardware and software implementation across the (NIPRNet and SIPRNet) for both garrison and deployed networks in order to meet CYBERCOM's Tasking Order requirement. Funding decrease of \$1.290M from FY18 to FY19 is the result of virtualization of tactical hardware and the reclassification of NIPRNet Enterprise Alternate Tokens and SIPRNet Tokens from equipment to consummables.				
CONSOLIDATED EMERGENCY RESPONSE SYSTEM (CERS): \$8.391M will support technical refresh engineering and system hardware/software upgrade. The increase of \$3.682M from FY2018 to FY2019 is the result of funding provided for the mandated system hardware/software upgrade.				
ENTERPRISE LAND MOBILE RADIOS (E-LMR): \$13.485M funding will support multi-band radio (MBR) technical refresh and associated fielding support as well as system hardware/software upgrade. The increase of \$9.213M from FY2018 to FY2019 if the result of the start of Multi Band Radio refresh and the mandated system hardware/software upgrade.				
E-LMR DPRI (\$7.627M) - Funding is required to procure equipment to expand the current ELMR network that supports Joint Region Marianas (JRM). JRM provides ELMR support for all DOD and Federal organizations on the island of Guam. The Marine Corps is increasing the active duty population on Guam by ~5,000 personnel. The increase of personnel drives additional requirements for fire and emergency				

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<b>Exhibit P-40, Budget Line Item Justification:</b> PB 2019 Navy		<b>Date:</b> February 2018
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 1109N: Procurement, Marine Corps / BA 04: Communications and Electronics Equipment / BSA 19: Other Support (Non-Tel)		<b>P-1 Line Item Number / Title:</b> 4635 / Comm & Elec Infrastructure Supt
<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> 0206313M, 0605013M
<b>Line Item MDAP/MAIS Code:</b> N/A		
services, which in turn increase radio communication requirements. The Marine Corps is only expanding the current system to accommodate additional subscriber bandwidth. ELMR expansion is vital to supporting the relocation of Marines from Okinawa to Guam.		
TEST, EVALUATION, & ENGINEERING ENVIRONMENT - EQUIPMENT & TECHNICAL SERVICES (TEEE): Realignment of effort to new BLI 4620 in FY19 and beyond reflects USMC Program Management Office (PMO) reorganization to improve support of USMC OPFOR.		
MARINE CORPS INFORMATION OPERATIONS PROGRAM (MCIOP): Realignment of effort to new BLI 4620 in FY19 and beyond reflects USMC Program Management Office (PMO) reorganization to improve support of USMC OPFOR.		

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Exhibit P-40a, Budget Item Justification For Aggregated Items: PB 2019 Navy														Date: February 2018						
Appropriation / Budget Activity / Budget Sub Activity: 1109N / 04 / 19					P-1 Line Item Number / Title: 4635 / Comm & Elec Infrastructure Supt									Aggregated Items Title: Comm & Elec Infrastructure Supt						
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 (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)			
<b>1) Base Telecommunications Infrastructure (BTI)</b>																				
1.1) BTI - Defense Policy Review Initiative Equipment <sup>(1)</sup>	A		-	-	13.420	-	-	7.729	-	-	10.110	-	-	30.630	-	-	-	-	30.630	
1.2) BTI - Unified Capabilities & Dense Wave Division Multiplexing <sup>(2)</sup>	A		-	-	87.918	-	-	9.201	-	-	22.783	-	-	23.719	-	-	-	-	23.719	
1.3) BTI - Outside Plants	A		-	-	7.773	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
<i>Subtotal: 1) Base Telecommunications Infrastructure (BTI)</i>			-	-	<b>109.111</b>	-	-	<b>16.930</b>	-	-	<b>32.893</b>	-	-	<b>54.349</b>	-	-	-	-	<b>54.349</b>	
<b>2) CONSOLIDATED EMERGENCY RESPONSE SYSTEM (CERS)</b>																				
2.2) CERS - Tech Refresh Engineering <sup>(3)</sup>	A		-	-	-	-	-	-	-	-	-	-	-	2.091	-	-	-	-	2.091	
2.4) CERS - Fielding Activities <sup>(4)</sup>			-	-	19.001	-	-	3.175	-	-	0.885	-	-	-	-	-	-	-	-	
2.5) CERS - Emergency Dispatch for Marine Corps Installations <sup>(5)</sup>	A		-	-	26.388	-	-	0.764	-	-	3.824	-	-	-	-	-	-	-	-	
2.6) CERS - E-911 for Marine Corps Installations	A		-	-	25.671	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
2.7) CERS - Network Equipment	A		-	-	1.229	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
2.8) CERS - ECP <sup>(6)</sup>	A		-	-	-	-	-	-	-	-	-	-	-	6.300	-	-	-	-	6.300	
<i>Subtotal: 2) CONSOLIDATED EMERGENCY RESPONSE SYSTEM (CERS)</i>			-	-	<b>72.289</b>	-	-	<b>3.939</b>	-	-	<b>4.709</b>	-	-	<b>8.391</b>	-	-	-	-	<b>8.391</b>	
<b>3) PUBLIC KEY INFRASTRUCTURE (PKI)</b>																				
3.1) IT Equipment (To include cables, infrastructure, storage devices, etc.)	A		-	-	14.358	-	-	1.238	-	-	1.409	-	-	0.119	-	-	-	-	0.119	
<i>Subtotal: 3) PUBLIC KEY INFRASTRUCTURE (PKI)</i>			-	-	<b>14.358</b>	-	-	<b>1.238</b>	-	-	<b>1.409</b>	-	-	<b>0.119</b>	-	-	-	-	<b>0.119</b>	
<b>4) Enterprise Land Mobile Radio (ELMR)</b>																				
4.1) ELMR - Subscriber Units Multi-Band Radios Refresh <sup>(7)</sup>	A		-	-	-	-	-	-	-	-	-	-	-	6.705	-	-	-	-	6.705	

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Exhibit P-40a, Budget Item Justification For Aggregated Items: PB 2019 Navy														Date: February 2018						
Appropriation / Budget Activity / Budget Sub Activity: 1109N / 04 / 19					P-1 Line Item Number / Title: 4635 / Comm & Elec Infrastructure Supt									Aggregated Items Title: Comm & Elec Infrastructure Supt						
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 (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)
4.2) ELMR - Western Region Infrastructure (8)	A		-	-	13.277	-	-	-	-	-	3.595	-	-	-	-	-	-	-	-	-
4.5) ELMR - Fielding Activities (9)	A		-	-	0.500	-	-	-	-	-	0.677	-	-	1.880	-	-	-	-	-	1.880
4.6) ELMR - ECP (10)	A		-	-	-	-	-	2.200	-	-	-	-	-	4.900	-	-	-	-	-	4.900
4.7) ELMR - Defense Policy Review Initiative Equipment	A		-	-	-	-	-	-	-	-	-	-	-	7.627	-	-	-	-	-	7.627
<i>Subtotal: 4) Enterprise Land Mobile Radio (ELMR)</i>			-	-	<b>13.777</b>	-	-	<b>2.200</b>	-	-	<b>4.272</b>	-	-	<b>21.112</b>	-	-	-	-	-	<b>21.112</b>
<b>5) MARINE CORPS INFORMATION OPERATIONS PROGRAM (MCIOP)</b>																				
5.1) Hardware	A		-	-	2.279	-	-	-	-	-	0.251	-	-	-	-	-	-	-	-	-
<i>Subtotal: 5) MARINE CORPS INFORMATION OPERATIONS PROGRAM (MCIOP)</i>			-	-	<b>2.279</b>	-	-	-	-	-	<b>0.251</b>	-	-	-	-	-	-	-	-	
<b>6) TEST, EVALUATION, &amp; ENGINEERING ENVIRONMENT</b>																				
6.1) Test Tools	A		-	-	0.806	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
6.2) Landing Forces Operations Center Integration System Test Environment	A		-	-	3.505	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
6.3) MCNEL Fly-Away Kits	A		-	-	0.703	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
6.4) CAC2S STIL Equip (Functional Equivalent)	A		-	-	0.838	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
6.5) VoIP-AS SIP Lab	A		-	-	2.284	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
6.6) Test Engineering Labs Infrastructure	A		-	-	-	-	-	1.022	-	-	0.921	-	-	-	-	-	-	-	-	-
<i>Subtotal: 6) TEST, EVALUATION, &amp; ENGINEERING ENVIRONMENT</i>			-	-	<b>8.136</b>	-	-	<b>1.022</b>	-	-	<b>0.921</b>	-	-	-	-	-	-	-	-	
<b>7) Prior Year Cumulative Funding</b>																				
7.1) Prior Year Cumulative Funding	A		-	-	11.872	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
<i>Subtotal: 7) Prior Year Cumulative Funding</i>			-	-	<b>11.872</b>	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
<b>Total</b>			-	-	<b>231.822</b>	-	-	<b>25.329</b>	-	-	<b>44.455</b>	-	-	<b>83.971</b>	-	-	-	-	-	<b>83.971</b>

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

**Footnotes:**

(1) BTI DPRI: Funding increased \$20.52M from FY 2018 to FY 2019 due to an increase in the number of sites receiving BTI IT systems in support of the relocation schedule from Okinawa to Guam.

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<b>Exhibit P-40a, Budget Item Justification For Aggregated Items:</b> PB 2019 Navy		<b>Date:</b> February 2018
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 1109N / 04 / 19	<b>P-1 Line Item Number / Title:</b> 4635 / Comm & Elec Infrastructure Supt	<b>Aggregated Items Title:</b> Comm & Elec Infrastructure Supt
(2) BTI UC/DWDM: Funding increased \$0.936M from FY 2018 to FY 2019 due to the increased scope and complexity of the UC/DWDM modernization at MCB Camp Pendleton.		
(3) CERS-Tech Refresh Engineering increase \$2.091M from FY 2018 to FY 2019 due to engineering support required to prepare for tech refresh starting in FY 2020.		
(4) CERS Fielding Activities decreased \$0.885M from FY 2018 to FY 2019 due to scheduled FOC and completion of fielding in Sep 2018.		
(5) CERS Emergency Dispatch decreased \$3.824M from FY 2018 to FY 2019 due to scheduled FOC and completion of installation and fielding in Sep 2018.		
(6) CERS Software Upgrade ECP increased \$6.300 from FY2018 - FY2019 to upgrade systems from Windows 7 to the mandated Windows 10 environment. Funding will procure the hardware and software required to be Windows 10 and IA compliant.		
(7) ELMR Subscriber Units Multi-Band Radios Refresh increased \$6.705M from FY 2018 to FY 2019 due to scheduled tech refresh in FY 2019.		
(8) ELMR Western Region Infrastructure (WRI) decreased \$3.595M from FY2018 - FY2019 due to scheduled FOC and completion of WRI installation Sep 2018.		
(9) ELMR Fielding Activities increased \$1.203M from FY2018 - FY2019 due to increase of support required for tech refresh starting in FY2019.		
(10) ELMR Software Upgrade ECP increased \$4.900M from FY 2018 - FY 2019 to upgrade systems to the mandated Windows 10 environment. Funding will procure the hardware and software required to be Windows 10 and IA compliant.		

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<b>Exhibit P-40, Budget Line Item Justification: PB 2019 Navy</b>								<b>Date:</b> February 2018				
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 1109N: Procurement, Marine Corps / BA 05: Support Vehicles / BSA 1: Administrative Vehicles					<b>P-1 Line Item Number / Title:</b> 5006 / Commercial Cargo Vehicles							
<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> 0206624M				
<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 (\$ in Millions)	232.938	93.219	66.951	25.441	0.000	25.441	29.784	31.360	35.118	31.254	Continuing	Continuing
Less PY Advance Procurement (\$ in Millions)	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) (\$ in Millions)	232.938	93.219	66.951	25.441	0.000	25.441	29.784	31.360	35.118	31.254	Continuing	Continuing
Plus CY Advance Procurement (\$ in Millions)	-	-	-	-	-	-	-	-	-	-	-	-
<b>Total Obligation Authority (\$ in Millions)</b>	<b>232.938</b>	<b>93.219</b>	<b>66.951</b>	<b>25.441</b>	<b>0.000</b>	<b>25.441</b>	<b>29.784</b>	<b>31.360</b>	<b>35.118</b>	<b>31.254</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 (\$ in Millions)	-	-	-	-	-	-	-	-	-	-	-	-
Flyaway Unit Cost (\$ in Dollars)	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost (\$ in Dollars)	-	-	-	-	-	-	-	-	-	-	-	-
<b>Description:</b>												
Commercial Cargo Vehicles - The Commercial Cargo Vehicles program is a centrally managed program for procurement of commercially-available and general purpose vehicles such as heavy and light trucks, special purpose trucks, certain fire department trucks, refuse collection trucks, tanker trucks and all types of trailers. This line also includes P-19 Replacement, which is a tactical firefighting vehicle.												
This line item includes funding specified for Defense Policy Review Initiative (DPRI) within the above details.												
Emergency Response Vehicles (ERV) - Replaces firefighting apparatuses for maintaining the minimal installations ERV requirements for structural and airfield operations capabilities throughout the Marine Corps. Additionally, Defense Policy Review Initiative (DPRI). This requirement is to outfit the new Government of Japan funded J-008 Fire Station for the future Marine Corps Base Guam. Specifically this funding will procure the Command Vehicle, Aerial Ladder Truck, Fire Engine, HAZMAT Rescue Vehicle, and Water Tender.												
Commercial Passenger Vehicle (CPV) - The CPV is a centrally managed program for the procurement of commercially available vehicles, such as sedans, vans and buses of various sizes. These vehicles are primarily used for passenger transportation on Marine Corps Base Japan, where leases are rarely economical.												
P-19 Replacement (P-19R) - Vehicles are replacing the obsolete A/S32P-19A Crash Fire Rescue fleet in support of expeditionary airfield operations and the supporting establishment. The vehicle is outfitted with advanced fire suppression equipment and provides rescue and aircraft fire fighting capabilities to permanent and expeditionary airfields throughout the Marine Corps. The P-19 may also be employed to fight structural fires in support of base camps and as firefighting support to other elements of the Marine Air Ground Task Force (MAGTF), such as ammunition supply points, Petroleum, Oil, and Lubricant (POL) distribution points, or hazardous material storage facilities.												
Marine Security Guard (Vehicles) - Funds the procurement of commercial vehicles for the Marine Security Guard based on the requirements of the particular command and country embassies.												
<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>		
Navy	Quantity	-	-	-	-	-	-	-	-	-	-	-
	Total Obligation Authority	93.219	58.032	25.441	-	25.441	29.784	31.360	35.118	31.254		

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Exhibit P-40, Budget Line Item Justification: PB 2019 Navy							Date: February 2018							
Appropriation / Budget Activity / Budget Sub Activity: 1109N: Procurement, Marine Corps / BA 05: Support Vehicles / BSA 1: Administrative Vehicles				P-1 Line Item Number / Title: 5006 / Commercial Cargo Vehicles										
ID Code (A=Service Ready, B=Not Service Ready): A		Program Elements for Code B Items: N/A			Other Related Program Elements: 0206624M									
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					
NR	Quantity	-	-	-	-	-	-	-	-	-				
	Total Obligation Authority	-	8.919	-	-	-	-	-	-	-				
Total: Secondary Distribution	Quantity	-	-	-	-	-	-	-	-	-				
	Total Obligation Authority	93.219	66.951	25.441	-	25.441	29.784	31.360	35.118	31.254				

**UNCLASSIFIED**

<b>Exhibit P-40, Budget Line Item Justification: PB 2019 Navy</b>							<b>Date:</b> February 2018		
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 1109N: Procurement, Marine Corps / BA 05: Support Vehicles / BSA 1: Administrative Vehicles				<b>P-1 Line Item Number / Title:</b> 5006 / Commercial Cargo Vehicles					
<b>ID Code</b> (A=Service Ready, B=Not Service Ready): A				<b>Program Elements for Code B Items:</b> N/A					
<b>Line Item MDAP/MAIS Code:</b> N/A				<b>Other Related Program Elements:</b> 0206624M					
<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>
P-40a	Commercial Cargo Vehicles	P-5a, P-21			- / 232.938	- / 93.219	- / 66.951	- / 25.441	- / -
<b>P-40</b>	<b>Total Gross/Weapon System Cost</b>				<b>- / 232.938</b>	<b>- / 93.219</b>	<b>- / 66.951</b>	<b>- / 25.441</b>	<b>- / 0.000</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. Title represents the P-40a Title when only the P-40a Summary/Total is shown.									
Note: Totals in this Exhibit P-40 set may not be exact or sum exactly due to rounding.									

**Justification:**

The FY 2019 funding request was reduced by (\$.155) million to reflect the Department of Navy's effort to support the Office of Management and Budget directed reforms for Efficiency and Effectiveness that include a lean, accountable, more efficient government.

FY18 Base Appropriation Request: \$66.951M(\$58.032M Active, \$8.919M Reserves)

P-19R - Vehicles - \$32.141M (\$23.222 Active, \$8.919 Reserve) will continue to procure efforts such as non-recurring engineering and procurement of modifications and ECP's. Funds will include a portfolio such as (CDRL's, Halotron bottles, etc) to continue implementing tasks required from FRP decision. Additionally, programmatic oversight (production/progress reviews) and logistics supportability (e.g., FDT) of those production vehicles is required in support of P-19 for the P-19R vehicles. Compliance with NFPA-414 is required since it is a KPP. The ordering period for the contract expires in FY18. Funding in FY19 and out reflects P-19R realignment to BLI 5050 to centralize modification funding for USMC tactical vehicles.

PB18 was built assuming FY17 Request for Additional Appropriation (RAA) would be appropriated and AAO would be achieved in FY17. Congress did not appropriate the P-19R RAA request for FY17. Program has procured a quantity of 91 vehicles in FY17. Program's FY18 plan has changed due to the RAA not being appropriated and the program will now procure 35 vehicles in FY18.

Commercial Passenger Vehicles - \$11.475M - Funds will procure vehicles such as buses and sedans for the required replacements of passenger vehicles that have exceeded the recommended service life for Marine Corps Installations Pacific (MCIPAC); and to support the operation and mission of the USMC OCONUS (Japan) commands. This effort transitioned from Commercial Passenger Vehicles (BLI 5003) in FY17.

Commercial Cargo Vehicles - \$10.271M- Funds will procure a portfolio of non-tactical general purpose vehicles such as heavy duty and light trucks, special purpose trucks, refuse collection trucks, certain fire department trucks, tanker trucks and all types of trailers to support the deployment and resetting of Operating Forces. Equipment will support the Operating Forces training, readiness, deployment and reconstitution; and will comply with California Air Resource Board (CARB) and Executive Order (EO) 13693.

Emergency Response Vehicles - \$4.533M - Funds will procure ladder trucks, ambulances and fire pumper for Marine Corps activities and commands.

Marine Security Guard (Vehicles) - \$8.531M - Funds the procurement of commercial vehicles for the Marine Security Guard based on the requirements of the particular command and country embassies.

FY19 Base Appropriation Request: \$25.893M

Commercial Passenger Vehicles - \$3.643M - Funding will procure vehicles such as buses (Green Line), passenger vans and sedans (administrative and law enforcement) for the required replacements of passenger vehicles that have exceeded the recommended service life for Marine Corps Installations Pacific (MCIPAC); and to support the operation and mission of the USMC OCONUS (Japan) commands. Funds will also be used for the procurement of missions critical passenger vehicles needed for the recent transition of Townsend Bombing Range from the Georgia Air National Guard to the Marine Corps. The reduction of \$7.832M from FY18 to FY19 is a result of fewer vehicles being bought, assuming the requirements for Over-the-Snow vehicles would be achieved in FY18.

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<b>Exhibit P-40, Budget Line Item Justification:</b> PB 2019 Navy		<b>Date:</b> February 2018
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 1109N: Procurement, Marine Corps / BA 05: Support Vehicles / BSA 1: Administrative Vehicles		<b>P-1 Line Item Number / Title:</b> 5006 / Commercial Cargo Vehicles
<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> 0206624M
<b>Line Item MDAP/MAIS Code:</b> N/A		
<p>Commercial Cargo Vehicles - \$10.295M- Funds will procure a portfolio of non-tactical general purpose vehicles such as heavy duty and light trucks, special purpose trucks, refuse collection trucks, certain fire department trucks, tanker trucks and all types of trailers to support the deployment and resetting of Operating Forces. Equipment will support the Operating Forces training, readiness, deployment and reconstitution; and will comply with California Air Resource Board (CARB) and Executive Order (EO) 13693. Funds will also be used to procure mission critical commercial cargo vehicles (tractor trucks, low-boy trailers, etc.)to operate and maintain ranges as well as fight wild land fires on Marine Corps Installations. Additionally, the Defense Policy Review Initiative funding will procure the first of four JP-5 fuel trucks required to support Marine Corps aviation operations on the North ramp of Naval Support Activity Andersen Air Force Base in Guam.</p> <p>Emergency Response Vehicles - \$3.492M - Funds will procure ladder trucks, ambulances and fire pumper for Marine Corps activities and commands. The funds will also procure brush trucks and water extenders to fight range fires on Marine Corps Installations. The decrease of \$1.041M from FY18 TO FY19 is the result of a reduced requirement for FY19.</p> <p>Marine Security Guard (Vehicles) - \$8.011M - Funds the procurement of commercial vehicles for the Marine Security Guard based on the requirements of the particular command and country embassies. Vehicle increased unit costs for the Armored Vehicles are applicable to reflect inflation.</p>		

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Exhibit P-40a, Budget Item Justification For Aggregated Items: PB 2019 Navy														Date: February 2018						
Appropriation / Budget Activity / Budget Sub Activity: 1109N / 05 / 1					P-1 Line Item Number / Title: 5006 / Commercial Cargo Vehicles									Aggregated Items Title: Commercial Cargo Vehicles						
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 (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)
<b>1) Commercial Cargo Vehicles</b>																				
1.1) Commercial Passenger Vehicles	A		-	-	-	-	-	3.161	-	-	11.475	-	-	3.643	-	-	-	-	-	3.643
1.2) Emergency Response Vehicles	A		-	-	18.859	-	-	4.719	-	-	4.533	-	-	3.492	-	-	-	-	-	3.492
1.3) Commercial Cargo Vehicles	A		-	-	170.017	-	-	4.313	-	-	10.271	-	-	10.295	-	-	-	-	-	10.295
<b>Subtotal: 1) Commercial Cargo Vehicles</b>			-	-	<b>188.876</b>	-	-	<b>12.193</b>	-	-	<b>26.279</b>	-	-	<b>17.430</b>	-	-	-	-	-	<b>17.430</b>
<b>2) P-19 Replacement</b>																				
2.1) P-19R Procurement Vehicles (1)(t)	A		636,631.58	38	24.192	667,055.00	14	9.339	626,592.00	35	21.931	-	-	-	-	-	-	-	-	-
2.2) P-19 Procurement of Vehicles (2)(t)	A		-	-	-	608,186.00	54	32.842	-	-	-	-	-	-	-	-	-	-	-	-
2.3) P-19R Procurement of Vehicles (3)(t)	A		-	-	-	687,217.39	23	15.806	-	-	-	-	-	-	-	-	-	-	-	-
2.4) Program Office Support (4)	A		-	-	14.844	-	-	-	-	-	0.147	-	-	-	-	-	-	-	-	-
2.5) Contracting Data Requirement List (CDRL)	A		-	-	0.156	-	-	0.818	-	-	0.093	-	-	-	-	-	-	-	-	-
2.6) Prior Year Cumulative (5)	A		-	-	1.187	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2.7) First Destination Transportation (FDT) (6)			-	-	0.060	-	-	0.150	-	-	0.413	-	-	-	-	-	-	-	-	-
2.8) Program Support (Halotron Carts) (7)	A		-	-	-	-	-	1.350	-	-	-	-	-	-	-	-	-	-	-	-
2.9) Halotron Bottle	A		-	-	-	-	-	0.706	-	-	0.358	-	-	-	-	-	-	-	-	-
2.10) Intercom Procurement (Tocnet) (8)	A		-	-	0.182	-	-	3.414	-	-	-	-	-	-	-	-	-	-	-	-
2.11) Engineering Change Proposal (ECP) (9)	A		-	-	1.344	-	-	-	-	-	5.826	-	-	-	-	-	-	-	-	-
2.12) Configuration Changes	A		-	-	-	-	-	2.154	-	-	-	-	-	-	-	-	-	-	-	-
2.13) Contractor Logistics Support (CLS)	A		-	-	-	-	-	0.536	-	-	0.373	-	-	-	-	-	-	-	-	-

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<b>Exhibit P-40a, Budget Item Justification For Aggregated Items:</b> PB 2019 Navy														<b>Date:</b> February 2018						
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 1109N / 05 / 1							<b>P-1 Line Item Number / Title:</b> 5006 / Commercial Cargo Vehicles							<b>Aggregated Items Title:</b> Commercial Cargo Vehicles						
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 (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)
2.14) Contract Logistics Support Parts <sup>(10)</sup>	A		-	-	-	-	-	2.030	-	-	-	-	-	-	-	-	-	-	-	-
2.15) Initial Issue Provisioning (IIP) and Secondary Repairables	A		-	-	2.097	-	-	3.264	-	-	3.000	-	-	-	-	-	-	-	-	-
2.16) Special Tools	A		-	-	-	-	-	0.191	-	-	-	-	-	-	-	-	-	-	-	-
2.17) Instructor Key Personnel Training, NET and Refurbishment	A		-	-	-	-	-	0.598	-	-	-	-	-	-	-	-	-	-	-	-
<b>Subtotal: 2) P-19 Replacement</b>			-	-	<b>44.062</b>	-	-	<b>73.198</b>	-	-	<b>32.141</b>	-	-	-	-	-	-	-	-	-
<b>3) Marine Security Guard</b>																				
3.1) UnArmored <sup>(11)</sup>	A		-	-	58,025.38	65	3.772	68,620.14	56	3.843	84,990.00	42	3.570	-	-	-	84,990.00	42	3.570	
3.2) Armored <sup>(11)(t)</sup>	A		-	-	92,190.00	44	4.056	101,913.04	46	4.688	100,929.78	44	4.441	-	-	-	100,929.78	44	4.441	
<b>Subtotal: 3) Marine Security Guard</b>			-	-	<b>0.000</b>	-	-	<b>7.828</b>	-	-	<b>8.531</b>	-	-	<b>8.011</b>	-	-	-	-	-	<b>8.011</b>
<b>Total</b>			-	-	<b>232.938</b>	-	-	<b>93.219</b>	-	-	<b>66.951</b>	-	-	<b>25.441</b>	-	-	-	-	-	<b>25.441</b>
Note: Subtotals or Totals in this Exhibit P-40a may not be exact or sum exactly, due to rounding.																				
(t) indicates the presence of a P-5a																				
<b>Footnotes:</b>																				
(1) Vehicles: P-19R Production Contract contains step ladder pricing. To achieve maximum value of step ladder pricing all vehicles need to be on a single delivery order. This Delivery order was awarded in November 2016 under continuing resolution authority for 14 vehicles in order to keep the production line running.																				
(2) These vehicles were placed on order in May 2017, using step ladder pricing.																				
(3) This order was placed July 2017, under a different ordering period than the previous orders placed during FY17.																				
(4) Increase of Program Office Support in FY18 for technical manual reviews and engineer data updates for provisioning.																				
(5) Federal statute requires Federal Retail Excise Tax (FRET) on all trucks of 33,000+ lbs gross weight being shipped to US locations. FRET is based on 12% of final cost. In FY17, the Internal Revenue Service granted relief of FRET for the P-19R.																				
(6) The FY18 FDT charges increase is attributed to shipping of production vehicles.																				
(7) Halotron Carts: All ordered with FY17 funding and will be delivered in FY18.																				
(8) Intercom procured in FY17 achieving economies of scale.																				
(9) The FY18 increase is for procurement ECP Kits resulting from NFPA-414 updates. Compliance with NFPA-414 is required since it is a KPP.																				
(10) Contractor Logistics Support Parts procured in FY17.																				
(11) Increased unit cost from FY18 to FY19 reflects inflation.																				

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Exhibit P-5a, Procurement History and Planning: PB 2019 Navy									Date: February 2018			
Appropriation / Budget Activity / Budget Sub Activity: 1109N / 05 / 1				P-1 Line Item Number / Title: 5006 / Commercial Cargo Vehicles					Aggregated Items: Commercial Cargo Vehicles			
Item Number / Title [DODIC]	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 (\$)	Specs Avail Now?	Date Revision Available	RFP Issue Date
<b>2) P-19 Replacement</b>												
2.1) P-19R Procurement Vehicles (1)(†)		2015	Oshkosh / Oshkosh WI	C / FFP	MARCORSYSCOM	May 2015	Apr 2016	13	611,968.00	Y		
2.1) P-19R Procurement Vehicles (1)(†)		2016	Oshkosh / Oshkosh WI	C / FFP	MARCORSYSCOM	Aug 2016	Feb 2017	17	667,055.00	Y		
2.1) P-19R Procurement Vehicles (1)(†)		2017 <sup>(12)</sup>	Oshkosh / Oshkosh WI	C / FFP	MARCORSYSCOM	Nov 2016	Jul 2017	14	667,055.00	Y		
2.1) P-19R Procurement Vehicles (1)(†)		2018	Oshkosh / Oshkosh WI	C / FFP	MARCORSYSCOM	Mar 2018	Sep 2018	35	626,592.00	Y		
2.2) P-19 Procurement of Vehicles (2)(†)		2017	Oshkosh / Oshkosh WI	C / FP	MARCORSYSCOM	May 2017	Nov 2017	54	608,186.00	Y		
2.3) P-19R Procurement of Vehicles (3)(†)		2017	Oshkosh Corp@Oshkosh WI / Oshkosh, Wisconsin	C / FP	MARCORSYSCOM	Jul 2017	Jan 2018	23	687,217.39	Y		
<b>3) Marine Security Guard</b>												
3.1) UnArmored		2017	Various Vendors / Various	Various	Arlington	Jun 2017	Jun 2017	65	58,025.38	N	Oct 2016	
3.1) UnArmored		2018	Various Vendors / Various	Various	Arlington	Jun 2018	Jun 2018	56	68,620.14	N	Oct 2016	
3.1) UnArmored		2019	Various Vendors / Various	Various	Arlington	Jun 2019	Jun 2019	42	84,990.00	N	Oct 2016	
3.2) Armored <sup>(11)</sup>		2017	Various / Various	Various	Arlington	Jun 2017	Jun 2017	44	92,190.00	N	Oct 2016	
3.2) Armored <sup>(11)</sup>		2018	Various / Various	Various	Arlington	Jun 2018	Jun 2018	46	101,913.04	N	Oct 2016	
3.2) Armored <sup>(11)</sup>		2019	Various / Various	Various	Arlington	Jun 2019	Jun 2019	44	100,929.78	N	Oct 2016	

(†) indicates the presence of a P-21

**Footnotes:**

(12) P19R production contract ordering period ends 29 May 2018

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Exhibit P-21, Production Schedule: PB 2019 Navy																				Date: February 2018																				B A L A N C E											
Appropriation / Budget Activity / Budget Sub Activity: 1109N / 05 / 1										P-1 Line Item Number / Title: 5006 / Commercial Cargo Vehicles										Aggregated Items: Commercial Cargo Vehicles																				B A L A N C E											
Items (Units in Each)							Fiscal Year 2015												Fiscal Year 2016											B A L A N C E																					
O C R O #	M F R Y	SERVICE	PROC QTY	ACCEPT PRIOR TO 1 OCT 2014	BAL DUE AS OF 1 OCT	O C T	N O V	D E C	J A N	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																						
2) P-19 Replacement																																																			
2.1) P-19R Procurement Vehicles <sup>(1)</sup>																																																			
Prior Years Deliveries: 8																																																			
28	2015	NAVY	13	0	13																																		1	1	1	1	7								
28	2016	NAVY	17	0	17																																				A -	-	17								
28	2017	NAVY	14	0	14																																							14							
28	2018	NAVY	35	0	35																																							35							
2.2) P-19 Procurement of Vehicles <sup>(2)</sup>																																																			54
2.3) P-19R Procurement of Vehicles <sup>(3)</sup>																																																		23	
							O C T	N O V	D E C	J A N	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 Navy																				Date: February 2018																			
Appropriation / Budget Activity / Budget Sub Activity: 1109N / 05 / 1										P-1 Line Item Number / Title: 5006 / Commercial Cargo Vehicles										Aggregated Items: Commercial Cargo Vehicles																			
Items (Units in Each)							Fiscal Year 2017												Fiscal Year 2018																				
O C R O #	M F R	FY	SERVICE	PROC QTY	ACCEPT PRIOR TO 1 OCT 2016	BAL DUE AS OF 1 OCT	O C T	N O V	D E C	J A N	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	B A L A N C E								
2) P-19 Replacement																																							
2.1) P-19R Procurement Vehicles <sup>(1)</sup>																																							
Prior Years Deliveries: 8																																							
28	2015	NAVY	13	6	7	1	2	2	2																											0			
28	2016	NAVY	17	0	17	-	-	-	-	2	2	2	2	2	2	2	2	2	2	2	2	1										0							
28	2017	NAVY	14	0	14	A -	-	-	-	-	-	-	-	-	-	-	2	4	4	4	4	4										0							
28	2018	NAVY	35	0	35																		A -	-	-	-	-	-	-	-	-	1	34						
2.2) P-19 Procurement of Vehicles <sup>(2)</sup>																																							
29	2017	NAVY	54	0	54																		A -	-	-	-	-	-	4	4	5	4	5	4	5	4	6	5	3
2.3) P-19R Procurement of Vehicles <sup>(3)</sup>																																							
30	2017	NAVY	23	0	23																		A -	-	-	-	-	-	1	2	2	2	2	2	2	2	2	6	
							O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P	O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P									

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Exhibit P-21, Production Schedule: PB 2019 Navy																				Date: February 2018																			
Appropriation / Budget Activity / Budget Sub Activity: 1109N / 05 / 1										P-1 Line Item Number / Title: 5006 / Commercial Cargo Vehicles										Aggregated Items: Commercial Cargo Vehicles																			
Items (Units in Each)							Fiscal Year 2019												Fiscal Year 2020											BALANCE									
O C R O #	M F R Y	SERVICE	PROC QTY	ACCEPT PRIOR TO 1 OCT 2018	BAL DUE AS OF 1 OCT	O C T	N O V	D E C	J A N	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										
2) P-19 Replacement																																							
2.1) P-19R Procurement Vehicles <sup>(1)</sup>																																							
Prior Years Deliveries: 8																																							
28	2015	NAVY	13	13	0																																0		
28	2016	NAVY	17	17	0																																0		
28	2017	NAVY	14	14	0																																0		
28	2018	NAVY	35	1	34	-	3	3	3	3	3	2	2	2	2	11	0																						
2.2) P-19 Procurement of Vehicles <sup>(2)</sup>																																					0		
2.3) P-19R Procurement of Vehicles <sup>(3)</sup>																																				0			
							O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P	O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P									

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Exhibit P-21, Production Schedule: PB 2019 Navy								Date: February 2018				
Appropriation / Budget Activity / Budget Sub Activity: 1109N / 05 / 1			P-1 Line Item Number / Title: 5006 / Commercial Cargo Vehicles					Aggregated Items: Commercial Cargo Vehicles				
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	Oshkosh - Oshkosh WI	12	200	200	0	3	6	9	0	1	6	7
2	Oshkosh - Oshkosh WI	12	200	200	0	3	6	9	0	1	6	7
3	Oshkosh Corp@Oshkosh WI - Oshkosh, Wisconsin				23	0	0	0	0	0	0	0

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

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

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<b>Exhibit P-40, Budget Line Item Justification: PB 2019 Navy</b>										<b>Date:</b> February 2018							
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 1109N: Procurement, Marine Corps / BA 05: Support Vehicles / BSA 2: Tactical Vehicles										<b>P-1 Line Item Number / Title:</b> 5050 / Motor Transport Modifications							
<b>ID Code</b> (A=Service Ready, B=Not Service Ready): B				<b>Program Elements for Code B Items:</b> N/A					<b>Other Related Program Elements:</b> 0206624M								
<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 (\$ in Millions)	129.830	13.336	21.824	11.392	44.440	55.832	18.693	13.693	15.876	16.209	Continuing	Continuing					
Less PY Advance Procurement (\$ in Millions)	-	-	-	-	-	-	-	-	-	-	-	-					
Net Procurement (P-1) (\$ in Millions)	129.830	13.336	21.824	11.392	44.440	55.832	18.693	13.693	15.876	16.209	Continuing	Continuing					
Plus CY Advance Procurement (\$ in Millions)	-	-	-	-	-	-	-	-	-	-	-	-					
<b>Total Obligation Authority (\$ in Millions)</b>	<b>129.830</b>	<b>13.336</b>	<b>21.824</b>	<b>11.392</b>	<b>44.440</b>	<b>55.832</b>	<b>18.693</b>	<b>13.693</b>	<b>15.876</b>	<b>16.209</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 (\$ in Millions)	-	-	-	-	-	-	-	-	-	-	-	-					
Flyaway Unit Cost (\$ in Dollars)	-	-	-	-	-	-	-	-	-	-	-	-					
Gross/Weapon System Unit Cost (\$ in Dollars)	-	-	-	-	-	-	-	-	-	-	-	-					
<b>Description:</b>																	
The modifications program funds numerous essential modifications, initiatives, and new vehicle procurements that are required to address operational priorities, engineering change proposals, safety concerns, support equipment inefficiencies, tool malfunctions, product quality deficiencies, and other issues that affect vehicle reliability, availability, and readiness. A proactive and focused approach ensures proper vehicle sustainment and life-cycle management and allows the program office to develop and implement improvements, as needed, to respond to the evolving requirements of the Marine Corps and sustain the fleet.																	
Medium Tactical Vehicle Replacement (MTVR) - The MTVR is the Marine Corps' medium ground lift capability supporting all elements of the Marine Air-Ground Task Force (MAGTF). With its 70% off-road mission profile and the addition of a highly survivable armor package, the MTVR is heavily used in contingency operations as well as missions supporting humanitarian operations. It has a payload of 7.1 tons off-road and 15 tons on-road, a high-performance suspension, traction control, central tire inflation system, automatic transmission, and corrosion technology upgrades, to transport personnel, ammunition, bulk cargo, and/or bulk fuel and water in a variety of environments. The MTVR family of vehicles includes a cargo variant (both standard and extended wheel base configurations), a dump truck, a wrecker, a tractor and a HIMARS Rocket Resupply System Vehicle. This program funds numerous product improvements to the MTVR via engineering change proposals (ECPs), resulting from post-production requirements in Force Protection, Communications, on-board Situational Awareness, and improved fuel efficiency required across the Range of Military Operations, as well as addressing product quality deficiencies and other issues that impact vehicle safety, reliability, availability and readiness. The Requirements Capability Change to improve Fuel Efficiency for the MTVR is part of the program's forward-leaning initiatives to lower fuel consumption and extend the vehicle's cruising range, while lowering operating costs over the life of the MTVR.																	
Mine Resistant Ambush Protected (MRAP) Family of Vehicles (FoV) provides Warfighters multi-mission platforms capable of mitigating Improvised Explosive Devices (IEDs), underbody mines, and small arms fire threats, which are currently the greatest casualty producers in Overseas Contingency Operations (OCO). Multiple MRAP vehicle Categories (CATs) have been procured, fielded, and are now being sustained such as the MRAP-All Terrain Vehicle (M-ATV) with combat operations (OPS) in rural, mountainous, and urban terrain. Category I - Urban combat operations, ambulance. Category II - Multi-mission ops-convoy lead, troop transport, ambulance, utility vehicle. Category III - Mine/IED clearance ops, explosive ordnance disposal. Funding includes required Government Furnished Equipment (GFE)/subsystems and ECP/ Capability Insertion in response to an UUNS/JUONS and Warfighter safety and survivability requirements.																	
P-19 Replacement (P-19R) - Vehicles are replacing the obsolete A/S32P-19A Crash Fire Rescue fleet in support of expeditionary airfield operations and the supporting establishment. The vehicle is outfitted with advanced fire suppression equipment and provides rescue and aircraft fire fighting capabilities to permanent and expeditionary airfields throughout the Marine Corps. The P-19R may also be employed to fight structural fires in support of base camps and as firefighting support to other elements of the Marine Air Ground Task Force (MAGTF), such as ammunition supply points, Petroleum, Oil, and Lubricant (POL) distribution points, or hazardous material storage facilities.																	

