Department of Defense
Fiscal Year (FY) 2020 Budget Estimates

March 2019

Navy

Justification Book Volume 1 of 1

Procurement of Ammo, Navy & MC

The estimated cost of this report for the Department of the Navy (DON) is $22,278.

The estimated total cost for supporting the DON budget justification material is approximately $1,803,116 for the 2019 fiscal year. This includes $81,351 in supplies and $1,721,765 in labor.

Table of Volumes

Navy..... Volume 1

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Volume 1 Table of Contents

Introduction and Explanation of Contents.....Volume 1 - v

Comptroller Exhibit P-1.....Volume 1 - vii

Master Line Item Table of Contents (by Appropriation then Line Number).....Volume 1 - xix

Master Line Item Table of Contents (Alphabetically by Line Item Title).....Volume 1 - xxi

Line Item Table of Contents (by Appropriation then Line Number)..... Volume 1 - xxiii

Line Item Table of Contents (Alphabetically by Line Item Title).....Volume 1 - xxv

Exhibit P-40s.....Volume 1 - 1

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Procurement of Ammunition, Navy and Marine Corps

For construction, procurement, production, and modification of ammunition, and accessories therefor; specialized equipment and training devices; expansion of public and private plants, including ammunition facilities, authorized by section 2854 of title 10, United States Code, and the land necessary therefor, for the foregoing purposes, and such lands and interests therein, may be acquired, and construction prosecuted thereon prior to approval of title; and procurement and installation of equipment, appliances, and machine tools in public and private plants; reserve plant and Government and contractor-owned equipment layaway; and other expenses necessary for the foregoing purposes, $1,186,128,000 to remain available for obligation until September 30, 2022.

FY 2020 Overseas Contingency Operations funding can be separated into the following categories:

- OCO for Direct War Costs ($121,657,000): Direct War costs are those combat or direct combat support costs that will not continue to be expended once combat operations end at major contingency locations.

- OCO for Enduring Requirements ($83,157,000): OCO for Enduring Requirements are enduring in-theater and in-CONUS costs that will likely remain after combat operations cease, and have previously been funded in OCO.

- OCO for Base Requirements ($981,314,000): OCO for Base Requirements is OCO funding for base budget requirements in support of the National Defense Strategy. The Budget requests these funds in OCO to comply with the base budget defense caps included in the Budget Control Act of 2011.

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

Appropriation	FY 2018 (Base + OCO)	FY 2019 Base Enacted	FY 2019 OCO Enacted	FY 2019 Total Enacted
Procurement of Ammo, Navy & MC	1,037,741	952,682	229,783	1,182,465
Total Department of the Navy	1,037,741	952,682	229,783	1,182,465

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

Appropriation	FY 2020 Base	FY 2020 OCO for Base Requirements	FY 2020 OCO for Direct War and Enduring Costs	FY 2020 Total OCO
Procurement of Ammo, Navy & MC		981,314	204,814	1,186,128
Total Department of the Navy		981,314	204,814	1,186,128

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

Appropriation	FY 2020 Total (Base + OCO)
Procurement of Ammo, Navy & MC	1,186,128
Total Department of the Navy	1,186,128

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

Appropriation: Procurement of Ammo, Navy & MC

Budget Activity	FY 2018 (Base + OCO)	FY 2019 Base Enacted	FY 2019 OCO Enacted	FY 2019 Total Enacted
01. Proc Ammo, Navy	719,318	682,074	195,189	877,263
02. Proc Ammo, MC	318,423	270,608	34,594	305,202
Total Procurement of Ammo, Navy & MC	1,037,741	952,682	229,783	1,182,465

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

Appropriation: Procurement of Ammo, Navy & MC

Budget Activity	FY 2020 Base	FY 2020 OCO for Base Requirements	FY 2020 OCO for Direct War and Enduring Costs	FY 2020 Total OCO
01. Proc Ammo, Navy		468,180	166,542	634,722
02. Proc Ammo, MC		513,134	38,272	551,406
Total Procurement of Ammo, Navy & MC		981,314	204,814	1,186,128

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

Appropriation: Procurement of Ammo, Navy & MC

Budget Activity	FY 2020 Total (Base + OCO)
01. Proc Ammo, Navy	634,722
02. Proc Ammo, MC	551,406
Total Procurement of Ammo, Navy & MC	1,186,128

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

Appropriation: 1508N Procurement of Ammo, Navy & MC

Line No	Item Nomenclature	Ident Code	FY 2018 (Base + OCO) Quantity	FY 2018 (Base + OCO) Cost	FY 2019 Base Enacted Quantity	FY 2019 Base Enacted Cost	FY 2019 OCO Enacted Quantity	FY 2019 OCO Enacted Cost	FY 2019 Total Enacted Quantity	FY 2019 Total Enacted Cost	Sec
Budget Activity 01: Proc Ammo, Navy											
	Navy Ammunition										
1	General Purpose Bombs	A		115,423		68,221		48,530		116,751	U
2	JDAM	B	7758	164,284	3688	87,900	3906	93,019	7594	180,919	U
3	Airborne Rockets, All Types	A		85,016		135,822		2,163		137,985	U
4	Machine Gun Ammunition	A		14,112		11,344		5,000		16,344	U
5	Practice Bombs	A		43,427		49,471				49,471	U
6	Cartridges & Cart Actuated Devices	A		55,717		53,751		4,805		58,556	U
7	Air Expendable Countermeasures	A		78,608		66,382		36,580		102,962	U
8	JATOS	A		3,435		2,907		747		3,654	U
9	5 Inch/54 Gun Ammunition	A		22,112		70,058				70,058	U
10	Intermediate Caliber Gun Ammunition	A		12,804		32,151				32,151	U
11	Other Ship Gun Ammunition	A		59,539		42,142		2,538		44,680	U
12	Small Arms & Landing Party Ammo	A		50,784		49,888				49,888	U
13	Pyrotechnic and Demolition	A		10,260		10,931		1,807		12,738	U
14	Cancelled Account Adjustments (87)	A		1							U
15	Ammunition Less Than $5 Million	A		3,796		1,106				1,106	U
Total Proc Ammo, Navy				719,318		682,074		195,189		877,263	