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<b>Exhibit P-40, Budget Line Item Justification: PB 2019 Navy</b>							<b>Date:</b> February 2018																
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 1109N: Procurement, Marine Corps / BA 05: Support Vehicles / BSA 2: Tactical Vehicles				<b>P-1 Line Item Number / Title:</b> 5050 / Motor Transport Modifications																			
<b>ID Code</b> (A=Service Ready, B=Not Service Ready): B		<b>Program Elements for Code B Items:</b> N/A				<b>Other Related Program Elements:</b> 0206624M																	
<b>Line Item MDAP/MAIS Code:</b> N/A																							
Logistics Vehicle System Replacement (LVSR) Modification: Provides for various modifications required for the LVSR fleet of vehicles, such as for the integration of brackets and cables for warfighter systems, and for critical safety upgrades. These upgrades address issues that affect user safety, life cycle issues, obsolescence, and ultimately, life cycle cost reductions.																							
Motor Transport Modification (MTM) - Light Tactical Family of Vehicles (FoV) - Modification program funds numerous essential modifications, initiatives, and new vehicle procurements that are required to address operational priorities, engineering change proposals, safety concerns, support equipment inefficiencies, tool malfunctions, product quality deficiencies, and other issues that affect vehicle reliability, availability and readiness. A proactive and focused approach ensures proper sustainment and life-cycle management of the light tactical vehicle fleet and allows the program office to develop and implement improvements, as needed, to respond to the evolving requirements of the Marine Corps.																							
<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>													
Navy	Quantity	-	-	-	-	-	-	-	-	-													
	Total Obligation Authority	12.595	21.632	11.155	44.440	55.595	18.278	13.273	15.445	15.769													
NR	Quantity	-	-	-	-	-	-	-	-	-													
	Total Obligation Authority	0.741	0.192	0.237	-	0.237	0.415	0.420	0.431	0.440													
<b>Total: Secondary Distribution</b>	Quantity	-	-	-	-	-	-	-	-	-													
	Total Obligation Authority	13.336	21.824	11.392	44.440	55.832	18.693	13.693	15.876	16.209													

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Exhibit P-40, Budget Line Item Justification: PB 2019 Navy							Date: February 2018			
Appropriation / Budget Activity / Budget Sub Activity:				P-1 Line Item Number / Title:						
1109N: Procurement, Marine Corps / BA 05: Support Vehicles / BSA 2: Tactical Vehicles				5050 / Motor Transport Modifications						
ID Code (A=Service Ready, B=Not Service Ready): B		Program Elements for Code B Items: N/A				Other Related Program Elements: 0206624M				
<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)	
P-40a	Motor Transport Modifications				- / 129.830	- / 13.336	- / 21.824	- / 11.392	- / 44.440	- / 55.832
<b>P-40</b>	<b>Total Gross/Weapon System Cost</b>				<b>- / 129.830</b>	<b>- / 13.336</b>	<b>- / 21.824</b>	<b>- / 11.392</b>	<b>- / 44.440</b>	<b>- / 55.832</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. Title represents the P-40a Title when only the P-40a Summary/Total is shown.										
Note: Totals in this Exhibit P-40 set may not be exact or sum exactly due to rounding.										
<b>Justification:</b>										
Funding changes after FY 2018 reflect the inclusion of funding for Mine Resistant Ambush Protected (MRAP) vehicles previously funded in BLI 6520 and the P-19R vehicles previously funded in BLI 5006. Funding for these programs were realigned to BLI 5050 to centralize modification funding for USMC tactical vehicles.										
FY 2018 Base Appropriation Request: \$21.824M										
Medium Tactical Vehicle Replacement (MTVR) Modification: \$6.551M; In FY18, integration brackets and cables continue to be installed on the MTVR fleet of vehicles. Funding supports the procurement of subsystems and components that were transitioned to the Marine Corps from the Office of Naval Research (ONR) Future Naval Capability initiative for a fuel efficient MTVR in September 2016.										
Motor Transport Modifications (MTM) \$3.993M; Funding will provide for the implementation of the fleet service life extension initiatives, vehicles, quality deficiency resolutions, safety initiatives, transparent armor re-lamination and environmental/state transportation mandated vehicle changes. Provides support for ECP integration to include addressing deficiencies of HMMWV vehicles due to up armoring and age degradation of the fleet, testing and fielding efforts for hosted systems i.e. C4I, weapons, and intel that use light tactical vehicles as their base transportation mode.										
Logistics Vehicle System Replacement (LVSR) Modification: \$11.088M; \$.192M Reserve. Funding will provide for various modifications required for the LVSR fleet of vehicles, such as for the integration of brackets and cables for warfighter systems, and for critical safety upgrades, including the brake corrosion ECP and the armored door lock improvements. These upgrades address issues that affect user safety, life cycle issues, obsolescence, and ultimately, life cycle cost reductions.										
The FY 2019 funding request was reduced by (\$.304) million to reflect the Department of Navy's effort to support the Office of Management and Budget directed reforms for Efficiency and Effectiveness that include a lean, accountable, more efficient government.										
FY 2019 Base Appropriation Request: \$11.392M										
Medium Tactical Vehicle Replacement (MTVR) Modification: \$7.147M; In FY19, MTVR has a three-tier integration effort that will span across Marine Corps Expeditionary Forces (MEFs), Marine Augmentation Program-Kuwait (MAP-K) and the Marine Forces-Reserve (MFR), for installing brackets and cables, as well as other ECP kits, on the MTVR fleet of vehicles that will increase the survivability and safety of both vehicles and crew. Critical ECP's are prioritized within the program and funded to maximize benefit to Marines using the vehicles; examples of ECP's include (but are not limited to) front and rear cab axle mounts required due to the addition of heavy armor; emergency egress window (EEW) to enable quick and safe crew extraction from a damaged vehicle; and C4I integration kits to enable the plug-in use of on-board communications and situational awareness capabilities that are now required for all forward deployed vehicles. As the MTVR fleet is the workhorse of the Operating forces, it is also the largest consumer of fuel. A goal of 20% improvement in fuel efficiency will achieve significant cost avoidance to Operating Forces, while increasing the vehicle's cruising range and reducing the logistics footprint. The increase of \$.596M from FY18 to FY19 reflects the FE Low-Rate Production of FE systems to determine best value solution for the Marine Corps' Medium Tactical Vehicles.										

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<b>Exhibit P-40, Budget Line Item Justification: PB 2019 Navy</b>		<b>Date:</b> February 2018		
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 1109N: Procurement, Marine Corps / BA 05: Support Vehicles / BSA 2: Tactical Vehicles		<b>P-1 Line Item Number / Title:</b> 5050 / Motor Transport Modifications		
<b>ID Code</b> (A=Service Ready, B=Not Service Ready): B	<b>Program Elements for Code B Items:</b> N/A	<b>Other Related Program Elements:</b> 0206624M		
<b>Line Item MDAP/MAIS Code:</b> N/A	Logistics Vehicle System Replacement (LVSR) Modification: \$3.298M; \$.215M Reserve. Funding will provide for various modifications required for the LVSR fleet of vehicles, such as for the integration of brackets and cables for warfighter system, and for critical safety upgrades. These upgrades address issues that affect user safety, life cycle, obsolescence, and ultimately, life cycle cost reductions. The decrease of \$7.269M accounts for completion in FY18 of 500 of the 2000 door locks.			
P-19 Replacement: \$.022M Reserve. Funding will provide Initial Support, Training, Spares and FSRs for Reserves' vehicles. The decrease of \$32.119M from FY18 to FY19 reflects completion of vehicle procurement. Funding in FY19 and out reflects P-19R vehicles previously in BLI 5006.				
Mine Resistant Ambush Protected (MRAP) vehicles: (\$.710M) Funds ECP upgrades/modifications for the enduring MRAP vehicle requirement. Continues ECP Upgrades and Modifications to maintain vehicle relevancy in meeting force protection threats, such as blast, rollover or water submersion events, and responding to operational needs. The decrease of \$4.442M from FY18 to FY19 is a result in the reduction of ECP upgrades and modifications. Funding in FY19 and out reflects MRAP previously in BLI 6520.				
Motor Transport Modifications (MTM): \$.0M; The reduction of \$3.993M from FY18 to FY19 is a result of funds realigned for higher priority requirements.				
OCO: FY 2019 OCO Appropriation Request: \$44.440M				
Medium Tactical Vehicle Replacement (MTVR) Modification: \$18.001M; OCO will fund procurement and installation of various ECP kits needed for the MTVRs located in the Marine Expeditionary Unit (MEU) Augmentation Program-Kuwait (MAP-K). The ECP Kits include (but are not limited to) the C4ISR kits which provide cabling and bracketry for the Joint Battle Command Platform (JBC-P) and Counter IED Systems (CVRJ); Rear Cab Mounts, Front Cab Mounts, the Automatic Fire Extinguishing System (AFES) and the Emergency Egress Window (EEW). These kits increase the overall survivability, safety and the Command, Control, Communication, Computers, Intelligence, Surveillance and Reconnaissance (C4ISR) capabilities of the MTVR Armored Family of Vehicles.				
Logistics Vehicle System Replacement: (LVSR): \$.519M OCO. Will fund procurement and installation of various Engineering Change Proposals (ECP), such as brake safety, JBC-P and counter IED Systems, CVRJs needed for the LVSRs located in the MAP-K. These kits increase force protection of all LVSR variants by ensuring the vehicles have updated ECPs to increase braking capability, navigation and counter IED threats.				
Mine Resistant Ambush Protected (MRAP) Family of Vehicles (FoV): \$25.920M OCO. Funds the installation of Egress kits procured in response to UUUNS 08275UC and 10215UC; MARCENT Enduring requirements. The Egress kit increases force protection on all Cougar CAT I and CAT II variants by ensuring that vehicle occupants can safely exit the vehicle after blast, rollover or water submersion events.				

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Exhibit P-40a, Budget Item Justification For Aggregated Items: PB 2019 Navy														Date: February 2018						
Appropriation / Budget Activity / Budget Sub Activity: 1109N / 05 / 2					P-1 Line Item Number / Title: 5050 / Motor Transport Modifications									Aggregated Items Title: Motor Transport Modifications						
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 (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)
<b>1) Medium Tactical Vehicle Replacement (MTVR) Modifications</b>																				
1.1) Vehicle Safety Modifications/ Upgrades Proc & Installs <sup>(1)</sup>	A		-	-	1.670	-	-	1.775	-	-	0.735	-	-	0.396	-	-	10.500	-	-	10.896
1.2) Vehicle ECP Integration Equipment & Installs <sup>(2)</sup>	A		-	-	43.290	-	-	1.639	-	-	0.679	-	-	0.380	-	-	7.501	-	-	7.881
1.3) Energy Efficiency Initiative <sup>(3)</sup>	B		-	-	2.212	-	-	2.958	-	-	4.437	-	-	5.545	-	-	-	-	-	5.545
1.4) Energy Initiative Program Support <sup>(4)</sup>	A		-	-	-	-	-	0.450	-	-	0.700	-	-	0.826	-	-	-	-	-	0.826
1.5) Prior Years Cumulative Funding	A		-	-	10.042	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
<b>Subtotal: 1) Medium Tactical Vehicle Replacement (MTVR) Modifications</b>			-	-	<b>57.214</b>	-	-	<b>6.822</b>	-	-	<b>6.551</b>	-	-	<b>7.147</b>	-	-	<b>18.001</b>	-	-	<b>25.148</b>
<b>2) LVSR Mods</b>																				
2.1) LVSR Systems Integrations Equip & Installs (GFE, TOCNET, etc)	A		-	-	24.258	-	-	0.200	-	-	0.100	-	-	-	-	-	-	-	-	-
2.2) Vehicle Safety Mods/Upgrades	A		-	-	12.647	-	-	0.403	-	-	10.453	-	-	1.912	-	-	-	-	-	1.912
2.3) LVSR Modification Kits (ECPs) <sup>(5)</sup>	A		-	-	20.210	-	-	0.417	-	-	0.535	-	-	1.386	-	-	0.519	-	-	1.905
2.4) LVSR Reserves (ECP, Safety & Integration)			-	-	2.969	-	-	0.748	-	-	0.192	-	-	0.215	-	-	-	-	-	0.215
2.5) Prior Years Cumulative Funding	A		-	-	12.532	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
<b>Subtotal: 2) LVSR Mods</b>			-	-	<b>72.616</b>	-	-	<b>1.768</b>	-	-	<b>11.280</b>	-	-	<b>3.513</b>	-	-	<b>0.519</b>	-	-	<b>4.032</b>
<b>3) Motor Transport Mods</b>																				
3.1) Safety Modifications <sup>(6)</sup>	B		-	-	-	-	-	1.174	-	-	1.100	-	-	-	-	-	-	-	-	-
3.2) Reliability Engineering <sup>(7)</sup>	A		-	-	-	-	-	1.960	-	-	1.828	-	-	-	-	-	-	-	-	-
3.3) Program Integration <sup>(8)</sup>	B		-	-	-	-	-	1.082	-	-	0.970	-	-	-	-	-	-	-	-	-
3.4) Technical Publications <sup>(9)</sup>	A		-	-	-	-	-	0.085	-	-	0.095	-	-	-	-	-	-	-	-	-
3.5) Unified Command Suite	A		-	-	-	-	-	0.445	-	-	-	-	-	-	-	-	-	-	-	-

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<b>Exhibit P-40a, Budget Item Justification For Aggregated Items:</b> PB 2019 Navy														<b>Date:</b> February 2018						
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 1109N / 05 / 2					<b>P-1 Line Item Number / Title:</b> 5050 / Motor Transport Modifications									<b>Aggregated Items Title:</b> Motor Transport Modifications						
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 (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)
<b>Subtotal: 3) Motor Transport Mods</b>			-	-	<b>0.000</b>	-	-	<b>4.746</b>	-	-	<b>3.993</b>	-	-	-	-	-	-	-	-	-
<b>4) P-19R</b>																				
4.1) Reserves Initial Support/Training/ Spares/FSRs	A		-	-	-	-	-	-	-	-	-	-	-	0.022	-	-	-	-	-	0.022
<b>Subtotal: 4) P-19R</b>			-	-	<b>0.000</b>	-	-	-	-	-	-	-	-	<b>0.022</b>	-	-	-	-	-	<b>0.022</b>
<b>5) Mine Resistant Ambush Protected (MRAP)</b>																				
5.1) Cougar Egress Installation <sup>(10)</sup>	A		-	-	-	-	-	-	-	-	-	-	-	0.000	-	-	25.920	-	-	25.920
5.2) ECP Upgrades <sup>(11)</sup>	A		-	-	-	-	-	-	-	-	-	-	-	0.710	-	-	-	-	-	0.710
<b>Subtotal: 5) Mine Resistant Ambush Protected (MRAP)</b>			-	-	<b>0.000</b>	-	-	-	-	-	-	-	-	<b>0.710</b>	-	-	25.920	-	-	<b>26.630</b>
<b>Total</b>			-	-	<b>129.830</b>	-	-	<b>13.336</b>	-	-	<b>21.824</b>	-	-	<b>11.392</b>	-	-	<b>44.440</b>	-	-	<b>55.832</b>

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

**Footnotes:**

- (1) FY18 to FY19 decrease of \$0.339M due to realignment of funding to meet Marine Corps priorities. FY18 to FY19 difference for OCO funding is due to increasingly urgent need to provide Safety ECP's for MTVR's in theater; no OCO was requested in MTVR's FY18 Budget.
- (2) FY18 to FY19 decrease of \$0.299M due to realignment of funding to meet Marine Corps priorities. FY18 to FY19 difference for OCO funding is due to emergent requirement to procure ECP's for MTVR's in theater; no OCO was requested in MTVR's FY18 Budget.
- (3) Increase from FY18 to FY19 of \$1.108M is for the increased procurement and scheduled installations of the materials and parts necessary to decrease fuel usage in various tactical vehicles in the fleet.
- (4) FY18 to FY19 increase of \$.126M is due to adjusted cost estimate to include additional support to process/analyze data as upgrades to fleet are completed.
- (5) FY18 to FY19 difference for OCO funding is due to increasingly urgent need for force protection of all LVSR variants that occupants safely exit.
- (6) FY18 to FY19 decrease of \$1.100M is due to funds realigned for higher priority requirements.
- (7) FY18 to FY19 decrease of \$1.828M is due to funds realigned for higher priority requirements.
- (8) FY18 to FY19 decrease of \$.970M is due to funds realigned for higher priority requirements.
- (9) FY18 to FY19 decrease of \$.095M is due to funds realigned for higher priority requirements.
- (10) FY18 - FY19 Base overall decrease of \$0.442M (BLI 6520 FY18 \$1.152 realigned to BLI 5050 FY19 \$0.710M)
- (11) FY18 - FY19 OCO overall increase of \$21.9200M (BLI 6520 FY18 \$4.000M realigned to BLI 5050 FY19 \$25.920M)

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<b>Exhibit P-40, Budget Line Item Justification: PB 2019 Navy</b>										<b>Date:</b> February 2018		
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 1109N: Procurement, Marine Corps / BA 05: Support Vehicles / BSA 2: Tactical Vehicles						<b>P-1 Line Item Number / Title:</b> 5095 / Joint Light Tactical Vehicle						
<b>ID Code</b> (A=Service Ready, B=Not Service Ready): B				<b>Program Elements for Code B Items:</b> 0605812M, 0605813M						<b>Other Related Program Elements:</b> 0603635M, 0605812M, 0605813M		
<b>Line Item MDAP/MAIS Code:</b> 279												
<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> )	125	212	527	1,642	-	1,642	1,994	1,184	998	931	-	7,613
Gross/Weapon System Cost ( <i>\$ in Millions</i> )	64.529	104.230	233.639	607.011	0.000	607.011	707.778	475.381	439.744	421.609	715.032	3,768.953
Less PY Advance Procurement ( <i>\$ in Millions</i> )	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) ( <i>\$ in Millions</i> )	64.529	104.230	233.639	607.011	0.000	607.011	707.778	475.381	439.744	421.609	715.032	3,768.953
Plus CY Advance Procurement ( <i>\$ in Millions</i> )	-	-	-	-	-	-	-	-	-	-	-	-
<b>Total Obligation Authority</b> ( <i>\$ in Millions</i> )	<b>64.529</b>	<b>104.230</b>	<b>233.639</b>	<b>607.011</b>	<b>0.000</b>	<b>607.011</b>	<b>707.778</b>	<b>475.381</b>	<b>439.744</b>	<b>421.609</b>	<b>715.032</b>	<b>3,768.953</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 Dollars</i> )	284,112.00	255,216.98	269,614.80	280,026.80	-	280,026.80	267,172.02	273,641.05	320,758.52	330,807.73	-	352,395.64
Gross/Weapon System Unit Cost ( <i>\$ in Dollars</i> )	516,232.00	491,650.94	443,337.76	369,677.83	-	369,677.83	354,953.86	401,504.22	440,625.25	452,856.07	-	495,068.04

**Description:**

Joint Light Tactical Vehicle (JLTV) Family of Vehicles (FoV) is a joint U.S. Army and U.S. Marine Corps program, of which the Army is the lead service. JLTV is a FoV capable of performing multiple mission roles that will provide protected, sustained, networked mobility for personnel and payloads across the full Range of Military Operations (ROMO). JLTV objectives include increased protection and performance over the current fleet; and, minimizing ownership costs by maximizing commonality, fuel efficiency, reliability, and maintaining effective competition throughout the life cycle. Commonality of components, maintenance procedures, training, etc., among vehicles is expected to be inherent in FoV solutions across mission variants to minimize total ownership cost. Unique service requirements have been minimized.

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<b>Exhibit P-40, Budget Line Item Justification: PB 2019 Navy</b>							<b>Date:</b> February 2018			
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 1109N: Procurement, Marine Corps / BA 05: Support Vehicles / BSA 2: Tactical Vehicles				<b>P-1 Line Item Number / Title:</b> 5095 / Joint Light Tactical Vehicle						
<b>ID Code</b> (A=Service Ready, B=Not Service Ready): B		<b>Program Elements for Code B Items:</b> 0605812M, 0605813M				<b>Other Related Program Elements:</b> 0603635M, 0605812M, 0605813M				
<b>Line Item MDAP/MAIS Code:</b> 279										
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)	
P-5	1 / Joint Light Tactical Vehicle	P-5a, P-21			125 / 64.529	212 / 104.230	527 / 233.639	1,642 / 607.011	- / 0.000	1,642 / 607.011
<b>P-40</b>	<b>Total Gross/Weapon System Cost</b>				<b>125 / 64.529</b>	<b>212 / 104.230</b>	<b>527 / 233.639</b>	<b>1,642 / 607.011</b>	<b>- / 0.000</b>	<b>1,642 / 607.011</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 2018 Base Appropriation Request: \$233.639M. Planned projects include the procurement of 527 Low Rate Initial Production (LRIP) vehicles, kit procurement, government and contractor support, development of publications, and technical data. The kits will support the baseline vehicle by providing the warfighter the ability to augment the vehicle's configuration to meet required vehicle capabilities such as fording, survivability, hot and cold weather operations, communications/C4I winches, etc, in order to respond to environmental conditions or threat situations.

FY 2019 Base Appropriation Request: \$607.011M. Planned projects include the procurement of 1,642 vehicles, kit procurement, government and contractor support, development of publications, and technical data. FY 2019 line capacity is quantity of 2,820. The kits will support the baseline vehicle by providing the warfighter the ability to augment the vehicle's configuration to meet required vehicle capabilities such as fording, survivability, hot and cold weather operations, communications/C4I winches, etc, in order to respond to environmental conditions or threat situations.

The increase (\$373.372M) in funding from FY 2018 to FY 2019 is due to the increased procurement of JLTV (1,115 additional vehicles), associated kits, Systems Engineering, Technical Support, Testing, Full Rate Production Decision, Fielding Decision, and the initiation of vehicle fielding to achieve Initial Operational Capability (IOC) scheduled for 1Q FY20.

Kits consist of mission essential equipment specific to each vehicle and variant and are necessary for the various operational requirements. Procurement includes up to 75 individual kits options for each vehicle. Kits may include, but are not limited to, armor kits required for force protection and survivability, tactical communications kits which provide net-ready capabilities, and operational kits that complement base vehicle functionality to achieve requirements for tactical employment and mobility.

FY19 OCO Request: N/A

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<b>Exhibit P-5, Cost Analysis:</b> PB 2019 Navy													<b>Date:</b> February 2018						
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 1109N / 05 / 2			<b>P-1 Line Item Number / Title:</b> 5095 / Joint Light Tactical Vehicle										<b>Item Number / Title [DODIC]:</b> 1 / Joint Light Tactical Vehicle						
<b>ID Code</b> (A=Service Ready, B=Not Service Ready) :													<b>MDAP/MAIS Code:</b>						
<b>Resource Summary</b>				<b>Prior Years</b>			<b>FY 2017</b>		<b>FY 2018</b>		<b>FY 2019 Base</b>		<b>FY 2019 OCO</b>		<b>FY 2019 Total</b>				
Procurement Quantity ( <i>Units in Each</i> )							125		212		527		1,642		-		1,642		
Gross/Weapon System Cost (\$ in Millions)							64.529		104.230		233.639		607.011		0.000		607.011		
Less PY Advance Procurement (\$ in Millions)							-		-		-		-		-		-		
Net Procurement (P-1) (\$ in Millions)							64.529		104.230		233.639		607.011		0.000		607.011		
Plus CY Advance Procurement (\$ in Millions)							-		-		-		-		-		-		
<b>Total Obligation Authority</b> (\$ in Millions)							<b>64.529</b>		<b>104.230</b>		<b>233.639</b>		<b>607.011</b>		<b>0.000</b>		<b>607.011</b>		
(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)																			
Initial Spares (\$ in Millions)							-		-		-		-		-		-		
Gross/Weapon System Unit Cost (\$ in Dollars)							516,232.00		491,650.94		443,337.76		369,677.83		-		369,677.83		
Note: Subtotals or Totals in this Exhibit P-5 may not be exact or sum exactly due to rounding.																			
<b>Cost Elements</b>	<b>Prior Years</b>			<b>FY 2017</b>			<b>FY 2018</b>			<b>FY 2019 Base</b>			<b>FY 2019 OCO</b>			<b>FY 2019 Total</b>			
	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	
Flyaway - JLTV Cost																			
Recurring Cost																			
1.1.1) General Purpose <sup>(†)</sup> <sup>(1)</sup>	273,366.67	30	8.201	257,012.12	10	2.570	258,069.57	115	29.678	267,936.08	485	129.949	-	-	-	267,936.08	485	129.949	
1.1.2) Heavy Guns Carrier <sup>(†)</sup>	249,969.70	66	16.498	257,012.12	132	33.926	258,923.00	33	8.544	268,815.83	733	197.042	-	-	-	268,815.83	733	197.042	
1.1.3) Close Combat Weapons Carrier <sup>(†)</sup>	286,956.52	23	6.600	261,109.05	24	6.267	274,322.00	88	24.140	281,840.00	150	42.276	-	-	-	281,840.00	150	42.276	
1.1.4) Utility <sup>(†)</sup>	281,000.00	15	4.215	246,576.80	46	11.343	247,477.00	291	72.016	257,062.04	274	70.435	-	-	-	257,062.04	274	70.435	
1.1.5) Engineering Change Orders (ECO) (2)	-	-	-	-	-	-	-	7.709	-	-	20.102	-	-	-	-	-	-	20.102	
<i>Subtotal: Recurring Cost</i>	-	-	<i>35.514</i>	-	-	<i>54.106</i>	-	-	<i>142.087</i>	-	-	<i>459.804</i>	-	-	-	-	-	<i>459.804</i>	
<i>Subtotal: Flyaway - JLTV Cost</i>	-	-	<i>35.514</i>	-	-	<i>54.106</i>	-	-	<i>142.087</i>	-	-	<i>459.804</i>	-	-	-	-	-	<i>459.804</i>	
Hardware Cost																			
Recurring Cost																			
2.1.1) Kits <sup>(3)</sup>	-	-	8.043	-	-	12.839	-	-	40.035	-	-	88.855	-	-	-	-	-	88.855	
<i>Subtotal: Recurring Cost</i>	-	-	<i>8.043</i>	-	-	<i>12.839</i>	-	-	<i>40.035</i>	-	-	<i>88.855</i>	-	-	-	-	-	<i>88.855</i>	
<i>Subtotal: Hardware Cost</i>	-	-	<i>8.043</i>	-	-	<i>12.839</i>	-	-	<i>40.035</i>	-	-	<i>88.855</i>	-	-	-	-	-	<i>88.855</i>	
Support - Support Costs Cost																			
3.1) Interim Contract support (ICS) <sup>(4)</sup>	-	-	-	-	-	-	-	-	-	-	-	5.883	-	-	-	-	-	5.883	

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<b>Exhibit P-5, Cost Analysis: PB 2019 Navy</b>												<b>Date:</b> February 2018														
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 1109N / 05 / 2				<b>P-1 Line Item Number / Title:</b> 5095 / Joint Light Tactical Vehicle								<b>Item Number / Title [DODIC]:</b> 1 / Joint Light Tactical Vehicle														
<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.																										
<b>Cost Elements</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>Unit Cost</b> (\$)	<b>Qty</b> ( <i>Each</i> )	<b>Total Cost</b> (\$ M)	<b>Unit Cost</b> (\$)	<b>Qty</b> ( <i>Each</i> )	<b>Total Cost</b> (\$ M)	<b>Unit Cost</b> (\$)	<b>Qty</b> ( <i>Each</i> )	<b>Total Cost</b> (\$ M)	<b>Unit Cost</b> (\$)	<b>Qty</b> ( <i>Each</i> )	<b>Total Cost</b> (\$ M)	<b>Unit Cost</b> (\$)	<b>Qty</b> ( <i>Each</i> )	<b>Total Cost</b> (\$ M)	<b>Unit Cost</b> (\$)	<b>Qty</b> ( <i>Each</i> )	<b>Total Cost</b> (\$ M)								
3.2) Program Management <sup>(5)</sup>	-	-	3.420	-	-	4.379	-	-	5.550	-	-	5.877	-	-	-	-	-	5.877								
3.3) Contractor SEPM <sup>(6)</sup>	-	-	3.303	-	-	6.202	-	-	2.855	-	-	2.698	-	-	-	-	-	2.698								
3.4) System Technical Support (STS) <sup>(7)</sup>	-	-	4.378	-	-	11.366	-	-	10.500	-	-	10.881	-	-	-	-	-	10.881								
3.5) Test Support <sup>(8)</sup>	-	-	8.842	-	-	15.338	-	-	5.539	-	-	8.471	-	-	-	-	-	8.471								
3.6) Publications/ Technical Data	-	-	1.000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-								
3.7) Fielding <sup>(9)</sup>	-	-	0.029	-	-	-	-	-	8.130	-	-	23.304	-	-	-	-	-	23.304								
3.8) Training Aids, Devices, Simulators and Simulations (TADSS) <sup>(10)</sup>	-	-	-	-	-	-	-	-	18.943	-	-	1.238	-	-	-	-	-	1.238								
<i>Subtotal: Support - Support Costs Cost</i>	-	-	<b>20.972</b>	-	-	<b>37.285</b>	-	-	<b>51.517</b>	-	-	<b>58.352</b>	-	-	-	-	-	<b>58.352</b>								
<b>Gross/Weapon System Cost</b>	<b>516,232.00</b>	<b>125</b>	<b>64.529</b>	<b>491,650.94</b>	<b>212</b>	<b>104.230</b>	<b>443,337.76</b>	<b>527</b>	<b>233.639</b>	<b>369,677.83</b>	<b>1,642</b>	<b>607.011</b>	-	-	<b>0.000</b>	<b>369,677.83</b>	<b>1,642</b>	<b>607.011</b>								

(†) indicates the presence of a P-5a

**Footnotes:**

(1) The JLTV LRIP and FRP production contract was competitively awarded to Oshkosh Defense in 2015. The contract between the Government and Oshkosh includes priced option years through the end of the first contract period (Base plus 8 options). These contracted prices are not negotiable on a year to year basis. Vehicle and kit costs are based on the firm fixed price contract cost, quantity ranges, and option year. These ranges are dependent on total quantities procured across all Services based on both platform and variant. The unit cost increases from FY18 to FY19 is based on contract escalation estimated by the manufacturer's projected overhead and commodities forecast (i.e. raw materials, petroleum, and forward pricing rate agreements with labor unions) and are reflected in the contract. Funding increase from FY 2018 to FY 2019 of \$305.3M is due to the increased procurement quantities based on program and operational requirements. The production rates provided in this exhibit are annual estimates. Oshkosh's main production line is not wholly JLTV and has been set up to run multiple other Military Tactical and Commercial Business vehicles on the same line during the same shift. As such they do not have a unique JLTV 1-8-5.

(2) Funding increase from FY18 to FY19 of \$12.393M is a result in the implementation of Engineering Change Orders (ECOs) and retro fit of design changes to vehicles produced and delivered in FY15-FY19 based on results from observations during manufacture on a production line, operational assessments, or from feedback from test events such as MOT&E. In accordance with the USD (AT&L) approved Joint Cost Position methodologies, JLTV ECOs were developed as an analogy based upon a study of multiple legacy tactical wheeled vehicles.

(3) Kits are not categorized in Flyaway costs because they are not considered part of prime mission equipment. Funding increase from FY 2018 to FY 2019 of \$48.820M is due to the increased procurement quantities in accordance with the production rate and operational requirements. All kit costs are based on actual contract pricing that will not change and is not negotiable. Kits consist of mission essential equipment specific to each vehicle and variant and are necessary for the various operational requirements. Procurement includes up to 75 individual kit options for each individual vehicle. Kits may include, but are not limited to, armor kits required for force protection and survivability, tactical communications kits which provide net-ready capabilities, and operational kits that complement base vehicle functionality to achieve requirements for tactical employment and mobility. Final kit procurement density is subject to change and based on operational and mission profile at time of award.

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<b>Exhibit P-5, Cost Analysis:</b> PB 2019 Navy		<b>Date:</b> February 2018		
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 1109N / 05 / 2	<b>P-1 Line Item Number / Title:</b> 5095 / Joint Light Tactical Vehicle	<b>Item Number / Title [DODIC]:</b> 1 / Joint Light Tactical Vehicle		
<b>ID Code</b> (A=Service Ready, B=Not Service Ready) :	<b>MDAP/MAIS Code:</b>			
(4) Funding increase from FY 2018 to FY 2019 of \$5.883M is due to the award of Interim Contract Support (ICS) on the JLTV production contract. ICS provides vendor support for maintenance and repair of JLTVs between initial fielding in FY19 and the transition of sustainment to an organic capability planned to begin in FY22. ICS pricing is based on the total number of fielded vehicles, was priced as part of the contract proposal, and pricing was accepted by the Government.				
(5) Funding increase from FY18 to FY19 of \$0.327M is due to the need for the continuation of program management support requirements as the JLTV program proceeds through the acquisition process.				
(6) Funding reduction for vendor program management costs from FY 2018 and FY2019 of \$0.157M is a result of stabilization of the production line as production ramp-up occurs.				
(7) Funding increase from FY18 to FY19 of \$0.381M based on estimated increase in System Technical Support (STS) work in relation to increased production rates. STS provides for all services and supplies requested to accomplish Engineering, Configuration Management, Quality Assurance, IPS, maintenance, training, and testing associated with Government-initiated changes and improvements to the production vehicles, logistics products, and fielding of the JLTV. In accordance with the Joint Cost Position approved methodologies, future JLTV STS work was developed as an analogy based upon a study of multiple legacy tactical wheeled vehicles.				
(8) Funding increase from FY18 to FY19 of \$2.932M is required for the completion of Corrosions Test, Command, Control, Communications, Computers, & Intelligence (C4I) test, Performance test and follow-on reliability testing.				
(9) Funding increase from FY18 to FY19 of \$15.174M is due to the costs associated with the Total Package Fielding (TPF) of JLTVs to operation forces. The cost of TPF includes the shipment of vehicles, kits, and all ancillary equipment required to conduct initial fielding and training to receiving units. Costs also include travel and labor for 3 fielding teams to conduct concurrent fielding events at multiple USMC bases and stations around the globe.				
(10) Funding decrease from FY18 to FY19 of \$17.705M is due to the completed procurement of Training Aids, Devices, and Simulators and Simulations (TADSS) necessary to support vehicle fielding and improve operator safety, survivability, and vehicle maintainability. Funds will support the installation and training of TADSS devices to receiving units and training centers.				

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Exhibit P-5a, Procurement History and Planning: PB 2019 Navy								Date: February 2018				
Appropriation / Budget Activity / Budget Sub Activity: 1109N / 05 / 2			P-1 Line Item Number / Title: 5095 / Joint Light Tactical Vehicle				Item Number / Title [DODIC]: 1 / Joint Light Tactical Vehicle					
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 (\$)	Specs Avail Now?	Date Revision Available	RFP Issue Date
1.1.1) General Purpose <sup>(†)</sup>		2015	Oshkosh Corp LLC <sup>(11)</sup> / Oshkosh WI	C / FFP	TACOM	Aug 2015	Sep 2016	6	332,000.00	Y		Dec 2014
1.1.1) General Purpose <sup>(†)</sup>		2016	Oshkosh Corp LLC <sup>(11)</sup> / Oshkosh WI	C / FFP	TACOM	Mar 2016	Jan 2017	24	258,721.00	Y		
1.1.1) General Purpose <sup>(†)</sup>		2017 <sup>(12)</sup>	Oshkosh Corp LLC <sup>(11)</sup> / Oshkosh WI	C / FFP	TACOM	Dec 2016	Oct 2017	10	257,012.12	Y		
1.1.1) General Purpose <sup>(†)</sup>		2018 <sup>(13)</sup>	Oshkosh Corp LLC <sup>(11)</sup> / Oshkosh WI	C / FFP	TACOM	Dec 2017	Oct 2018	115	258,069.57	Y		
1.1.1) General Purpose <sup>(†)</sup>		2019	Oshkosh Corp LLC <sup>(11)</sup> / Oshkosh WI	C / FFP	TACOM	Dec 2018	Oct 2019	485	267,936.08	Y		
1.1.2) Heavy Guns Carrier <sup>(†)</sup>		2016	Oshkosh Defense LLC / Oshkosh, WI	C / FFP	TACOM	Mar 2016	Jan 2017	66	249,970.00	Y		
1.1.2) Heavy Guns Carrier <sup>(†)</sup>		2017	Oshkosh Defense LLC / Oshkosh, WI	C / FFP	TACOM	Dec 2016	Oct 2017	132	257,012.12	Y		
1.1.2) Heavy Guns Carrier <sup>(†)</sup>		2018	Oshkosh Defense LLC / Oshkosh, WI	C / FFP	TACOM	Dec 2017	Oct 2018	33	258,923.00	Y		
1.1.2) Heavy Guns Carrier <sup>(†)</sup>		2019	Oshkosh Defense LLC / Oshkosh, WI	C / FFP	TACOM	Dec 2018	Oct 2019	733	268,815.83	Y		
1.1.3) Close Combat Weapons Carrier <sup>(†)</sup>		2016	Oshkosh Defense LLC / Oshkosh, WI	C / FFP	TACOM	Mar 2016	Jan 2017	23	286,944.00	Y		
1.1.3) Close Combat Weapons Carrier <sup>(†)</sup>		2017	Oshkosh Defense LLC / Oshkosh, WI	C / FFP	TACOM	Dec 2016	Oct 2017	24	261,109.05	Y		
1.1.3) Close Combat Weapons Carrier <sup>(†)</sup>		2018	Oshkosh Defense LLC / Oshkosh, WI	C / FFP	TACOM	Dec 2017	Oct 2018	88	274,322.00	Y		
1.1.3) Close Combat Weapons Carrier <sup>(†)</sup>		2019	Oshkosh Defense LLC / Oshkosh, WI	C / FFP	TACOM	Dec 2018	Oct 2019	150	281,840.00	Y		
1.1.4) Utility <sup>(†)</sup>		2016	Oshkosh Defense LLC / Oshkosh, WI	C / FFP	TACOM	Mar 2016	Jan 2017	15	281,014.00	Y		
1.1.4) Utility <sup>(†)</sup>		2017	Oshkosh Defense LLC / Oshkosh, WI	C / FFP	TACOM	Dec 2016	Oct 2017	46	246,576.80	Y		
1.1.4) Utility <sup>(†)</sup>		2018	Oshkosh Defense LLC / Oshkosh, WI	C / FFP	TACOM	Dec 2017	Oct 2018	291	247,477.00	Y		
1.1.4) Utility <sup>(†)</sup>		2019	Oshkosh Defense LLC / Oshkosh, WI	C / FFP	TACOM	Dec 2018	Oct 2019	274	257,062.04	Y		

(†) indicates the presence of a P-21

**Footnotes:**

(11) MS C and contract award occurred on 25 August 2015. Production rates for the JLTV variants are shown as annual rates.