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

Appropriation: 1508N Procurement of Ammo, Navy & MC

Line No	Item Nomenclature	Ident Code	FY 2020 Base Quantity	FY 2020 Base Cost	FY 2020 OCO for Base Requirements Quantity	FY 2020 OCO for Base Requirements Cost	FY 2020 OCO for Direct War and Enduring Costs Quantity	FY 2020 OCO for Direct War and Enduring Costs Cost	FY 2020 Total OCO Quantity	FY 2020 Total OCO Cost	Sec
	Budget Activity 01: Proc Ammo, Navy										
	Navy Ammunition										
1	General Purpose Bombs	A				36,028		26,978		63,006	U
2	JDAM	B			2844	70,413	544	12,263	3388	82,676	U
3	Airborne Rockets, All Types	A				31,756		45,020		76,776	U
4	Machine Gun Ammunition	A				4,793		33,577		38,370	U
5	Practice Bombs	A				34,708		11,903		46,611	U
6	Cartridges & Cart Actuated Devices	A				45,738		15,081		60,819	U
7	Air Expendable Countermeasures	A				77,301		16,911		94,212	U
8	JATOS	A				7,262				7,262	U
9	5 Inch/54 Gun Ammunition	A				22,594				22,594	U
10	Intermediate Caliber Gun Ammunition	A				37,193				37,193	U
11	Other Ship Gun Ammunition	A				39,491		3,262		42,753	U
12	Small Arms & Landing Party Ammo	A				47,896		1,010		48,906	U
13	Pyrotechnic and Demolition	A				10,621		537		11,158	U
14	Cancelled Account Adjustments (87)	A									U
15	Ammunition Less Than $5 Million	A				2,386				2,386	U
	Total Proc Ammo, Navy					468,180		166,542		634,722	

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

Appropriation: 1508N Procurement of Ammo, Navy & MC

Line No	Item Nomenclature	Ident Code	Quantity	FY 2020 Total (Base + OCO) Cost	Sec
Budget Activity 01: Proc Ammo, Navy					
Navy Ammunition					
1	General Purpose Bombs	A		63,006	U
2	JDAM	B	3388	82,676	U
3	Airborne Rockets, All Types	A		76,776	U
4	Machine Gun Ammunition	A		38,370	U
5	Practice Bombs	A		46,611	U
6	Cartridges & Cart Actuated Devices	A		60,819	U
7	Air Expendable Countermeasures	A		94,212	U
8	JATOS	A		7,262	U
9	5 Inch/54 Gun Ammunition	A		22,594	U
10	Intermediate Caliber Gun Ammunition	A		37,193	U
11	Other Ship Gun Ammunition	A		42,753	U
12	Small Arms & Landing Party Ammo	A		48,906	U
13	Pyrotechnic and Demolition	A		11,158	U
14	Cancelled Account Adjustments (87)	A			U
15	Ammunition Less Than $5 Million	A		2,386	U
Total Proc Ammo, Navy				634,722	

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

Appropriation: 1508N Procurement of Ammo, Navy & MC

Line No	Item Nomenclature	Ident Code	FY 2018 (Base + OCO) Quantity	FY 2018 (Base + OCO) Cost	FY 2019 Base Enacted Quantity	FY 2019 Base Enacted Cost	FY 2019 OCO Enacted Quantity	FY 2019 OCO Enacted Cost	FY 2019 Total Enacted Quantity	FY 2019 Total Enacted Cost	Sec
Budget Activity 02: Proc Ammo, MC											
	Marine Corps Ammunition										
16	Mortars	A		49,618		18,516		2,018		20,534	U
17	Direct Support Munitions	A		40,500		61,999		632		62,631	U
18	Infantry Weapons Ammunition	A		89,196		54,695		779		55,474	U
19	Combat Support Munitions	A		14,146		31,577		164		31,741	U
20	Ammo Modernization	A		15,262		15,001				15,001	U
21	Artillery Munitions	A		105,741		82,581		31,001		113,582	U
22	Items Less Than $5 Million	A		3,960		6,239				6,239	U
Total Proc Ammo, MC				318,423		270,608		34,594		305,202	
Total Procurement of Ammo, Navy & MC				1,037,741		952,682		229,783		1,182,465	

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

Appropriation: 1508N Procurement of Ammo, Navy & MC

Line No	Item Nomenclature	Ident Code	FY 2020 Base Quantity	FY 2020 Base Cost	FY 2020 OCO for Base Requirements Quantity	FY 2020 OCO for Base Requirements Cost	FY 2020 OCO for Direct War and Enduring Costs Quantity	FY 2020 OCO for Direct War and Enduring Costs Cost	FY 2020 Total OCO Quantity	FY 2020 Total OCO Cost	Sec
Budget Activity 02: Proc Ammo, MC											
	Marine Corps Ammunition										
16	Mortars	A				55,543		1,930		57,473	U
17	Direct Support Munitions	A				131,765		1,172		132,937	U
18	Infantry Weapons Ammunition	A				78,056		2,158		80,214	U
19	Combat Support Munitions	A				40,048		965		41,013	U
20	Ammo Modernization	A				14,325				14,325	U
21	Artillery Munitions	A				188,876		32,047		220,923	U
22	Items Less Than $5 Million	A				4,521				4,521	U
Total Proc Ammo, MC						513,134		38,272		551,406	
Total Procurement of Ammo, Navy & MC						981,314		204,814		1,186,128	

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

Appropriation: 1508N Procurement of Ammo, Navy & MC

Line No	Item Nomenclature	Ident Code	FY 2020 Total (Base + OCO) Quantity	Cost	Sec
Budget Activity 02: Proc Ammo, MC					
	Marine Corps Ammunition				
16	Mortars	A		57,473	U
17	Direct Support Munitions	A		132,937	U
18	Infantry Weapons Ammunition	A		80,214	U
19	Combat Support Munitions	A		41,013	U
20	Ammo Modernization	A		14,325	U
21	Artillery Munitions	A		220,923	U
22	Items Less Than $5 Million	A		4,521	U
Total Proc Ammo, MC				551,406	
Total Procurement of Ammo, Navy & MC				1,186,128	

Master Line Item Table of Contents (by Appropriation then Line Number)

Appropriation 1508N: Procurement of Ammo, Navy & MC

Line #	BA	BSA	Line Item Number	Line Item Title	Page
1	01	01	0145	General Purpose Bombs	Volume 1 - 1
2	01	01	0148	JT Direct Attack Munition (JDAM)	Volume 1 - 27
3	01	01	0151	Airborne Rockets, All Types	Volume 1 - 37
4	01	01	0155	Machine Gun Ammunition	Volume 1 - 51
5	01	01	0160	Practice Bombs	Volume 1 - 63
6	01	01	0180	Cartridge Actuated Devices/Propellant Act Devices	Volume 1 - 75
7	01	01	0182	Air Expendable Countermeasures	Volume 1 - 89
8	01	01	0194	Jet Assisted Take Off (JATOs)	Volume 1 - 109
9	01	01	0250	5 Inch/54 Gun Ammunition	Volume 1 - 117
10	01	01	0266	Intermediate Caliber Gun Ammo	Volume 1 - 131
11	01	01	0270	Other Ship Gun Ammunition	Volume 1 - 143
12	01	01	0335	Small Arms & Lndg Party Ammo	Volume 1 - 167
13	01	01	0340	Pyrotechnic and Demolition	Volume 1 - 203
15	01	01	0400	Ammunition less than $5 million	Volume 1 - 221

Appropriation 1508N: Procurement of Ammo, Navy & MC

Line #	BA	BSA	Line Item Number	Line Item Title	Page
16	02	01	1085	Mortars	Volume 1 - 229
17	02	01	1125	Direct Support Munitions	Volume 1 - 245
18	02	01	1350	Infantry Weapons Ammunition	Volume 1 - 265
19	02	01	1550	Combat Support Munitions	Volume 1 - 295
20	02	01	1630	Ammo Modernization	Volume 1 - 317
21	02	01	1650	Artillery Munitions	Volume 1 - 321
22	02	01	1660	Items less than $5 million	Volume 1 - 345

Master Line Item Table of Contents (Alphabetically by Line Item Title)

Line Item Title	Line Item Number	Line #	BA	BSA	Page
5 Inch/54 Gun Ammunition	0250	9	01	01	Volume 1 - 117
Air Expendable Countermeasures	0182	7	01	01	Volume 1 - 89
Airborne Rockets, All Types	0151	3	01	01	Volume 1 - 37
Ammo Modernization	1630	20	02	01	Volume 1 - 317
Ammunition less than $5 million	0400	15	01	01	Volume 1 - 221
Artillery Munitions	1650	21	02	01	Volume 1 - 321
Cartridge Actuated Devices/Propellant Act Devices	0180	6	01	01	Volume 1 - 75
Combat Support Munitions	1550	19	02	01	Volume 1 - 295
Direct Support Munitions	1125	17	02	01	Volume 1 - 245
General Purpose Bombs	0145	1	01	01	Volume 1 - 1
Infantry Weapons Ammunition	1350	18	02	01	Volume 1 - 265
Intermediate Caliber Gun Ammo	0266	10	01	01	Volume 1 - 131
Items less than $5 million	1660	22	02	01	Volume 1 - 345
JT Direct Attack Munition (JDAM)	0148	2	01	01	Volume 1 - 27
Jet Assisted Take Off (JATOs)	0194	8	01	01	Volume 1 - 109
Machine Gun Ammunition	0155	4	01	01	Volume 1 - 51
Mortars	1085	16	02	01	Volume 1 - 229

Line Item Title	Line Item Number	Line #	BA	BSA	Page
Other Ship Gun Ammunition	0270	11	01	01	Volume 1 - 143
Practice Bombs	0160	5	01	01	Volume 1 - 63
Pyrotechnic and Demolition	0340	13	01	01	Volume 1 - 203
Small Arms & Lndg Party Ammo	0335	12	01	01	Volume 1 - 167

Line Item Table of Contents (by Appropriation then Line Number)

Appropriation 1508N: Procurement of Ammo, Navy & MC

Line #	BA	BSA	Line Item Number	Line Item Title	Page
1	01	01	0145	General Purpose Bombs	Volume 1 - 1
2	01	01	0148	JT Direct Attack Munition (JDAM)	Volume 1 - 27
3	01	01	0151	Airborne Rockets, All Types	Volume 1 - 37
4	01	01	0155	Machine Gun Ammunition	Volume 1 - 51
5	01	01	0160	Practice Bombs	Volume 1 - 63
6	01	01	0180	Cartridge Actuated Devices/Propellant Act Devices	Volume 1 - 75
7	01	01	0182	Air Expendable Countermeasures	Volume 1 - 89
8	01	01	0194	Jet Assisted Take Off (JATOs)	Volume 1 - 109
9	01	01	0250	5 Inch/54 Gun Ammunition	Volume 1 - 117
10	01	01	0266	Intermediate Caliber Gun Ammo	Volume 1 - 131
11	01	01	0270	Other Ship Gun Ammunition	Volume 1 - 143
12	01	01	0335	Small Arms & Lndg Party Ammo	Volume 1 - 167
13	01	01	0340	Pyrotechnic and Demolition	Volume 1 - 203
15	01	01	0400	Ammunition less than $5 million	Volume 1 - 221

Appropriation 1508N: Procurement of Ammo, Navy & MC

Line #	BA	BSA	Line Item Number	Line Item Title	Page
16	02	01	1085	Mortars	Volume 1 - 229
17	02	01	1125	Direct Support Munitions	Volume 1 - 245
18	02	01	1350	Infantry Weapons Ammunition	Volume 1 - 265
19	02	01	1550	Combat Support Munitions	Volume 1 - 295
20	02	01	1630	Ammo Modernization	Volume 1 - 317
21	02	01	1650	Artillery Munitions	Volume 1 - 321
22	02	01	1660	Items less than $5 million	Volume 1 - 345

Line Item Table of Contents (Alphabetically by Line Item Title)

Line Item Title	Line Item Number	Line #	BA	BSA	Page
5 Inch/54 Gun Ammunition	0250	9	01	01	Volume 1 - 117
Air Expendable Countermeasures	0182	7	01	01	Volume 1 - 89
Airborne Rockets, All Types	0151	3	01	01	Volume 1 - 37
Ammo Modernization	1630	20	02	01	Volume 1 - 317
Ammunition less than $5 million	0400	15	01	01	Volume 1 - 221
Artillery Munitions	1650	21	02	01	Volume 1 - 321
Cartridge Actuated Devices/Propellant Act Devices	0180	6	01	01	Volume 1 - 75
Combat Support Munitions	1550	19	02	01	Volume 1 - 295
Direct Support Munitions	1125	17	02	01	Volume 1 - 245
General Purpose Bombs	0145	1	01	01	Volume 1 - 1
Infantry Weapons Ammunition	1350	18	02	01	Volume 1 - 265
Intermediate Caliber Gun Ammo	0266	10	01	01	Volume 1 - 131
Items less than $5 million	1660	22	02	01	Volume 1 - 345
JT Direct Attack Munition (JDAM)	0148	2	01	01	Volume 1 - 27
Jet Assisted Take Off (JATOs)	0194	8	01	01	Volume 1 - 109
Machine Gun Ammunition	0155	4	01	01	Volume 1 - 51
Mortars	1085	16	02	01	Volume 1 - 229