(12) Due to quantity and budget limitation of the Continuing Resolution, JLTV quantities were procured in multiple contract awards.. 106 vehicles were procured in Dec 2016 and 106 vehicles were procured in Jul 2017.

(13) Due to quantity and budget limitation of the Continuing Resolution, JLTV quantities will be procured in multiple contract awards.. 192 vehicles were procured in Dec 2017. The balance of 335 vehicles will be procured upon budget passage..

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Exhibit P-21, Production Schedule: PB 2019 Navy																			Date: February 2018																					
Appropriation / Budget Activity / Budget Sub Activity: 1109N / 05 / 2										P-1 Line Item Number / Title: 5095 / Joint Light Tactical Vehicle										Item Number / Title [DODIC]: 1 / Joint Light Tactical Vehicle																				
Cost Elements (Units in Each)							Fiscal Year 2015												Fiscal Year 2016																					
O C O #	M F R Y	SERVICE	PROC QTY	ACCEPT PRIOR TO 1 OCT 2014	BAL DUE AS OF 1 OCT	Fiscal Year 2015												Calendar Year 2015												B A L A N C E										
O C O #	M F R Y	SERVICE	PROC QTY	ACCEPT PRIOR TO 1 OCT 2014	BAL DUE AS OF 1 OCT	O C T	N O V	D E C	J A N	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	B A L A N C E										
1.1.1) General Purpose <sup>(1)</sup>																																								
1	2015	NAVY	6	0	6																															1	5			
1	2015	ARMY <sup>(‡)</sup>	115	0	115																															9	106			
1	2015	Total	121	0	121																															10	111			
1	2016	NAVY	24	0	24																																24			
1	2016	ARMY <sup>(‡)</sup>	377	0	377																																377			
1	2016	Total	401	0	401																																401			
1	2017	NAVY	10	0	10																																10			
1	2017	ARMY <sup>(‡)</sup>	607	0	607																																607			
1	2017	Total	617	0	617																																617			
1	2018	NAVY	115	0	115																																115			
1	2018	ARMY <sup>(‡)</sup>	918	0	918																																918			
1	2018	Total	1,033	0	1,033																																1,033			
1	2019	NAVY	485	0	485																																485			
1	2019	ARMY <sup>(‡)</sup>	1,029	0	1,029																																1,029			
1	2019	Total	1,514	0	1,514																																1,514			
1.1.2) Heavy Guns Carrier																																								
2	2016	NAVY	66	0	66																																	66		
2	2016	ARMY <sup>(‡)</sup>	69	0	69																																	69		
2	2016	Total	135	0	135																																	135		
2	2017	NAVY	132 <sup>(14)</sup>	0	132																																	132		
2	2017	ARMY <sup>(‡)</sup>	279	0	279																																	279		
2	2017	Total	411	0	411																																	411		
2	2018	NAVY	33	0	33																																	33		
2	2018	ARMY <sup>(‡)</sup>	265	0	265																																	265		
2	2018	Total	298	0	298																																	298		
2	2019	NAVY	733	0	733																																		733	
2	2019	ARMY <sup>(‡)</sup>	507	0	507																																		507	
2	2019	Total	1,240	0	1,240																																	1,240		
1.1.3) Close Combat Weapons Carrier																																								
3	2016	NAVY	23	0	23																																		23	
						O C T	N O V	D E C	J A N	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 Navy																				Date: February 2018																		
Appropriation / Budget Activity / Budget Sub Activity: 1109N / 05 / 2										P-1 Line Item Number / Title: 5095 / Joint Light Tactical Vehicle										Item Number / Title [DODIC]: 1 / Joint Light Tactical Vehicle																		
Cost Elements (Units in Each)					Fiscal Year 2015															Fiscal Year 2016																		
O C O #	M F R	FY	SERVICE	PROC QTY	ACCEPT PRIOR TO 1 OCT 2014	BAL DUE AS OF 1 OCT	O C T	N O V	D E C	J A N	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	B A L A N C E							
3	2016	ARMY (‡)		42	0	42																														42		
3	2016	Total		65	0	65																														65		
3	2017	NAVY		24	0	24																															24	
3	2017	ARMY (‡)		56	0	56																															56	
3	2017	Total		80	0	80																															80	
3	2018	NAVY		88	0	88																															88	
3	2018	ARMY (‡)		102	0	102																															102	
3	2018	Total		190	0	190																															190	
3	2019	NAVY		150	0	150																															150	
3	2019	ARMY (‡)		117	0	117																															117	
3	2019	Total		267	0	267																															267	
1.1.4) Utility																																						
4	2016	NAVY		15	0	15																																15
4	2016	ARMY (‡)		165	0	165																																165
4	2016	Total		180	0	180																															180	
4	2017	NAVY		46	0	46																																46
4	2017	ARMY (‡)		649	0	649																																649
4	2017	Total		695	0	695																															695	
4	2018	NAVY		291	0	291																																291
4	2018	ARMY (‡)		803	0	803																															803	
4	2018	Total		1,094	0	1,094																															1,094	
4	2019	NAVY		274	0	274																																274
4	2019	ARMY (‡)		1,737	0	1,737																																1,737
4	2019	Total		2,011	0	2,011																																2,011

**UNCLASSIFIED**

**Exhibit P-21, Production Schedule: PB 2019 Navy**

**Date: February 2018**

**Appropriation / Budget Activity / Budget Sub Activity:**

1109N / 05 / 2

**P-1 Line Item Number / Title:**

5095 / Joint Light Tactical Vehicle

**Item Number / Title [DODIC]:**

1 / Joint Light Tactical Vehicle

Cost Elements (Units in Each)										Fiscal Year 2017												Fiscal Year 2018												
O C O #	M F R Y	SERVICE	PROC QTY	ACCEPT PRIOR TO 1 OCT 2016	BAL DUE AS OF 1 OCT	Calendar Year 2017												Calendar Year 2018												B A L A N C E				
						O C T	N O V	D E C	J A N	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					
1.1.1) General Purpose <sup>(1)</sup>																																		
1	2015	NAVY	6	1	5	1	1	1	1	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0			
1	2015	ARMY <sup>(‡)</sup>	115	9	106	9	9	9	9	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	0			
1	2015	Total	121	10	111	10	10	10	10	11	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	0			
1	2016	NAVY	24	0	24	-	-	-	1	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	3	0		
1	2016	ARMY <sup>(‡)</sup>	377	0	377	-	-	-	31	31	31	31	31	31	31	31	31	31	32	32	32	32	32	32	32	32	32	32	32	32	0			
1	2016	Total	401	0	401	-	-	-	32	33	33	33	33	33	33	33	33	34	34	34	34	34	35	-	-	-	-	-	-	-	-	0		
1	2017	NAVY	10	0	10	A -	-	-	-	-	-	-	-	-	-	-	-	-	-	1	1	1	1	1	1	1	1	1	1	1	0			
1	2017	ARMY <sup>(‡)</sup>	607	0	607	A -	-	-	-	-	-	-	-	-	-	-	-	-	50	50	50	50	50	51	51	51	51	51	51	51	0			
1	2017	Total	617	0	617	-	-	-	-	-	-	-	-	-	-	-	-	-	51	51	51	51	51	52	52	52	52	52	51	51	0			
1	2018	NAVY	115	0	115														A -	-	-	-	-	-	-	-	-	-	-	-	115			
1	2018	ARMY <sup>(‡)</sup>	918	0	918														A -	-	-	-	-	-	-	-	-	-	-	-	918			
1	2018	Total	1,033	0	1,033														-	-	-	-	-	-	-	-	-	-	-	-	1,033			
1	2019	NAVY	485	0	485																											485		
1	2019	ARMY <sup>(‡)</sup>	1,029	0	1,029																											1,029		
1	2019	Total	1,514	0	1,514																											1,514		
1.1.2) Heavy Guns Carrier																																		
2	2016	NAVY	66	0	66	-	-	-	5	5	5	5	5	5	5	5	6	6	6	6	6	6	6	6	6	6	6	6	6	6	0			
2	2016	ARMY <sup>(‡)</sup>	69	0	69	-	-	-	5	5	5	5	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	0			
2	2016	Total	135	0	135	-	-	-	10	10	10	10	11	11	11	11	12	12	12	12	12	12	12	-	-	-	-	-	-	-	-	0		
2	2017	NAVY	132 <sup>(14)</sup>	0	132	A -	-	-	-	-	-	-	-	-	-	-	-	11	11	11	11	11	11	11	11	11	11	11	11	11	11	0		
2	2017	ARMY <sup>(‡)</sup>	279	0	279	A -	-	-	-	-	-	-	-	-	-	-	-	23	23	23	23	23	23	23	23	23	23	23	23	23	23	0		
2	2017	Total	411	0	411	-	-	-	-	-	-	-	-	-	-	-	-	34	34	34	34	34	34	34	34	34	34	34	34	34	34	0		
2	2018	NAVY	33	0	33													A -	-	-	-	-	-	-	-	-	-	-	-	-	-	-	33	
2	2018	ARMY <sup>(‡)</sup>	265	0	265													A -	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	265
2	2018	Total	298	0	298													-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	298	
2	2019	NAVY	733	0	733																												733	
2	2019	ARMY <sup>(‡)</sup>	507	0	507																												507	
2	2019	Total	1,240	0	1,240																												1,240	
1.1.3) Close Combat Weapons Carrier																																		
3	2016	NAVY	23	0	23	-	-	-	1	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	0			
						O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P	O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P					

**UNCLASSIFIED**

**Exhibit P-21, Production Schedule: PB 2019 Navy**

**Date: February 2018**

**Appropriation / Budget Activity / Budget Sub Activity:**

1109N / 05 / 2

**P-1 Line Item Number / Title:**

5095 / Joint Light Tactical Vehicle

**Item Number / Title [DODIC]:**

1 / Joint Light Tactical Vehicle

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	ACCEPT PRIOR TO 1 OCT 2016	BAL DUE AS OF 1 OCT	O C T	N O V	D E C	J A N	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	
3	2016	ARMY (‡)		42	0	42	-	-	-	3	3	3	3	3	3	4	4	4	4	4	4	4	-	-	-	-	-	-	-	0	
3	2016	Total		65	0	65	-	-	-	4	5	5	5	5	5	6	6	6	6	6	6	6	-	-	-	-	-	-	-	0	
3	2017	NAVY		24	0	24		A -	-	-	-	-	-	-	-	-	-	-	2	2	2	2	2	2	2	2	2	2	0		
3	2017	ARMY (‡)		56	0	56		A -	-	-	-	-	-	-	-	-	-	-	4	4	4	4	5	5	5	5	5	5	0		
3	2017	Total		80	0	80		-	-	-	-	-	-	-	-	-	-	-	6	6	6	6	7	7	7	7	7	7	0		
3	2018	NAVY		88	0	88													A -	-	-	-	-	-	-	-	-	-	88		
3	2018	ARMY (‡)		102	0	102													A -	-	-	-	-	-	-	-	-	-	102		
3	2018	Total		190	0	190													-	-	-	-	-	-	-	-	-	-	190		
3	2019	NAVY		150	0	150																								150	
3	2019	ARMY (‡)		117	0	117																								117	
3	2019	Total		267	0	267																								267	
1.1.4) Utility																															
4	2016	NAVY		15	0	15	-	-	-	1	1	1	1	1	1	1	1	1	2	2	2									0	
4	2016	ARMY (‡)		165	0	165	-	-	-	13	13	13	14	14	14	14	14	14	14	14	14	14									0
4	2016	Total		180	0	180	-	-	-	14	14	14	15	15	15	15	15	15	16	16	16	-	-	-	-	-	-	-	0		
4	2017	NAVY		46	0	46		A -	-	-	-	-	-	-	-	-	-	-	3	3	4	4	4	4	4	4	4	4	0		
4	2017	ARMY (‡)		649	0	649		A -	-	-	-	-	-	-	-	-	-	-	54	54	54	54	54	54	54	54	54	55	0		
4	2017	Total		695	0	695		-	-	-	-	-	-	-	-	-	-	-	57	57	58	58	58	58	58	58	58	59	0		
4	2018	NAVY		291	0	291													A -	-	-	-	-	-	-	-	-	-	291		
4	2018	ARMY (‡)		803	0	803													A -	-	-	-	-	-	-	-	-	-	803		
4	2018	Total		1,094	0	1,094													-	-	-	-	-	-	-	-	-	-	1,094		
4	2019	NAVY		274	0	274																								274	
4	2019	ARMY (‡)		1,737	0	1,737																								1,737	
4	2019	Total		2,011	0	2,011																								2,011	

**UNCLASSIFIED**

**Exhibit P-21, Production Schedule: PB 2019 Navy**

**Date: February 2018**

**Appropriation / Budget Activity / Budget Sub Activity:**  
1109N / 05 / 2

**P-1 Line Item Number / Title:**  
5095 / Joint Light Tactical Vehicle

**Item Number / Title [DODIC]:**  
1 / Joint Light Tactical Vehicle

Cost Elements (Units in Each)										Fiscal Year 2019												Fiscal Year 2020												B A L A N C E		
O C R O #	M F R Y	SERVICE	PROC QTY	ACCEPT PRIOR TO 1 OCT 2018	BAL DUE AS OF 1 OCT	Calendar Year 2019												Calendar Year 2020													B A L A N C E					
						O C T	N O V	D E C	J A N	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							
1.1.1) General Purpose <sup>(1)</sup>																																				
1	2015	NAVY	6	6	0																											0				
1	2015	ARMY <sup>(‡)</sup>	115	115	0																											0				
1	2015	Total	121	121	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0					
1	2016	NAVY	24	24	0																											0				
1	2016	ARMY <sup>(‡)</sup>	377	377	0																											0				
1	2016	Total	401	401	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0						
1	2017	NAVY	10	10	0																										0					
1	2017	ARMY <sup>(‡)</sup>	607	607	0																										0					
1	2017	Total	617	617	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0							
1	2018	NAVY	115	0	115	9	9	9	9	9	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	0							
1	2018	ARMY <sup>(‡)</sup>	918	0	918	76	76	76	76	76	76	77	77	77	77	77	77	77	77	77	77	77	77	77	77	77	77	77	0							
1	2018	Total	1,033	0	1,033	85	85	85	85	85	86	87	87	87	87	87	87	87	87	87	87	87	87	87	87	87	87	87	0							
1	2019	NAVY	485	0	485		A	-	-	-	-	-	-	-	-	-	-	-	40	40	40	40	40	40	40	40	40	41	41	41	41	41	0			
1	2019	ARMY <sup>(‡)</sup>	1,029	0	1,029		A	-	-	-	-	-	-	-	-	-	-	-	85	85	85	86	86	86	86	86	86	86	86	86	86	86	0			
1	2019	Total	1,514	0	1,514		-	-	-	-	-	-	-	-	-	-	-	-	125	125	125	126	126	126	126	126	127	127	127	127	127	127	0			
1.1.2) Heavy Guns Carrier																																				
2	2016	NAVY	66	66	0																											0				
2	2016	ARMY <sup>(‡)</sup>	69	69	0																										0					
2	2016	Total	135	135	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0					
2	2017	NAVY	132 <sup>(14)</sup>	0																											0					
2	2017	ARMY <sup>(‡)</sup>	279	279	0																										0					
2	2017	Total	411	411	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0						
2	2018	NAVY	33	0	33	2	2	2	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	0						
2	2018	ARMY <sup>(‡)</sup>	265	0	265	22	22	22	22	22	22	22	22	22	22	22	22	22	22	22	22	22	22	22	22	22	23	23	0							
2	2018	Total	298	0	298	24	24	24	25	25	25	25	25	25	25	25	25	25	25	26	-	-	-	-	-	-	-	-	-	-	0					
2	2019	NAVY	733	0	733		A	-	-	-	-	-	-	-	-	-	-	-	61	61	61	61	61	61	61	61	61	61	61	61	62	0				
2	2019	ARMY <sup>(‡)</sup>	507	0	507		A	-	-	-	-	-	-	-	-	-	-	-	42	42	42	42	42	42	42	42	42	43	43	43	43	43	0			
2	2019	Total	1,240	0	1,240		-	-	-	-	-	-	-	-	-	-	-	-	103	103	103	103	103	103	103	103	104	104	104	105	0	0				
1.1.3) Close Combat Weapons Carrier																																				
3	2016	NAVY	23	23	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	0					

**UNCLASSIFIED**

**Exhibit P-21, Production Schedule: PB 2019 Navy**

**Date: February 2018**

**Appropriation / Budget Activity / Budget Sub Activity:**

1109N / 05 / 2

**P-1 Line Item Number / Title:**

5095 / Joint Light Tactical Vehicle

**Item Number / Title [DODIC]:**

1 / Joint Light Tactical Vehicle

Cost Elements (Units in Each)							Fiscal Year 2019												Fiscal Year 2020												B A L A N C E
O C R O #	M F R Y	SERVICE	PROC QTY	ACCEPT PRIOR TO 1 OCT 2018	BAL DUE AS OF 1 OCT	O C T	N O V	D E C	J A N	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		
3	2016	ARMY <sup>(‡)</sup>	42	42	0																									0	
3	2016	Total	65	65	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0			
3	2017	NAVY	24	24	0																									0	
3	2017	ARMY <sup>(‡)</sup>	56	56	0																									0	
3	2017	Total	80	80	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0			
3	2018	NAVY	88	0	88	7	7	7	7	7	7	7	7	8	8	8	8	8	8									0			
3	2018	ARMY <sup>(‡)</sup>	102	0	102	8	8	8	8	8	8	9	9	9	9	9	9	9	9									0			
3	2018	Total	190	0	190	15	15	15	15	15	15	16	16	17	17	17	17	17	17	-	-	-	-	-	-	-	-	0			
3	2019	NAVY	150	0	150															12	12	12	12	12	13	13	13	0			
3	2019	ARMY <sup>(‡)</sup>	117	0	117															9	9	9	10	10	10	10	10	0			
3	2019	Total	267	0	267															21	21	21	22	22	23	23	23	0			
1.1.4) Utility																															
4	2016	NAVY	15	15	0																									0	
4	2016	ARMY <sup>(‡)</sup>	165	165	0																									0	
4	2016	Total	180	180	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0			
4	2017	NAVY	46	46	0																									0	
4	2017	ARMY <sup>(‡)</sup>	649	649	0																									0	
4	2017	Total	695	695	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0			
4	2018	NAVY	291	0	291	24	24	24	24	24	24	24	24	24	25	25	25	25										0			
4	2018	ARMY <sup>(‡)</sup>	803	0	803	66	67	67	67	67	67	67	67	67	67	67	67	67	67									0			
4	2018	Total	1,094	0	1,094	90	91	91	91	91	91	91	91	91	92	92	92	-	-	-	-	-	-	-	-	-	-	0			
4	2019	NAVY	274	0	274														22	22	23	23	23	23	23	23	23	0			
4	2019	ARMY <sup>(‡)</sup>	1,737	0	1,737														144	144	144	145	145	145	145	145	145	0			
4	2019	Total	2,011	0	2,011														166	166	167	168	168	168	168	168	168	0			
							O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P	O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P	

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Exhibit P-21, Production Schedule: PB 2019 Navy										Date: February 2018					
Appropriation / Budget Activity / Budget Sub Activity: 1109N / 05 / 2				P-1 Line Item Number / Title: 5095 / Joint Light Tactical Vehicle					Item Number / Title [DODIC]: 1 / Joint Light Tactical Vehicle						
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	Oshkosh Corp LLC <sup>(11)</sup> - Oshkosh WI	12	696	2,820	0	10	10	20	0	3	10	13			
2	Oshkosh Defense LLC - Oshkosh, WI	12	696	2,820	0	10	10	20	0	3	10	13			
3	Oshkosh Defense LLC - Oshkosh, WI	12	696	2,820	0	10	10	20	0	3	10	13			
4	Oshkosh Defense LLC - Oshkosh, WI	12	696	2,820	0	10	10	20	0	3	10	13			

(‡) 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).

**Footnotes:**

(11) MS C and contract award occurred on 25 August 2015. Production rates for the JLTV variants are shown as annual rates.

(14) 2

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<b>Exhibit P-40, Budget Line Item Justification: PB 2019 Navy</b>										<b>Date:</b> February 2018			
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 1109N: Procurement, Marine Corps / BA 05: Support Vehicles / BSA 2: Tactical Vehicles										<b>P-1 Line Item Number / Title:</b> 5097 / Family of Tactical Trailers			
<b>ID Code (A=Service Ready, B=Not Service Ready): A</b>										<b>Program Elements for Code B Items: N/A</b>			
<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 (\$ in Millions)	146.965	2.691	1.938	2.393	0.000	2.393	2.693	3.146	10.209	3.283	Continuing	Continuing	
Less PY Advance Procurement (\$ in Millions)	-	-	-	-	-	-	-	-	-	-	-	-	
Net Procurement (P-1) (\$ in Millions)	146.965	2.691	1.938	2.393	0.000	2.393	2.693	3.146	10.209	3.283	Continuing	Continuing	
Plus CY Advance Procurement (\$ in Millions)	-	-	-	-	-	-	-	-	-	-	-	-	
<b>Total Obligation Authority (\$ in Millions)</b>	<b>146.965</b>	<b>2.691</b>	<b>1.938</b>	<b>2.393</b>	<b>0.000</b>	<b>2.393</b>	<b>2.693</b>	<b>3.146</b>	<b>10.209</b>	<b>3.283</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 (\$ in Millions)	-	-	-	-	-	-	-	-	-	-	-	-	
Flyaway Unit Cost (\$ in Dollars)	-	-	-	-	-	-	-	-	-	-	-	-	
Gross/Weapon System Unit Cost (\$ in Dollars)	-	-	-	-	-	-	-	-	-	-	-	-	
<b>Description:</b> The Family of Tactical Trailers (FTT) encompasses installed equipment upgrades and changes made to fielded trailers.													
Family of Tactical Trailers provides for the procurement and support of trailers in the light, medium, and heavy fleet to enhance Marine Corps tactical vehicle mobility capability. This program supports various light, medium and heavy trailers, to include the M1102-H (Cargo) & M1102-MCC (Marine Corps Chassis) Light Tactical Trailers (LTT); the M1076 PLS (Palletized Load System) Trailer, the MK1077 Flatrack for the PLS Trailer and LVSR; Medium Tactical Vehicle Replacement (MTVR) Trailer; M870 Ton Low Bed, Mk970 Tactical Refueler and the Flatrack Refueler Capability (FRC).													
<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>			
Navy	Quantity	-	-	-	-	-	-	-	-	-	-	-	
	Total Obligation Authority	1.952	1.276	1.725	-	1.725	2.010	2.448	9.497	2.556			
NR	Quantity	-	-	-	-	-	-	-	-	-	-	-	
	Total Obligation Authority	0.739	0.662	0.668	-	0.668	0.683	0.698	0.712	0.727			
<b>Total: Secondary Distribution</b>	Quantity	-	-	-	-	-	-	-	-	-	-	-	
	Total Obligation Authority	2.691	1.938	2.393	-	2.393	2.693	3.146	10.209	3.283			

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Exhibit P-40, Budget Line Item Justification: PB 2019 Navy							Date: February 2018			
Appropriation / Budget Activity / Budget Sub Activity:				P-1 Line Item Number / Title:						
1109N: Procurement, Marine Corps / BA 05: Support Vehicles / BSA 2: Tactical Vehicles				5097 / Family of Tactical Trailers						
ID Code (A=Service Ready, B=Not Service Ready): A		Program Elements for Code B Items: N/A				Other Related Program Elements: 0206624M				
Line Item MDAP/MAIS Code: 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)	
P-40a	Family of Tactical Trailers				- / 146.965	- / 2.691	- / 1.938	- / 2.393	- / -	- / 2.393
<b>P-40</b>	<b>Total Gross/Weapon System Cost</b>				<b>- / 146.965</b>	<b>- / 2.691</b>	<b>- / 1.938</b>	<b>- / 2.393</b>	<b>- / 0.000</b>	<b>- / 2.393</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. Title represents the P-40a Title when only the P-40a Summary/Total is shown.

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

**Justification:**

FY 2018 Base Appropriation Request: \$1.938M (\$1.276 Active; \$0.662M Reserve)

Funds in the amount of \$1.938M supports the Active and Reserve Heavy Trailer Fleet program acquisitions.

Funding supports procurement and installation of safety and engineering change modifications to the Medium and Heavy Tactical Trailer Fleets such as the Palletized Load System-Trailer (PLST), M870 (40 & 50 ton variants), Mk1077 (Flatrack), Mk970 and the MK593 Medium Trailer and Flatrack Refueler Capability (FRC) to provide support to the Operational Forces by providing the capability to transport required cargo within the rugged mission profile of the Medium Tactical Vehicle Replacement (MTVR) and Logistical Vehicle System Replacement (LVSR).

FY 2019 Base Appropriation Request: \$2.393M (\$1.725 Active; \$0.668M Reserve)

Funds in the amount of \$2.483M provides for the Active and Reserve Medium and Heavy Trailer Fleet program acquisition plans. Funding will support procurement and installation of safety and performance Engineering Change Proposals (ECPs) to modify the Medium and Heavy Tactical Trailer Fleet of Vehicles, including the Palletized Load System-Trailer (PLST), M870 (40 & 50 ton trailers), Mk1077 (Flattrack), Mk970, MTVR MK 593 Trailer and Flatrack Refueling Capability (FRC) to enable the Operational Forces to tow required bulk and liquid cargo within the mission profile of the MTVR and LVSR prime movers.

The increase in funding of \$0.455M from FY 2018 to FY 2019 reflects a reprioritization by the Marine Corps towards these efforts, particularly for an ECP to address ground clearance issues for the M870 Heavy Lift trailers that have been encountered in overseas operational environments.

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Exhibit P-40a, Budget Item Justification For Aggregated Items: PB 2019 Navy														Date: February 2018						
Appropriation / Budget Activity / Budget Sub Activity: 1109N / 05 / 2					P-1 Line Item Number / Title: 5097 / Family of Tactical Trailers									Aggregated Items Title: Family of Tactical Trailers						
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 (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)
<b>1) Family of Tactical Trailers (FTT)</b>																				
1.1) Heavy Trailer (ECP) <sup>(1)</sup>			-	-	4.023	-	-	0.976	-	-	0.493	-	-	0.853	-	-	-	-	-	0.853
1.2) Medium Trailer (ECP) <sup>(2)</sup>			-	-	-	-	-	0.976	-	-	0.783	-	-	0.872	-	-	-	-	-	0.872
1.3) Family of Tactical Trailer Modification- Reserves <sup>(3)</sup>	A		-	-	1.181	-	-	0.739	-	-	0.662	-	-	0.668	-	-	-	-	-	0.668
1.4) Prior Year Cum Funding <sup>(4)</sup>	A		-	-	46.854	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
<b>Subtotal: 1) Family of Tactical Trailers (FTT)</b>			-	-	<b>52.058</b>	-	-	<b>2.691</b>	-	-	<b>1.938</b>	-	-	<b>2.393</b>	-	-	-	-	-	<b>2.393</b>
<b>2) MTVR Trailer</b>																				
2.1) Prior Year Cum Funding <sup>(5)</sup>	A		-	-	94.907	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
<b>Subtotal: 2) MTVR Trailer</b>			-	-	<b>94.907</b>	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
<b>Total</b>			-	-	<b>146.965</b>	-	-	<b>2.691</b>	-	-	<b>1.938</b>	-	-	<b>2.393</b>	-	-	-	-	-	<b>2.393</b>
Note: Subtotals or Totals in this Exhibit P-40a may not be exact or sum exactly, due to rounding.																				

**Footnotes:**

(1) FY18 to FY19 increase of \$0.360M will fund additional ECP's, such as those for resolving trailer ground clearance deficiencies for M870.

(2) FY18 to FY19 increased \$0.089M and will fund additional ECP's, like those for resolving medium trailer ground clearance deficiencies.

(3) FY18 to FY19 increase of \$0.006M will be used for implementation of ECP's to address operational issues such as ground clearance deficiencies.

(4) FTT increased cumulative Prior Year by \$9.101 to include previous procurement of Palletized Load System (PLS) Trailers.

(5) MTVR Trailer increased cumulative Prior Year by \$57.206M, as MTVR Trailers was realigned to the FTT in a fiscal year prior to the budget year.

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<b>Exhibit P-40, Budget Line Item Justification: PB 2019 Navy</b>										<b>Date:</b> February 2018					
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 1109N: Procurement, Marine Corps / BA 05: Support Vehicles / BSA 2: Tactical Vehicles					<b>P-1 Line Item Number / Title:</b> 5132 / Trailers										
<b>ID Code</b> (A=Service Ready, B=Not Service Ready): A			<b>Program Elements for Code B Items:</b> N/A						<b>Other Related Program Elements:</b> N/A						
<b>Line Item MDAP/MAIS Code:</b> N/A															
<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 (\$ in Millions)	0.000	0.000	10.282	6.540	0.000	6.540	0.000	0.000	0.000	0.000	-	16.822			
Less PY Advance Procurement (\$ in Millions)	-	-	-	-	-	-	-	-	-	-	-	-			
Net Procurement (P-1) (\$ in Millions)	0.000	0.000	10.282	6.540	0.000	6.540	0.000	0.000	0.000	0.000	-	16.822			
Plus CY Advance Procurement (\$ in Millions)	-	-	-	-	-	-	-	-	-	-	-	-			
<b>Total Obligation Authority (\$ in Millions)</b>	<b>0.000</b>	<b>0.000</b>	<b>10.282</b>	<b>6.540</b>	<b>0.000</b>	<b>6.540</b>	<b>0.000</b>	<b>0.000</b>	<b>0.000</b>	<b>0.000</b>	-	<b>16.822</b>			
<i>(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)</i>															
Initial Spares (\$ in Millions)	-	-	-	-	-	-	-	-	-	-	-	-			
Flyaway Unit Cost (\$ in Dollars)	-	-	-	-	-	-	-	-	-	-	-	-			
Gross/Weapon System Unit Cost (\$ in Dollars)	-	-	-	-	-	-	-	-	-	-	-	-			
<b>Description:</b> Program funding was requested in order to fund FORCE 2025 and Infrastructure Reset (IR) Strategy emerging interim facilities requirements. The trailers line is made up of temporary facilities (interim relocatable trailers) that will be purchased to accommodate the Marine Corps' 185K Active Duty End Strength. These shelters will be located at the following locations: Marine Corps Base (MCB) Quantico in FY18, and MCB Camp Pendleton in FY19.															

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Exhibit P-40, Budget Line Item Justification: PB 2019 Navy							Date: February 2018			
Appropriation / Budget Activity / Budget Sub Activity: 1109N: Procurement, Marine Corps / BA 05: Support Vehicles / BSA 2: Tactical Vehicles				P-1 Line Item Number / Title: 5132 / Trailers						
ID Code (A=Service Ready, B=Not Service Ready): A		Program Elements for Code B Items: N/A			Other Related Program Elements: N/A					
Line Item MDAP/MAIS Code: N/A										
Exhibits Schedule				Prior Years	FY 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)	
P-40a	Trailers	P-5a			- / 0.000	- / -	- / 10.282	- / 6.540	- / -	- / 6.540
<b>P-40</b>	<b>Total Gross/Weapon System Cost</b>				<b>- / 0.000</b>	<b>- / 0.000</b>	<b>- / 10.282</b>	<b>- / 6.540</b>	<b>- / 0.000</b>	<b>- / 6.540</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. Title represents the P-40a Title when only the P-40a Summary/Total is shown.

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

**Justification:**

- FY18 Baseline Budget: FY18 funding of \$10.282M funds 5 temporary facilities projects and planning in support of NDAA-directed end strength increase in FY17 (182K to 185K), Marine Corps Force 2025 FY18 facilities requirements, and CMC Infrastructure Reset FY-18 proposed consolidations and demolitions. This funding is foundational to meeting the intent of SecDef's Phase Two focus. Absent this temporary facilities funding, the Marine Corps will delay meeting these program balance, facilities investment, and force structure growth requirements.

- FY19 Baseline Budget: FY19 Funding of \$6.540M funds 3 temporary facilities projects and planning in support of NDAA-directed end strength increase in FY17 (182K to 185K), Marine Corps Force 2025 FY19 facilities requirements, and CMC Infrastructure Reset FY19 proposed consolidations and demolitions. The requested \$6.540M will fund the purchase of the specialized SCIF-capable relocatables/trailers for MCB Camp Pendleton I MEF Intel Battalion requirements, and funds the Naval Facilities Engineering Command's (NAVFAC) required Supervision, Inspection and Overhead (SIOH). Intel Bn Units stand up in FY19, and there currently is no available or specialized admin facilities upon MCB Camp Pendleton. This funding is foundational to meeting the intent of SecDef's Phase Two focus. Absent this temporary facilities funding, the Marine Corps will delay meeting these program balance, facilities investment, and force structure growth requirements. The decrease in required funding of \$3.742M from FY18 to FY19 is due to the approved MAGTF unit phasing plan, which results in more facilities hardships and square footage deficiencies in FY18 than FY19.

OCO:

N/A

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Exhibit P-40a, Budget Item Justification For Aggregated Items: PB 2019 Navy														Date: February 2018						
Appropriation / Budget Activity / Budget Sub Activity: 1109N / 05 / 2					P-1 Line Item Number / Title: 5132 / Trailers									Aggregated Items Title: Trailers						
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 (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)
<b>1) Trailers</b>																				
1) Relocatable Trailers <sup>(†)</sup>	A		-	-	-	-	-	-	2,056K	5	10.282	2,180K	3	6.540	-	-	-	2,180K	3	6.540
<i>Subtotal: 1) Trailers</i>			-	-	<b>0.000</b>	-	-	-	-	-	<b>10.282</b>	-	-	<b>6.540</b>	-	-	-	-	-	<b>6.540</b>
<b>Total</b>			-	-	<b>0.000</b>	-	-	-	-	-	<b>10.282</b>	-	-	<b>6.540</b>	-	-	-	-	-	<b>6.540</b>

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

(†) indicates the presence of a P-5a

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Exhibit P-5a, Procurement History and Planning: PB 2019 Navy								<b>Date:</b> February 2018				
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 1109N / 05 / 2			<b>P-1 Line Item Number / Title:</b> 5132 / Trailers						<b>Aggregated Items:</b> Trailers			
Item Number / Title [DODIC]	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 (\$)	Specs Avail Now?	Date Revision Available	RFP Issue Date
<b>1) Trailers</b>												
1) Relocatable Trailers		2018	TBD / TBD	C / TBD	Arlington VA	Jun 2018	Aug 2018	5	2,056K	N		Mar 2018
1) Relocatable Trailers		2019	TBD / TBD	C / TBD	Arlington VA	Feb 2019	Apr 2019	3	2,180K	N		Dec 2018

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<b>Exhibit P-40, Budget Line Item Justification: PB 2019 Navy</b>								<b>Date:</b> February 2018				
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 1109N: Procurement, Marine Corps / BA 06: Engineer and Other Equipment / BSA 1: Engineer and Other Equipment				<b>P-1 Line Item Number / Title:</b> 6054 / Env Cntrl Equip Assorted								
ID Code (A=Service Ready, B=Not Service Ready): A			Program Elements for Code B Items: N/A				Other Related Program Elements: 0206624M					
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 (\$ in Millions)	85.983	0.000	1.405	0.496	0.000	0.496	0.495	0.496	3.368	3.431	-	95.674
Less PY Advance Procurement (\$ in Millions)	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) (\$ in Millions)	85.983	0.000	1.405	0.496	0.000	0.496	0.495	0.496	3.368	3.431	-	95.674
Plus CY Advance Procurement (\$ in Millions)	-	-	-	-	-	-	-	-	-	-	-	-
<b>Total Obligation Authority (\$ in Millions)</b>	<b>85.983</b>	<b>0.000</b>	<b>1.405</b>	<b>0.496</b>	<b>0.000</b>	<b>0.496</b>	<b>0.495</b>	<b>0.496</b>	<b>3.368</b>	<b>3.431</b>	<b>-</b>	<b>95.674</b>
(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)												
Initial Spares (\$ in Millions)	-	-	-	-	-	-	-	-	-	-	-	-
Flyaway Unit Cost (\$ in Dollars)	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost (\$ in Dollars)	-	-	-	-	-	-	-	-	-	-	-	-
<b>Description:</b> The Family of Environmental Control Equipment consists of Environmental Control Units (ECU), Field Refrigeration Systems, Integrated Trailer ECU and Generator Systems, and Cooling and Refrigeration Expeditionary Tool Kits. These systems provide required heating, cooling, storage, and servicing for systems throughout the Marine Corps. Current efforts seek to replace all legacy ECUs with systems of higher reliability and higher efficiency using EPA-approved refrigerants, more energy efficient enhanced mobility, easier to repair, and quieter than their predecessors. With environmental control systems consuming 50-70% of tactical electric power in theater, this savings will be a significant contribution to reducing the USMC fuel demand, and lightening the Marine Air-Ground Task Force (MAGTF). The Warfighter benefit includes a decreased logistics footprint, less reliance on petroleum-derived fuels, increased local energy security, and reduced tanker losses (fewer on the road). The operational imperative to reduce fuel usage will consequently reduce refueling operations and exposing Marines to hazardous fuel convoy operations.												
Efforts include procurement of the following principal end items and ancillary equipment: (1) Field Refrigeration Systems (FRS) Refrigerant Unit (RU) replacement. This effort seeks to replace legacy RUs in current USMC Large and Small FRSs complying with EPA regulations while increasing efficiency thus reducing overall power requirements/demands.  (2) The Enhanced Environmental Control Unit (E2CU) program is the second generation of a family of environmental control units from 9,000 BTU to 60,000 BTU/Hr cooling output. The E2CU program will provide tactical Heating, Ventilation and Air Conditioning (HVAC) and superior reliability for all MAGTF units in all operational concepts. E2CU will have significant average fuel efficiency improvements over the current ECU family. This has been demonstrated while complying with newer EPA regulations on refrigerants.												
Secondary Distribution	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023			
Navy	Quantity	-	-	-	-	-	-	-	-	-	-	-
	Total Obligation Authority	-	-	0.496	-	0.496	0.377	0.385	0.396	0.404		
NR	Quantity	-	-	-	-	-	-	-	-	-	-	-
	Total Obligation Authority	-	1.405	-	-	-	0.118	0.111	2.972	3.027		
<b>Total:</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>-</b>

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<b>Exhibit P-40, Budget Line Item Justification: PB 2019 Navy</b>							<b>Date:</b> February 2018			
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 1109N: Procurement, Marine Corps / BA 06: Engineer and Other Equipment / BSA 1: Engineer and Other Equipment				<b>P-1 Line Item Number / Title:</b> 6054 / Env Cntrl Equip Assorted						
<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> 0206624M		
<b>Line Item MDAP/MAIS Code:</b> 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	
Secondary Distribution	Total Obligation Authority	-	1.405	0.496	-	0.496	0.495	0.496	3.368	3.431

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<b>Exhibit P-40, Budget Line Item Justification: PB 2019 Navy</b>							<b>Date:</b> February 2018			
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 1109N: Procurement, Marine Corps / BA 06: Engineer and Other Equipment / BSA 1: Engineer and Other Equipment				<b>P-1 Line Item Number / Title:</b> 6054 / Env Cntrl Equip Assorted						
<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> 0206624M			
<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>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	1 / Env Cntrl Equip Assorted				- / 85.983	- / 0.000	- / 1.405	- / 0.496	- / 0.000	- / 0.496
P-40	<b>Total Gross/Weapon System Cost</b>				<b>- / 85.983</b>	<b>- / 0.000</b>	<b>- / 1.405</b>	<b>- / 0.496</b>	<b>- / 0.000</b>	<b>- / 0.496</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 2018 Base Appropriation Request: \$1.405M (ACTIVE: \$0.000/RESERVE: \$1.405M)

Funds will purchase new Refrigeration Units (RUs) for the existing Small and Large Field Refrigeration Systems upgrading the RUs with EPA compliant refrigerant.