Line Item Title	Line Item Number	Line #	BA	BSA	Page
Other Ship Gun Ammunition	0270	11	01	01	Volume 1 - 143
Practice Bombs	0160	5	01	01	Volume 1 - 63
Pyrotechnic and Demolition	0340	13	01	01	Volume 1 - 203
Small Arms & Lndg Party Ammo	0335	12	01	01	Volume 1 - 167

Exhibit P-40, Budget Line Item Justification: PB 2020 Navy	Date: March 2019
Appropriation / Budget Activity / Budget Sub Activity: 1508N: Procurement of Ammo, Navy & MC / BA 01: Proc Ammo, Navy / BSA 1: Navy Ammunition	**P-1 Line Item Number / Title:** 0145 / General Purpose Bombs

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

Resource Summary	Prior Years	FY 2018	FY 2019	FY 2020 Base	FY 2020 OCO	FY 2020 Total	FY 2021	FY 2022	FY 2023	FY 2024	To Complete	Total
Procurement Quantity *(Units in Each)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost *($ in Millions)*	2,442.452	115.423	116.751	0.000	63.006	63.006	47.001	43.171	44.035	44.913	Continuing	Continuing
Less PY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) *($ in Millions)*	2,442.452	115.423	116.751	0.000	63.006	63.006	47.001	43.171	44.035	44.913	Continuing	Continuing
Plus CY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority *($ in Millions)*	**2,442.452**	**115.423**	**116.751**	**0.000**	**63.006**	**63.006**	**47.001**	**43.171**	**44.035**	**44.913**	**Continuing**	**Continuing**
(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)*	-	-	-	-	-	-	-	-	-	-	-	-

Description:

FY 2020 funding totals include $0.0M for Base and $63.006M for Overseas Contingency Operations (OCO); of which $36.028M is realigned as part of the OCO for Base Requirements. FY 2020 OCO for Base Requirements is OCO funding for base budget requirements in support of the National Defense Strategy. The Budget requests these funds in OCO to comply with the base budget defense caps included in the Budget Control Act of 2011.

The General Purpose (GP) bombs budget is intended to sustain munitions component inventory levels as defined in the Navy Munitions Requirement Process (NMRP) model. This model produces inventory requirements based on fleet operational scenarios and the number of weapons required to engage defined target sets. The budget also procures on-going technology integration to optimize the production and capability of products within the Direct Attack Weapons (DAW) portfolio. Inventory levels fluctuate year to year based on changes to the model as tactical targets are reassessed and weapons are expended in tactical operations and training. This variable requirement is assessed and a mean average is used to buffer out the most extreme changes.

The GP Budget procures several different categories of munition components. Bomb bodies vary in size, construction and explosive fill to provide the desired effect when employed against their targets. The flight and guidance of the bomb body is provided in three basic ways. First, a basic fixed fin stabilizes the bomb and allows the weapon to travel on a ballistic line of fall as controlled by forward movement imparted by the aircraft and gravity. Secondly, the Laser Guided components control the fall of the bomb using movable surfaces and a laser detecting devices to guide the bomb to a location on the ground illuminated by a laser designator.

The DSU-42 PLGS is a modified DSU-38 that when integrated with the JDAM BLU-109 provides an active laser sensor that detects and characterizes laser designation angle of arrival and then transmits this information to the JDAM guidance kit. This modification will enable the BLU-109 to take advantage of an already demonstrated capability on the F/A-18 for other classes of weapons. The Non-Recurring Engineering (NRE) effort was accomplished in FY 2017.

All of the various weapons assemblies utilize a family of fuzes that when installed into the weapon provides a controlled initiation of the explosive fill when commanded through impact with a target or at a predetermined time. This predetermined time may occur above the ground for an explosion above the target or below the ground after impact to engage a target that is buried. There is also funding included in this budget to address a myriad of subcomponents that are used in the assembly of the various configurations, including arming wires, adapters, lugs, nose plugs and other components required for All Up Round (AUR) configurations. This budget also funds production engineering, integrated logistics, and product improvement efforts to sustain production and ongoing enhancements to ensure the weapons remain relevant in the environments they are used.

Exhibit P-40, Budget Line Item Justification: PB 2020 Navy	**Date:** March 2019
Appropriation / Budget Activity / Budget Sub Activity: 1508N: Procurement of Ammo, Navy & MC / BA 01: Proc Ammo, Navy / BSA 1: Navy Ammunition	**P-1 Line Item Number / Title:** 0145 / General Purpose Bombs

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 2018	FY 2019	FY 2020 Base	FY 2020 OCO	FY 2020 Total
Exhibit Type	Title*	Subexhibits	ID CD	MDAP/ MAIS Code	Quantity / Total Cost *(Each) I ($ M)*	Quantity / Total Cost *(Each) I ($ M)*	Quantity / Total Cost *(Each) I ($ M)*	Quantity / Total Cost *(Each) I ($ M)*	Quantity / Total Cost *(Each) I ($ M)*	Quantity / Total Cost *(Each) I ($ M)*
P-5	1 / GP Bomb	P-5a, P-21			- / 2,442.452	- / 115.423	- / 116.751	- / 0.000	- / 63.006	- / 63.006
P-40	**Total Gross/Weapon System Cost**				**- / 2,442.452**	**- / 115.423**	**- / 116.751**	**- / 0.000**	**- / 63.006**	**- / 63.006**

*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 2020 OCO for baseline funding is required to meet Naval Munitions Requirements Process (NMRP) inventory requirements. This model produces inventory requirements based on fleet operational scenarios and the number of weapons required to engage defined target sets. The budget also procures on-going technology integration to optimize the production and capability of products within the Direct Attack Weapons (DAW) portfolio. Inventory requirements fluctuate year to year based on changes to the model as tactical targets are reassessed and weapons are expended in tactical operations and training. This variable requirement is assessed and a mean average is used buffer out the most extreme changes.

This budget supports critical Navy Title 10 war reserve/operational, training and test requirements IAW DoD Instruction 3000.04 (Munitions Requirements Process) and OPNAV INST 8011.9 (Navy Munitions Requirements Process). War reserve requirements support OSD-approved Combatant Commander Operational Plans, Homeland Defense, and other OSD-directed missions. Training requirements support individual and collective training of Active and Reserve Component forces. Test requirements support the verification, fielding, safety and quality assurance of Navy weapons and equipment throughout their life cycle.

Annual Non-Combat Expenditure Allowance (NCEA) prepares Naval Aviation units for deployment and is the largest cause of current and future General Purpose (GP) bombs procurement. NCEA utilization of GP bombs in support of Fleet readiness continues every year. Procurements are primarily designed to replenish the weapons used each year to achieve required readiness levels. Unlike procurement of capital assets, a large percentage of GP weapons are consumed in annual fleet training expenditures; thereby, reducing the ability to simply adjust procurements a year in response to budget reductions. Barring a reduction in fleet training expenditures and the correlating readiness degradation, any reductions in GP bombs procurements in a given year will have to be made up with increased procurements in the out years to restore inventory to a level adequate to support NCEA and fleet readiness.

OCO:
FY 2020 Direct War (OCO) funding request in the amount of $7.4M is required to replenish bomb components that were expended in direct support of combat operations in theater. These operations are in support of Operation Inherent Resolve.

Exhibit P-5, Cost Analysis: PB 2020 Navy		Date: March 2019
Appropriation / Budget Activity / Budget Sub Activity: 1508N / 01 / 1	P-1 Line Item Number / Title: 0145 / General Purpose Bombs	Item Number / Title [DODIC]: 1 / GP Bomb
ID Code (A=Service Ready, B=Not Service Ready) :	MDAP/MAIS Code:	

Resource Summary	Prior Years	FY 2018	FY 2019	FY 2020 Base	FY 2020 OCO	FY 2020 Total
Procurement Quantity *(Units in Each)*	-	-	-	-	-	-
Gross/Weapon System Cost *($ in Millions)*	2,442.452	115.423	116.751	0.000	63.006	63.006
Less PY Advance Procurement *($ in Millions)*	-	-	-	-	-	-
Net Procurement (P-1) *($ in Millions)*	2,442.452	115.423	116.751	0.000	63.006	63.006
Plus CY Advance Procurement *($ in Millions)*	-	-	-	-	-	-
Total Obligation Authority *($ in Millions)*	**2,442.452**	**115.423**	**116.751**	**0.000**	**63.006**	**63.006**
(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 2018			FY 2019			FY 2020 Base			FY 2020 OCO			FY 2020 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) Q2191 BLU-111(†) (1)	3,916.27	8,826	34.565	5,884.16	4,500	26.479	6,001.84	1,403	8.421	-	-	0.000	6,122.00	405	2.479	6,122.00	405	2.479
1.1.2) Q2192 BLU-110(†) (2)	11,488.55	131	1.505	9,645.00	813	7.841	13,220.08	1,142	15.097	-	-	0.000	13,484.00	299	4.031	13,484.00	299	4.031
1.1.3) Q2199 BLU-109(†) (3)	29,130.06	1,284	37.403	31,449.00	372	11.699	31,074.30	77	2.393	-	-	-	-	-	-	-	-	-
1.1.4) Q2160 BLU-117(†) (4)	-	-	-	-	-	-	24,529.00	222	5.445	-	-	0.000	25,020.00	75	1.876	25,020.00	75	1.876
1.1.5) Q2011 BSU-33 Con Fin(†) (5)	-	-	-	-	-	-	233.93	6,500	1.521	-	-	0.000	237.44	6,500	1.543	237.44	6,500	1.543
1.1.6) Q2193 BLU-126(†) (6)	-	-	-	-	-	-	-	-	-	-	-	0.000	7,050.00	90	0.635	7,050.00	90	0.635
Subtotal: Recurring Cost	-	-	*73.473*	-	-	*46.019*	-	-	*32.877*	-	-	*0.000*	-	-	*10.564*	-	-	*10.564*
Subtotal: Hardware Cost	**-**	**-**	***73.473***	**-**	**-**	***46.019***	**-**	**-**	***32.877***	**-**	**-**	***0.000***	**-**	**-**	***10.564***	**-**	**-**	***10.564***
Hardware - Guided Bombs Cost Cost																		
Recurring Cost																		
2.1.1) Q2186 Guided Bomb Tailkits(†)	21,102.12	9,655	203.741	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2.1.2) Q2230 GBU-49 Precision Kit(†) (7)	-	-	-	-	-	-	44,500.00	367	16.332	-	-	-	-	-	-	-	-	-