FY 2019 Base Appropriation Request: \$0.496M (ACTIVE: \$0.496/RESERVE: \$0.000M)

Funds will purchase new Refrigeration Units (RUs) for the existing Small and Large Field Refrigeration Systems upgrading the RUs with EPA compliant refrigerant.

The decrease of \$0.909M from FY18 to FY19 is a result of the buy out of the Approved Acquisition Objective (AAO) with FY18 PMC.

**OCO:**

FY 2019 Overseas Contingency Operations (OCO) Request: N/A

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<b>Exhibit P-5, Cost Analysis:</b> PB 2019 Navy													<b>Date:</b> February 2018					
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 1109N / 06 / 1				<b>P-1 Line Item Number / Title:</b> 6054 / Env Cntrl Equip Assorted									<b>Item Number / Title [DODIC]:</b> 1 / Env Cntrl Equip Assorted					
<b>ID Code</b> (A=Service Ready, B=Not Service Ready) :													<b>MDAP/MAIS Code:</b>					
<b>Resource Summary</b>				<b>Prior Years</b>		<b>FY 2017</b>		<b>FY 2018</b>		<b>FY 2019 Base</b>		<b>FY 2019 OCO</b>		<b>FY 2019 Total</b>				
Procurement Quantity ( <i>Units in Each</i> )				-		-		-		-		-		-				
Gross/Weapon System Cost (\$ in Millions)				85.983		0.000		1.405		0.496		0.000		0.496				
Less PY Advance Procurement (\$ in Millions)				-		-		-		-		-		-				
Net Procurement (P-1) (\$ in Millions)				85.983		0.000		1.405		0.496		0.000		0.496				
Plus CY Advance Procurement (\$ in Millions)				-		-		-		-		-		-				
<b>Total Obligation Authority</b> (\$ in Millions)				85.983		0.000		1.405		0.496		0.000		0.496				
(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 Dollars)				-		-		-		-		-		-				
Note: Subtotals or Totals in this Exhibit P-5 may not be exact or sum exactly due to rounding.																		
<b>Cost Elements</b>	<b>Prior Years</b>			<b>FY 2017</b>			<b>FY 2018</b>			<b>FY 2019 Base</b>			<b>FY 2019 OCO</b>			<b>FY 2019 Total</b>		
	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)
Flyaway Cost																		
Recurring Cost																		
1.1.1) Small Field Refrigeration Units (SFRS)	-	-	-	-	-	-	-	-	-	-	-	0.246	-	-	-	-	-	0.246
1.1.2) Small Field Refrigeration Unit - Reserves	-	-	-	-	-	-	-	-	1.205	-	-	-	-	-	-	-	-	
1.1.3) Large Field Refrigeration Units (LFRS)	-	-	-	-	-	-	-	-	-	-	-	0.250	-	-	-	-	-	0.250
1.1.4) Large Field Refrigeration Unit (LFRS) - Reserves	-	-	-	-	-	-	-	-	0.200	-	-	-	-	-	-	-	-	
1.1.5) Environmental Control Equipment Assorted - Reserves	-	-	8.164	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Subtotal: Recurring Cost	-	-	8.164	-	-	-	-	-	1.405	-	-	0.496	-	-	-	-	-	0.496
Subtotal: Flyaway Cost	-	-	8.164	-	-	-	-	-	1.405	-	-	0.496	-	-	-	-	-	0.496
Support Cost																		
2.1) Warranties, ILS/CLS Support	-	-	7.673	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
2.2) Prior Year Cum Funding	-	-	70.146	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Subtotal: Support Cost	-	-	77.819	-	-	-	-	-	-	-	-	-	-	-	-	-	-	

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Exhibit P-5, Cost Analysis: PB 2019 Navy													Date: February 2018													
Appropriation / Budget Activity / Budget Sub Activity: 1109N / 06 / 1				P-1 Line Item Number / Title: 6054 / Env Cntrl Equip Assorted									Item Number / Title [DODIC]: 1 / Env Cntrl Equip Assorted													
ID Code (A=Service Ready, B=Not Service Ready) :													MDAP/MAIS Code:													
Note: Subtotals or Totals in this Exhibit P-5 may not be exact or sum exactly due to rounding.																										
Cost Elements	Prior Years			FY 2017			FY 2018			FY 2019 Base			FY 2019 OCO			FY 2019 Total										
	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)								
Gross/Weapon System Cost	-	-	85.983	-	-	0.000	-	-	1.405	-	-	0.496	-	-	0.000	-	-	0.496								

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Exhibit P-40, Budget Line Item Justification: PB 2019 Navy										Date: February 2018			
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 1109N: Procurement, Marine Corps / BA 06: Engineer and Other Equipment / BSA 1: Engineer and Other Equipment										<b>P-1 Line Item Number / Title:</b> 6277 / Tactical Fuel Systems			
ID Code (A=Service Ready, B=Not Service Ready): A										Program Elements for Code B Items: N/A			
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 (\$ in Millions)	334.793	0.000	1.788	0.054	0.000	0.054	0.052	0.051	0.051	0.050	-	336.839	
Less PY Advance Procurement (\$ in Millions)	-	-	-	-	-	-	-	-	-	-	-	-	
Net Procurement (P-1) (\$ in Millions)	334.793	0.000	1.788	0.054	0.000	0.054	0.052	0.051	0.051	0.050	-	336.839	
Plus CY Advance Procurement (\$ in Millions)	-	-	-	-	-	-	-	-	-	-	-	-	
<b>Total Obligation Authority (\$ in Millions)</b>	<b>334.793</b>	<b>0.000</b>	<b>1.788</b>	<b>0.054</b>	<b>0.000</b>	<b>0.054</b>	<b>0.052</b>	<b>0.051</b>	<b>0.051</b>	<b>0.050</b>	-	<b>336.839</b>	
(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)													
Initial Spares (\$ in Millions)	-	-	-	-	-	-	-	-	-	-	-	-	
Flyaway Unit Cost (\$ in Dollars)	-	-	-	-	-	-	-	-	-	-	-	-	
Gross/Weapon System Unit Cost (\$ in Dollars)	-	-	-	-	-	-	-	-	-	-	-	-	
<b>Description:</b>													
Family of Expeditionary Fuel Systems (FEFS) is a family of systems line that contains highly versatile fuel systems designed to receive, test, store, transfer and dispense fuel in support of Marine Air Ground Tactical Force (MAGTF) operations. The family contains individual Table of Allowance Material Control Numbers which support MAGTF operations by providing all aspects of land-based fuel support to include analysis, receipt, storage, transfer and dispensing including all the components required to configure the following systems: Tactical Airfield Fuel Distribution System (TAFDS), Amphibious Assault Fuel System (AAFS), SIXCON Fuel Storage and Pump Module, Fire Suppression System (FSS), Helicopter Expedient Refueling System (HERS), Expedient Refueling System (ERS), Ground Refueling System (GERS) (small and medium), 600 Gallons Per Minute (GPM) Fuel Pump Assembly, 150 GPM Fuel Pump Assembly, Hose Reel System, Berm Liners, Tanks/Pods (500 Gallon to 50K), Petroleum Quality Analysis System-Enhanced, Petroleum Test Kit, and various elastomeric fuel systems components and equipment. Procurement supports centrally management items with lifecycles, preplanned product improvements, and obsolescence mitigation via newer components and subsystems supported by industry. Procurement also supports repacking current systems into smaller modular packages for scalability and mission tailoring which may require additional subsystems for certain packages to be complete as new TAMCNs and tables of allowances are authorized.													
Secondary Distribution		FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023			
Navy	Quantity	-	-	-	-	-	-	-	-	-	-	-	
	Total Obligation Authority	-	0.895	-	-	-	-	-	-	-	-	-	
NR	Quantity	-	-	-	-	-	-	-	-	-	-	-	
	Total Obligation Authority	-	0.893	0.054	-	0.054	0.052	0.051	0.051	0.051	0.050	0.050	
<b>Total: Secondary Distribution</b>	Quantity	-	-	-	-	-	-	-	-	-	-	-	
	<b>Total Obligation Authority</b>	-	<b>1.788</b>	<b>0.054</b>	-	<b>0.054</b>	<b>0.052</b>	<b>0.051</b>	<b>0.051</b>	<b>0.051</b>	<b>0.050</b>	<b>0.050</b>	

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<b>Exhibit P-40, Budget Line Item Justification: PB 2019 Navy</b>							<b>Date:</b> February 2018			
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 1109N: Procurement, Marine Corps / BA 06: Engineer and Other Equipment / BSA 1: Engineer and Other Equipment				<b>P-1 Line Item Number / Title:</b> 6277 / Tactical Fuel Systems						
<b>ID Code</b> (A=Service Ready, B=Not Service Ready): A				<b>Program Elements for Code B Items:</b> N/A						
<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>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>	
P-5	1 / Tactical Fuel Systems				- / 334.793	- / 0.000	- / 1.788	- / 0.054	- / 0.000	- / 0.054
P-40	<b>Total Gross/Weapon System Cost</b>				- / 334.793	- / 0.000	- / 1.788	- / 0.054	- / 0.000	- / 0.054

\*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:**

FY2018 Base Appropriation Request: \$1.788M (ACTIVE: \$0.895M/RESERVE: \$0.893M)

Family of Expeditionary Fuel Systems funds will purchase various centrally managed Fuel Components (Fuel Pods and 3K/20K/50K), Digital Free Water Detectors (DFWD) (replacing legacy Combined Contaminated Fuel Detector (CCFDs)), Solar Pulse Chargers, and a critical 600 Gallons Per Minute (GPM) Engineering Change Proposal (ECP).

FY2019 Base Appropriation Request: \$0.054M (RESERVE: \$0.054M)

Family of Expeditionary Fuel Systems funds will purchase various centrally managed Fuel Components (Fuel Pods and 3K/20K/50K), Digital Free Water Detectors (DFWD) (replacing legacy CCFDs), Solar Pulse Chargers, and a critical 600 GPM ECP.

Funding decreased from FY18 to FY19 by \$1.734M due to there are no longer any active programs under this family of systems. The remaining funding within this line item provides sustainment of centrally managed items.

**OCO:**

FY 2019 Overseas Contingency Operations (OCO) Request: N/A

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<b>Exhibit P-5, Cost Analysis:</b> PB 2019 Navy												<b>Date:</b> February 2018								
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 1109N / 06 / 1			<b>P-1 Line Item Number / Title:</b> 6277 / Tactical Fuel Systems												<b>Item Number / Title [DODIC]:</b> 1 / Tactical Fuel Systems					
<b>ID Code</b> (A=Service Ready, B=Not Service Ready) :												<b>MDAP/MAIS Code:</b>								
<b>Resource Summary</b>				<b>Prior Years</b>		<b>FY 2017</b>		<b>FY 2018</b>		<b>FY 2019 Base</b>		<b>FY 2019 OCO</b>		<b>FY 2019 Total</b>						
Procurement Quantity ( <i>Units in Each</i> )				-		-		-		-		-		-						
Gross/Weapon System Cost (\$ in Millions)				334.793		0.000		1.788		0.054		0.000		0.054						
Less PY Advance Procurement (\$ in Millions)				-		-		-		-		-		-						
Net Procurement (P-1) (\$ in Millions)				334.793		0.000		1.788		0.054		0.000		0.054						
Plus CY Advance Procurement (\$ in Millions)				-		-		-		-		-		-						
<b>Total Obligation Authority</b> (\$ in Millions)				334.793		0.000		1.788		0.054		0.000		0.054						
(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 Dollars)				-		-		-		-		-		-						
Note: Subtotals or Totals in this Exhibit P-5 may not be exact or sum exactly due to rounding.																				
<b>Cost Elements</b>	<b>Prior Years</b>			<b>FY 2017</b>			<b>FY 2018</b>			<b>FY 2019 Base</b>			<b>FY 2019 OCO</b>			<b>FY 2019 Total</b>				
	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)		
Flyaway - Tactical Fuel Systems Cost																				
Recurring Cost																				
1.1.1) Fuel System Components and Equipment (ACTIVE)	-	-	0.076	-	-	-	-	-	0.601	-	-	-	-	-	-	-	-			
1.1.2) Fuel System Components and Equipment (RESERVES)	-	-	-	-	-	-	-	-	0.887	-	-	0.054	-	-	-	-	0.054			
<i>Subtotal: Recurring Cost</i>	-	-	0.076	-	-	-	-	-	1.488	-	-	0.054	-	-	-	-	0.054			
<i>Subtotal: Flyaway - Tactical Fuel Systems Cost</i>	-	-	0.076	-	-	-	-	-	1.488	-	-	0.054	-	-	-	-	0.054			
Support - Support Cost																				
2.1) Integrated Logistics Support (ACTIVE)	-	-	-	-	-	-	-	-	0.293	-	-	-	-	-	-	-	-			
2.2) Integrated Logistics Support (RESERVES))	-	-	1.058	-	-	-	-	-	0.007	-	-	-	-	-	-	-	-			
2.3) Prior Years Cumulative Funding	1,668K	200	333.659	-	-	-	-	-	-	-	-	-	-	-	-	-	-			
<i>Subtotal: Support - Support Cost</i>	-	-	334.717	-	-	-	-	-	0.300	-	-	-	-	-	-	-	-			
Gross/Weapon System Cost	-	-	334.793	-	-	0.000	-	-	1.788	-	-	0.054	-	-	0.000	-	0.054			

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Exhibit P-40, Budget Line Item Justification: PB 2019 Navy										Date: February 2018					
Appropriation / Budget Activity / Budget Sub Activity:					P-1 Line Item Number / Title:										
1109N: Procurement, Marine Corps / BA 06: Engineer and Other Equipment / BSA 1: Engineer and Other Equipment					6366 / Power Equipment Assorted										
ID Code (A=Service Ready, B=Not Service Ready): A			Program Elements for Code B Items: N/A					Other Related Program Elements: 0206624M							
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 (\$ in Millions)	371.367	19.106	9.910	21.062	0.000	21.062	27.858	24.431	24.931	26.456	-	525.121			
Less PY Advance Procurement (\$ in Millions)	-	-	-	-	-	-	-	-	-	-	-	-			
Net Procurement (P-1) (\$ in Millions)	371.367	19.106	9.910	21.062	0.000	21.062	27.858	24.431	24.931	26.456	-	525.121			
Plus CY Advance Procurement (\$ in Millions)	-	-	-	-	-	-	-	-	-	-	-	-			
<b>Total Obligation Authority (\$ in Millions)</b>	<b>371.367</b>	<b>19.106</b>	<b>9.910</b>	<b>21.062</b>	<b>0.000</b>	<b>21.062</b>	<b>27.858</b>	<b>24.431</b>	<b>24.931</b>	<b>26.456</b>	-	<b>525.121</b>			
<i>(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)</i>															
Initial Spares (\$ in Millions)	-	-	-	-	-	-	-	-	-	-	-	-			
Flyaway Unit Cost (\$ in Dollars)	-	-	-	-	-	-	-	-	-	-	-	-			
Gross/Weapon System Unit Cost (\$ in Dollars)	-	-	-	-	-	-	-	-	-	-	-	-			
<b>Description:</b>															
FAMILY OF POWER EQUIPMENT - The Family of Mobile Electric Power Equipment consists of command and control systems for power management and distribution (intelligent power management), tactical generators ranging from 2 to 100 kilowatts, power distribution systems, energy storage systems, load banks, floodlights, cabling, and electrician tool kits. This equipment is procured and fielded to manage and provide electricity on the battlefield. Systems may be mounted on prime movers, skids or trailers. Systems support maneuver, combat support, and combat service support units requiring tactical power to operate weapons systems, Command, Control, Communications, Computers and Intelligence (C4I) systems, medical and messing facilities, environmental control equipment, and water purification systems. With over 10,000 generators and using diesel engines in the Operating Forces, improving their fuel efficiency and reliability will be a significant contribution to reducing the USMC fuel demand, and lightening the MAGTF. The Warfighter benefit includes a decreased logistics footprint, less reliance on petroleum derived fuels, increased local energy security, and reduced tanker losses (fewer on the road). The operational imperative to reduce fuel usage will consequently reduce refueling operations and exposing Marines to hazardous fuel convoy operations.															
Efforts encompass procurement and testing of the following principal end items and ancillary equipment:															
(1) Intelligent Power Management Systems (IPMS) which support a robust, scalable solution to interconnect, control, store and distribute power from various sources. As a result, the power requirements will be met in a more efficient manner thus reducing fuel consumption. The IPMS will use multiple electrical inputs from military generators, vehicles and renewable sources. Subsystems include Advanced Digital Control System (ADCS), Energy Storage Unit (ESU), and Intelligent Power Distribution System (IPD).															
(2) Advanced Medium Mobile Power Sources (AMMPS) procurement of the remaining Generator Sets needed systems to complete the Approved Acquisition Objective															
(3) Advanced AMMPS Digital Control System procurement to provide tactical general gridding capability that will provide greater flexibility and reduce fuel consumption of networked generators.															
(4) Large Advanced Power Sources (LAMPS) procurement of newer more fuel efficient large format generators (100-200kw) replacing the legacy generators and ensuring commonality with the Army large format generators.															
FAMILY OF ALTERNATIVE POWER SOURCES FOR COMMUNICATIONS EQUIPMENT (APSCE) - This family consists of multiple suites of devices, grouped into sub-families, that are used to provide highly expeditionary power (worn on the Marine, hand-carried, or vehicle mounted) to operate communications equipment, computers and peripheral equipment in place of disposable batteries, and for scenarios where fuel powered generators are too large, too heavy, unsuitable for use, or provide undue logistics burden due to refueling needs.															
The first suite of devices encompasses renewable and hybrid energy based systems, and includes the man-portable Ground Renewable Expeditionary Energy Network System (GREENS) that supports a company level operations center and Forward Operating Base, the man-packable Solar Portable Alternative Communications Energy Systems (SPACES) that supports Combat Outposts and Observation Points, and the Mobile Electric Hybrid Power Source (MEHPS) that provides light systems (up to 5kW) and medium (up to 10kW) to power mission command and control, information networks, communications,															

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<b>Exhibit P-40, Budget Line Item Justification: PB 2019 Navy</b>							<b>Date:</b> February 2018									
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 1109N: Procurement, Marine Corps / BA 06: Engineer and Other Equipment / BSA 1: Engineer and Other Equipment				<b>P-1 Line Item Number / Title:</b> 6366 / Power Equipment Assorted												
<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> 0206624M									
<b>Line Item MDAP/MAIS Code:</b> N/A																
environmental control, life support, sustainment and illumination at the battalion level. All of these exploit the use of solar energy and power management technologies to recharge batteries and directly power electronic equipment without a need, or with a reduced need for re-fueling generators.																
The second suite of devices includes both shelter based (semi-rugged) and fully ruggedized power supplies (operate outdoors) that convert grid power (alternating current) to vehicle based power (direct current). These power supplies support all elements across the USMC with standard models that provide variable electrical output to support a wide electrical range of operations.																
The third suite of devices is the vehicle mounted inverters that convert vehicle 24 Volt direct current to 120 Volt alternating current to allow on-the-move operation of equipment that previously was only able to be used while stationary. These inverters are used throughout all theaters of operations by Marine Corps aviation and ground units requiring 120 VAC, 60Hz electrical power. The inverter based power systems reduce the requirement for tactical generators needed for small operations.																
The fourth suite of devices provides an alternative power source for each radio in the Marine Corps (seven different models). These radio power adapters allow radios to be powered from central power sources (such as GREENS and SPACES) or grid power (120 volt AC generator), reducing the consumption of rechargeable and non-rechargeable batteries when in garrison/shelter operations. These systems lead to cost avoidance, conservation of batteries, and flexibility of operations.																
The fifth suite supports all lead-acid batteries used in vehicles and artillery systems, and a host of battery chemistries (nickel-cadmium (NiCd), nickel metal hydride (NiMH), and lithium-ion (Li-ion)) used in command, control and communications systems. The suite consists of battery chargers, battery conditioners, battery maintainers, battery analyzers, and battery safety management systems for both garrison (semi-rugged) and deployed operations (ruggedized). As the USMC (and all services) move towards fully adopting rechargeable batteries for energy efficiency and logistics demand reduction, this suite of devices is critical to support numerous weapons, robots, IED jammers, surveillance systems, vehicles, and communication systems that are highly dependent on batteries for their operation.																
<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>						
Navy	Quantity	-	-	-	-	-	-	-	-	-						
	Total Obligation Authority	15.926	8.122	19.229	-	19.229	25.990	22.523	22.984	24.468						
NR	Quantity	-	-	-	-	-	-	-	-	-						
	Total Obligation Authority	3.180	1.788	1.833	-	1.833	1.868	1.908	1.947	1.988						
<b>Total: Secondary Distribution</b>	Quantity	-	-	-	-	-	-	-	-	-						
	<b>Total Obligation Authority</b>	<b>19.106</b>	<b>9.910</b>	<b>21.062</b>	<b>-</b>	<b>21.062</b>	<b>27.858</b>	<b>24.431</b>	<b>24.931</b>	<b>26.456</b>						

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Exhibit P-40, Budget Line Item Justification: PB 2019 Navy							Date: February 2018			
Appropriation / Budget Activity / Budget Sub Activity:				P-1 Line Item Number / Title:						
1109N: Procurement, Marine Corps / BA 06: Engineer and Other Equipment / BSA 1: Engineer and Other Equipment				6366 / Power Equipment Assorted						
ID Code (A=Service Ready, B=Not Service Ready): A		Program Elements for Code B Items: N/A				Other Related Program Elements: 0206624M				
Line Item MDAP/MAIS Code: 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)	
P-5	1 / Power Equipment Assorted				- / 371.367	- / 19.106	- / 9.910	- / 21.062	- / 0.000	- / 21.062
P-40	Total Gross/Weapon System Cost				- / 371.367	- / 19.106	- / 9.910	- / 21.062	- / 0.000	- / 21.062

\*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:**

FY2018 Base Appropriation Request: \$9.910M (ACTIVE: \$8.122M/RESERVE: \$1.788M)

MOBILE POWER EQUIPMENT \$6.694M (ACTIVE: \$6.694M/RESERVE: \$0.000M)

Funds the procurement of Large Advanced Mobile Power Source (LAMPS), Intelligent Power Management (IPM) subsystems (AMMPS Advanced Digital Control System (ADCS), FDT charges and various logistics support.

ADVANCED POWER SOURCES \$3.216M (ACTIVE:\$1.428M/RESERVE: \$1.788M)

Funds the procurement and fielding of Advanced Battery Charger. Funding required to meet the Approved Acquisition Objectives outlined in the Total Force Structure Management System.

FY2019 Base Appropriation Request: \$21.062M (ACTIVE: \$19.229M/RESERVE: \$1.833M)

MOBILE POWER EQUIPMENT \$9.447M (ACTIVE: \$9.447M/RESERVE: \$0.000M)

Funds the procurement of Intelligent Power Management (IPM) subsystems (AMMPS Advanced Digital Control System (ADCS), FDT charges and various logistics support.

ADVANCED POWER SOURCES \$11.615M (ACTIVE:\$9.858M/RESERVE: \$1.833M)

Funds the procurement and fielding of Advanced Battery Charger. Funding required to meet the Approved Acquisition Objectives outlined in the Total Force Structure Management System as well as awarding the MEHPS production contract and systems for product verification testing.

The increase in Advanced Power Sources funding of \$8.399M from FY18 to FY19 is due to funding the Advanced Battery Charger Production contract and procuring the systems needed for product verification testing.

The increase in Mobile Power Equipment funding of \$2.753M from FY18 to FY19 is for the procurement and packaging of the Advanced Digital Control System (ADCS) for the Advanced Medium Mobile Power Sources (AMMPS) generators.

OCO:

FY 2018 Overseas Contingency Operations (OCO) Request: N/A

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<b>Exhibit P-5, Cost Analysis:</b> PB 2019 Navy													<b>Date:</b> February 2018					
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 1109N / 06 / 1			<b>P-1 Line Item Number / Title:</b> 6366 / Power Equipment Assorted										<b>Item Number / Title [DODIC]:</b> 1 / Power Equipment Assorted					
<b>ID Code</b> (A=Service Ready, B=Not Service Ready) :													<b>MDAP/MAIS Code:</b>					
<b>Resource Summary</b>				<b>Prior Years</b>			<b>FY 2017</b>		<b>FY 2018</b>		<b>FY 2019 Base</b>		<b>FY 2019 OCO</b>		<b>FY 2019 Total</b>			
Procurement Quantity ( <i>Units in Each</i> )				-			-		-		-		-		-			
Gross/Weapon System Cost (\$ in Millions)				371.367			19.106		9.910		21.062		0.000		21.062			
Less PY Advance Procurement (\$ in Millions)				-			-		-		-		-		-			
Net Procurement (P-1) (\$ in Millions)				371.367			19.106		9.910		21.062		0.000		21.062			
Plus CY Advance Procurement (\$ in Millions)				-			-		-		-		-		-			
<b>Total Obligation Authority</b> (\$ in Millions)				371.367			19.106		9.910		21.062		0.000		21.062			
(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 Dollars)				-			-		-		-		-		-			
Note: Subtotals or Totals in this Exhibit P-5 may not be exact or sum exactly due to rounding.																		
<b>Cost Elements</b>	<b>Prior Years</b>			<b>FY 2017</b>			<b>FY 2018</b>			<b>FY 2019 Base</b>			<b>FY 2019 OCO</b>			<b>FY 2019 Total</b>		
	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)
Hardware - Mobile Power Equipment Cost																		
Recurring Cost																		
1.1.1) Micro-Grid Storage/IMM	-	-	-	-	-	-	-	-	-	-	-	3.400	-	-	-	-	-	3.400
1.1.2) Advanced Medium Mobile Power Systems (AMMPS)	-	-	168.763	-	-	-	-	-	4.020	-	-	3.734	-	-	-	-	-	3.734
1.1.3) AMMPS DCS Kits	-	-	-	-	-	1.234	-	-	0.374	-	-	-	-	-	-	-	-	-
1.1.4) Large Advanced Mobile Power Systems (LAMPS)	-	-	-	-	-	2.170	-	-	1.900	-	-	2.236	-	-	-	-	-	2.236
1.1.5) Power Equipment Logistics Support Items	-	-	4.477	-	-	0.009	-	-	0.400	-	-	0.077	-	-	-	-	-	0.077
<i>Subtotal: Recurring Cost</i>	-	-	173.240	-	-	3.413	-	-	6.694	-	-	9.447	-	-	-	-	-	9.447
<i>Subtotal: Hardware - Mobile Power Equipment Cost</i>	-	-	173.240	-	-	3.413	-	-	6.694	-	-	9.447	-	-	-	-	-	9.447
Hardware - Advanced Power Sources Cost																		
Recurring Cost																		
2.1.1) Alternate Power Sources for Comm/Electric Equip (APSCE)-Reserves	-	-	6.306	-	-	3.180	-	-	1.788	-	-	1.833	-	-	-	-	-	1.833
2.1.2) Alternate Power Sources for Communications/	-	-	99.991	-	-	12.513	-	-	1.428	-	-	9.782	-	-	-	-	-	9.782

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Exhibit P-5, Cost Analysis: PB 2019 Navy													Date: February 2018													
Appropriation / Budget Activity / Budget Sub Activity: 1109N / 06 / 1				P-1 Line Item Number / Title: 6366 / Power Equipment Assorted									Item Number / Title [DODIC]: 1 / Power Equipment Assorted													
ID Code (A=Service Ready, B=Not Service Ready) :													MDAP/MAIS Code:													
Note: Subtotals or Totals in this Exhibit P-5 may not be exact or sum exactly due to rounding.																										
Cost Elements	Prior Years			FY 2017			FY 2018			FY 2019 Base			FY 2019 OCO			FY 2019 Total										
	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)								
Electronic Equipment (APSCE)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-									
<i>Subtotal: Recurring Cost</i>	-	-	106.297	-	-	15.693	-	-	3.216	-	-	11.615	-	-	-	-	-	11.615								
<i>Subtotal: Hardware - Advanced Power Sources Cost</i>	-	-	106.297	-	-	15.693	-	-	3.216	-	-	11.615	-	-	-	-	-	11.615								
Support Cost																										
3.1) Prior Year Cumulative Funding	-	-	91.830	-	-	-	-	-	-	-	-	-	-	-	-	-	-									
<i>Subtotal: Support Cost</i>	-	-	91.830	-	-	-	-	-	-	-	-	-	-	-	-	-	-									
Gross/Weapon System Cost	-	-	371.367	-	-	19.106	-	-	9.910	-	-	21.062	-	-	0.000	-	-	21.062								

**Remarks:**

[Hardware] Mobile Power Equipment is a portion of Expeditionary Energy Initiatives.

[Hardware] Advanced Power Sources is a portion of Expeditionary Energy Initiatives.

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<b>Exhibit P-40, Budget Line Item Justification: PB 2019 Navy</b>										<b>Date:</b> February 2018			
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 1109N: Procurement, Marine Corps / BA 06: Engineer and Other Equipment / BSA 1: Engineer and Other Equipment					<b>P-1 Line Item Number / Title:</b> 6518 / Amphibious Support Equipment								
ID Code (A=Service Ready, B=Not Service Ready): A			Program Elements for Code B Items: N/A				Other Related Program Elements: 0206623M						
Line Item MDAP/MAIS Code: 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 (\$ in Millions)	176.177	7.471	5.830	5.290	0.000	5.290	7.136	7.217	10.094	13.969	Continuing	Continuing	
Less PY Advance Procurement (\$ in Millions)	-	-	-	-	-	-	-	-	-	-	-	-	
Net Procurement (P-1) (\$ in Millions)	176.177	7.471	5.830	5.290	0.000	5.290	7.136	7.217	10.094	13.969	Continuing	Continuing	
Plus CY Advance Procurement (\$ in Millions)	-	-	-	-	-	-	-	-	-	-	-	-	
<b>Total Obligation Authority (\$ in Millions)</b>	<b>176.177</b>	<b>7.471</b>	<b>5.830</b>	<b>5.290</b>	<b>0.000</b>	<b>5.290</b>	<b>7.136</b>	<b>7.217</b>	<b>10.094</b>	<b>13.969</b>	<b>Continuing</b>	<b>Continuing</b>	
(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)													
Initial Spares (\$ in Millions)	-	-	-	-	-	-	-	-	-	-	-	-	
Flyaway Unit Cost (\$ in Dollars)	-	-	-	-	-	-	-	-	-	-	-	-	
Gross/Weapon System Unit Cost (\$ in Dollars)	-	-	-	-	-	-	-	-	-	-	-	-	
<b>Description:</b>													
Amphibious Support Equipment supports multiple capabilities, enhancements, life cycle replacements, and personnel equipment shortfalls when required and as needed by reconnaissance units throughout operating forces for airborne/parachuting programs, specialized reconnaissance programs and underwater reconnaissance capability programs. Programs such as: Airborne Reconnaissance Equipment (ARE) program -- a roll-up line with multiple specialized raid projects, such as, parachuting equipment used for reconnaissance in support of Marine Air Ground Task Force (MAGTF) operations; Air Delivery Family of Systems (formerly Joint Precision Air Drop System (JPADS)) program -- provides capability for increased air carrier survivability, ground accuracy, standoff delivery, and improved effectiveness and assessment feedback for airdrop missions with procurement of parachute delivery systems consisting of a decelerator (parachute) guided by an Autonomous Guidance Unit attached to a Container Delivery System that interfaces with cargo aircraft for autonomous delivery of airborne cargo from high altitudes and lateral separation to predetermined small drop zones; Amphibious Reconnaissance Capability program (formerly Underwater Reconnaissance Capability (URC))-- an overarching Family of Systems which sustains/enhances/supports capabilities of current and future combatant diving systems and small craft as needed and when required by the fleet such as Combat Rubber Reconnaissance Craft (CRRC), Open Water Safety Craft (OWSC), Underwater Breathing Apparatus (UBA), Combatant Diver Full Face Mask (CDFFM), Combatant Diver Vest (CDV), Expeditionary Hyperbaric Chamber System (EHCS), Transportable recompression Chamber System (TRCS), Combat Dry Diver Suit (CDDS), Maritime Operations Suit (MOS), Portable Compressor Diesel Driven (PCDD), Rapid Deployable Oxygen Transfer Pump System (RDOTPS), Non-gasoline Burning Outboard Engine (NBOE), and the Diver Reconnaissance Vehicle (DRV), Diver Propulsion Device (DPD), Marine Individual Assault Kit (MIAK), Marine Assault Breacher's Kit (MABK) in support of MAGTF expeditionary operations.													
<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>		
Navy	Quantity		-	-	-	-	-	-	-	-	-	-	-
	Total Obligation Authority		7.151	5.556	5.091	-	5.091	6.932	7.009	9.882	13.753		
NR	Quantity		-	-	-	-	-	-	-	-	-	-	-
	Total Obligation Authority		0.320	0.274	0.199	-	0.199	0.204	0.208	0.212	0.216		
Total: <b>Secondary Distribution</b>	Quantity		-	-	-	-	-	-	-	-	-	-	-
	Total Obligation Authority		7.471	5.830	5.290	-	5.290	7.136	7.217	10.094	13.969		

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Exhibit P-40, Budget Line Item Justification: PB 2019 Navy							Date: February 2018			
Appropriation / Budget Activity / Budget Sub Activity:				P-1 Line Item Number / Title:						
1109N: Procurement, Marine Corps / BA 06: Engineer and Other Equipment / BSA 1: Engineer and Other Equipment				6518 / Amphibious Support Equipment						
ID Code (A=Service Ready, B=Not Service Ready): A		Program Elements for Code B Items: N/A				Other Related Program Elements: 0206623M				
Line Item MDAP/MAIS Code: 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)	
P-40a	Amphibious Support Equipment				- / 176.177	- / 7.471	- / 5.830	- / 5.290	- / -	- / 5.290
<b>P-40</b>	<b>Total Gross/Weapon System Cost</b>				<b>- / 176.177</b>	<b>- / 7.471</b>	<b>- / 5.830</b>	<b>- / 5.290</b>	<b>- / 0.000</b>	<b>- / 5.290</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. Title represents the P-40a Title when only the P-40a Summary/Total is shown.

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

**Justification:**

FY2018 Base Appropriations Request: \$5.830M

Airborne Reconnaissance Equipment: \$4.138M (Active - \$3.864M, Reserves - \$0.274M) - Funding will support procurement of the Enhanced Multi Mission Parachute Systems (EMMPS), and various equipment such as MA-12 Altimeters, kits, component sets, ancillary equipment and increased combat multipliers, survivability, durability and functionality over that of the current inventory items.

Amphibious Reconnaissance Capability: \$1.692M (Active - \$1.692M, Reserves - \$0.000M) - Funding will support procurement of Amphibious Reconnaissance Capability Family of Systems equipment such as the Combat Rubber Reconnaissance Craft and Rapid Deployable Oxygen Transfer Pump System to sustain, enhance, and support capabilities of current and future combatant diving systems and small craft.

FY2019 Base Appropriations Request: \$5.290M

Airborne Reconnaissance Equipment: \$2.612M (Active - \$2.413, Reserves - \$0.199M) - Funding will continue to support the procurement of the Enhanced Multi Mission Parachute Systems (E-MMPS).

Amphibious Reconnaissance Capability: \$2.678M (Active - \$2.678M, Reserves - \$0.000M) - Funding will continue to support procurement of Combat Rubber Reconnaissance Craft and procurement of Amphibious Reconnaissance Capability Family of Systems equipment such as, the Marine Assault Breacher's Kit and the Marine Individual Assault Kit for diving configuration and to sustain, enhance, and support capabilities of current and future combatant diving systems and small craft.