Exhibit P-5, Cost Analysis: PB 2020 Navy		Date: March 2019
Appropriation / Budget Activity / Budget Sub Activity: 1508N / 01 / 1	P-1 Line Item Number / Title: 0145 / General Purpose Bombs	Item Number / Title [DODIC]: 1 / GP Bomb
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 2018			FY 2019			FY 2020 Base			FY 2020 OCO			FY 2020 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)
2.1.3) Q2200 Laser Capability DSU-38(†)	12,419.62	9,897	122.917	13,923.19	1,275	17.752	14,219.15	436	6.200	-	-	0.000	14,486.00	104	1.507	14,486.00	104	1.507
2.1.4) Q2220 Laser Capability DSU-42(†)	-	-	-	-	-	-	16,646.40	567	9.439	-	-	0.000	16,979.32	505	8.575	16,979.32	505	8.575
2.1.5) Q2181 Laser Guided Bombs CCG (Raytheon)(†)	11,008.25	1,696	18.670	8,674.00	246	2.134	8,822.22	315	2.779	-	-	0.000	9,024.42	676	6.101	9,024.42	676	6.101
2.1.6) Q2181 Laser Guided Bombs CCG (Lockheed)(†)	62,875.00	400	25.150	8,674.00	129	1.119	8,822.22	315	2.779	-	-	0.000	9,024.42	676	6.101	9,024.42	676	6.101
2.1.7) Q2187 Laser Guided Bombs AFG(†)	4,416.93	2,552	11.272	4,699.00	235	1.104	4,788.62	1,306	6.254	-	-	0.000	4,893.00	1,352	6.615	4,893.00	1,352	6.615
2.1.8) Q2197 Bombs Subcomponents (8)	-	-	5.371	-	-	1.844	-	-	2.102	-	-	0.000	-	-	1.236	-	-	1.236
Subtotal: Recurring Cost	-	-	*387.121*	-	-	*23.953*	-	-	*45.885*	-	-	*0.000*	-	-	*30.135*	-	-	*30.135*
Non Recurring Cost																		
2.2.2) Q2895 DSU-42 Laser Capability Non Recurring	-	-	41.576	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2.2.3) Q2898 DSU Variant NRE	-	-	-	-	-	11.000	-	-	-	-	-	-	-	-	-	-	-	-
Subtotal: Non Recurring Cost	-	-	*41.576*	-	-	*11.000*	-	-	-	-	-	-	-	-	-	-	-	-
Subtotal: Hardware - Guided Bombs Cost Cost	**-**	**-**	***428.697***	**-**	**-**	***34.953***	**-**	**-**	***45.885***	**-**	**-**	***0.000***	**-**	**-**	***30.135***	**-**	**-**	***30.135***
Hardware - Fuzes Cost Cost																		
Recurring Cost																		
3.1.1) Q2196 FMU-143	3,823.06	2,125	8.124	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
3.1.2) Q2032 FMU-139 Electrical Fuze(†) (9)	1,219.89	48,443	59.095	2,440.48	11,197	27.326	2,327.45	12,123	28.216	-	-	0.000	2,374.00	6,519	15.476	2,374.00	6,519	15.476
3.1.3) Q2210 Hard Target Void Sensing Fuze(†)	10,212.00	500	5.106	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Subtotal: Recurring Cost	-	-	*72.325*	-	-	*27.326*	-	-	*28.216*	-	-	*0.000*	-	-	*15.476*	-	-	*15.476*
Non Recurring Cost																		
3.2.1) Q2896 FUZE Non Recurring	-	-	47.601	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Exhibit P-5, Cost Analysis: PB 2020 Navy		Date: March 2019
Appropriation / Budget Activity / Budget Sub Activity: 1508N / 01 / 1	P-1 Line Item Number / Title: 0145 / General Purpose Bombs	Item Number / Title [DODIC]: 1 / GP Bomb
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 2018			FY 2019			FY 2020 Base			FY 2020 OCO			FY 2020 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)
3.2.2) Q2861 Production Acceptance Test & Evaluation FUZE	-	-	5.763	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Subtotal: Non Recurring Cost	-	-	*53.364*	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Subtotal: Hardware - Fuzes Cost Cost	**-**	**-**	***125.689***	**-**	**-**	***27.326***	**-**	**-**	***28.216***	**-**	**-**	***0.000***	**-**	**-**	***15.476***	**-**	**-**	***15.476***
Hardware - Acceptance Testing - Guided Bombs Cost																		
Recurring Cost																		
4.1.1) Q2860 Production Acceptance Test & Evaluation Guided Bombs	-	-	23.756	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Subtotal: Recurring Cost	-	-	*23.756*	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Subtotal: Hardware - Acceptance Testing - Guided Bombs Cost	**-**	**-**	***23.756***	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**
Hardware - Prior Years Cost																		
Non Recurring Cost																		
5.1.1) Prior Years Cumulative Funding	-	-	1,679.690	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Subtotal: Non Recurring Cost	-	-	*1,679.690*	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Subtotal: Hardware - Prior Years Cost	**-**	**-**	***1,679.690***	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**
Support - Integrated Logistics Cost																		
6.1) Q2800 GP Bombs (10)	-	-	2.008	-	-	0.139	-	-	0.245	-	-	0.000	-	-	0.249	-	-	0.249
6.2) Q2800 Guided Bombs	-	-	3.139	-	-	0.069	-	-	0.070	-	-	0.000	-	-	0.068	-	-	0.068
6.3) Q2800 Fuzes	-	-	2.151	-	-	0.401	-	-	0.409	-	-	0.000	-	-	0.417	-	-	0.417
Subtotal: Support - Integrated Logistics Cost	**-**	**-**	***7.298***	**-**	**-**	***0.609***	**-**	**-**	***0.724***	**-**	**-**	***0.000***	**-**	**-**	***0.734***	**-**	**-**	***0.734***
Support - Production Engineering Cost																		
7.1) Q2830 GP Bombs (11)	-	-	22.132	-	-	2.091	-	-	4.042	-	-	0.000	-	-	2.042	-	-	2.042
7.2) Q2830 Guided Bombs	-	-	34.526	-	-	1.028	-	-	1.268	-	-	0.000	-	-	0.842	-	-	0.842

Exhibit P-5, Cost Analysis: PB 2020 Navy		Date: March 2019
Appropriation / Budget Activity / Budget Sub Activity: 1508N / 01 / 1	P-1 Line Item Number / Title: 0145 / General Purpose Bombs	Item Number / Title [DODIC]: 1 / GP Bomb
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 2018			FY 2019			FY 2020 Base			FY 2020 OCO			FY 2020 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)
7.3) Q2830 Fuzes	-	-	22.719	-	-	2.383	-	-	2.704	-	-	0.000	-	-	2.180	-	-	2.180
Subtotal: Support - Production Engineering Cost	**-**	**-**	***79.377***	**-**	**-**	***5.502***	**-**	**-**	***8.014***	**-**	**-**	***0.000***	**-**	**-**	***5.064***	**-**	**-**	***5.064***
Support - Miscellaneous Support Cost																		
8.1) Q2850 Product Improvement Program (PIP) (12)	-	-	19.090	-	-	0.260	-	-	0.268	-	-	0.000	-	-	0.273	-	-	0.273
8.2) Q2892 Non-Standard Items (13)	-	-	1.799	-	-	0.250	-	-	0.255	-	-	0.000	-	-	0.255	-	-	0.255
8.3) Q2893 Remanufacture Components	-	-	1.724	-	-	0.235	-	-	0.238	-	-	0.000	-	-	0.237	-	-	0.237
8.4) Q2894 Gaging	-	-	1.859	-	-	0.269	-	-	0.274	-	-	0.000	-	-	0.268	-	-	0.268
Subtotal: Support - Miscellaneous Support Cost	**-**	**-**	***24.472***	**-**	**-**	***1.014***	**-**	**-**	***1.035***	**-**	**-**	***0.000***	**-**	**-**	***1.033***	**-**	**-**	***1.033***
Gross/Weapon System Cost	**-**	**-**	**2,442.452**	**-**	**-**	**115.423**	**-**	**-**	**116.751**	**-**	**-**	**0.000**	**-**	**-**	**63.006**	**-**	**-**	**63.006**

(†) indicates the presence of a P-5a

Footnotes:

(1) Q2191 BLU-111 is a 500 lb. general purpose bomb body.