Decrease in funding from FY18 to FY19 of \$0.540M is achievement of Approved Acquisition Objective (AAO) for the Maneuverable Parachute System (MC-6).

**OCO:**

FY2019 Overseas Contingency Operations (OCO) Request: N/A

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Exhibit P-40a, Budget Item Justification For Aggregated Items: PB 2019 Navy														Date: February 2018						
Appropriation / Budget Activity / Budget Sub Activity: 1109N / 06 / 1					P-1 Line Item Number / Title: 6518 / Amphibious Support Equipment									Aggregated Items Title: Amphibious Support Equipment						
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 (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)
<b>1) Airborne and Recon Equipment (ARE)</b>																				
1.1) Enhanced Multi-Mission Parachute System (EMMPS) <sup>(1)</sup>	A		-	-	43.449	-	-	5.433	-	-	3.464	-	-	2.413	-	-	-	-	-	2.413
1.2) EMMPS (Reserves)	A		-	-	0.400	-	-	0.320	-	-	0.274	-	-	0.199	-	-	-	-	-	0.199
1.3) MA-12 Altimeters	A		-	-	-	-	-	-	-	-	0.400	-	-	-	-	-	-	-	-	-
<i>Subtotal: 1) Airborne and Recon Equipment (ARE)</i>			-	-	<b>43.849</b>	-	-	<b>5.753</b>	-	-	<b>4.138</b>	-	-	<b>2.612</b>	-	-	-	-	-	<b>2.612</b>
<b>2) Amphibious Reconnaissance Capability - formerly Underwater Reconnaissance Capability (URC)</b>																				
2.1) Combat Rubberized Reconnaissance Craft (2)	A		-	-	33.317	-	-	1.718	-	-	1.586	-	-	1.678	-	-	-	-	-	1.678
2.2) Rapid Deployable Oxygen Transfer Pump System	A		-	-	-	-	-	-	-	-	0.106	-	-	-	-	-	-	-	-	-
2.3) Marine Assault Breacher's Kit	A		-	-	-	-	-	-	-	-	-	-	-	0.500	-	-	-	-	-	0.500
2.4) Marine Individual Assault Kit	A		-	-	-	-	-	-	-	-	-	-	-	0.500	-	-	-	-	-	0.500
<i>Subtotal: 2) Amphibious Reconnaissance Capability - formerly Underwater Reconnaissance Capability (URC)</i>			-	-	<b>33.317</b>	-	-	<b>1.718</b>	-	-	<b>1.692</b>	-	-	<b>2.678</b>	-	-	-	-	-	<b>2.678</b>
<b>3) Prior Years Cumulative Funding</b>																				
3.1) Prior Years Cumulative Funding	A		-	-	99.011	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
<i>Subtotal: 3) Prior Years Cumulative Funding</i>			-	-	<b>99.011</b>	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
<b>Total</b>			-	-	<b>176.177</b>	-	-	<b>7.471</b>	-	-	<b>5.830</b>	-	-	<b>5.290</b>	-	-	-	-	-	<b>5.290</b>
Note: Subtotals or Totals in this Exhibit P-40a may not be exact or sum exactly, due to rounding.																				
<b>Footnotes:</b>																				
(1) Level of effort line includes various quantities for multiple parachute and special purpose equipment component sets and auxillary equipment as needed to sustain/enhance Marine Corps unique Airborne, Aerial Delivery, and Helicopter Support Equipment capabilities. Funding is used to support legacy items with known and unknown modifications identified in the year of execution.																				
(2) Overarching family of systems line includes various quantities of multiple dive and boat systems, components, and ancillary equipment as needed to sustain/enhance amphibious capability. Funding is used to support legacy items with known and unknown modifications identified during the year of execution.																				

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<b>Exhibit P-40, Budget Line Item Justification: PB 2019 Navy</b>										<b>Date:</b> February 2018			
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 1109N: Procurement, Marine Corps / BA 06: Engineer and Other Equipment / BSA 1: Engineer and Other Equipment					<b>P-1 Line Item Number / Title:</b> 6520 / EOD Systems								
ID Code (A=Service Ready, B=Not Service Ready): A			Program Elements for Code B Items: N/A					Other Related Program Elements: 0206211M, 0206313M, 0206623M, 0206315M, 0502511M, 0206624M					
<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 (\$ in Millions)	6,465.246	110.224	48.240	47.854	8.000	55.854	44.376	26.624	30.993	28.613	Continuing	Continuing	
Less PY Advance Procurement (\$ in Millions)	-	-	-	-	-	-	-	-	-	-	-	-	
Net Procurement (P-1) (\$ in Millions)	6,465.246	110.224	48.240	47.854	8.000	55.854	44.376	26.624	30.993	28.613	Continuing	Continuing	
Plus CY Advance Procurement (\$ in Millions)	-	-	-	-	-	-	-	-	-	-	-	-	
<b>Total Obligation Authority (\$ in Millions)</b>	<b>6,465.246</b>	<b>110.224</b>	<b>48.240</b>	<b>47.854</b>	<b>8.000</b>	<b>55.854</b>	<b>44.376</b>	<b>26.624</b>	<b>30.993</b>	<b>28.613</b>	<b>Continuing</b>	<b>Continuing</b>	
(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)													
Initial Spares (\$ in Millions)	-	-	-	-	-	-	-	-	-	-	-	-	
Flyaway Unit Cost (\$ in Dollars)	-	-	-	-	-	-	-	-	-	-	-	-	
Gross/Weapon System Unit Cost (\$ in Dollars)	-	-	-	-	-	-	-	-	-	-	-	-	
<b>Description:</b>													
ASSAULT BREACHER VEHICLE (ABV) is a tracked, armored combat engineer vehicle designed to breach minefields and complex obstacles and provide a deliberate and in-stride breaching capability. ABV consists of a rebuilt and upgraded M1A1 Tank chassis with the integration of Non-Developmental Items (NDI), which includes a Full-Width Mine Plow, a Dozer Blade, a Surface Mine Plow, a Rapid Ordnance Removal System, two M58 Linear Demolition Charges, a lane marking system and a self-defense weapon system. The ABV will provide crew protection and vehicle survivability while having the speed and mobility to keep pace with the maneuver force. The M1A1 Tank Chassis will provide economic supportability of the system through its commonality with the tank fleet and armor protection for survivability.													
MK 154 MODERNIZATION is a line charge launcher system installed in the Amphibious Assault Vehicle Personnel variant (AAVP7) used to breach mine fields in shallow water and inland areas, providing the USMC with an amphibious operations breaching capability.													
FAMILY OF EOD EQUIPMENT (FEOD) is comprised of over forty Table of Authorized Material Control Numbers (TAMCNs) providing the required tools and capabilities to detect, locate, access, identify, triage, diagnose, stabilize, render safe, neutralize, recover, exploit, and dispose of unexploded explosive ordnance (UXO), improvised explosive devices (IED), and weapons of mass destruction (WMD). The portfolio includes specialized diagnostic equipment, robotics and energetically actuated tools, which enable EOD to provide the Marine air-ground task force (MAGTF) and Marine Special Operations Forces with critical enabling capabilities that deliver responsive, scalable, strategic depth for special operations, crisis response, and littoral access.													
MINE RESISTANT AMBUSH PROTECTED (MRAP) Family of Vehicles (FoV) provides Warfighters multi-mission platforms capable of mitigating Improvised Explosive Devices (IEDs), underbody mines, and small arms fire threats, which are currently the greatest casualty producers in Overseas Contingency Operations (OCO). Multiple MRAP vehicle categories (CATs) have been procured, fielded, and sustained: MRAP-All Terrain Vehicle (M-ATV) - Combat operations (ops) in rural, mountainous, urban terrain. Category I - Urban combat operations, ambulance. Category II - Multi-mission ops-convoy lead, troop transport, ambulance, utility vehicle. Category III - Mine/IED clearance ops, explosive ordnance disposal. Funding includes required Government Furnished Equipment (GFE)/subsystems and Engineering Change Proposal (ECP)/Capability Insertion in response to an UUNS/JUONS and Warfighter safety and survivability requirements.													
MRAP funding has been realigned to BLI 5050 beginning in FY19.													
COUNTER RADIO-CONTROLLED IMPROVISED EXPLOSIVE DEVICE (RCIED) ELECTRONIC WARFARE (USMC CREW) SYSTEMS are vehicle mounted and dismounted modular programmable multi-band radio frequency jammers designed to deny enemy use of selected portions of the radio frequency spectrum in the vicinity of the jammer to counter the RCIED threat. The mounted and dismounted systems													

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<b>Exhibit P-40, Budget Line Item Justification: PB 2019 Navy</b>							<b>Date:</b> February 2018																
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 1109N: Procurement, Marine Corps / BA 06: Engineer and Other Equipment / BSA 1: Engineer and Other Equipment				<b>P-1 Line Item Number / Title:</b> 6520 / EOD Systems																			
<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> 0206211M, 0206313M, 0206623M, 0206315M, 0502511M, 0206624M																	
<b>Line Item MDAP/MAIS Code:</b> N/A																							
provide Marines in vehicle convoys and on foot with the necessary protection from the continued and evolving threat of deadly RCIEDs. Legacy CREW systems are currently deployed to meet threats in the multiple theaters of operation and fielded to selected Marine Expeditionary Units (MEU)/Marine Expeditionary Forces (MEF) in support of worldwide deployment.																							
FAMILY OF COUNTER-IMPROVISED EXPLOSIVE DEVICE (C-IED) CAPABILITIES (F2C) provides capabilities not found in the current Joint land force structure to defeat explosive hazards and protect Marines and equipment while conducting route and area clearance operations. The Family of Counter-Improvised Explosive Device (C-IED) Capabilities (F2C) will enable Commanders to deliberately operate in explosive hazards environments by detecting and marking explosive hazards, enabling the Commanders to make timely and informed decisions to avoid the explosive hazards, or, if necessary, neutralize explosive hazards that impede their missions. Multiple detection and marking capabilities will detect a broader spectrum of explosive hazards and achieve higher overall effectiveness rates. Standoff and remote-controlled detection and marking capabilities will remove Joint forces from direct contact with explosive hazards and enhance force protection and the vehicles' system survivability. Operational speeds and rates will increase and better support the operational tempo (OPTEMPO) of the current and future force. ENFIRE is a digital surveying kit designed to collect and disseminate engineer-related information while minimizing exposure to enemy observation.																							
<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>													
Navy	Quantity	-	-	-	-	-	-	-	-	-													
	Total Obligation Authority	107.374	48.240	47.854	8.000	55.854	44.376	26.624	30.993	28.613													
NR	Quantity	-	-	-	-	-	-	-	-	-													
	Total Obligation Authority	2.850	-	-	-	-	-	-	-	-													
<b>Total: Secondary Distribution</b>	Quantity	-	-	-	-	-	-	-	-	-													
	Total Obligation Authority	110.224	48.240	47.854	8.000	55.854	44.376	26.624	30.993	28.613													

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<b>Exhibit P-40, Budget Line Item Justification: PB 2019 Navy</b>							<b>Date:</b> February 2018			
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 1109N: Procurement, Marine Corps / BA 06: Engineer and Other Equipment / BSA 1: Engineer and Other Equipment				<b>P-1 Line Item Number / Title:</b> 6520 / EOD Systems						
<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> 0206211M, 0206313M, 0206623M, 0206315M, 0502511M, 0206624M				
<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>	
P-40a	EOD Systems				- / 6,465.246	- / 110.224	- / 48.240	- / 47.854	- / 8.000	- / 55.854
<b>P-40</b>	<b>Total Gross/Weapon System Cost</b>				<b>- / 6,465.246</b>	<b>- / 110.224</b>	<b>- / 48.240</b>	<b>- / 47.854</b>	<b>- / 8.000</b>	<b>- / 55.854</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. Title represents the P-40a Title when only the P-40a Summary/Total is shown.

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

**Justification:**  
The FY 2019 funding request was reduced by (\$.122) million to reflect the Department of Navy's effort to support the Office of Management and Budget directed reforms for Efficiency and Effectiveness that include a lean, accountable, more efficient government.

FY2018 Base Appropriation Request: \$27.240M

CREW Systems: The decrease in funding from FY2017 to FY2018 (\$75.00M) completes procurement of Mounted CREW Systems and Vehicle Integration Kits using FY17 OCO funding.

MINE RESISTANT AMBUSH PROTECTED (MRAP) VEHICLES: (\$1.152M) Funds Engineering Change Proposal (ECP) upgrades for the enduring MRAP vehicle requirement. Continues Engineering Change Proposal (ECP) Block III Upgrades and Egress Installations to maintain vehicle relevancy in meeting force protection threats, such as blast, rollover or water submersion events, and responding to operational needs.

MRAP funding has been realigned to BLI 5050 beginning in FY19.

FAMILY OF EOD EQUIPMENT: (\$26.087M) Funds Supply Stock Lists (SL-3) Kits to include specialized tools. The decrease of \$9.087M from FY 2017 to FY 2018 is attributed to the \$21.300M required in FY2017 to upgrade critical equipment required to mitigate significant risk to EOD Technicians executing tasks within an explosive hazardous serious injury zone. Supports the procurement of AN/PVS-31 Optic Sights (with helmet mounts) and AN/PAS-29 Enhanced Clip-On Thermal Imagers (ECOTI) as well as various specialized EOD kits and EOD equipment.

ASSAULT BREACHER VEHICLE MODIFICATION: (\$0.001M) Funds support M1A1 Upgrade.

FY 2019 Base Appropriation Request: \$47.854M

Family of EOD EQUIPMENT: (\$45.962M) Funds Supply Stock Lists (SL-3) Kits to include specialized tools, and a Table of Equipment plus up to support the growth of two USMC platoons in FY19. The increase of \$2.875M from FY18 to FY19 is attributed to the need to purchase Radiographic Imaging Systems, Remote Fuze Disassembly Kits, and Bomb Suits.

FAMILY OF COUNTER-IMPROVISED EXPLOSIVE DEVICE (C-IED) CAPABILITIES (F2C): (\$1.891M) Funds will support the procurement of Counter Improvised Explosive Device (C-IED) Capability (F2C) equipment. This procurement will provide the critical equipment such as Sickle Sticks and other F2C tools to detect and mark explosive hazards; provide standoff and remote-controlled detection and marking and remove operating forces from direct contact with explosive hazards.

ASSAULT BREACHER VEHICLE MODIFICATION: (\$0.001M) Funds support M1A1 Upgrade.

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<b>Exhibit P-40, Budget Line Item Justification: PB 2019 Navy</b>		<b>Date:</b> February 2018
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 1109N: Procurement, Marine Corps / BA 06: Engineer and Other Equipment / BSA 1: Engineer and Other Equipment		<b>P-1 Line Item Number / Title:</b> 6520 / EOD Systems
<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> 0206211M, 0206313M, 0206623M, 0206315M, 0502511M, 0206624M
<b>Line Item MDAP/MAIS Code:</b> N/A		
OCO: FY 2018 Overseas Contingency Operations (OCO) Request: \$21.000M (\$4.0M MRAP, \$17.0M EOD, \$8.000M C-IED)		
MINE RESISTANT AMBUSH PROTECTED (MRAP) Family of Vehicles (FoV): \$4.000M Funds the installation of Egress kits procured in response to UUUNS 08275UC and 10215UC; MARCENT Enduring requirements. The Egress kit increases force protection on all Cougar CAT I and CAT II variants by ensuring that vehicle occupants can safely exit the vehicle after blast, rollover or water submersion events.		
FAMILY OF EOD EQUIPMENT: (\$17.000M) - Procures Commercial Off the Shelf (COTS) equipment to include sensor detectors, video fiber optic scopes, Improvised Explosive Devices (IED)/Weapons of Mass Destruction (WMD) diagnostic kits and fusion optics. These capabilities will give the EOD technician precision capabilities to counter IEDs/WMDs during category "A" incidents where the EOD technician is required to assume a grave and immediate risk and physically operate within the very serious injury zone. Continue to provide support to EOD operations currently in support of U.S. Forces Central Command (CENT) and other "new norm" (ONN) Special Purpose Marine Air Ground Task Forces (SPMAGTFs) Crisis Response (CR) postured world-wide require a multitude of EOD specific equipment items to achieve full readiness, enabling supported units and nations engaged against the threat and use of IEDs, WMDs, and Unexploded Explosive Ordnance (UXO).		
FY 2019 Overseas Contingency Operations (OCO) Request: \$8.000M		
FAMILY OF COUNTER-IMPROVISED EXPLOSIVE DEVICE (C-IED) CAPABILITIES (F2C): (\$8.000M) Procures Husky Mounted Detection System Wire Detection (HMDS-WD) systems in support of the MROC DM 39-2011 R2C FoS Increment II Capabilities Production Document requirement. This capability will yield faster, more effective route clearance missions, significantly improve chances of avoiding an explosive hazard strike, and better awareness of the enemy's tactics, techniques, and procedures. The current HMDS lacks the ability to find command wires associated with deeply buried IEDs, relying on the ground penetrating radar to find the IED main charge or container.		

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Exhibit P-40a, Budget Item Justification For Aggregated Items: PB 2019 Navy														Date: February 2018							
Appropriation / Budget Activity / Budget Sub Activity: 1109N / 06 / 1							P-1 Line Item Number / Title: 6520 / EOD Systems							Aggregated Items Title: EOD Systems							
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 (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	
<b>1) Assault Breacher Vehicle (ABV)</b>																					
1.1) Assault Breacher Vehicle (ABV) Modification	A		-	-	6.698	-	-	0.394	-	-	0.001	-	-	0.001	-	-	-	-	-	0.001	
<i>Subtotal: 1) Assault Breacher Vehicle (ABV)</i>			-	-	<b>6.698</b>	-	-	<b>0.394</b>	-	-	<b>0.001</b>	-	-	<b>0.001</b>	-	-	-	-	-	<b>0.001</b>	
<b>2) Family of EOD Systems</b>																					
2.1) EOD Specialized Equipment and Tool Kits <sup>(1)</sup>	A		-	-	123.263	-	-	31.634	-	-	43.087	-	-	45.962	-	-	-	-	-	45.962	
2.2) EOD Reserves	A		-	-	-	-	-	2.850	-	-	-	-	-	-	-	-	-	-	-	-	
<i>Subtotal: 2) Family of EOD Systems</i>			-	-	<b>123.263</b>	-	-	<b>34.484</b>	-	-	<b>43.087</b>	-	-	<b>45.962</b>	-	-	-	-	-	<b>45.962</b>	
<b>3) MK 154 Remanufacture</b>																					
3.1) MK 154 Remanufacture	A		199,083.33	48	9.556	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
<i>Subtotal: 3) MK 154 Remanufacture</i>			-	-	<b>9.556</b>	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
<b>4) Mine Resistant Ambush Protected (MRAP)</b>																					
4.1) Upgrades <sup>(2)</sup>	A		-	-	0.508	-	-	0.346	-	-	5.152	-	-	-	-	-	-	-	-	-	
4.2) Prior Years Cumulative Funding <sup>(3)</sup>	A		-	-	6,296.296	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
<i>Subtotal: 4) Mine Resistant Ambush Protected (MRAP)</i>			-	-	<b>6,296.804</b>	-	-	<b>0.346</b>	-	-	<b>5.152</b>	-	-	-	-	-	-	-	-	-	
<b>5) COUNTER RCIED ELECTRONIC WARFARE (USMC CREW)</b>																					
5.1) CREW Mounted Upgrade <sup>(4)</sup>	A		-	-	-	-	-	65.000	-	-	-	-	-	-	-	-	-	-	-	-	
5.2) Vehicle Integration Kits	A		-	-	-	-	-	10.000	-	-	-	-	-	-	-	-	-	-	-	-	
<i>Subtotal: 5) COUNTER RCIED ELECTRONIC WARFARE (USMC CREW)</i>			-	-	<b>0.000</b>	-	-	<b>75.000</b>	-	-	-	-	-	-	-	-	-	-	-	-	
<b>6) Family of Counter-Improvised Explosive Device (C-IED) Capabilities</b>																					
6.1) Counter-Improvised Explosive Devices (C-IED)	A		-	-	-	-	-	-	-	-	-	-	-	-	1.891	-	-	8.000	-	-	9.891
<i>Subtotal: 6) Family of Counter-Improvised Explosive Device (C-IED) Capabilities</i>			-	-	<b>0.000</b>	-	-	-	-	-	-	-	-	-	<b>1.891</b>	-	-	<b>8.000</b>	-	-	<b>9.891</b>
<b>7) Prior Years Cumulative Funding</b>																					
7.1) Other Prior Year	A		-	-	28.925	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
<i>Subtotal: 7) Prior Years Cumulative Funding</i>			-	-	<b>28.925</b>	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	

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Exhibit P-40a, Budget Item Justification For Aggregated Items: PB 2019 Navy													Date: February 2018							
Appropriation / Budget Activity / Budget Sub Activity: 1109N / 06 / 1					P-1 Line Item Number / Title: 6520 / EOD Systems								Aggregated Items Title: EOD Systems							
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 (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)			
Total			-	-	6,465.246	-	-	110.224	-	-	48.240	-	-	47.854	-	-	8.000	-	-	55.854

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

**Footnotes:**

(1) Various tool kits are procured. EOD tool kits include CBNRE kits, Search kits, Tech kits, Tool kits, SL3 kits, GO kits, and IED kits. FY18 base and OCO will procure sensor detectors, video fiber optic scopes, Improvised Explosive Devices (IED)/Weapons of Mass Destruction (WMD) diagnostic kits and fusion optics.

(2) FY18 - FY19 Base overall decrease of \$0.442M (BLI 6520 MRAP FY18 \$1.152 realigned to BLI 5050 FY19 \$0.710M)

(3) FY18 - FY19 OCO overall increase of \$21.9200M (BLI 6520 MRAP FY18 \$4.000M realigned to BLI 5050 FY19 \$25.920M)

(4) Supports performance upgrade of mounted CREW Systems.

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<b>Exhibit P-40, Budget Line Item Justification: PB 2019 Navy</b>										<b>Date:</b> February 2018			
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 1109N: Procurement, Marine Corps / BA 06: Engineer and Other Equipment / BSA 2: Materials Handling Equipment					<b>P-1 Line Item Number / Title:</b> 6438 / Physical Security Equipment								
ID Code (A=Service Ready, B=Not Service Ready): A			Program Elements for Code B Items: N/A				Other Related Program Elements: 0206313M						
<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 (\$ in Millions)	262.257	23.495	53.477	28.306	0.000	28.306	17.977	18.362	90.477	39.553	Continuing	Continuing	
Less PY Advance Procurement (\$ in Millions)	-	-	-	-	-	-	-	-	-	-	-	-	
Net Procurement (P-1) (\$ in Millions)	262.257	23.495	53.477	28.306	0.000	28.306	17.977	18.362	90.477	39.553	Continuing	Continuing	
Plus CY Advance Procurement (\$ in Millions)	-	-	-	-	-	-	-	-	-	-	-	-	
<b>Total Obligation Authority (\$ in Millions)</b>	<b>262.257</b>	<b>23.495</b>	<b>53.477</b>	<b>28.306</b>	<b>0.000</b>	<b>28.306</b>	<b>17.977</b>	<b>18.362</b>	<b>90.477</b>	<b>39.553</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 (\$ in Millions)	-	-	-	-	-	-	-	-	-	-	-	-	
Flyaway Unit Cost (\$ in Dollars)	-	-	-	-	-	-	-	-	-	-	-	-	
Gross/Weapon System Unit Cost (\$ in Dollars)	-	-	-	-	-	-	-	-	-	-	-	-	
<b>Description:</b>													
Physical Security Systems provide systematic, uniform technological solutions to manpower intensive security requirements. Systems are used at bases and stations protecting our most important assets vital to operations - people, flight lines, classified information, Arms, Ammunition, and Explosives (AA&E), shore lines, open desert areas, critical assets and infrastructure and providing constant, vigilant capabilities that control and restrict access and provide notification of actual and attempted unauthorized intrusion. Mass Notification System (MNS) provides immediate notice and warning to personnel living and working aboard our bases and stations in the event of security breaches via interior and exterior speaker systems, telephones and computers in the event of natural disasters, terrorist activities, weather emergencies or other events requiring immediate guidance to ensure the safety and security of personnel. These systems upgrade and replace antiquated individually purchased systems that are costly to maintain and may not meet prescribed requirements for securing U.S. assets. The Marine Corps Electronic Security System (MCESS) Program provides a comprehensive electronic security system suite that supports collateral equipment including intrusion detection, surveillance, installation, and facility automated access control and tracking capabilities. These systems increase efficiency/effectiveness of available security manpower and improve security and safety at installation perimeter, flight line, restricted area, facility entry points and is now expanding to meet installation access control requirements. Ground based radars support wide areas aboard Marine Corps installations such as expansive waterways, open airfields and desert areas (improved assessment at long distances) allowing for greater defensive posture and response capabilities.													
Collateral Equipment (CE) funds the one time initial outfitting of equipment not defined as built-in for new facilities (MILCONs), newly renovated/refurbished facilities, and Host Nation funded construction projects. The one time procurement includes equipment such as Mass Notification Systems, Intrusion Detection Systems, Closed Circuit TVs, Information Technology switches and routers, Passive Optical Networks, Internal Grounding Systems, Voice over Internet Protocol (VOIP), Audio Visual/Video Teleconferencing Systems and other industrial equipment such as recycling and pulping systems, warehouse conveyor systems, and heavy maintenance equipment.													
Identity Dominance System-MC (IDS-MC) is a multi-modal (fingerprint, iris and face) biometric collection system that provides the USMC a reliable and effective capability to collect, share, match, access, verify and store identity information. IDS-MC will enable the Marine to collect appropriate biometric, biographical and reference information on an individual and match this locally developed information with pre-existing information available to the expeditionary force. The system will display match results with linkage to the respective individual's biographical and reference information as well as help analyze the response, update records as appropriate, create reports and disseminate updated information in accordance with current MAGTF policy. The primary mission of IDS-MC is to provide the MAGTF with the means to identify persons encountered in the battlespace. While IDS-MC is not an intelligence analysis system, it does provide identification information in support of military intelligence and law enforcement operations by providing positive identification of persons of interest. IDS-MC is an enabler in the areas of detainee management and questioning, base access, counterintelligence screening, border control, law enforcement, displaced persons' management and aiding in humanitarian assistance missions. IDS-MC supports the tactical application of identity dominance and fully supports a forward presence, crisis response and contingency response capability. IDS will subsume the Biometrics Automated Toolset (BAT). The total AAO of 804 is required for training facilities and eleven battalion-sized elements.													

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<b>Exhibit P-40, Budget Line Item Justification:</b> PB 2019 Navy		<b>Date:</b> February 2018
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 1109N: Procurement, Marine Corps / BA 06: Engineer and Other Equipment / BSA 2: Materials Handling Equipment		<b>P-1 Line Item Number / Title:</b> 6438 / Physical Security Equipment
<b>ID Code</b> (A=Service Ready, B=Not Service Ready): A	<b>Program Elements for Code B Items:</b> N/A	<b>Other Related Program Elements:</b> 0206313M
<b>Line Item MDAP/MAIS Code:</b> N/A		
Utilities provide essential support to facilities for performing installation missions. Utilities PMC funding provides the initial hardware and equipment to establish an enterprise-wide cybersecure network operating environment for the control systems that operate our utilities and the facilities systems that deliver utilities to facilities. Without this cybersecure environment, our utilities and facilities will remain vulnerable to attack that could damage or deny the use of our installations or facilities to provide mission support. This effort answers the DoD mandate (OASD Memorandum 31 Mar 2016 to implement cybersecurity controls on the most critical facility-related control systems by the end of FY19, referencing DoDI 8500.01, Cybersecurity, Mar 2014). To provide the cybersecure network, the hardware and equipment will be used to support the buildup of the Building and Utilities Control Systems (BUCS) Enclaves. The enclaves will be established within Marine Corps facilities already designated for housing IT assets. The enclaves will provide capabilities such as a resilient isolated network for the various BUCS to include increased security controls for high risk activities such as vendor or contractor maintenance, repair, or expansion of systems; consistent implementation of security controls across BUCS; comprehensive passive and active monitoring, including inheritance of security and monitoring services from the servicing Network Operations and Security Center (NOSC); increased breach isolation capabilities; patching and tech refreshes; secure sharing of control system and metering data with business systems for analysis; and to reduce total hardware count and software count, resulting in lower life cycle cost and reduced threat surface.		

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Exhibit P-40, Budget Line Item Justification: PB 2019 Navy							Date: February 2018			
Appropriation / Budget Activity / Budget Sub Activity:				P-1 Line Item Number / Title:						
1109N: Procurement, Marine Corps / BA 06: Engineer and Other Equipment / BSA 2: Materials Handling Equipment				6438 / Physical Security Equipment						
ID Code (A=Service Ready, B=Not Service Ready): A		Program Elements for Code B Items: N/A				Other Related Program Elements: 0206313M				
<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)	
P-40a	Physical Security Equipment				- / 262.257	- / 23.495	- / 53.477	- / 28.306	- / -	- / 28.306
<b>P-40</b>	<b>Total Gross/Weapon System Cost</b>				<b>- / 262.257</b>	<b>- / 23.495</b>	<b>- / 53.477</b>	<b>- / 28.306</b>	<b>- / 0.000</b>	<b>- / 28.306</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. Title represents the P-40a Title when only the P-40a Summary/Total is shown.										
Note: Totals in this Exhibit P-40 set may not be exact or sum exactly due to rounding.										
<b>Justification:</b> Beginning in FY19, Identity Dominance System has been realigned from BLI 6438 PHYSICAL SECURITY EQUIPMENT, to BLI 4652, MODIFICATIONS KIT C4FIRE SUPPORT SYSTEMS C41.										
FY18 Base Appropriation Request: \$53.477M										
IDS-MC \$0.498M: Supports the required remanufacture of the SEEK II handheld hardware repurposed for IDS-MC, which provides identification information in support of military intelligence and law enforcement operations by providing positive identification of persons of interest. IDS-MC is an enabler in the areas of detainee management and questioning, base access, counterintelligence screening, border control, law enforcement, displaced persons' management and aiding in humanitarian assistance missions. IDS-MC supports the tactical application of identity dominance and fully supports a forward presence, crisis response and contingency response capability.										
Collateral Equipment \$41.532M: Funds initial outfitting (one time procurement) of items like mass notification systems, intrusion detection systems, closed circuit TVs, passive optical networks, internal grounding systems, voice over internet telephones, switches, routers, uninterrupted power supplies, audio visual, and video teleconferencing suites.										
The increase of \$29.472M from FY17 to FY18 is due to the type and number of construction projects that are currently under construction and are coming to completion in FY18, therefore requiring collateral equipment . Without equipment, facilities such as Townsend Bombing Range, Camp Pendleton Communication Complex, Joint Strike Force Hangar at MCAS Miramar, Unmanned Aircraft System Facility at MCAS Cherry Point, Radar Air Traffic Control Facility at MCAS New River, Aircraft Hangar Facility at MCB Hawaii, and Simulator Control Facility at Camp Lejeune may not be usable for their intended purpose after construction.										
Installation Security Systems \$7.447M: Funds the procurement of physical security systems and program initiatives supporting flight line security, waterside/shoreline security, protection of classified material storage areas, Arms, Ammunition & Explosives (AA&E) and other critical assets. Funds will support the enhancement of command and control systems for the Marine Corps Expeditionary Security System (MCCESS). As well as required upgrades to the family of systems to maintain compliance with DoD requirements to deploy an enterprise access control system capable of interfacing with DoD databases such as Defense Enrollment Eligibly Reporting System (DEERS) and other federal government authoritative databases. This funding also supports Defense Policy Review Initiatives (DPRI) for Guam, Okinawa and Iwakuni. Funding, executed by Space and Naval Warfare Center (SPAWAR), will procure, install and accredit, access control and intrusion detection for five MILCON projects. The five projects, funded by the Government of Japan (GoJ), are in direct support of the Futenma Replacement Facility (FRF) program. The GoJ projects are (1) MC0508-T Base Communications Building, (2) MC0510-T Exchange Complex, (3) MC0514-T Bachelor Enlisted Quarters C & D, (4) MC0590-T Magazines A-D, and (5) MC2579-T Electrical Substation. The FRF program is a bilateral agreement with the GoJ to relocate operations at MCAS Futenma to Camp Schwab. Implementation of the installation physical access control systems approval occurred in FY17.										
The decrease in funding of \$3.492M from FY17 to FY18 is due to reduced requirements for CCTV/data recording devices at installations.										
Utilities \$4.000M: Funds the procurement of hardware and equipment to support the buildout of the Building and Utilities Control Systems (BUCS) Enclaves at 4 Regional Commands and 15 installations. The increase in funding of \$4.000M in FY17 to FY18 is due to program implementation beginning in FY18. FY18 will be the only year of PMC funding for these efforts under the Utilities program, as all BUCS requirements will transition to the newly-created Facilities Related Control Systems (FRCS) program beginning in FY19.										

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<b>Exhibit P-40, Budget Line Item Justification:</b> PB 2019 Navy		<b>Date:</b> February 2018
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 1109N: Procurement, Marine Corps / BA 06: Engineer and Other Equipment / BSA 2: Materials Handling Equipment	<b>P-1 Line Item Number / Title:</b> 6438 / Physical Security Equipment	
<b>ID Code</b> (A=Service Ready, B=Not Service Ready): A	<b>Program Elements for Code B Items:</b> N/A	<b>Other Related Program Elements:</b> 0206313M
<b>Line Item MDAP/MAIS Code:</b> N/A		
FY19 Base Appropriation Request: \$28.306M		
Installation Security Systems \$4.262M: Funds the procurement of physical security systems and program initiatives supporting flight line security, waterside/shoreline security, protection of classified material storage areas (SCIFS), Arms, Ammunition & Explosives (AA&E) and other critical assets. Funds will support the enhancement of command and control systems for the Marine Corps Electronic Security System (MCESS). Funding will also support upgrades to the family of systems to maintain compliance with Federal and DoD requirements to deploy an enterprise access control system capable of interfacing with DoD databases such as Defense Enrollment Eligibly Reporting System (DEERS) and other federal government authoritative databases. This funding also supports Defense Policy Review Initiatives (DPRI) for Guam, Okinawa and Iwakuni.		
The decrease in funding of \$3.185M from FY18 to FY19 is due the implementation funding for physical access control systems in the previous years.		
Collateral Equipment \$24.044M: Funds will be used for the initial outfitting (one time procurement) of items like mass notification systems, intrusion detection systems, closed circuit TVs, passive optical networks, internal grounding systems, voice over internet telephones, switches, routers, uninterrupted power supplies, audio visual, and video teleconferencing suites. The FY19 projects include four aircraft hangars, two communications facilities, and one bachelor housing facility. Without equipment, the buildings may not be usable for their intended purpose after construction.		
The decrease of \$17.488M from FY18 to FY19 is due to the fewer number and type of projects requiring collateral equipment in FY19 (FY17 MILCON projects create FY19 collateral equipment requirements).		
OCO: FY 2019 Overseas Contingency Operations (OCO) Request: N/A		

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Exhibit P-40a, Budget Item Justification For Aggregated Items: PB 2019 Navy														Date: February 2018						
Appropriation / Budget Activity / Budget Sub Activity: 1109N / 06 / 2					P-1 Line Item Number / Title: 6438 / Physical Security Equipment									Aggregated Items Title: Physical Security Equipment						
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 (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)
1) Collateral Equipment																				
1.1) Collateral Equipment	A		-	-	127.511	-	-	12.060	-	-	41.532	-	-	24.044	-	-	-	-	-	24.044
<i>Subtotal: 1) Collateral Equipment</i>			-	-	<b>127.511</b>	-	-	<b>12.060</b>	-	-	<b>41.532</b>	-	-	<b>24.044</b>	-	-	-	-	-	<b>24.044</b>
2) Installations Security Equipment																				
2.1) Installation Security Equipment	A		-	-	112.037	-	-	10.939	-	-	7.447	-	-	4.262	-	-	-	-	-	4.262
<i>Subtotal: 2) Installations Security Equipment</i>			-	-	<b>112.037</b>	-	-	<b>10.939</b>	-	-	<b>7.447</b>	-	-	<b>4.262</b>	-	-	-	-	-	<b>4.262</b>
3) Identity Dominance System - Marine Corps (IDS-MC) <sup>(1)</sup>																				
3.1) IDS Marine Corps Increment II Hardware <sup>(2)</sup>	A		-	-	-	-	-	-	-	-	0.498	-	-	-	-	-	-	-	-	-
3.2) Software Support <sup>(3)</sup>	A		-	-	2.693	-	-	0.496	-	-	-	-	-	-	-	-	-	-	-	
<i>Subtotal: 3) Identity Dominance System - Marine Corps (IDS-MC)</i>			-	-	<b>2.693</b>	-	-	<b>0.496</b>	-	-	<b>0.498</b>	-	-	-	-	-	-	-	-	
4) Utilities																				
4.1) Utilities	A		-	-	-	-	-	-	-	-	4.000	-	-	-	-	-	-	-	-	-
<i>Subtotal: 4) Utilities</i>			-	-	<b>0.000</b>	-	-	<b>0.000</b>	-	-	<b>4.000</b>	-	-	-	-	-	-	-	-	
5) Prior Year Cumulative Funding																				
5.1) Prior Year Cumulative Funding	A		256,615.38	78	20.016	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
<i>Subtotal: 5) Prior Year Cumulative Funding</i>			-	-	<b>20.016</b>	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
<b>Total</b>			-	-	<b>262.257</b>	-	-	<b>23.495</b>	-	-	<b>53.477</b>	-	-	<b>28.306</b>	-	-	-	-	-	<b>28.306</b>

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

**Footnotes:**

<sup>(1)</sup> IDSMC software licenses have been fully procured for our AAO, and we will use the funding to fix and remanufacture the hardware for Increment 1.

<sup>(2)</sup> FY18 updated to actual plan.

<sup>(3)</sup> FY18 updated to actual plan.

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<b>Exhibit P-40, Budget Line Item Justification: PB 2019 Navy</b>										<b>Date:</b> February 2018			
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 1109N: Procurement, Marine Corps / BA 06: Engineer and Other Equipment / BSA 3: General Property					<b>P-1 Line Item Number / Title:</b> 6522 / Field Medical Equipment								
ID Code (A=Service Ready, B=Not Service Ready): A			Program Elements for Code B Items: N/A				Other Related Program Elements: 0206623M						
<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 (\$ in Millions)	0.000	0.000	0.000	33.513	0.000	33.513	3.109	4.405	10.382	10.723	Continuing	Continuing	
Less PY Advance Procurement (\$ in Millions)	-	-	-	-	-	-	-	-	-	-	-	-	
Net Procurement (P-1) (\$ in Millions)	0.000	0.000	0.000	33.513	0.000	33.513	3.109	4.405	10.382	10.723	Continuing	Continuing	
Plus CY Advance Procurement (\$ in Millions)	-	-	-	-	-	-	-	-	-	-	-	-	
<b>Total Obligation Authority (\$ in Millions)</b>	<b>0.000</b>	<b>0.000</b>	<b>0.000</b>	<b>33.513</b>	<b>0.000</b>	<b>33.513</b>	<b>3.109</b>	<b>4.405</b>	<b>10.382</b>	<b>10.723</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 (\$ in Millions)	-	-	-	-	-	-	-	-	-	-	-	-	
Flyaway Unit Cost (\$ in Dollars)	-	-	-	-	-	-	-	-	-	-	-	-	
Gross/Weapon System Unit Cost (\$ in Dollars)	-	-	-	-	-	-	-	-	-	-	-	-	
<b>Description:</b> New start in FY19.													
Family of Field Medical Equipment (FFME) is the sole organic medical capability for the Marine Corps, and is comprised of multiple and modular capabilities that provide the full spectrum of healthcare and life saving equipment on the battlefield. FFME provides medical equipment and supplies to medical units. This program's objective is to plan for lifecycle replacements and upgrades while also modernizing equipment in order to provide the most effective medical care for Marine and Sailors in any mission. Some items will replace current line items within the Authorized Medical Allowance Lists (AMAL) and provide increases in performance characteristics, and other items represent new, emerging technology not currently included in fielded capabilities which will provide improved clinical outcomes.													
Family of Field Medical Equipment (FFME) is comprised of items such as:													
The Authorized Medical Allowance List (AMAL) modernization is comprised of numerous assemblages required to support current standards of care and treatment protocols while enhancing capabilities for battlefield casualties such as: The Expeditionary Medical Refrigeration Unit (EMRU), Patient Active Warming System, Infrascanner Intracranial Pressure (ICP), Bloodborne Pathogen Test Kit, Expeditionary Portable Oxygen Generation System and the Acute Care Cover for Severely Injured Limbs.													
The Forward Resuscitative Surgery System (FRSS) provides Level I and II Health Service Support (HSS). The FRSS is a highly mobile, rapidly deployable, trauma surgical unit that provides emergency surgical interventions to stabilize casualties that might otherwise die or lose limbs before reaching treatment. The FRSS is the lightest and most mobile of the Marine Corps HSS elements capable of providing trauma surgical care. The FRSS is modular, rapidly transportable and deployable by air or surface means. Included in the FRSS are medical materials, a shelter, ancillary equipment, and mobile electric power.													
The Battalion Aid Station (BAS) AMAL provides the equipment necessary to support a BAS manned by a Medical Officer, a Physician Assistant and the Hospital Corpsman assigned to a Battalion or Squadron. One BAS AMAL provides initial resuscitative and stabilizing care for 50 surgical patients with major wounds. The BAS AMAL is scalable, expeditionary and employed to provide immediate pre-surgical resuscitation and stabilization of patients with battle injuries prior to transport to higher echelons of care. The BAS AMAL is rugged enough to survive rough handling and austere environments. Equipment and material contained in the BAS AMAL is similar to that used in garrison medical clinics and in FFME kits organic to supported units.													

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<b>Exhibit P-40, Budget Line Item Justification: PB 2019 Navy</b>		<b>Date:</b> February 2018
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 1109N: Procurement, Marine Corps / BA 06: Engineer and Other Equipment / BSA 3: General Property		<b>P-1 Line Item Number / Title:</b> 6522 / Field Medical Equipment
<b>ID Code</b> (A=Service Ready, B=Not Service Ready): A	<b>Program Elements for Code B Items:</b> N/A	<b>Other Related Program Elements:</b> 0206623M
<b>Line Item MDAP/MAIS Code:</b> N/A		
The Sick Call AMAL provides medical personnel with 30 days of equipment to treat 300 deployed Marines and Sailors for Disease and Non-Battle Injuries (DNBI). The Sick Call AMAL can be deployed independently or used to augment the BAS. The Sick Call AMAL is light, mobile, and capable of providing Level One Health Service Support (HSS) and it is ruggedized to survive rough handling and austere environments. Equipment and material contained in the Sick Call AMAL is similar to that used in garrison medical clinics and in FFME kits organic to supported units.		
The Shock Trauma Platoon (STP) AMAL provides equipment to perform initial resuscitative care for 50 non-surgical combat casualties for 30 days and establish 10 post trauma care patient holding litters for up to 48 hours. When co-located with the Forward Resuscitative Surgery System AMAL 645, the STP becomes a triage center and pre/postoperative care ward. STPs provide patient medical support for Surgical Companies deployed in its Area of Responsibility (AOR) or can be deployed independently to provide trauma resuscitation capabilities beyond that of the BAS. The AMALs are staffed by a mix of Emergency Medicine, Family Practice and support staff and the capabilities are scalable, rugged, easily transported and operate reliably in expeditionary environments.		
The En Route Care System (ERCS) provides equipment for the care of two critically injured/ill, but stabilized casualties in a theater operations for up to a two hour medical evacuation (MEDEVAC) flight from a field treatment facility to the next higher echelon of medical care. The ERCS is a modular system that includes medical equipment, medical treatment protocols and supplies.		
The Acute Care Ward AMAL provides the equipment necessary to support six cots and four critical care beds for up to 72 hours for each patient or 50-bed days total. The AMAL is scalable, rugged and operates reliably in expeditionary environments, provide medical equipment and supplies to perform clinical procedures for patient conditions for the Acute Care Ward for the first 30 days of deployment. The Acute Care Ward AMAL is employed within the Surgical Company and represents the primary patient holding capacity within the USMC medical capability portfolio. It is expected that the demand for this capability may increase in AORs that require distributed operations, have long evacuation distances, and have denied air space.		
Preventive Medicine AMALs contain the equipment necessary to provide technical preventive medicine advice, inspect food service operations, waste disposal, water potability vector control and surveillance, field sanitation, heat/cold injury prevention and disease surveillance and control measures for communicable diseases for 30 days. This AMAL is deployed with the Preventive Medicine Technician, Environmental Officer, or Industrial Hygiene Officer and is critical to the combat effectiveness in austere environments where personnel can be exceptionally susceptible to diseases and illnesses endemic to areas US forces are not frequently located.		
Digital Radiography Equipment program (AMAL 627) provides radiological capability to surgical trauma platoons to diagnose injuries and medical abnormalities. AMAL 627 contains equipment to support one x-ray machine and develop x-rays. The x-ray unit is a compact, mobile and lightweight system that enables all imaging functions to be performed at the point of patient care. The unit is comprised of a low capacity x-ray and a digitally computed radiographic (CR) reader, which scans the x-ray plates and displays the images on a laptop computer. The unit can be broken down into components for transportation and storage. It is operable and maintainable under all conditions of altitude, climate and terrain.		
The Laboratory AMAL provides the equipment to perform hematology, blood chemistry, urinalysis, blood banking, microbiology, and other miscellaneous laboratory tests essential to support a field medical facility treating casualties requiring surgery and trauma resuscitation. Laboratory AMALs are also used for the identification of non-battle related diseases which historically have claimed as many or more lives than combat itself and also has the potential to render troops non-combat effective due to illness. Further, it provides the capability to establish a blood bank for immediate supply of blood products to treat combat casualties during mass-casualty events.		
The Short Range Casualty Evacuation (CASEVAC) AMAL provides the Marine Corps with the capability to provide medical treatment during the air or ground evacuation of injured/ill personnel from the point of injury to a Surgical Company. The system provides the equipment and supplies necessary to provide care for up to eight patients, one critically injured/ill casualty, five other litter patients and two ambulatory patients for up to two hours flight time.		
The Authorized Dental Allowance List (ADAL) provides dental services to the Marine Expeditionary Force (MEF). In an operational environment, the Dental Battalion's primary mission is to provide dental health maintenance with a focus on emergency care. ADALs contain equipment required by dentists and their technicians to perform dental procedures on Marines in an expeditionary environment and can be broken down into component sets or scaled down to fit the size and mission of the deploying unit. The ADAL is primarily designed for standalone dental treatment, but can be used in conjunction with other AMALs.		

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Exhibit P-40, Budget Line Item Justification: PB 2019 Navy							Date: February 2018			
Appropriation / Budget Activity / Budget Sub Activity:				P-1 Line Item Number / Title:						
1109N: Procurement, Marine Corps / BA 06: Engineer and Other Equipment / BSA 3: General Property				6522 / Field Medical Equipment						
ID Code (A=Service Ready, B=Not Service Ready): A		Program Elements for Code B Items: N/A				Other Related Program Elements: 0206623M				
Line Item MDAP/MAIS Code: 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)	
P-40a	Field Medical Equipment				- / 0.000	- / -	- / -	- / 33.513	- / -	- / 33.513
P-40	Total Gross/Weapon System Cost				- / 0.000	- / 0.000	- / 0.000	- / 33.513	- / 0.000	- / 33.513

\*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. Title represents the P-40a Title when only the P-40a Summary/Total is shown.

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

**Justification:**

FY 2018 Base Appropriation: \$0M; BLI 6522 inactive FY15-FY18.

New Start in FY19.

FY 2019 Base Appropriation: \$33.513M procures improved and modernized equipment for AMALs such as the Laboratory AMAL and the Acute Care Ward Equipment. Equipment procurements for these blocks will increase performance, reduce power requirements, and improve expeditionary capabilities to better support changes in USMC CONOPS for distributed operations. Funding will also procure equipment such as the Expeditionary Medical Refrigeration Unit (EMRU) which will replace the current Hemacool Refrigeration Unit currently employed in the Laboratory, FRSS and STP AMALs. Equipment such as the EMRU will provide significant increases in performance, using less than half of the current power than the Hemacool and able to run on batteries for more than twice the amount of time as the Hemacool (up to 48 hours), greatly improving the expeditionary capabilities of the supported AMALs. The EMRU expands clinical refrigeration capabilities beyond just blood products as it can be used for extended transport and storage of vaccines and reagents. Additionally, the EMRU uses new technology with EPA compliant gases and will not require the R-134a refrigerant used in the Hemacool which will be phased out by the Environmental Protection Agency (EPA) in FY19. Funding will procure critical shortfalls of Class VIII Medical Equipment Sets required in the USMC Prepositioning Objective (PREPO) which support two major Operation Plans (OPLANS). Currently, there are no surgical AMALs in PREPO as a result of the obsolescence and disposal of the Main Operating Room AMALs which presents a significant capability gap for medical support in major combat operations. The FY19 funds will close that gap entirely by procuring FRSS AMALs. There are no patient movement equipment AMALs in PREPO at this time; current OPLANS require the USMC to have the ability to move critically injured personnel and post-surgical patients both from the point of injury, and the forward deployed surgical site locations to the next echelon of medical care as detailed in Joint Publication 4-02. The FY19 funds will close that gap entirely by procuring En Route Care System AMALs. USMC policy designates Class VIII material as War Reserve Material (WRM) and aside from the capabilities maintained in the PREPO Program, there is a critical shortfall in WRM stocks which cannot be rapidly procured and configured on short notice. Currently each MEF maintains 15 Days of Supply (DOS) and the USMC Logistics Command (LOGCOM) does not maintain Class VIII War Reserve Material and Contingency Preparedness equipment sets and supplies for the Operating Force (OPFOR). The OPFOR (I and II MEF) have determined there are significant AMAL shortfalls across all AMAL types for the purpose of providing medical support for rapid, large scale deployments. Therefore, the MEFs must increase their AMAL stocking levels held in a contingency status in order to have the ability to rapidly deploy the medical capabilities required to support two concurrent, full Marine Expeditionary Brigades. FY19 funds will provide the initial issue of AMALs which will close this gap and significantly increase readiness.

Increase in FY19 is a new start to procure AMAL modernization equipment, WRM shortfalls, Contingency Preparedness equipment and to procure critical shortfalls of Class VIII Medical Equipment Sets (such as the FRSS and ERCS) required in the USMC Prepositioning Objective.

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Exhibit P-40a, Budget Item Justification For Aggregated Items: PB 2019 Navy														Date: February 2018						
Appropriation / Budget Activity / Budget Sub Activity: 1109N / 06 / 3					P-1 Line Item Number / Title: 6522 / Field Medical Equipment									Aggregated Items Title: Field Medical Equipment						
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 (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)
<b>1) Family of Field Medical Equipment</b>																				
1.1) Authorized Medical Allowance List (AMAL) - Equipment	A		-	-	-	-	-	-	-	-	-	-	-	1.738	-	-	-	-	-	1.738
1.2) Acute Care Ward Equipment	A		-	-	-	-	-	-	-	-	-	-	-	1.230	-	-	-	-	-	1.230
1.3) Laboratory - Equipment	A		-	-	-	-	-	-	-	-	-	-	-	1.045	-	-	-	-	-	1.045
1.4) En Route Care System (ERCS) - Equipment <sup>(1)</sup>	A		-	-	-	-	-	-	-	-	-	-	-	14.000	-	-	-	-	-	14.000
1.5) Authorized Dental Allowance List (ADAL) - Equipment	A		-	-	-	-	-	-	-	-	-	-	-	1.000	-	-	-	-	-	1.000
1.7) Forward Resuscitative Surgery System (FRSS) - Equipment <sup>(2)</sup>	A		-	-	-	-	-	-	-	-	-	-	-	12.500	-	-	-	-	-	12.500
1.8) Shock Trauma Platoon (STP) - Equipment	A		-	-	-	-	-	-	-	-	-	-	-	2.000	-	-	-	-	-	2.000
<b>Subtotal: 1) Family of Field Medical Equipment</b>			-	-	<b>0.000</b>	-	-	-	-	-	-	-	-	<b>33.513</b>	-	-	-	-	-	<b>33.513</b>
<b>Total</b>			-	-	<b>0.000</b>	-	-	-	-	-	-	-	-	<b>33.513</b>	-	-	-	-	-	<b>33.513</b>
Note: Subtotals or Totals in this Exhibit P-40a may not be exact or sum exactly, due to rounding.																				
<b>Footnotes:</b>																				
(1) FY19 Funding: The En Route Care System (ERCS) was never fielded for the Maritime Prepositioning Squadrons and the Marine Corps Prepositioning Program-Norway. The initial acquisition was only funded for the OPFORs. As a result this capability gap has been carried over for more than a decade despite the Prepositioning requirement for the USMC to provide critical patient movement equipment. FY19 funding will procure the ERCS AMAL to close this capability gap.																				
(2) FY19 Funding: The Forward Resuscitative Surgery System (FRSS) was never fielded for the Maritime Prepositioning Squadrons and the Marine Corps Prepositioning Program-Norway. The FRSS was fielded as a mobile, expeditionary surgical suite to replace the Main Operating Room AMALs, however the initial acquisition was only funded for the OPFORs. As a result, there is no USMC surgical capability in the Prepositioning Program in support of major OPLANs. FY19 Funding will procure the FRSS AMAL to close this capability gap.																				

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<b>Exhibit P-40, Budget Line Item Justification: PB 2019 Navy</b>								<b>Date:</b> February 2018				
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 1109N: Procurement, Marine Corps / BA 06: Engineer and Other Equipment / BSA 3: General Property				<b>P-1 Line Item Number / Title:</b> 6532 / Training Devices								
ID Code (A=Service Ready, B=Not Service Ready): B			Program Elements for Code B Items: N/A					Other Related Program Elements: 0206623M				
<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 (\$ in Millions)	898.388	31.016	76.185	52.040	0.000	52.040	159.308	113.716	104.624	62.618	Continuing	Continuing
Less PY Advance Procurement (\$ in Millions)	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) (\$ in Millions)	898.388	31.016	76.185	52.040	0.000	52.040	159.308	113.716	104.624	62.618	Continuing	Continuing
Plus CY Advance Procurement (\$ in Millions)	-	-	-	-	-	-	-	-	-	-	-	-
<b>Total Obligation Authority (\$ in Millions)</b>	<b>898.388</b>	<b>31.016</b>	<b>76.185</b>	<b>52.040</b>	<b>0.000</b>	<b>52.040</b>	<b>159.308</b>	<b>113.716</b>	<b>104.624</b>	<b>62.618</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 (\$ in Millions)	-	0.049	0.050	0.051	-	0.051	0.052	0.053	0.054	0.055	Continuing	Continuing
Flyaway Unit Cost (\$ in Dollars)	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost (\$ in Dollars)	-	-	-	-	-	-	-	-	-	-	-	-
<b>Description:</b>												
COMBINED ARMS COMMAND AND CONTROL TRAINER UPGRADE SYSTEM (CACCTUS) upgrades Combined Arms Staff Trainer (CAST) at the 5 Approved Acquisition Objective (AAO) locations to provide a more immersive training opportunity for Marine Air Ground Task Force (MAGTF) staff elements in the areas of fire support employment, coordination, and integration. The upgraded system will support Marine Expeditionary Battalion (MEB) level training and to effectively integrate current and emerging Communications Command Control Computers and Intelligence (C4I) systems. These funds will also support the procurement of system hardware.												
COMMAND and CONTROL TRAINING and EDUCATION CENTER of EXCELLENCE (C2 TECOE) supports the five (5) MAGTF Integrated Systems Training Centers (MISTCs). The MISTCs, under the operational control of the C2 TECOE is the primary Command and Control (C2) training venue for the Marine Corps operating forces for both individual and collective C2 systems sustainment training. The yearly funding is for equipment refresh and procurement of new training systems. A portion of the C2 computer systems are replaced each year to provide current systems for classroom and combat operation training in battle staff training for commanders and unit personnel.												
DEPLOYABLE VIRTUAL TRAINING ENVIRONMENT (DVTE) is a laptop PC based simulation system capable of emulating organic and supporting Infantry Battalion weapons systems and training scenarios to facilitate Training and Readiness (T&R) based training, currently being fielded at the Battalion level. Its portable configuration allows Marines to train when they otherwise could not; aboard ship, at remote reserve locations and deployed. DVTE conducts multiple types of training such as language and culture training, platoon and squad level tactics, employment of supporting arms, and various Recognition of Combatants (ROC) packages. DVTE is part of a Commander's "training toolkit" contributing to the building block approach to standards based training focusing on achieving an improved level of combat readiness. Funding supports hardware refresh and integration/interoperability capabilities with operational forces' systems.												
FAMILY OF COMBAT VEHICLE TRAINING SYSTEM (FCVTS) consists of the active duty Marine Corps' Combat Convoy Simulator (CCS) and the Combat Vehicle Training Systems which includes the Advanced Gunnery Training System (AGTS_) for the M1A1 Abrams Tank and Light Armored Vehicle - 25 (LAV-25), and the Amphibious Assault Vehicle Turret Training (AAV-TT). The CCS provides an immersive training environment in which Marines exercise combat skills including tactics, techniques and procedures for vehicle convoy operations in a variety of simulated road, terrain, weather, visibility and operational conditions. Tactical scenarios include weapons usage, target engagement, driver evasive action, vehicle coordination command and control procedures, Improvised Explosive Device (IED) defeat, and calls for fire, close air support and medical evacuation. The Combat Vehicle Training System (CVTS) provides full-fidelity, computer-based training systems for the M1A1 main battle tank, the Light Armored Vehicle (LAV) 25, and the Amphibious Assault Vehicle (AAV) vehicles. It provides full crew training without the need for fuel, ammunition, training areas and ranges. Training systems can be linked together allowing for section and platoon level training. Procurement funding supports technology refresh.												

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<b>Exhibit P-40, Budget Line Item Justification: PB 2019 Navy</b>		<b>Date:</b> February 2018
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 1109N: Procurement, Marine Corps / BA 06: Engineer and Other Equipment / BSA 3: General Property	<b>P-1 Line Item Number / Title:</b> 6532 / Training Devices	
<b>ID Code</b> (A=Service Ready, B=Not Service Ready): B	<b>Program Elements for Code B Items:</b> N/A	<b>Other Related Program Elements:</b> 0206623M
<b>Line Item MDAP/MAIS Code:</b> N/A		
FORCE ON FORCE TRAINING SYSTEMS (FoFTS) provides realistic, non-live fire capabilities to perform force-on-force training and supports realistic, live fire force-on-target training. The program develops, fields and supports a suite of tactical engagement capabilities that enhance MAGTF training around the world and across the range of military operations. The program includes tactical training systems such as the Special Effects Small Arms Marking System (SESAMS) and advanced, instrumented, laser-based tactical engagement systems such as the Instrumented-Tactical Engagement Simulation System (I-TESS) that provide realistic weapons effects, position locating, and enhanced After Action Review (AAR) capability to support Live-Virtual-Constructive (LVC) events in the MAGTF Training Program curriculum. Funding supports procurement of company sets of I-TESS training systems required to meet AAO.		
IMMERSIVE TRAINING RANGE SUPPORT (ITRS) [FORMERLY SQUAD IMMERSIVE TRAINING ENVIRONMENT (SITE)] will provide II Marine Expeditionary Force (MEF) an outdoor Infantry Immersion Trainer (IIT) that will consist of small unit training ranges with urban structures finished and decorated to replicate geo-specific locations paired with integrated direct fire training systems, virtual simulation screens, and video instrumentation for after action review. The outdoor training environments closely replicate current operational threats by stimulating all senses to stress small unit actions and the small unit leader's tactical, moral, and ethical decision making within the context of operational culture. IIT provides the capability for small-unit rehearsal training and squad leader decision making for assessment and measurement. The immersive training environment seeks to suspend disbelief by closely replicating the actual operating environment, including realistic battlefield friendly and enemy effects to the level of fidelity that the perceived difference between the actual operational environment and immersive training environment is nearly indistinguishable to the training audience. This high-level of battlefield realism provides training exposure to operational complexities, mental and physical stressors, and tactical and ethical decision-making in a culturally accurate, threat accurate, and interactive environment.		
INDOOR SIMULATED MARKSMANSHIP TRAINER (ISMT) is a three (3) dimensional simulation based trainer for indoor use, capable of instructing in basic and advanced marksmanship, shoot/no-shoot judgment, combat marksmanship, and weapons employment tactics. The ISMT is used for remedial, virtual instruction to augment live fire upon simulated targets with an indication of the rounds fired. The ISMT systems are used both within the continental United States (CONUS) and Outside CONUS (OCONUS). The system has five (5) firing positions and is capable of operating simulated weapons such as AT4, M2 .50 Cal, M9, M16A4, M16A2 Fully Sensored, M240G, M240B, M203, MK19, MP5, M249 SAW, M870 12 gauge shotgun, SMAW, M224 60mm Mortar, M252 81mm Mortar, M4A1, Joint Services Combat Shotgun (JSCS, M67 Infantry Automatic Rifle (IAR), M32 Multi-shot Grenade Launcher, and the M72 Light Anti-Armor Weapon (LAW).		
MARINE AIR GROUND TASK FORCE (MAGTF)TACTICAL WARFARE SIMULATION (MTWS) is the Marine Corps' only constructive, aggregate-level simulation system used to support the training of Marine commanders and their battle staffs in MAGTF war-fighting principles/concepts and associated command and control procedures. Using complex computer-simulated behavior models, MTWS provides an interactive, decision-based, real-time, war game representing the six war-fighting functional areas of fires, command and control, force protection, logistics, maneuver, and intelligence. Its modeling breadth and flexibility enables users to represent and exercise a wide variety of combat scenarios to prepare leaders to face the military challenges of today's world. MTWS is designed to support the training of commanders and their staffs in exercises involving live and simulated land, air, and naval forces at all operational command levels. The system supports all levels of command throughout the MEF and Joint Task Force (JTF). MTWS can be used as a multi-sided war game, including red, blue, civilian, and non-aligned sides. The system can also be used to validate specific operational plans against a variety of enemy and environmental situations. Thus command personnel may examine alternative tactical solutions on a "what if" basis.		
MARINE CORPS DISTANCE LEARNING Program (MCDLP) - provides the MarineNet E-Learning Infrastructure that enables Marines to receive training and education via interactive media, when and where training is needed. DL contributes to the Marine Corps' operational readiness by providing Marines with access to required Military Occupational Specialty (MOS), common skills training and Professional Military Education (PME) training at 40 Learning Resource Centers (LRCs) located at Marine Corps bases and stations both CONUS and OCONUS.		
RANGES AND TRAINING AREA MANAGEMENT (RTAM) Baseline program modernizes major USMC base and station live training ranges to provide enhanced after action review with ground truth feedback, realistic representation of Opposing Forces (OPFOR) and enhanced range and exercise command and control capabilities. Integrating live and simulated training technologies, the fielded capabilities enhance live-fire, force-on-target, GUAM initiatives, and force-on-force training. Major system components of modernization include Military Operations on Urbanized Terrain (MOUT) facilities, inter-active targetry, battlefield effects simulators, individual and vehicle tracking systems, aviation tracking systems, Tactical Engagement Simulation Systems, simulated munitions, integrated simulation, and range control and exercise control information processing and situational awareness displays. Training is required to support the complexities of command and control, live-fire coordination in support of maneuver, and logistics operations in support of units at and above company level. Deploying operational units need access to instrumented, non live-fire and live-fire capable MOUT training facilities, urban sniper training capabilities, convoy operation/reaction course capability, Urban Close Air Support (CAS) ranges, and IED/EOD training capability in order to accomplish this training and bring the Marine Corps into the 21st century, to include a fully Immersive Infantry Trainer (IIT). These capabilities give deploying units the opportunity to better meet training requirements before exercising as a MAGTF and deploying to the combat theaters. Additionally lessons learned from Operation Iraqi Freedom (OIF) are driving the need for new training systems supporting a seamless training environment allowing crucial core capabilities to be available for all Marines at all sites at once.		

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<b>Exhibit P-40, Budget Line Item Justification:</b> PB 2019 Navy		<b>Date:</b> February 2018
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 1109N: Procurement, Marine Corps / BA 06: Engineer and Other Equipment / BSA 3: General Property		<b>P-1 Line Item Number / Title:</b> 6532 / Training Devices
<b>ID Code</b> (A=Service Ready, B=Not Service Ready): B	<b>Program Elements for Code B Items:</b> N/A	<b>Other Related Program Elements:</b> 0206623M
<b>Line Item MDAP/MAIS Code:</b> N/A		
SUPPORTING ARMS VIRTUAL TRAINER (SAVT) will advance the training capability, operational readiness, and tactical proficiency of USMC Joint Terminal Attack Controllers (JTACs), Forward Observers (FOs), and Forward Air Controllers (FACs). The personnel will use training scenarios that require the placement of tactical ordnance on selected target using Joint Close Air Support (JCAS) procedures and observed fire procedures for Naval Surface Fire Support (NSFS), artillery and mortar fire to perform destruction, neutralization, suppression, illumination/coordinated illumination, interdiction and harassment fire missions.		
TRAINING SIMULATION SUPPORT (TSS) program encompasses the procurement of low density, minor (low cost) MAGTF ground training equipment, simulators and simulations. These devices such as medical training kits, climbing walls, weapons models and mockups, enhance basic occupational and combat skills across the wide spectrum of tactics, techniques, procedures and proficiency. TSS for the most part is for commercial/service non-developmental training devices, used by Marine Corps Schools of Infantry, Marine Corps Martial Arts Program, Recruit Depots, operating forces, bases, stations, and support combat readiness. Funding provides capability for the USMC to conduct critical Overseas Contingency Operations (OCO) training and participate as a full-fledged member of several Joint programs.		
UNITED STATES MARINE CORPS OPERATOR DRIVER SIMULATOR (USMC ODS) is a computer based operator driving simulator used to provide entry and sustainment level operator driving training for USMC operators. The simulator provides realistic experiences in vehicle operation in both on and off-road scenarios featuring various road and weather conditions. Cab configurations include interchangeable vehicle extension kits consisting of dash panel, faux armor panels, steering wheels and vehicle dynamics software to replicate Medium and Large Tactical Wheeled Vehicles. Funding supports the procurement of cab replacement.		
This line item includes funding specified for Defense Policy Review Initiative (DPRI) within the details above.		

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Exhibit P-40, Budget Line Item Justification: PB 2019 Navy							Date: February 2018			
Appropriation / Budget Activity / Budget Sub Activity:				P-1 Line Item Number / Title:						
1109N: Procurement, Marine Corps / BA 06: Engineer and Other Equipment / BSA 3: General Property				6532 / Training Devices						
ID Code (A=Service Ready, B=Not Service Ready): B		Program Elements for Code B Items: N/A				Other Related Program Elements: 0206623M				
<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)	
P-40a	Training Devices				- / 898.388	- / 31.016	- / 76.185	- / 52.040	- / -	- / 52.040
<b>P-40</b>	<b>Total Gross/Weapon System Cost</b>				<b>- / 898.388</b>	<b>- / 31.016</b>	<b>- / 76.185</b>	<b>- / 52.040</b>	<b>- / 0.000</b>	<b>- / 52.040</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. Title represents the P-40a Title when only the P-40a Summary/Total is shown.										
Note: Totals in this Exhibit P-40 set may not be exact or sum exactly due to rounding.										
<b>Justification:</b>										
Overall Training Devices Accomplishments: Baseline requests provide for seamless training environments that continue to enhance training capabilities, modernize major USMC base and station live training ranges, provide enhanced after action review with ground truth feedback, realistic representation of OPFOR and enhanced range and exercise command and control capabilities. Without these training devices, Marines will not be properly trained and prepared for combat when deployed to combat theaters.										
The FY 2019 funding request was reduced by (\$4.029) million to account for the availability of prior year execution balances.										
FY2018 Base Appropriation Request: \$76.185M										
COMBINED ARMS COMMAND AND CONTROL TRAINER UPGRADE SYSTEM (CACCTUS) \$4.659M will provide necessary hardware components and installation in support of the training systems at all five (5) authorized sites and the supporting test facility.										
COMMAND and CONTROL TRAINING and EDUCATION CENTER of EXCELLENCE (C2 TECOE) \$.516M will provide the procurement funding support for equipment refresh and procurement of new training systems at the five (5) MAGTF Integrated Systems Training Centers (MISTCs).										
DEPLOYABLE VIRTUAL TRAINING ENVIRONMENT (DVTE) \$2.538M will provide procurement funding support for the new phase of the hardware refresh of DVTE suites which will be accomplished over the next 4 years (2017 to 2020).										
FORCE ON FORCE TRAINING SYSTEM (FoFTS) \$7.456M represents a new start. Receipt of funds in FY 18 will allow procurement of sets of Instrumented-Tactical Engagement Simulation Systems (I-TESS) to support large scale battalion and joint level Force on Force training exercises with enhanced instrumentation systems for Armored vehicles and Crew Served Weapons.										
IMMERSIVE TRAINING RANGE SUPPORT (ITRS) [FORMERLY SQUAD IMMERSIVE TRAINING ENVIRONMENT (SITE)] \$25.012M represents a new start. The receipt of funds in FY18 will provide an outdoor Infantry Immersive Trainer (IIT) for increased IIT capacity at Camp Lejeune, NC to address II MEF and east coast Security Force Battalion operational unit throughput deficiencies.										
INDOOR SIMULATED MARKSMANSHIP TRAINER (ISMT) \$8.158M will provide for the hardware refresh procurement of simulated weapons such as AT4, M2 .50 Cal, M9, M16A4, M16A2 Fully Sensored, M240G, M240B, M203, MK19, MP5, M249 SAW, M870 12 gauge shotgun, SMAW, M224 60mm Mortar, M252 81mm Mortar, M4A1, Joint Services Combat Shotgun (JSCS, M67 Infantry Automatic Rifle (IAR), M32 Multi-shot Grenade Launcher, and the M72 Light Anti-Armor Weapon (LAW) and to modify and alter the ISMT space aboard the LPD Class 17 platform to baseline/backfit the compartments layout.										
MARINE AIR GROUND TASK FORCE (MAGTF) TACTICAL WARFARE SIMULATION (MTWS) \$0.904M will provide hardware/software refresh in accordance with four-year refresh cycle.										
MARINE CORPS DISTANCE LEARNING PROGRAM (MCDLP) \$2.696M will provide hardware, technical support and testing for the disaster recovery site for MarineNet and purchase yearly software license renewals.										

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<b>Exhibit P-40, Budget Line Item Justification: PB 2019 Navy</b>		<b>Date:</b> February 2018
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 1109N: Procurement, Marine Corps / BA 06: Engineer and Other Equipment / BSA 3: General Property	<b>P-1 Line Item Number / Title:</b> 6532 / Training Devices	
<b>ID Code</b> (A=Service Ready, B=Not Service Ready): B	<b>Program Elements for Code B Items:</b> N/A	<b>Other Related Program Elements:</b> 0206623M
<b>Line Item MDAP/MAIS Code:</b> N/A		
<p>RANGES AND TRAINING AREA MANAGEMENT \$19.481M will provide funding for continued Integrated Range Status System (IRSS) re-capitalization and will allow for procurement of training systems and devices that support multiple ranges at various locations such as inter-active targetry, battlefield effects simulators, individual and vehicle tracking systems, and aviation tracking systems for live fire and non-live fire training ranges at the MAGTF Training Center (MAGTFTC) and home station commands which is based on priorities established by Training &amp; Education Command Range &amp; Training Area Management division.</p> <p>SUPPORTING ARMS VIRTUAL TRAINER (SAVT) \$4.212M will provide the start of procurement funding to support the technical refresh to be accomplished over two years (2018 and 2019) at all sites including the test berth. Migrating to improved JSAF Enhancements and Windows 10.</p> <p>TRAINING SIMULATIONS SUPPORT (TSS) \$0.553M encompasses the procurement of low density, minor (low cost) MAGTF ground training equipment, simulators and simulations. These devices such as medical training kits, bleeding simulation kits, weapons models and mockups, enhance basic occupational and combat skills across the wide spectrum of tactics, techniques, procedures and proficiency. Funding provides capability for the USMC to conduct critical training and participate as a full-fledged member of several Joint programs. FY18 will provide continued support for a determined combination of minor low cost ground training equipment, simulators and simulations. The funding for the TSS line (460910) is level throughout the FYDP and the small increases each year (average of 3%) account for annual inflation.</p> <p>FY2019 Base Appropriation Request: \$52.040M</p> <p>COMBINED ARMS COMMAND AND CONTROL TRAINER UPGRADE SYSTEM (CACCTUS) \$2.909M will provide necessary hardware components and installation in support of the training systems at all five (5) authorized sites and the supporting test facility. The \$1.750M decrease from FY 18 to FY 19 is due to hardware refresh schedule and realignment of funds to align with these schedules. The FY 2019 funding request was reduced by \$1.0 million to account for the availability of prior year execution balances.</p> <p>COMMAND and CONTROL TRAINING and EDUCATION CENTER of EXCELLENCE (C2 TECOE) \$0.413M will provide the procurement funding support for equipment refresh and procurement of new training systems at the five (5) MAGTF Integrated Systems Training Centers (MISTCs). Decrease of \$.103 from FY 18 to FY19 is based on the hardware refresh schedule.</p> <p>DEPLOYABLE VIRTUAL TRAINING ENVIRONMENT (DVTE) \$.947M will provide procurement funding support for the new phase of the hardware refresh of DVTE suites which will be accomplished over the next four (4) years (2017 to 2020). The decrease of \$1.591M is due to smaller allotments numbers of DVTE systems at the locations being refreshed during FY19 and also due to a realignment of funding to align with the updated refresh schedule. The FY 2019 funding request was reduced by \$0.50 million to account for the availability of prior year execution balances.</p> <p>FORCE ON FORCE TRAINING SYSTEM (FoFTS) \$20.942M will allow procurement of additional sets of Instrumented-Tactical Engagement Simulation Systems (I-TESS) to support large scale battalion and joint level training exercises with enhanced instrumentation systems for Armored vehicles and Crew Served Weapons. The increase of \$13.486M from FY18 to FY19 procures Mobile Fire Support Trainers (MFST), Combat Vehicle Tactical Engagement Simulator System (CV-TESS) kits for LAV, M1A1, ACV, AAV variants, and additional systems to support the fielding of Tactical Decision Kits (TDK).</p> <p>INDOOR SIMULATED MARKSMANSHIP TRAINER (ISMT) \$2.673M will provide for the hardware refresh procurement of simulated weapons such as AT4, M2 .50 Cal, M9, M16A4, M16A2 Fully Sensored, M240G, M240B, M203, MK19, MP5, M249 SAW, M870 12 gauge shotgun, SMAW, M224 60mm Mortar, M252 81mm Mortar, M4A1, Joint Services Combat Shotgun (JSCS, M67 Infantry Automatic Rifle (IAR), M32 Multi-shot Grenade Launcher, and the M72 Light Anti-Armor Weapon (LAW) and to modify and alter the ISMT space aboard the LPD Class 17 platform to baseline/backfit the compartments layout. Decrease from FY18 to FY19 in the amount of \$5.485M is due to a reduction in the number of simulated weapons requiring refresh.</p> <p>MARINE AIR GROUND TASK FORCE (MAGTF) TACTICAL WARFARE SIMULATION (MTWS) \$0.752M will provide hardware/software refresh in accordance with four-year refresh cycle. Decrease of \$.152M from FY 18 to FY19 is based on the hardware refresh schedule.</p> <p>MARINE CORPS DISTANCE LEARNING PROGRAM (MCDLP) \$0.875M will provide hardware, technical support and testing for the disaster recovery site for MarineNet and purchase yearly software license renewals. Decrease from FY18 to FY19 in the amount of \$1.821M is due to having the Continuity of Operations (COOP) move from MCEITS to Amazon Government Cloud based solution.</p>		

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<b>Exhibit P-40, Budget Line Item Justification:</b> PB 2019 Navy		<b>Date:</b> February 2018
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 1109N: Procurement, Marine Corps / BA 06: Engineer and Other Equipment / BSA 3: General Property		<b>P-1 Line Item Number / Title:</b> 6532 / Training Devices
<b>ID Code</b> (A=Service Ready, B=Not Service Ready): B	<b>Program Elements for Code B Items:</b> N/A	<b>Other Related Program Elements:</b> 0206623M
<b>Line Item MDAP/MAIS Code:</b> N/A		
RANGES AND TRAINING AREA MANAGEMENT \$22.476M will allow for procurement of training systems and devices that support multiple ranges at various locations such as inter-active targetry, battlefield effects simulators, individual and vehicle tracking systems, and aviation tracking systems for live fire and non-live fire training ranges at the MAGTFTC and home station commands which is based on priorities established by Training & Education Command Range & Training Area Management division. The \$2.998M increase in funds from FY18 to FY19 provides funding support for Expeditionary Operations Training Group (EOTG) Visit Board Search and Seizure (VBSS) training systems. The FY 2019 funding request was reduced by \$2.529 million to account for the availability of prior year execution balances.		
TRAINING SIMULATIONS SUPPORT (TSS) \$0.053M provides minimum procurement of low density, minor (low cost) MAGTF ground training equipment, simulators and simulations. These devices such as medical training kits, bleeding simulation kits, weapons models and mockups, enhance basic occupational and combat skills across the wide spectrum of tactics, techniques, procedures and proficiency. Funding provides capability for the USMC to conduct critical training and participate as a full-fledged member of several Joint programs. FY19 will provide minimal continued support for a determined combination of minor low cost ground training equipment, simulators and simulations. The \$.500M decrease from FY 18 to FY 19 is reduction to support procurement of only the minimal high priority low cost TSS devices.		
OCO: FY2018 Overseas Contingency Operations (OCO): N/A FY2019 Overseas Contingency Operations (OCO): N/A		