(2) Q2192 BLU-110 is a 1000 lb. general purpose bomb body.

(3) Q2199 BLU-109 is a 2000 lb. hard target penetrator bomb body.

(4) Q2160 BLU-117 is a 2,000 lb. general purpose bomb body.

(5) Q2011 BSU-33 is a required inventory item necessary to complete end item configurations of the unguided Free Fall General Purpose Bomb.

(6) Q2193 The BLU-126 is a low collateral damage bomb body. BLU-126 cost element has been added due to additional requirements per NMRP.

(7) Q2230 GBU-49 was identified by USMC as a Direct Attack Moving Target weapon for the F-35B in support of Marine Expeditionary Unit Deployment.

(8) Q2197 Bomb sub-components (MXU-735, Lanyards, Lugs, M72; M73; M74 cables, FUZE accessory kits, miscellaneous hardware) procured out of this are required for assembly of BLU-109, BLU-110, BLU-111 and BLU-126 bomb bodies into end item configuration weapons such as Free fall unguided bombs, Laser Guided Bombs (LGB) and Joint Direct Attack Munitions (JDAM).

(9) Q2032 FMU-139 D/B is a cockpit programmable digital general purpose fuze with a hardened target capability in line with the National Defense Strategy's requirement for a more lethal force. Non-recurring schedule extended to incorporate USAF unique requirements. Qualification of final design scheduled to complete 1QFY 2019 followed by initial production award.

(10) Q2800 GP Bombs Integrated Logistics baseline funding is required for FY 2020 to support the deliveries.

(11) Q2830 GP Bombs Production Engineering funding is required to support the FY 2020 procurement engineering efforts.

Exhibit P-5, Cost Analysis: PB 2020 Navy		Date: March 2019
Appropriation / Budget Activity / Budget Sub Activity: 1508N / 01 / 1	**P-1 Line Item Number / Title:** 0145 / General Purpose Bombs	**Item Number / Title [DODIC]:** 1 / GP Bomb
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	

(12) Q2850 Product Improvement Program (PIP) includes Universal Armament Interface (UAI) updates incorporated in the fuze and guided bomb components. Also includes Insensitive Munitions (IM) compliance for GP Bombs.

(13) Q2892 Non-Standard Items procured out of this are Control Surfaces, Bands, Strakes, Aero Panels, Dunnage and Packaging required to support General Purpose Bomb All-Up-Round (AUR) configurations.

Exhibit P-5a, Procurement History and Planning: PB 2020 Navy		Date: March 2019
Appropriation / Budget Activity / Budget Sub Activity: 1508N / 01 / 1	P-1 Line Item Number / Title: 0145 / General Purpose Bombs	Item Number / Title [DODIC]: 1 / GP Bomb

Cost Elements	OCO	FY	Contractor and Location	Method/Type or Funding Vehicle	Location of PCO	Award Date	Date of First Delivery	Qty (Each)	Unit Cost ($)	Specs Avail Now?	Date Revision Available	RFP Issue Date
1.1.1) Q2191 BLU-111(†)		2017	General Dynamics BLU-111 / Garland, TX/MCAAP	C / FP	JMC Rock Island, IL	May 2017	May 2020	1,096	5,765.84	Y		Jun 2014
1.1.1) Q2191 BLU-111(†)	✓	2018	General Dynamics BLU-111 / Garland, TX/MCAAP	C / FP	JMC Rock Island, IL	May 2018	May 2021	4,500	5,884.16	Y		Jun 2014
1.1.1) Q2191 BLU-111(†)	✓	2019	General Dynamics BLU-111 / Garland, TX/MCAAP	C / FP	JMC Rock Island, IL	May 2019	May 2022	1,403	6,001.84	Y		Jun 2014
1.1.1) Q2191 BLU-111(†)	✓	2020	General Dynamics BLU-111 / Garland, TX/MCAAP	C / FP	JMC Rock Island, IL	May 2020	May 2023	405	6,122.00	Y		Jun 2014
1.1.2) Q2192 BLU-110(†)	✓	2018	General Dynamics BLU-110 / Garland TX/MCAAP	C / FP	JMC Rock Island, IL	Jul 2018	Jul 2021	813	9,645.00	Y		Mar 2014
1.1.2) Q2192 BLU-110(†)	✓	2019	General Dynamics BLU-110 / Garland TX/MCAAP	C / FP	JMC Rock Island, IL	Jul 2019	Jul 2022	1,142	13,220.08	Y		Mar 2014
1.1.2) Q2192 BLU-110(†)	✓	2020	General Dynamics BLU-110 / Garland TX/MCAAP	C / FP	JMC Rock Island, IL	Jul 2020	Jul 2023	299	13,484.00	Y		Mar 2014
1.1.3) Q2199 BLU-109(†)		2015	National Forge BLU-109 / Irving, PA/MCAPP	C / FP	JMC Rock Island, IL	Feb 2016	Dec 2019	77	25,995.00	Y		Dec 2014
1.1.3) Q2199 BLU-109(†)	✓	2018	National Forge BLU-109 / Irving, PA/MCAPP	C / FP	JMC Rock Island, IL	Feb 2018	Dec 2021	372	31,449.00	Y		Dec 2014
1.1.3) Q2199 BLU-109(†)	✓	2019	National Forge BLU-109 / Irving, PA/MCAPP	C / FP	JMC Rock Island, IL	Feb 2019	Dec 2022	77	31,074.30	Y		Dec 2014
1.1.4) Q2160 BLU-117(†)	✓	2019	General Dynamics BLU-117 / Garland TX/MCAAP	C / FP	JMC Rock Island, IL	Jun 2019	Mar 2022	222	24,529.00	Y		Feb 2016
1.1.4) Q2160 BLU-117(†)	✓	2020	General Dynamics BLU-117 / Garland TX/MCAAP	C / FP	JMC Rock Island, IL	Jun 2020	Mar 2023	75	25,020.00	Y		Feb 2016
1.1.5) Q2011 BSU-33 Con Fin(†)		2019	CAPCO, INC / GRAND JUNCTION, CO	C / IDIQ	JMC Rock Island, IL	Feb 2019	Feb 2020	6,500	233.93	Y		Sep 2015
1.1.5) Q2011 BSU-33 Con Fin(†)	✓	2020	CAPCO, INC / GRAND JUNCTION, CO	C / IDIQ	JMC Rock Island, IL	Feb 2020	Feb 2021	6,500	237.44	Y		Sep 2015
1.1.6) Q2193 BLU-126	✓	2020	General Dyanmics / JMC Rock Island, IL	C / FP	JMC Rock Island, IL	Jul 2020	Jul 2022	90	7,050.00	Y		Jun 2014
2.1.1) Q2186 Guided Bomb Tailkits(†)	✓	2017	The Boeing Company Guided Bombs (Tailkits) / St. Charles, MO	C / FPIF	AFLCMC Hill AFB	Feb 2017	Mar 2018	4,643	21,186.66	Y		Oct 2013
2.1.2) Q2230 GBU-49 Precision Kit(†)		2019	Raytheon Missile Systems / Albuquerque, New Mexico	C / FFP	NAVAIR, Pax River, MD	Nov 2018	Aug 2020	367	44,500.00	Y		Jun 2018
2.1.3) Q2200 Laser Capability DSU-38(†)		2016	The Boeing Company DSU-38 / St. Charles, MO	SS / IDIQ	NAVAIR, Pax River, MD	Mar 2016	Mar 2017	1,016	13,422.00	Y		Jan 2015
2.1.3) Q2200 Laser Capability DSU-38(†)		2017	The Boeing Company DSU-38 / St. Charles, MO	SS / IDIQ	NAVAIR, Pax River, MD	Mar 2017	Mar 2018	1,059	13,663.59	Y		Jan 2015