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Exhibit P-40a, Budget Item Justification For Aggregated Items: PB 2019 Navy														Date: February 2018						
Appropriation / Budget Activity / Budget Sub Activity: 1109N / 06 / 3					P-1 Line Item Number / Title: 6532 / Training Devices									Aggregated Items Title: Training Devices						
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 (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)
<b>1) CACCTUS</b>																				
1.1) CACCTUS Lab Equipment/Hardware	A		-	-	39.369	-	-	3.515	-	-	4.659	-	-	2.909	-	-	-	-	-	2.909
1.2) CACCTUS Peripherals	A		-	-	0.150	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1.3) CACCTUS Software Licenses	A		-	-	0.250	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1.4) CACCTUS Hardware Support Services	A		-	-	0.740	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1.5) CACCTUS NAVAIR Database Correlation	A		-	-	0.248	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
<i><b>Subtotal: 1) CACCTUS</b></i>			-	-	<b>40.757</b>	-	-	<b>3.515</b>	-	-	<b>4.659</b>	-	-	<b>2.909</b>	-	-	-	-	-	<b>2.909</b>
<b>2) C2TECOE</b>																				
2.1) C2TECOE - Lab Equipment			-	-	2.971	-	-	0.295	-	-	0.416	-	-	0.313	-	-	-	-	-	0.313
2.2) C2TECOE - Training Systems			-	-	0.781	-	-	0.100	-	-	0.100	-	-	0.100	-	-	-	-	-	0.100
<i><b>Subtotal: 2) C2TECOE</b></i>			-	-	<b>3.752</b>	-	-	<b>0.395</b>	-	-	<b>0.516</b>	-	-	<b>0.413</b>	-	-	-	-	-	<b>0.413</b>
<b>3) DVTE</b>																				
3.1) DVTE Phase III Hardware Refresh	A		-	-	1.270	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
3.2) DVTE Technical Refresh			-	-	-	-	-	2.229	-	-	2.538	-	-	0.947	-	-	-	-	-	0.947
<i><b>Subtotal: 3) DVTE</b></i>			-	-	<b>1.270</b>	-	-	<b>2.229</b>	-	-	<b>2.538</b>	-	-	<b>0.947</b>	-	-	-	-	-	<b>0.947</b>
<b>4) FoFTS</b>																				
4.1) FoFTS I-TESS Training Systems	A		-	-	-	-	-	-	-	-	7.456	-	-	20.942	-	-	-	-	-	20.942
<i><b>Subtotal: 4) FoFTS</b></i>			-	-	<b>0.000</b>	-	-	-	-	-	<b>7.456</b>	-	-	<b>20.942</b>	-	-	-	-	-	<b>20.942</b>
<b>5) (FCVTS) Family of Combat Vehicle Training Sys</b>																				
5.1) CCS Technical Refresh	A		-	-	21.000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
<i><b>Subtotal: 5) (FCVTS) Family of Combat Vehicle Training Sys</b></i>			-	-	<b>21.000</b>	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
<b>6) ISMT</b>																				
6.1) Modify/Alter ISMT space aboard LPD17 Class platform	A		-	-	-	-	-	-	-	-	0.200	-	-	0.200	-	-	-	-	-	0.200
6.2) ISMT Hardware Refresh (multiple locations and configurations)	A		-	-	15.543	-	-	8.159	-	-	7.958	-	-	2.473	-	-	-	-	-	2.473

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Exhibit P-40a, Budget Item Justification For Aggregated Items: PB 2019 Navy														Date: February 2018						
Appropriation / Budget Activity / Budget Sub Activity: 1109N / 06 / 3						P-1 Line Item Number / Title: 6532 / Training Devices								Aggregated Items Title: Training Devices						
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 (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)
6.3) ISMT Hardware Labor Support	A		-	-	0.190	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
6.4) ISMT Hardware Contractor Logistics Support	A		-	-	0.239	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
<b>Subtotal: 6) ISMT</b>			-	-	<b>15.972</b>	-	-	<b>8.159</b>	-	-	<b>8.158</b>	-	-	<b>2.673</b>	-	-	-	-	-	<b>2.673</b>
<b>7) MTWS</b>																				
7.1) MTWS Hardware and Software Refresh	A		-	-	-	-	-	-	-	-	-	0.904	-	-	0.752	-	-	-	-	0.752
<b>Subtotal: 7) MTWS</b>			-	-	<b>0.000</b>	-	-	-	-	-	-	<b>0.904</b>	-	-	<b>0.752</b>	-	-	-	-	<b>0.752</b>
<b>8) MCDLP</b>																				
8.1) MCDLP NAVAIR WR - Support	A		-	-	-	-	-	-	-	-	-	1.338	-	-	-	-	-	-	-	-
8.2) MCDLP NAVAIR Hardware Contract	A		-	-	-	-	-	-	-	-	-	0.500	-	-	-	-	-	-	-	-
8.3) MCDLP MITRE Test Programs	A		-	-	-	-	-	-	-	-	-	0.858	-	-	0.875	-	-	-	-	0.875
<b>Subtotal: 8) MCDLP</b>			-	-	<b>0.000</b>	-	-	-	-	-	-	<b>2.696</b>	-	-	<b>0.875</b>	-	-	-	-	<b>0.875</b>
<b>9) Ranges and Training Area Management</b>																				
9.1) RMT Multiple Instrum, MOUT, Targetry and BES TNG SYS and Range Re-Cap			-	-	299.155	-	-	11.792	-	-	18.882	-	-	21.900	-	-	-	-	-	21.900
9.2) Simulated Weapon Systems (MK19 & M41)	A		-	-	2.721	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
9.3) RM/T Support	A		-	-	1.377	-	-	0.650	-	-	0.562	-	-	0.576	-	-	-	-	-	0.576
9.4) IRSS Re-Capitalization	A		-	-	0.392	-	-	2.324	-	-	-	-	-	-	-	-	-	-	-	-
9.5) RMT Ranges Instrumentation (GUAM)	A		-	-	0.031	-	-	-	-	-	0.037	-	-	-	-	-	-	-	-	-
<b>Subtotal: 9) Ranges and Training Area Management</b>			-	-	<b>303.676</b>	-	-	<b>14.766</b>	-	-	<b>19.481</b>	-	-	<b>22.476</b>	-	-	-	-	-	<b>22.476</b>
<b>10) SAVT</b>																				
10.1) SAVT Hardware Refresh	A		-	-	-	-	-	1.419	-	-	2.218	-	-	-	-	-	-	-	-	-
10.2) SAVT Hardware Refresh Labor Support/CLS	A		-	-	-	-	-	-	-	-	0.794	-	-	-	-	-	-	-	-	-
10.3) SAVT - Post Deployment Software Support	A		-	-	-	-	-	-	-	-	1.200	-	-	-	-	-	-	-	-	-

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Exhibit P-40a, Budget Item Justification For Aggregated Items: PB 2019 Navy														Date: February 2018						
Appropriation / Budget Activity / Budget Sub Activity: 1109N / 06 / 3						P-1 Line Item Number / Title: 6532 / Training Devices								Aggregated Items Title: Training Devices						
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 (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)
<i>Subtotal: 10) SAVT</i>			-	-	0.000	-	-	1.419	-	-	4.212	-	-	-	-	-	-	-	-	-
<b>11) IMMERSIVE TRAINING RANGE SUPPORT (ITRS)</b>																				
11.1) ITRS IIT NAVFAC Training Sys Equipment Tasks	B		-	-	-	-	-	-	-	-	12.210	-	-	-	-	-	-	-	-	
11.2) ITRS IIT Range Instrumentation	A		-	-	-	-	-	-	-	-	9.176	-	-	-	-	-	-	-	-	
11.3) ITRS IIT Atmospherics	A		-	-	-	-	-	-	-	-	3.626	-	-	-	-	-	-	-	-	
<i>Subtotal: 11) IMMERSIVE TRAINING RANGE SUPPORT (ITRS)</i>			-	-	0.000	-	-	-	-	-	25.012	-	-	-	-	-	-	-	-	
<b>12) TSS</b>																				
12.1) Training Simulation Support (TSS) Training Aids			-	-	12.957	-	-	0.533	-	-	0.553	-	-	0.053	-	-	-	-	0.053	
<i>Subtotal: 12) TSS</i>			-	-	12.957	-	-	0.533	-	-	0.553	-	-	0.053	-	-	-	-	0.053	
<b>14) Prior Years Cumulative Funding</b>																				
14.1) Other Prior Year			-	-	499.004	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
<i>Subtotal: 14) Prior Years Cumulative Funding</i>			-	-	499.004	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
<b>Total</b>			-	-	<b>898.388</b>	-	-	<b>31.016</b>	-	-	<b>76.185</b>	-	-	<b>52.040</b>	-	-	-	-	<b>52.040</b>	

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

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Exhibit P-40, Budget Line Item Justification: PB 2019 Navy										Date: February 2018							
Appropriation / Budget Activity / Budget Sub Activity:					P-1 Line Item Number / Title:												
1109N: Procurement, Marine Corps / BA 06: Engineer and Other Equipment / BSA 3: General Property					6544 / Family of Construction Equipment												
ID Code (A=Service Ready, B=Not Service Ready): A			Program Elements for Code B Items: N/A					Other Related Program Elements: 0206624M									
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 (\$ in Millions)	178.865	37.318	26.286	36.156	0.000	36.156	42.705	35.829	41.372	40.876	Continuing	Continuing					
Less PY Advance Procurement (\$ in Millions)	-	-	-	-	-	-	-	-	-	-	-	-					
Net Procurement (P-1) (\$ in Millions)	178.865	37.318	26.286	36.156	0.000	36.156	42.705	35.829	41.372	40.876	Continuing	Continuing					
Plus CY Advance Procurement (\$ in Millions)	-	-	-	-	-	-	-	-	-	-	-	-					
<b>Total Obligation Authority (\$ in Millions)</b>	<b>178.865</b>	<b>37.318</b>	<b>26.286</b>	<b>36.156</b>	<b>0.000</b>	<b>36.156</b>	<b>42.705</b>	<b>35.829</b>	<b>41.372</b>	<b>40.876</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 (\$ in Millions)	-	0.051	0.052	0.053	-	0.053	0.054	0.055	0.058	0.056	Continuing	Continuing					
Flyaway Unit Cost (\$ in Dollars)	-	-	-	-	-	-	-	-	-	-	-	-					
Gross/Weapon System Unit Cost (\$ in Dollars)	-	-	-	-	-	-	-	-	-	-	-	-					
<b>Description:</b>																	
Family of Construction Equipment (FCE) provides for the replacement and Service Life Extension Program (SLEP) of Marine Corps construction equipment. Funding supports equipment to conduct engineer missions such as constructing countermobility obstacles, building pioneer roads, establishing survivability positions, development of expeditionary airfields and general engineering support to forward operating bases and lodgment areas. Airfield Damage Repair Kit (ADR) - The Marine Corps requires an Airfield Damage Repair (ADR) Kit capable of creating useable landing surfaces by new construction or repair of existing facilities. This mission has been repeatedly tested during recent operations in Afghanistan and Iraq and will be required in future operations. The ADR Kit must take advantage of modern development in construction equipment and materials, must be easily deployable, flexible enough to work in all geographic locations and environments, and be able to quickly repair craters and spalls of all sizes. The required capability for ADR Kits is to support the repairs for (6) 10-foot diameter concrete craters and (15) 10-foot diameter asphalt craters as well as 45 spalls. Also provides for Expeditionary Mobility Matting Systems (EMMS) which is modular, comprised of a kit with interchangeable parts which could be assembled into different configurations to support mission specific tasks. Those tasks range from improving mobility across beach landings and making passable paths along supply routes. This EMMS supports operations in temperate, cold weather, and desert environments.																	
Family of Material Handling Equipment (FMHE) line is a roll-up line that provides for the replacement and Service Life Extension Program (SLEP) of Marine Corps MHE such as forklifts, cranes, and container handlers. This budget line item also includes funding for equipment such as the Light Capability Rough Terrain Forklift (LCRTF), Hydraulic Excavator (HYEX), Extendable Boom Forklift Modernization (EBFL-M), Rough Terrain Container Handler (RTCH) SLEP and the Tractor, Rubber Tires, and Articulated Steering, Multiple Purpose (TRAM) SLEP.																	
Command Support Equipment - Provides for the procurement/replacement of equipment such as Class 3 (Non-industrial) and Class 4 (Industrial) equipment with system unit cost of \$250K or greater, to support the operation and mission of United States Marine Corps ground bases, air stations and districts for existing facilities.																	
Garrison Mobile Engineer Equipment (GMEE) - The Garrison Mobile Engineering Equipment (GMEE) program is a centrally-managed program for the procurement of commercial construction and engineering equipment such as graders, backhoes, cranes and other construction equipment. It provides logistical support for facilities and road maintenance, force protection barrier construction and airfield engineering.																	
Material Handling Equipment (MHE) - The Material Handling Equipment (MHE) program is a centrally-managed program for the procurement of a portfolio of replacement equipment such as forklifts, warehouse cranes and platform trucks, to include Rough Terrain Container Handler (RTCH).																	

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<b>Exhibit P-40, Budget Line Item Justification: PB 2019 Navy</b>							<b>Date:</b> February 2018			
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 1109N: Procurement, Marine Corps / BA 06: Engineer and Other Equipment / BSA 3: General Property				<b>P-1 Line Item Number / Title:</b> 6544 / Family of Construction Equipment						
<b>ID Code</b> (A=Service Ready, B=Not Service Ready): A			<b>Program Elements for Code B Items:</b> N/A					<b>Other Related Program Elements:</b> 0206624M		
<b>Line Item MDAP/MAIS Code:</b> N/A										
<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>
Navy	Quantity	-	-	-	-	-	-	-	-	-
	Total Obligation Authority	36.152	23.662	33.874	-	33.874	40.370	33.448	38.944	38.395
NR	Quantity	-	-	-	-	-	-	-	-	-
	Total Obligation Authority	1.166	2.624	2.282	-	2.282	2.335	2.381	2.428	2.481
<b>Total: Secondary Distribution</b>	Quantity	-	-	-	-	-	-	-	-	-
	<b>Total Obligation Authority</b>	<b>37.318</b>	<b>26.286</b>	<b>36.156</b>	-	<b>36.156</b>	<b>42.705</b>	<b>35.829</b>	<b>41.372</b>	<b>40.876</b>

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Exhibit P-40, Budget Line Item Justification: PB 2019 Navy							Date: February 2018			
Appropriation / Budget Activity / Budget Sub Activity:				P-1 Line Item Number / Title:						
1109N: Procurement, Marine Corps / BA 06: Engineer and Other Equipment / BSA 3: General Property				6544 / Family of Construction Equipment						
ID Code (A=Service Ready, B=Not Service Ready): A			Program Elements for Code B Items: N/A				Other Related Program Elements: 0206624M			
<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)	
P-40a	Family of Construction Equipment	P-5a			- / 178.865	- / 37.318	- / 26.286	- / 36.156	- / -	- / 36.156
<b>P-40</b>	<b>Total Gross/Weapon System Cost</b>				<b>- / 178.865</b>	<b>- / 37.318</b>	<b>- / 26.286</b>	<b>- / 36.156</b>	<b>- / 0.000</b>	<b>- / 36.156</b>
*Title represents 1) the Number / Title for Items; 2) the Number / Title [DODIC] for Ammunition; and/or 3) the Number / Title (Modification Type) for Modifications. Title represents the P-40a Title when only the P-40a Summary/Total is shown.										
Note: Totals in this Exhibit P-40 set may not be exact or sum exactly due to rounding.										
<b>Justification:</b>										
FY2018 Base Appropriation Request: \$26.286M (ACTIVE: \$23.662M/RESERVE: \$2.624M)										
Family of Construction Equipment - \$9.106M (ACTIVE: \$7.833M/RESERVE: \$1.273M): Funds continue to fund the procurement of the Airfield Damage Repair Kits, Expeditionary Matting Soil Stabilization System (EMS3) and Integrated Logistics Support for the Family of Construction Equipment programs. The ADR kit is capable of creating expedient repairs to useable landing surfaces by new construction or repair of existing facilities. ADR Kit(s) have the capability to support repairs for (6) 10-foot diameter concrete craters and (15) 10-foot diameter asphalt craters as well as 45 spills. Funding will also procure the new Expeditionary Matting Soil Stabilization System (EMS3) which is modular, comprised of a kit with interchangeable parts which could be assembled into different configurations to support mission specific tasks. Those tasks range from improving mobility across beach landings and making passable paths along supply routes. This EMS3 supports operations in temperate, cold weather, and desert environments.										
Family of Material Handling Equipment - \$11.546M (ACTIVE: \$10.195M/RESERVE: \$1.351M): Funds will procure the Tractor, Rubber Tires, and Articulated Steering, Multiple Purpose (TRAM) SLEP as well as Rough Terrain Container Handlers (RTCH) SEP to replace non-operational and over-aged forklifts, required to support the operation and mission of the USMC Bases and Stations.										
Material Handling Equipment - \$1.710M Funds will procure a portfolio of warehouse tractor forklifts, narrow aisle forklifts, various sizes (4,000 to 20,000 lbs.) forklifts, warehouse cranes and platform trucks to include Rough Terrain Container Handlers (RTCH) to replace non-operational and over-aged forklifts, required to support the operation and mission of the USMC Bases and Stations.										
Garrison Mobile Engineering Equipment \$3.453M - Funds will procure commercial engineering equipment to replace non-operational and over-aged light, medium or heavy duty tractors, road and runway sweepers, loaders, excavators, bulldozers, and scrapers required to comply with mandates and support the operation and mission of the USMC Bases and Stations.										
Command Support Equipment - \$0.471M Funding will procure emergency power generator for MCAGCC Twenty-nine Palms.										
FY2019 Base Appropriation Request: \$36.156M (ACTIVE: \$33.874M/RESERVE: \$2.282M)										
Family of Construction Equipment - \$6.718M (ACTIVE: \$5.439M/RESERVE: \$1.279M): Funds continue to fund the procurement of the Airfield Damage Repair (ADR) Kits, Expeditionary Mobility Matting System (EMMS) and Integrated Logistics Support for the Family of Construction Equipment programs. The ADR kit is capable of creating expedient repairs to useable landing surfaces by new construction or repair of existing facilities. ADR Kit(s) have the capability to support repairs for (6) 10-foot diameter concrete craters and (15) 10-foot diameter asphalt craters as well as 45 spills. Funds will also continue to procure the Expeditionary Mobility Matting System (EMMS) which is modular, comprised of a kit with interchangeable parts which could be assembled into different configurations to support mission specific tasks. Those tasks range from improving mobility across beach landings and making passable paths along supply routes. This EMMS supports operations in temperate, cold weather, and desert environments. Funds will also procure the vibratory compactor which mechanically stabilizes the soils to enable mobility operations.										
Funding decreased from FY18 to FY19 by \$2.388M due to a reduction in AAO for the Expeditionary Mobility Matting System (EMMS).										
Family of Material Handling Equipment - \$23.187M (ACTIVE: \$22.184M/RESERVE: \$1.003M): Funds will procure the All-Terrain Crane (MAC-50) as well as Rough Terrain Container Handlers (RTCH) SLEP to replace non-operational and over-aged forklifts, required to support the operation and mission of the USMC Bases and Stations.										

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<b>Exhibit P-40, Budget Line Item Justification:</b> PB 2019 Navy		<b>Date:</b> February 2018
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 1109N: Procurement, Marine Corps / BA 06: Engineer and Other Equipment / BSA 3: General Property	<b>P-1 Line Item Number / Title:</b> 6544 / Family of Construction Equipment	
<b>ID Code</b> (A=Service Ready, B=Not Service Ready): A	<b>Program Elements for Code B Items:</b> N/A	<b>Other Related Program Elements:</b> 0206624M
<b>Line Item MDAP/MAIS Code:</b> N/A		
Funding increased from FY18 to FY19 by \$11.641M to improve operational readiness levels to the All-Terrain Crane (MAC-50) and RTCH required to support the operation and mission of the USMC Bases and Stations.		
Material Handling Equipment - \$1.938M Funds will procure a portfolio of warehouse tractor forklifts, narrow aisle forklifts, various sizes (4,000 to 20,000 lbs.) forklifts, warehouse cranes and platform trucks to include Rough Terrain Container Handlers (RTCH) to replace non-operational and over-aged forklifts, required to support the operation and mission of the USMC Bases and Stations. Additionally, funds will procure equipment used to maintain ranges and fight wild-land fires.		
Garrison Mobile Engineering Equipment \$3.922M - Funds will procure commercial engineering equipment to replace non-operational and over-aged light, medium or heavy duty tractors, road and runway sweepers, loaders, excavators, bulldozers, and scrapers required to comply with mandates and support the operation and mission of the USMC Bases and Stations. Additionally, funds will procure equipment used to maintain ranges and fight wild-land fires.		
Command Support Equipment - \$0.391M Funding will support life cycle replacement of heavy metal recycling equipment at MCAGCC 29 Palms, CA.		
OCO: FY2018 Overseas Contingency Operations (OCO) Request: N/A		
FY2019 Overseas Contingency Operations (OCO) Request: N/A		

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Exhibit P-40a, Budget Item Justification For Aggregated Items: PB 2019 Navy														Date: February 2018					
Appropriation / Budget Activity / Budget Sub Activity: 1109N / 06 / 3						P-1 Line Item Number / Title: 6544 / Family of Construction Equipment								Aggregated Items Title: Family of Construction Equipment					
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 (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)
<b>1) Family of Construction Equipment</b>																			
1.1) Laser Leveling System	A		499,676.47	34	16.989	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1.2) Marine Corps Tactical Weld Shop <sup>(†)</sup>	A		147,109.59	73	10.739	124,987.00	89	11.124	-	-	-	-	-	-	-	-	-	-	-
1.3) Marine Corps Tactical Weld Shop-Reserves <sup>(†)</sup>	A		222,200.00	10	2.222	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1.5) Medium Crawler Tractor SLEP-Reserves	A		-	-	-	-	-	-	-	-	1.273	-	-	-	-	-	-	-	-
1.6) Family of Construction Equipment Integrated Logistics Support	A		-	-	13.780	-	-	-	-	-	0.532	-	-	0.403	-	-	-	-	0.403
1.7) Airfield Damage Repair Kit	A		-	-	-	-	-	15.482	-	-	5.621	-	-	3.036	-	-	-	-	3.036
1.8) Airfield Damage Repair Kit - Reserves	A		-	-	-	-	-	-	-	-	-	-	-	1.279	-	-	-	-	1.279
1.9) Expeditionary Matting Soil Stabilization System	A		-	-	-	-	-	-	-	-	1.680	-	-	2.000	-	-	-	-	2.000
1.10) Prior Years Cumulative Funding	A		-	-	135.135	-	-	-	-	-	-	-	-	-	-	-	-	-	-
<b>Subtotal: 1) Family of Construction Equipment</b>			-	-	<b>178.865</b>	-	-	<b>26.606</b>	-	-	<b>9.106</b>	-	-	<b>6.718</b>	-	-	-	-	<b>6.718</b>
<b>2) Family of Material Handling Equipment</b>																			
2.1) Rough Terrain Container Handler SLEP	A		-	-	-	-	-	-	-	-	1.779	-	-	8.087	-	-	-	-	8.087
2.2) All-Terrain Crane 50 Ton SLEP	A		-	-	-	-	-	-	-	-	-	-	-	14.097	-	-	-	-	14.097
2.3) All-Terrain Crane 50 Ton SLEP-Reserves	A		-	-	-	-	-	-	-	-	-	-	-	1.003	-	-	-	-	1.003
2.4) Tractor Rubber Tired Articulated SLEP	A		-	-	-	-	-	-	-	-	8.416	-	-	-	-	-	-	-	-
2.5) Tractor Rubber Tired Articulated SLEP-Reserves	A		-	-	-	-	-	-	-	-	1.351	-	-	-	-	-	-	-	-
2.6) Material Handling Equipment Integrated Logistics Support	A		-	-	-	-	-	-	-	-	1.166	-	-	-	-	-	-	-	-

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Exhibit P-40a, Budget Item Justification For Aggregated Items: PB 2019 Navy														Date: February 2018						
Appropriation / Budget Activity / Budget Sub Activity: 1109N / 06 / 3					P-1 Line Item Number / Title: 6544 / Family of Construction Equipment									Aggregated Items Title: Family of Construction Equipment						
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 (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ M)	Qty (Each)	Total Cost (\$ M)
<i>Subtotal: 2) Family of Material Handling Equipment</i>			-	-	0.000	-	-	1.166	-	-	11.546	-	-	23.187	-	-	-	-	-	23.187
<b>3) Garrison Mobile Engineering Equipment</b>																				
3.1) Garrison Mobile Engineering Equipment	A		-	-	-	-	-	2.007	-	-	3.453	-	-	3.922	-	-	-	-	-	3.922
<i>Subtotal: 3) Garrison Mobile Engineering Equipment</i>			-	-	0.000	-	-	2.007	-	-	3.453	-	-	3.922	-	-	-	-	-	3.922
<b>4) Material Handling Equipment</b>																				
4.1) Material Handling Equipment	A		-	-	-	-	-	1.031	-	-	1.710	-	-	1.938	-	-	-	-	-	1.938
<i>Subtotal: 4) Material Handling Equipment</i>			-	-	0.000	-	-	1.031	-	-	1.710	-	-	1.938	-	-	-	-	-	1.938
<b>5) Command Support Equipment</b>																				
5.1) Command Support Equipment	A		-	-	-	-	-	6.508	-	-	0.471	-	-	0.391	-	-	-	-	-	0.391
<i>Subtotal: 5) Command Support Equipment</i>			-	-	0.000	-	-	6.508	-	-	0.471	-	-	0.391	-	-	-	-	-	0.391
<b>Total</b>			-	-	<b>178.865</b>	-	-	<b>37.318</b>	-	-	<b>26.286</b>	-	-	<b>36.156</b>	-	-	-	-	-	<b>36.156</b>

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

(†) indicates the presence of a P-5a

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Exhibit P-5a, Procurement History and Planning: PB 2019 Navy								Date: February 2018				
Appropriation / Budget Activity / Budget Sub Activity: 1109N / 06 / 3			P-1 Line Item Number / Title: 6544 / Family of Construction Equipment					Aggregated Items: Family of Construction Equipment				
Item Number / Title [DODIC]	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 (\$)	Specs Avail Now?	Date Revision Available	RFP Issue Date
<b>1) Family of Construction Equipment</b>												
1.2) Marine Corps Tactical Weld Shop		2016	Caroline Growler, Inc / Star, NC	C / FFP	MCSC Quantico, VA	Jun 2016	Jun 2017	48	129,000.00	Y		Jun 2014
1.2) Marine Corps Tactical Weld Shop		2017 <sup>(1)</sup>	Caroline Growler, Inc / Star, NC	C / FFP	MCSC Quantico, VA	Feb 2017	Oct 2017	89	124,987.00	Y		Jun 2014
1.3) Marine Corps Tactical Weld Shop-Reserves		2016	Carolina Growler, Inc / Star, NC	C / FFP	MCSC Quantico, VA	Oct 2015	Sep 2017	10	132,200.00	Y		Jun 2014

**Footnotes:**

<sup>(1)</sup> FY2016 and FY2017 exercising Delivery Orders against Basic Contract

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<b>Exhibit P-40, Budget Line Item Justification: PB 2019 Navy</b>										<b>Date:</b> February 2018			
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 1109N: Procurement, Marine Corps / BA 06: Engineer and Other Equipment / BSA 3: General Property					<b>P-1 Line Item Number / Title:</b> 6545 / Family of Internally Trans Veh (ITV)								
ID Code (A=Service Ready, B=Not Service Ready): B			Program Elements for Code B Items: N/A					Other Related Program Elements: 0206623M					
<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 (\$ in Millions)	101.038	9.282	1.583	0.606	0.000	0.606	0.648	4.022	5.957	8.831	-	131.967	
Less PY Advance Procurement (\$ in Millions)	-	-	-	-	-	-	-	-	-	-	-	-	
Net Procurement (P-1) (\$ in Millions)	101.038	9.282	1.583	0.606	0.000	0.606	0.648	4.022	5.957	8.831	-	131.967	
Plus CY Advance Procurement (\$ in Millions)	-	-	-	-	-	-	-	-	-	-	-	-	
<b>Total Obligation Authority (\$ in Millions)</b>	<b>101.038</b>	<b>9.282</b>	<b>1.583</b>	<b>0.606</b>	<b>0.000</b>	<b>0.606</b>	<b>0.648</b>	<b>4.022</b>	<b>5.957</b>	<b>8.831</b>	<b>-</b>	<b>131.967</b>	
<i>(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)</i>													
Initial Spares (\$ in Millions)	-	-	-	-	-	-	-	-	-	-	-	-	
Flyaway Unit Cost (\$ in Dollars)	-	-	-	-	-	-	-	-	-	-	-	-	
Gross/Weapon System Unit Cost (\$ in Dollars)	-	-	-	-	-	-	-	-	-	-	-	-	
<b>Description:</b>													
The Family of Internally Transportable Vehicles (FITV), including the Utility Task Vehicle (UTV) are light weight and internally transportable in the V-22, CH-53D & CH53E helos. The FITV provides deployed Marine Air-Ground Task Force (MAGTF) and Marine Expeditionary Unit (Special Operations Capable) (MEU SOC) with vehicles, which are internally transportable in selected rotary and fixed wing aircraft. The FITV expeditionary vehicles support over-the-horizon amphibious operations, irregular warfare and enhanced company operations. The vehicles are fielded to infantry and reconnaissance communities. Speed, maneuverability, and the use of cover and concealment are the crew's primary means of survival.													
Based on MROC decision memorandum 02-2018 titled Expeditionary Fire Support System (EFSS) divestiture, the Marine Corps will divest of ITV prime mover and light strike variants and move toward modernization as Internally Transportable Vehicle (ITV) replacement alternatives are explored.													
The UTV is a part of the family of vehicles that provides infantry and reconnaissance battalions with a reliable, easily maintained, inexpensive vehicle to support dispersed and disaggregated operations in support of the future concepts outlined in Expeditionary Force-21 (EF-21). The UTV fills a capability gap in motorized logistics sustainment/casualty evacuation (CASEVAC) for Marine Corps infantry units. UTV's are employed by the helo companies of the MEUs and Special Purpose (SP) MAGTFs as they execute heliborne and tiltrotor operations. This commercial off the shelf (COTS) solution mitigates the infantry battalion support gap, with the ability to operate in remote, rural regions where currently fielded ground mobility platforms are unsuitable due to size, weight, and safety concerns.													
Efforts will begin to replace the current Family of Internally Transportable Vehicles (FITV) and Utility Task Vehicle (UTV). The replacement vehicle will be a multirole vehicle providing a deployed SP MAGTF and MEU SOC with an internally transportable vehicle to support over-the-horizon amphibious operations, irregular warfare and enhanced company operations. It will provide support to Reconnaissance, Infantry and Marine Corps Forces Special Operations Command (MARSOC). This capability will be employed by Marine Corps forces as they execute heliborne and tiltrotor operations.													
The FITV program will provide for the implementation of engineering change proposals, safety initiatives, and quality design resolutions to fielded UTVs. This hands-on method ensures proper in-service management and vehicle sustainment while allowing the program office to develop and implement improvements as needed to respond to evolving requirements of the Marine Corps that affect vehicle reliability, availability and readiness.													

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Exhibit P-40, Budget Line Item Justification: PB 2019 Navy							Date: February 2018		
Appropriation / Budget Activity / Budget Sub Activity:				P-1 Line Item Number / Title:					
1109N: Procurement, Marine Corps / BA 06: Engineer and Other Equipment / BSA 3: General Property				6545 / Family of Internally Trans Veh (ITV)					
ID Code (A=Service Ready, B=Not Service Ready): B		Program Elements for Code B Items: N/A				Other Related Program Elements: 0206623M			
Line Item MDAP/MAIS Code: 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)
P-5	1 / Family of Internally Trans Veh (ITV)	P-5a, P-21			- / 101.038	- / 9.282	- / 1.583	- / 0.606	- / 0.000
P-40	Total Gross/Weapon System Cost				- / 101.038	- / 9.282	- / 1.583	- / 0.606	- / 0.000
*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.									
<b>Justification:</b> FY 2018 Base Appropriation Request: \$1.583M									
Due to the Marine Corps decision and the divestiture of the ITV prime mover and light strike variants, funding will be used to provide product improvements to the existing UTV Fleet to address safety and reliability issues, engineering change proposals and technical manual updates, as required, based on feedback from the users of this COTS item in the operational environment.									
FY 2019 Base Appropriation Request: \$0.606									
Funding will provide for product improvement to the centrally managed UTV fleet for safety and reliability issues and engineering change proposals. The funds will also support the associated update of the technical documentation upon modification of the vehicles. The decrease of (\$0.977M) from FY18 to FY19 is due to the completion of the pre-induction repairs and the kit installations for the final ITV Improvement Initiative (I-Cubed) vehicles.									

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<b>Exhibit P-5, Cost Analysis:</b> PB 2019 Navy													<b>Date:</b> February 2018						
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 1109N / 06 / 3			<b>P-1 Line Item Number / Title:</b> 6545 / Family of Internally Trans Veh (ITV)										<b>Item Number / Title [DODIC]:</b> 1 / Family of Internally Trans Veh (ITV)						
<b>ID Code</b> (A=Service Ready, B=Not Service Ready) :													<b>MDAP/MAIS Code:</b>						
<b>Resource Summary</b>				<b>Prior Years</b>			<b>FY 2017</b>		<b>FY 2018</b>		<b>FY 2019 Base</b>		<b>FY 2019 OCO</b>		<b>FY 2019 Total</b>				
Procurement Quantity ( <i>Units in Each</i> )				-			-		-		-		-		-				
Gross/Weapon System Cost (\$ in Millions)				101.038			9.282		1.583		0.606		0.000		0.606				
Less PY Advance Procurement (\$ in Millions)				-			-		-		-		-		-				
Net Procurement (P-1) (\$ in Millions)				101.038			9.282		1.583		0.606		0.000		0.606				
Plus CY Advance Procurement (\$ in Millions)				-			-		-		-		-		-				
<b>Total Obligation Authority</b> (\$ in Millions)				101.038			9.282		1.583		0.606		0.000		0.606				
(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 Dollars)				-			-		-		-		-		-				
Note: Subtotals or Totals in this Exhibit P-5 may not be exact or sum exactly due to rounding.																			
<b>Cost Elements</b>	<b>Prior Years</b>			<b>FY 2017</b>			<b>FY 2018</b>			<b>FY 2019 Base</b>			<b>FY 2019 OCO</b>			<b>FY 2019 Total</b>			
	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	
Flyaway Cost																			
Recurring Cost																			
1.1.1) Production Acceptance Testing	-	-	0.007	-	-	0.252	-	-	-	-	-	-	-	-	-	-	-		
1.1.2) Modification Kits <sup>(1)</sup>	26,206.45	155	4.062	26,216.67	40	1.049	-	-	-	-	-	-	-	-	-	-	-		
1.1.3) Prior years Cumulative Funding	-	-	87.712	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
1.1.4) Initial Spares	-	-	-	-	-	0.524	-	-	-	-	-	-	-	-	-	-	-		
1.1.5) Utility Task Vehicle <sup>(1)(1)</sup>	50,513.89	144	7.274	50,513.89	104	5.253	-	-	-	-	-	-	-	-	-	-	-		
<i>Subtotal: Recurring Cost</i>	-	-	<b>99.055</b>	-	-	<b>7.078</b>	-	-	-	-	-	-	-	-	-	-	-		
<i>Subtotal: Flyaway Cost</i>	-	-	<b>99.055</b>	-	-	<b>7.078</b>	-	-	-	-	-	-	-	-	-	-	-		
Support Cost																			
2.1) Pre-induction Repairs	-	-	-	-	-	0.995	-	-	-	-	-	-	-	-	-	-	-		
2.2) UTV ECPs	-	-	-	-	-	-	-	-	0.759	-	-	-	-	-	-	-	-		
2.3) Kit Installation	-	-	1.254	-	-	0.951	-	-	-	-	-	-	-	-	-	-	-		
2.4) UTV Technical Documentation <sup>(2)</sup>	-	-	0.729	-	-	0.258	-	-	0.226	-	-	0.224	-	-	-	-	0.224		
2.5) UTV Safety Modifications <sup>(3)</sup>	-	-	-	-	-	-	-	-	0.238	-	-	0.247	-	-	-	-	0.247		
2.9) UTV Reliability Engineering <sup>(4)</sup>	-	-	-	-	-	-	-	-	0.360	-	-	0.135	-	-	-	-	0.135		

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Exhibit P-5, Cost Analysis: PB 2019 Navy													Date: February 2018													
Appropriation / Budget Activity / Budget Sub Activity: 1109N / 06 / 3				P-1 Line Item Number / Title: 6545 / Family of Internally Trans Veh (ITV)									Item Number / Title [DODIC]: 1 / Family of Internally Trans Veh (ITV)													
ID Code (A=Service Ready, B=Not Service Ready) :													MDAP/MAIS Code:													
Note: Subtotals or Totals in this Exhibit P-5 may not be exact or sum exactly due to rounding.																										
Cost Elements	Prior Years			FY 2017			FY 2018			FY 2019 Base			FY 2019 OCO			FY 2019 Total										
	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)								
<i>Subtotal: Support Cost</i>	-	-	<b>1.983</b>	-	-	<b>2.204</b>	-	-	<b>1.583</b>	-	-	<b>0.606</b>	-	-	-	-	-	<b>0.606</b>								
<i>Gross/Weapon System Cost</i>	-	-	<b>101.038</b>	-	-	<b>9.282</b>	-	-	<b>1.583</b>	-	-	<b>0.606</b>	-	-	<b>0.000</b>	-	-	<b>0.606</b>								

**Remarks:**

[Support Cost] UTV's are deployed to infantry battalions and the Reconnaissance units. Operational feedback will result in the need for product improvements to the UTV Fleet to address safety and reliability issues.

(†) indicates the presence of a P-5a

**Footnotes:**

- (1) FY17 reflects the procurement of 104 Utility Task Vehicles (UTV) increasing the AAO for UTVs from 144 to 248, per the Capability Requirement Change memo of 7 June 2017. The additional vehicles address the reconnaissance unit mobility requirement.
- (2) FY19 will support the update of technical documentation associated with UTV vehicle improvements.
- (3) UTV's are deployed to the infantry battalions and the Reconnaissance units. Continuous feedback provided on these vehicles results in necessary safety modifications.
- (4) Funding is provided for reliability engineering in support of product improvement to the UTV Fleet to address emergent fact of life reliability issues based on feedback from the operational users.

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Exhibit P-5a, Procurement History and Planning: PB 2019 Navy								Date: February 2018				
Appropriation / Budget Activity / Budget Sub Activity: 1109N / 06 / 3			P-1 Line Item Number / Title: 6545 / Family of Internally Trans Veh (ITV)					Item Number / Title [DODIC]: 1 / Family of Internally Trans Veh (ITV)				
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 (\$)	Specs Avail Now?	Date Revision Available	RFP Issue Date
1.1.2) Modification Kits <sup>(†)</sup>		2016	NSWC, Crane@Crane,IN / CRANE, IN	C / FFP	NSWC, Crane IN	Jul 2016	Sep 2016	155	26,206.45	Y		Nov 2015
1.1.2) Modification Kits <sup>(†)</sup>		2017	NSWC, Crane@Crane,IN / CRANE, IN	C / FFP	NSWC, Crane IN	Apr 2017	Jun 2017	40	26,216.67	Y		Nov 2015
1.1.5) Utility Task Vehicle		2016	Polaris Defense / Wyoming, MN	SS / BPA	GSA	Oct 2016	Dec 2016	144	50,513.89	Y		
1.1.5) Utility Task Vehicle		2017	Polaris Defense / Wyoming, MN	SS / BPA	GSA	Aug 2017	Oct 2017	104	50,513.89	Y		

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

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Exhibit P-21, Production Schedule: PB 2019 Navy																					Date: February 2018																																																																																																																																																																																																																								
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<b>Exhibit P-21, Production Schedule: PB 2019 Navy</b>								<b>Date:</b> February 2018				
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 1109N / 06 / 3			<b>P-1 Line Item Number / Title:</b> 6545 / Family of Internally Trans Veh (ITV)					<b>Item Number / Title [DODIC]:</b> 1 / Family of Internally Trans Veh (ITV)				
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	NSWC, Crane@Crane,IN - CRANE, IN	40	195	195	0	0	2	2	0	0	0	0

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

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

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Exhibit P-40, Budget Line Item Justification: PB 2019 Navy										Date: February 2018							
Appropriation / Budget Activity / Budget Sub Activity:					P-1 Line Item Number / Title:												
1109N: Procurement, Marine Corps / BA 06: Engineer and Other Equipment / BSA 4: Other Support					6670 / Items Less Than \$5 Million												
<b>ID Code</b> (A=Service Ready, B=Not Service Ready): B			<b>Program Elements for Code B Items:</b> N/A					<b>Other Related Program Elements:</b> 0206624M									
<b>Line Item MDAP/MAIS Code:</b> 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 (\$ in Millions)	33.289	6.383	7.716	11.608	0.000	11.608	12.480	11.517	9.914	10.161	Continuing	Continuing					
Less PY Advance Procurement (\$ in Millions)	-	-	-	-	-	-	-	-	-	-	-	-					
Net Procurement (P-1) (\$ in Millions)	33.289	6.383	7.716	11.608	0.000	11.608	12.480	11.517	9.914	10.161	Continuing	Continuing					
Plus CY Advance Procurement (\$ in Millions)	-	-	-	-	-	-	-	-	-	-	-	-					
<b>Total Obligation Authority (\$ in Millions)</b>	<b>33.289</b>	<b>6.383</b>	<b>7.716</b>	<b>11.608</b>	<b>0.000</b>	<b>11.608</b>	<b>12.480</b>	<b>11.517</b>	<b>9.914</b>	<b>10.161</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 (\$ in Millions)	-	-	-	-	-	-	-	-	-	-	-	-					
Flyaway Unit Cost (\$ in Dollars)	-	-	-	-	-	-	-	-	-	-	-	-					
Gross/Weapon System Unit Cost (\$ in Dollars)	-	-	-	-	-	-	-	-	-	-	-	-					
<b>Description:</b>																	
This budget line item includes various procurements such as engineering efforts, engineering change proposals, modifications, and other related items less than \$5 million each.																	
Corrosion Prevention and Control (CPAC) Program provides a comprehensive approach to extend the useful life on Marine Corps tactical ground and ground support equipment. The CPAC Program Office is responsible for the governance, oversight and management of both preventive and corrective corrosion control encompassing Acquisition Engineering, Material Development, Corrosion Service Teams, and Corrosion Repair Facility activities. The Consolidated CPAC Program provides a total lifecycle solution focused on Total Ownership Cost reduction and improved readiness.																	
Engineer Mods and Tool Kits funds critical improvements to various pieces of equipment by enhancing their current capabilities and expanding protection from direct and indirect fire by providing specific tool kits, including the specific chest or case to store and transport the tools, to perform specific missions assigned to engineer units, such as carpentry, grubbing or clearing areas with pioneer type tools, destruction/demolition, masonry, electrical (base camp support), plumbing, etc. including (but not limited to) Construction Shop Kit, Pioneer Platoon Kit, Pioneer Squad Kit, Carpenter Kit, Mason Kit, and tactical weld shop upgrades.																	
Marine Corps Family of Containers (MFCF) provides Marine Corps Operating Forces with a fully intermodal transport capability emphasizing dimensional standardization and International Organization for Standardization compatibility. Containers such as Pallet (PALCONs), Quadruple (QUADCONs), Quadruple with Roll-up door (QUADCON RUD) and Joint Modular Intermodal Container (JMIC) are procured. Containers will replace locally assembled prefabricated wooden mount out boxes and flat box pallets. The containers will be used to support storage and movement of organizational property and consumable supplies; provide field, garrison and shipboard warehousing; and facilitate ship-to-shore movement. The Joint Modular Intermodal Container (JMIC) provides efficient, seamless, and visible movement of supplies and unit equipment throughout the transportation and distribution systems.																	
Family of Expeditionary Water Systems (FEWS) is a family of systems line that contains items such as the Tactical Water Purification System (TWPS), Lightweight Water Purification System (LWPS), Expeditionary Water Distribution System (EWDS), Platoon Water Purification System (PWPS), Individual Water Purification System (IWPS), Forward Area Water Point Supply System, Pump Unit Set, Containerized Batch Laundry, Shower Systems, as well as all the various water supply support and analysis components and equipment including Six Container (SIXCON) Pump and Tank Modules, Nozzles, Interconnection Sets, Water Packaging Components, 3k/5k/25k Tanks, Hypochlorination Units, Water Quality Analysis Sets necessary to support the storage, distribution and analysis of potable water. The TWPS produces up to 1,500 gallons per hour (GPH), it is a mobile water treatment system that allows the commander to produce bulk water supplies at battalion and regimental level. The LWPS is a lightweight modular, self-contained system that uses filtration and reverse osmosis technology to produce up to 230 GPH of potable water from fresh, brackish, salt, and nuclear, biological, and chemical (NBC) contaminated water. This capability is necessary to provide safe and potable water to company units in an expeditionary environment or in extended company operations. PWPS is a vehicle																	

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<b>Exhibit P-40, Budget Line Item Justification: PB 2019 Navy</b>							<b>Date:</b> February 2018											
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 1109N: Procurement, Marine Corps / BA 06: Engineer and Other Equipment / BSA 4: Other Support				<b>P-1 Line Item Number / Title:</b> 6670 / Items Less Than \$5 Million														
<b>ID Code</b> (A=Service Ready, B=Not Service Ready): B			<b>Program Elements for Code B Items:</b> N/A					<b>Other Related Program Elements:</b> 0206624M										
<b>Line Item MDAP/MAIS Code:</b> N/A																		
transported system with a 2 person lift capability. It purifies a minimum of 15 GPH for fresh, brackish, and salt water. IWPS is an individual water purification system that is designed to provide emergency or short term drinking water to the individual Marine from a fresh water source.																		
Secondary Distribution	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023									
Navy	Quantity	-	-	-	-	-	-	-	-	-								
	Total Obligation Authority	5.792	7.634	11.098	-	11.098	12.109	11.140	9.529	9.767								
NR	Quantity	-	-	-	-	-	-	-	-	-								
	Total Obligation Authority	0.591	0.082	0.510	-	0.510	0.371	0.377	0.385	0.394								
<b>Total: Secondary Distribution</b>	<b>Quantity</b>	-	-	-	-	-	-	-	-	-								
	<b>Total Obligation Authority</b>	<b>6.383</b>	<b>7.716</b>	<b>11.608</b>	<b>-</b>	<b>11.608</b>	<b>12.480</b>	<b>11.517</b>	<b>9.914</b>	<b>10.161</b>								

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Exhibit P-40, Budget Line Item Justification: PB 2019 Navy							Date: February 2018			
Appropriation / Budget Activity / Budget Sub Activity:				P-1 Line Item Number / Title:						
1109N: Procurement, Marine Corps / BA 06: Engineer and Other Equipment / BSA 4: Other Support				6670 / Items Less Than \$5 Million						
ID Code (A=Service Ready, B=Not Service Ready): B		Program Elements for Code B Items: N/A				Other Related Program Elements: 0206624M				
<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)	
P-40a	Items Less Than \$5 Million	P-5a			- / 33.289	- / 6.383	- / 7.716	- / 11.608	- / -	- / 11.608
<b>P-40</b>	<b>Total Gross/Weapon System Cost</b>				<b>- / 33.289</b>	<b>- / 6.383</b>	<b>- / 7.716</b>	<b>- / 11.608</b>	<b>- / 0.000</b>	<b>- / 11.608</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. Title represents the P-40a Title when only the P-40a Summary/Total is shown.										
Note: Totals in this Exhibit P-40 set may not be exact or sum exactly due to rounding.										
<b>Justification:</b>										
FY2018 Base Appropriation Request: \$7.716M (ACTIVE: \$7.634M/RESERVE: \$0.082M)										
Corrosion Prevention and Control (CPAC) \$0.867M: Continues to fund the procurement of equipment protective covers designed to reduce and/or eliminate the negative effects of corrosion on USMC ground tactical and support equipment, and the replacement of aging covers that have exceeded their expected life cycle to prevent failure in the field. The priority will be to provide equipment covers for equipment at II MEF, MARFORRES, and MARSOC for USMC equipment placed in an administrative staging program to mitigate the negative impacts of corrosion and decrease total ownership costs. Additionally, procurement funding will be used to replace aging blast and painting equipment at the Corrosion Repair Facilities (CRF's) located at I MEF, II MEF, and III MEF which are managed by the consolidated CPAC program currently monitoring the health on 92,758 tactical ground and support equipment assets.										
Engineer Modification Kits (EMK) \$3.541: Continues to fund EMK for equipment armor installations, upgrades and safety concerns to prevent deterioration in Fleet readiness for Engineer Systems inventory consisting of over 47,000 end items associated to 120 TAMCNs. Supports modifications and upgrades to fielded legacy as well as newly fielded systems and provides quick response capability for meeting Fleet Marine Force sustainment for safety engineering, readiness, Quality Deficiency Report analysis, and legacy system modifications.										
Marine Corps Family of Containers (MCFC) \$1.297M: Funds the Joint Modular Intermodal Containers. Funding required to meet the Approved Acquisition Objectives outlined in the Total Force Structure Management System.										
Family of Expeditionary Water Systems (FEWS) \$2.011M: (ACTIVE: \$1.929M/RESERVES \$0.082M): Funds procure PWPS and supports the procurement of a critically needed ECP for the M80 Water Heater.										
FY2019 Base Appropriation Request: \$11.608M (ACTIVE: \$11.095M/RESERVE: \$0.513M)										
Marine Corps Family of Containers (MCFC) \$1.087M: Continues to fund Joint Modular Intermodal Containers. The JMIC is a collapsible, durable, reusable, easy-to-handle, modular packaging container that can operate world-wide, carried by various modes of transportation, and is envisioned for future use as a compliment to Navy seabasing efforts for automatic loading, handling, and storage systems. The JMIC will enable Marines to fulfill their mission by giving the unit commander the flexibility to configure a mobile/deployable container as necessary to meet the specific mission of the unit. It provides the operating forces with a fully intermodal transport capability which lays flat when not in use. The JMIC also provides a more effective use of storage areas in particularly limited storage facilities. Funding is required to meet the Approved Acquisition Objectives outlined in the Total Force Structure Management System. Decrease in funding of \$0.210M from FY18 to FY19 aligns with the procurement plan for JMICs.										
Corrosion Prevention and Control (CPAC) \$0.885M: Continues to fund the procurement of equipment protective covers designed to reduce and/or eliminate the negative effects of corrosion on USMC ground tactical and support equipment, and the replacement of aging covers that have exceeded their expected life cycle to prevent failure in the field. The priority will be to provide equipment covers for equipment at I MEF, II MEF, III MEF, MARFORRES, and MARSOC for USMC equipment placed in an administrative staging program to mitigate the negative impacts of corrosion and decrease total ownership costs.										

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<b>Exhibit P-40, Budget Line Item Justification:</b> PB 2019 Navy		<b>Date:</b> February 2018
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 1109N: Procurement, Marine Corps / BA 06: Engineer and Other Equipment / BSA 4: Other Support	<b>P-1 Line Item Number / Title:</b> 6670 / Items Less Than \$5 Million	
<b>ID Code</b> (A=Service Ready, B=Not Service Ready): B	<b>Program Elements for Code B Items:</b> N/A	<b>Other Related Program Elements:</b> 0206624M
<b>Line Item MDAP/MAIS Code:</b> N/A		
Additionally, procurement funding will be used to replace aging blast and painting equipment at the Corrosion Repair Facilities (CRF's) located at I MEF, II MEF, and III MEF which are managed by the consolidated CPAC program currently monitoring the health on 102,581 tactical ground and support equipment assets.		
Engineer Modification Kits (EMK) \$5.373M (ACTIVE: \$5.194M/RESERVE: \$0.179M): Continues to fund EMK for equipment armor installations, upgrades and safety concerns to prevent deterioration in Fleet readiness for Engineer Systems inventory consisting of over 47,000 end items associated to 120 TAMCNs. Supports modifications and upgrades to fielded legacy as well as newly fielded systems and provides quick response capability for meeting Fleet Marine Force sustainment for safety engineering, readiness, Quality Deficiency Report analysis, and legacy system modifications. The increase in funding from FY18 to FY19 of \$1.653M supports Assault Breacher Vehicle (ABV) engineering change proposals (ECPs) and cyber support through Toughbook procurement and refresh.		
Family of Expeditionary Water Systems (FEWS) \$4.263M (ACTIVE: \$3.932M/RESERVES \$0.331M): Funds procure PWPS and supports the procurement of a critically needed ECP for the M80 Water Heater. The increase in funding from FY18 to FY19 \$2.329M supports procurement of PWPS and a critically needed ECP for the M80 water Heater.		
OCO: -FY2019 Overseas Contingency Operations (OCO) Request: N/A		

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Exhibit P-40a, Budget Item Justification For Aggregated Items: PB 2019 Navy														Date: February 2018						
Appropriation / Budget Activity / Budget Sub Activity: 1109N / 06 / 4					P-1 Line Item Number / Title: 6670 / Items Less Than \$5 Million									Aggregated Items Title: Items Less Than \$5 Million						
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 (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)
<b>1) Items Less Than \$5 Million</b>																				
1.1) Prior Years Cumulative Funding	A		-	-	7.012	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
<i>Subtotal: 1) Items Less Than \$5 Million</i>			-	-	<b>7.012</b>	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
<b>2) Corrosion Prevention and Control (420114)</b>																				
2.1) Corrosion Prevention and Control (420114)	A		-	-	2.283	-	-	0.863	-	-	0.867	-	-	0.885	-	-	-	-	0.885	
<i>Subtotal: 2) Corrosion Prevention and Control (420114)</i>			-	-	<b>2.283</b>	-	-	<b>0.863</b>	-	-	<b>0.867</b>	-	-	<b>0.885</b>	-	-	-	-	<b>0.885</b>	
<b>3) Marine Corps Family of Containers (438098)</b>																				
3.1) Quadruple Container With Roll Up Doors - Active <sup>(1)</sup>	A		-	-	-	7,078.00	3	0.021	-	-	-	-	-	-	-	-	-	-	-	
3.2) Quadruple Container RUD - Active <sup>(1)</sup>	A		-	-	-	6,924.00	42	0.291	-	-	-	-	-	-	-	-	-	-	-	
3.3) Joint Modular Intermodal Containers (JMIC) - Active <sup>(1)(t)</sup>	A		-	-	-	2,087.00	40	0.083	2,098.00	618	1.296	2,136.36	508	1.085	-	-	-	2,136.36	508	1.085
3.4) Joint Modular Intermodal Container (JMIC)-Reserves <sup>(2)(t)</sup>	A		-	-	-	2,087.00	171	0.357	-	-	-	-	-	-	-	-	-	-	-	
3.5) Integrated Logistics Support (MCFC) - Active	A		-	-	-	-	-	0.012	-	-	0.001	-	-	0.002	-	-	-	-	0.002	
<i>Subtotal: 3) Marine Corps Family of Containers (438098)</i>			-	-	<b>0.000</b>	-	-	<b>0.764</b>	-	-	<b>1.297</b>	-	-	<b>1.087</b>	-	-	-	-	<b>1.087</b>	
<b>4) Family of Expeditionary Water Systems (260412)</b>																				
4.1) FEWS Individual Water Purification Systems (Reserves) <sup>(3)(t)</sup>	B		-	-	-	100.00	590	0.059	-	-	-	-	-	-	-	-	-	-	-	
4.2) FEWS Individual Water Purification Systems (Active) <sup>(t)</sup>	B		-	-	-	100.00	11,610	1.161	-	-	-	-	-	-	-	-	-	-	-	
4.3) FEWS Platoon Water Purification Systems (Active) <sup>(t)</sup>	B		-	-	-	-	-	-	15,071.68	128	1.929	14,800.00	217	3.212	-	-	-	14,800.00	217	3.212
4.6) FEWS Integrated Logistics Support (Active)	A		-	-	-	-	-	-	-	-	-	-	-	0.720	-	-	-	-	0.720	

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Exhibit P-40a, Budget Item Justification For Aggregated Items: PB 2019 Navy														Date: February 2018						
Appropriation / Budget Activity / Budget Sub Activity: 1109N / 06 / 4					P-1 Line Item Number / Title: 6670 / Items Less Than \$5 Million									Aggregated Items Title: Items Less Than \$5 Million						
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 (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)
4.7) FEWS Water Supply Support Components/ Equipment (Reserves)	A		-	-	-	-	-	-	-	-	0.082	-	-	0.331	-	-	-	-	-	0.331
<b>Subtotal: 4) Family of Expeditionary Water Systems (260412)</b>			-	-	<b>0.000</b>	-	-	<b>1.220</b>	-	-	<b>2.011</b>	-	-	<b>4.263</b>	-	-	-	-	-	<b>4.263</b>
<b>5) Engineer Modification Kits (268098)</b>																				
5.1) Engineer Equipment Modifications	A		-	-	23.299	-	-	3.362	-	-	3.541	-	-	5.194	-	-	-	-	-	5.194
5.2) Engineer Equipment Modification (Reserves)	A		-	-	0.695	-	-	0.174	-	-	-	-	-	0.179	-	-	-	-	-	0.179
<b>Subtotal: 5) Engineer Modification Kits (268098)</b>			-	-	<b>23.994</b>	-	-	<b>3.536</b>	-	-	<b>3.541</b>	-	-	<b>5.373</b>	-	-	-	-	-	<b>5.373</b>
<b>Total</b>			-	-	<b>33.289</b>	-	-	<b>6.383</b>	-	-	<b>7.716</b>	-	-	<b>11.608</b>	-	-	-	-	-	<b>11.608</b>

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

(†) indicates the presence of a P-5a

**Footnotes:**

(1) -FY17 PMC Active JMIC Quantity increased by 3 each (Increase from 37 to 40) due to funding movement from Reserves 0502514M to active (0206315M) and funding not required for Integrated Logistics Support. FY18 PMC slight pricing change due to quantity greater than 300 each (Contract Tier Pricing). -FY17 PMC Active JMIC Quantity increased by 6 each (Increase from 31 to 37) due to available funding not required for Integrated Logistics Support. -FY17 PMC Active supported remaining QuadCon RUD procurement. JMIC Active quantity decreased from 79 to 31; JMIC Procurement quantity increases with FY17 Reserves. Reference JMIC-Reserves Cost Element for FY17. -JMIC Contract Modification resulted in slight pricing change in FY17 and FY18. -FY18 through FY22; funds moved from Reserves (0502514M) to Active (0206315M). -FY16 and prior year funds reside in BLI 6543.

(2) -FY18 through FY22 Reserve (0502514M) funds moved to Active (0206315M). -Contract modification resulted in slight price change in FY17. Due to QuadCon Procurement decrease in FY17; JMIC quantity increased in FY17. -FY15/FY16 and prior year funds reside in BLI 6543.

(3) FEWS (260412) FY15/16 and Prior Year funds reside in BLI 6274.

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Exhibit P-5a, Procurement History and Planning: PB 2019 Navy									Date: February 2018			
Appropriation / Budget Activity / Budget Sub Activity: 1109N / 06 / 4			P-1 Line Item Number / Title: 6670 / Items Less Than \$5 Million					Aggregated Items: Items Less Than \$5 Million				
Item Number / Title [DODIC]	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 (\$)	Specs Avail Now?	Date Revision Available	RFP Issue Date
<b>3) Marine Corps Family of Containers (438098)</b>												
3.1) Quadruple Container With Roll Up Doors - Active		2017	Charleston Marine Containers, Inc / North Charleston, SC	C / FFP	MCSC Quantico, VA	Feb 2017	Feb 2017	3	7,078.00	N	Feb 2017	
3.2) Quadruple Container RUD - Active		2017	Charleston Marine Containers, Inc@North Charleston, SC / North Charleston, SC	C / FFP	MCSC Quantico, VA	Feb 2017	Feb 2017	42	6,924.00	N	Feb 2017	
3.3) Joint Modular Intermodal Containers (JMIC) - Active <sup>(1)</sup>		2017	Garrett Container Systems, Inc. / Accident, MD	C / FFP	MCSC Quantico, VA	Jan 2017	Mar 2017	40	2,087.00	N	Jan 2017	
3.3) Joint Modular Intermodal Containers (JMIC) - Active <sup>(1)</sup>		2018	Garrett Container Systems, Inc. / Accident, MD	C / FFP	MCSC Quantico, VA	Jan 2018	Mar 2018	618	2,098.00	N	Jan 2017	
3.3) Joint Modular Intermodal Containers (JMIC) - Active <sup>(1)</sup>		2019	Garrett Container Systems, Inc. / Accident, MD	C / TBD	MCSC Quantico, VA	Nov 2018	Feb 2019	508	2,136.36	N		
3.4) Joint Modular Intermodal Container (JMIC)-Reserves <sup>(2)</sup>		2017	Garrett Container Systems, Inc. / Accident, MD	C / FFP	MCSC Quantico, VA	Jan 2017	Mar 2017	171	2,087.00	N	Jan 2016	
<b>4) Family of Expeditionary Water Systems (260412)</b>												
4.1) FEWS Individual Water Purification Systems (Reserves) <sup>(3)</sup>		2017 <sup>(4)</sup>	Tailored Logistics Support Program / DLA	MIPR	DLA	Feb 2018	Aug 2018	590	100.00	N	Jun 2017	
4.2) FEWS Individual Water Purification Systems (Active)		2017 <sup>(5)</sup>	Tailored Logistics Support Program / DLA	C / TBD	Army Contracting Command, Fort Belvoir VA	Feb 2018	Aug 2018	11,610	100.00	N	Jun 2017	
4.3) FEWS Platoon Water Purification Systems (Active)		2018	TBD / TBD	C / TBD	MCSC Quantico, VA	Jul 2019	Jul 2019	128	15,071.68	Y		Aug 2018
4.3) FEWS Platoon Water Purification Systems (Active)		2019	TBD / TBD	C / TBD	MCSC Quantico, VA	Jul 2019	Jul 2019	217	14,800.00	Y		Aug 2018

**Footnotes:**

<sup>(4)</sup> Teaming with US Army. Planned Award FEB 2018; deliveries estimated Aug-18

<sup>(5)</sup> Teaming with US Army. Planned Award Feb-18, deliveries anticipated Aug-18

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Exhibit P-40, Budget Line Item Justification: PB 2019 Navy										Date: February 2018					
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 1109N: Procurement, Marine Corps / BA 07: Spares and Repair Parts / BSA 1: Spares And Repair Parts					<b>P-1 Line Item Number / Title:</b> 7000 / Spares and Repair Parts										
<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> 0206211M, 0206625M, 0204460M, 0206313M, 0206315M, 0305239M, 0502511M						
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 (\$ in Millions)	0.000	29.717	35.640	25.804	0.000	25.804	33.941	34.067	40.216	47.390	Continuing	Continuing			
Less PY Advance Procurement (\$ in Millions)	-	-	-	-	-	-	-	-	-	-	-	-			
Net Procurement (P-1) (\$ in Millions)	0.000	29.717	35.640	25.804	0.000	25.804	33.941	34.067	40.216	47.390	Continuing	Continuing			
Plus CY Advance Procurement (\$ in Millions)	-	-	-	-	-	-	-	-	-	-	-	-			
<b>Total Obligation Authority (\$ in Millions)</b>	<b>0.000</b>	<b>29.717</b>	<b>35.640</b>	<b>25.804</b>	<b>0.000</b>	<b>25.804</b>	<b>33.941</b>	<b>34.067</b>	<b>40.216</b>	<b>47.390</b>	<b>Continuing</b>	<b>Continuing</b>			
(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)															
Initial Spares (\$ in Millions)	-	-	-	-	-	-	-	-	-	-	-	-			
Flyaway Unit Cost (\$ in Dollars)	-	-	-	-	-	-	-	-	-	-	-	-			
Gross/Weapon System Unit Cost (\$ in Dollars)	-	-	-	-	-	-	-	-	-	-	-	-			
<b>Description:</b>															
Spares - Funds are required to reimburse the Navy Working Capital Fund for both repairable and consumable components at the time the initial spare parts package is released with the principal end item (PEI) to the Fleet Marine Force. This concept complies with the Navy Working Capital Fund funding of Initial Spares with reimbursement from the Procurement Account. Funds also provide for direct vendor support of the PEI delivery to the Fleet Marine Force.															
This account has funding for the following programs:															
Secure Mobile Anti-Jam Reliable Tactical-Terminal (SMART-T), Tactical Remote Sensor System (TRSS), MAGTF Secondary Imagery Dissemination System (MSIDS), Intelligence Analysis System (IAS), Terrestrial Collection, LAV-Anti Tank System Program, LAV Obssolescence Program, M1A1 Modification, Family of Material Handling Equipment (FMHE), Ground/Air Task Oriented Radar (G/ATOR AN/TPS-80), RQ-21A Small Tactical UAS, General Purpose Tool and Test Systems (GPTTS), Amphibious Combat Vehicle Increment 1.1 (ACV 1.1), and Training Simulation Support (TSS)/Training Devices.															
Secondary Distribution		FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023					
Navy	Quantity	-	-	-	-	-	-	-	-	-	-	-			
	Total Obligation Authority	27.617	35.278	25.804	-	25.804	33.941	34.067	40.216	47.390					
NR	Quantity	-	-	-	-	-	-	-	-	-	-	-			
	Total Obligation Authority	2.100	0.362	-	-	-	-	-	-	-					
Total: Secondary Distribution	Quantity	-	-	-	-	-	-	-	-	-	-	-			
	Total Obligation Authority	29.717	35.640	25.804	-	25.804	33.941	34.067	40.216	47.390					

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Exhibit P-40, Budget Line Item Justification: PB 2019 Navy							Date: February 2018			
Appropriation / Budget Activity / Budget Sub Activity:				P-1 Line Item Number / Title:						
1109N: Procurement, Marine Corps / BA 07: Spares and Repair Parts / BSA 1: Spares And Repair Parts				7000 / Spares and Repair Parts						
<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> 0206211M, 0206625M, 0204460M, 0206313M, 0206315M, 0305239M, 0502511M				
<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)	
P-18	PMC spares				- / -	- / 29.717	- / 35.640	- / 25.804	- / -	- / 25.804
P-40	Total Gross/Weapon System Cost				- / 0.000	- / 29.717	- / 35.640	- / 25.804	- / 0.000	- / 25.804
Title represents the P-18 Title for Spares.										
Note: Totals in this Exhibit P-40 set may not be exact or sum exactly due to rounding.										
<b>Justification:</b>										
FY 2018 Base Appropriation Request: \$35.640M (\$35.278M Active; \$0.362M Reserve)										
The funding increase (\$15.123M) from FY17 to FY18 is primarily due to G/ATOR increase of \$5.647, RQ-21 increase of \$5.215M and ACV 1.1 increase of \$5.569M.										
LAV Anti-Tank Modernization (ATM) BLI 2038: \$1.006M funding will continue to provide funding for spares required for the fielding of the ATM.										
AN/TPS-80 Ground Air Task Oriented Radar (G/ATOR) BLI 4655: \$16.840M provides spares funding to support Gallium Nitride (GaN) LRIP systems. FY18 Spares funding is required to procure the initial provisioning package to primarily support those GaN LRIP systems being procured in FY17 and fielded in FY19, as over 90 percent of the G/ATOR Spares have a lead time exceeding 12 months. The Spares funding increase of (\$5.647M) from FY17 to FY18 ultimately supports the additional fielding of four (4) new systems in FY19 for a total of ten (10) G/ATOR systems fielded through FY19. Additionally, this funding increase allows for the decentralized distribution of initial spares from LOGCOM to the Repair Inventory Points at each Marine Expeditionary Force. Without adequate sparing, Marine Operational Forces will not have the necessary repair parts to operate and maintain newly fielded G/ATOR Radar Systems placing the program at significant risk of meeting its important Key Performance Parameter (KPP) 8; Sustainment.										
Family of Material Handling Equipment (FMHE) BLI 6544: \$0.052M provides for the replacement and Service Life Extension Program (SLEP) of Marine Corps MHE such as forklifts, cranes, and container handlers. This budget line item also includes funding for equipment such as the Light Capability Rough Terrain Forklift (LCRTF), Hydraulic Excavator (HYEX), Extendable Boom Forklift Modernization (EBFL-M), Rough Terrain Container Handler (RTCH) SLEP and the Tractor, Rubber Tires, and Articulated Steering, Multiple Purpose (TRAM) SLEP.										
General Purpose Tool and Test Equipment BLI 4181: \$0.173M funding will continue to support reimbursement to the working capital funds for spares acquired and needed during test support.										
Training Simulation Support (TSS)/Training Devices BLI 6532: \$0.050M Training Simulation Support will continue to provide funding for a small quantity of systems spares/parts to fulfill allowance pool quantities while systems are being repaired or replaced.										
IAS BLI 4747: \$0.158M of spares funding will provide for direct vendor support of the principal end item (PEI) components delivery to the Fleet Marine Force.										
MSIDS BLI 4747: \$0.099M will provide for purchase of hardware and accessory spares of the MSIDS Suite necessary to keep ground-based imagery collection and dissemination assets in operation, ensuring spares are available to the warfighter when breakage occurs to minimize equipment down-time.										
TRSS BLI 4747: \$0.099M will provide for the purchase of equipment spares in the TRSS System of Systems (SoS) to ensure repair time and equipment unavailability is minimized for the warfighter.										
SMART-T BLI 4633: \$0.205M will provide for the direct vendor support of the principal end item (PEI) components to reduce repair time and equipment downtime for the Warfighter.										

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<b>Exhibit P-40, Budget Line Item Justification: PB 2019 Navy</b>		<b>Date:</b> February 2018
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 1109N: Procurement, Marine Corps / BA 07: Spares and Repair Parts / BSA 1: Spares And Repair Parts	<b>P-1 Line Item Number / Title:</b> 7000 / Spares and Repair Parts	
<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> 0206211M, 0206625M, 0204460M, 0206313M, 0206315M, 0305239M, 0502511M
<b>Line Item MDAP/MAIS Code:</b> N/A		
RQ-21 UAS BLI 4737: \$11.027M procures initial spares for 4 RQ-21A systems in FY18 as well as support sparing for deployments in that year. Increase of \$5.215M from FY17 to FY18 is due to requirement for the spares to support Marine deployments with RQ-21 that year.		
M1A1 Modification Kits BLI 2061: Reserve \$0.362M will procure the remaining reserve spares for the Abrams Integrated Display and Targeting System (AIDATS). The \$4.018M decrease in funding from FY17 is due to the procurement strategy that maximized production of AIDATS in FY17.		
ACV 1.1 BLI 2025: \$5.569M procures initial spares for communication suites, Driver's Vision Enhancer, Exportable Power, Joint Battle Command-Platform (JBC-P), and Amphibious Remote Weapon Stations (ARWS). Initial spares for ACV 1.1 are procured commensurate with the end items they support based on lead time for procurement.		
FY 2019 Base Appropriation Request: \$25.804M		
The funding decrease of \$9.836M from FY18 to FY19 is primarily due to G/ATOR decrease of \$3.822M and RQ-21 decrease of \$11.027M.		
LAV Obsolescence(OB) BLI 2038: \$5.735M funding will provide spares funding for direct vendor support required for the fielding of the OB kits on the Light Armored Vehicle.		
AN/TPS-80 Ground Air Task Oriented Radar (G/ATOR) BLI 4655: \$13.018M provides spares funding to support Gallium Nitride (GaN) LRIP systems procured in FY18. FY19 Spares funding is required to procure the initial provisioning package to primarily support those GaN LRIP systems being procured in FY18 and fielded in FY20, as over 90 percent of the G/ATOR Spares have a lead time exceeding 12 months. The Spares funding decreases (\$3.822M) from FY18 to FY19 supports the fielding of three (3) new systems in FY20 for a total of thirteen (13) G/ATOR systems fielded through FY20. The additional funding in FY18 supported the decentralized distribution of initial spares from LOGCOM to the Repair Inventory Points at each Marine Expeditionary Force. Without adequate sparing, Marine Operational Forces will not have the necessary repair parts to operate and maintain newly fielded G/ATOR Radar Systems placing the program at significant risk of meeting its important Key Performance Parameter (KPP) 8; Sustainment.		
Family of Material Handling Equipment (FMHE) BLI 6544: \$0.053M provides for the replacement and Service Life Extension Program (SLEP) of Marine Corps MHE such as forklifts, cranes, and container handlers. This budget line item also includes funding for equipment such as the Light Capability Rough Terrain Forklift (LCRTF), Hydraulic Excavator (HYEX), Extendable Boom Forklift Modernization (EBFL-M), Rough Terrain Container Handler (RTCH) SLEP and the Tractor, Rubber Tires, and Articulated Steering, Multiple Purpose (TRAM) SLEP.		
General Purpose Tool and Test Equipment BLI 4181: \$0.174M funding will continue to support reimbursement to the working capital funds for spares acquired and needed during test support.		
Training Simulation Support (TSS)/Training Devices BLI 6532: \$0.051M Training Simulation Support will continue to provide funding for a small quantity of systems spares/parts to fulfill allowance pool quantities while systems are being repaired or replaced.		
SMART-T BLI 4633: \$0.207M will provide for the direct vendor support of the principal end item (PEI) components to reduce repair time and equipment downtime for the Warfighter.		
IAS BLI 4747: \$0.160M of spares funding will provide for direct vendor support of the principal end item (PEI) components delivery to the Fleet Marine Force.		
Terrestrial Collection BLI 4747: \$0.261M will provide for purchase of equipment spares necessary to keep ground-based imagery collection and dissemination assets and sensor systems in operation, ensuring spares are available to the warfighter when breakage occurs to minimize equipment down-time.		
ACV 1.1 BLI 2025: \$6.145M will provide for initial spares for communication suites, Driver's Vision Enhancer, Exportable Power, Joint Battle Command-Platform (JBC-P), and Amphibious Remote Weapon Stations (ARWS). Initial spares for ACV 1.1 are procured commensurate with the end items they support based on lead time for procurement.		

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<b>Exhibit P-18, Initial and Replenishment Spare and Repair Parts Justification: PB 2019 Navy</b>					<b>Date:</b> February 2018		
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 1109N / 07 / 1		<b>P-1 Line Item Number / Title:</b> 7000 / Spares and Repair Parts			<b>Title:</b> PMC spares		
<b>End Item Line Item Number / Name [MDAP/MAIS]</b>	<b>Prior Years (\$ M)</b>	<b>FY 2017 (\$ M)</b>	<b>FY 2018 (\$ M)</b>	<b>FY 2019 Base (\$ M)</b>	<b>FY 2019 OCO (\$ M)</b>	<b>FY 2019 Total (\$ M)</b>	
<b>Initial</b>							
BA 02 - Weapons and combat vehicles							
2025 / Amphibious Combat Vehicle 1.1	-	-	5.569	6.145	-	6.145	
2038 / LAV PIP	-	0.628	1.006	5.735	-	5.735	
2061 / Modification Kits	-	2.100	0.362	0.000	-	0.000	
BA 04 - Communications and Electronics Equipment							
4181 / Repair and Test Equipment	-	0.218	0.173	0.174	-	0.174	
4633 / Radio Systems	-	0.201	0.205	0.207	-	0.207	
4655 / Ground/Air Task Oriented Radar (G/ATOR)	-	11.193	16.840	13.018	-	13.018	
4737 / RQ-21 UAS	-	15.012	11.027	0.000	-	0.000	
4747 / Intelligence Support Equipment	-	0.265	0.356	0.421	-	0.421	
BA 06 - Engineer and Other Equipment							
6532 / Training Devices	-	0.049	0.050	0.051	-	0.051	
6544 / Family of Construction Equipment	-	0.051	0.052	0.053	-	0.053	
<b>Subtotal: Initial</b>	<b>-</b>	<b>29.717</b>	<b>35.640</b>	<b>25.804</b>	<b>-</b>	<b>25.804</b>	
<b>Total Cost (Initial + Replenishment)</b>	<b>-</b>	<b>29.717</b>	<b>35.640</b>	<b>25.804</b>	<b>-</b>	<b>25.804</b>	