Exhibit P-5a, Procurement History and Planning: PB 2020 Navy		Date: March 2019
Appropriation / Budget Activity / Budget Sub Activity: 1508N / 01 / 1	P-1 Line Item Number / Title: 0145 / General Purpose Bombs	Item Number / Title [DODIC]: 1 / GP Bomb

Cost Elements	OCO	FY	Contractor and Location	Method/Type or Funding Vehicle	Location of PCO	Award Date	Date of First Delivery	Qty (Each)	Unit Cost ($)	Specs Avail Now?	Date Revision Available	RFP Issue Date
2.1.3) Q2200 Laser Capability DSU-38(†)		2018 (14)	The Boeing Company DSU-38 / St. Charles, MO	SS / IDDQ	NAVAIR, Pax River, MD	May 2018	May 2019	521	13,923.19	Y		Jan 2015
2.1.3) Q2200 Laser Capability DSU-38(†)	✓	2018	The Boeing Company DSU-38 / St. Charles, MO	SS / IDIQ	NAVAIR, Pax River, MD	Mar 2018	Mar 2019	754	13,923.19	Y		Jan 2015
2.1.3) Q2200 Laser Capability DSU-38(†)	✓	2019	The Boeing Company DSU-38 / St. Charles, MO	SS / IDDQ	NAVAIR, Pax River, MD	Mar 2019	Mar 2020	436	14,219.15	Y		Jan 2015
2.1.3) Q2200 Laser Capability DSU-38(†)	✓	2020	The Boeing Company DSU-38 / St. Charles, MO	SS / IDIQ	NAVAIR, Pax River, MD	Mar 2020	Mar 2021	104	14,486.00	Y		Jan 2015
2.1.4) Q2220 Laser Capability DSU-42(†)		2019	The Boeing Company DSU-42 / St. Charles, MO	SS / IDIQ	NAVAIR, Pax River, MD	Mar 2019	Jan 2022	567	16,646.40	Y		Aug 2017
2.1.4) Q2220 Laser Capability DSU-42(†)	✓	2020	The Boeing Company DSU-42 / St. Charles, MO	SS / IDIQ	NAVAIR, Pax River, MD	Mar 2020	Mar 2023	505	16,979.32	Y		Aug 2017
2.1.5) Q2181 Laser Guided Bombs CCG (Raytheon)(†)		2017	Raytheon Missile Systems LGB (Raytheon) / Tucson, AZ	C / IDIQ	Hill AFB, UT	Jul 2017	Mar 2019	400	14,274.00	Y		Jan 2014
2.1.5) Q2181 Laser Guided Bombs CCG (Raytheon)(†)		2018	Raytheon Missile Systems LGB (Raytheon) / Tucson, AZ	C / IDIQ	Hill AFB, UT	Jul 2018	Mar 2020	129	8,674.00	Y		Jan 2014
2.1.5) Q2181 Laser Guided Bombs CCG (Raytheon)(†)	✓	2018	Raytheon Missile Systems LGB (Raytheon) / Tucson, AZ	C / IDIQ	Hill AFB, UT	Jul 2018	Mar 2020	117	8,674.00	Y		Jan 2014
2.1.5) Q2181 Laser Guided Bombs CCG (Raytheon)(†)		2019	Raytheon Missile Systems LGB (Raytheon) / Tucson, AZ	C / IDDQ	Hill AFB, UT	Jul 2019	Mar 2021	315	8,822.22	Y		Jan 2014
2.1.5) Q2181 Laser Guided Bombs CCG (Raytheon)(†)	✓	2020	Raytheon Missile Systems LGB (Raytheon) / Tucson, AZ	C / IDIQ	Hill AFB, UT	Jul 2020	Mar 2022	676	9,024.42	Y		Jan 2014
2.1.6) Q2181 Laser Guided Bombs CCG (Lockheed)(†)		2017	Lockheed Martin Corporation LGB / Archbald, PA	C / IDIQ	Hill AFB, UT	Jul 2017	Mar 2019	400	14,274.00	Y		Jan 2014
2.1.6) Q2181 Laser Guided Bombs CCG (Lockheed)(†)		2018	Lockheed Martin Corporation LGB / Archbald, PA	C / IDIQ	Hill AFB, UT	Jul 2018	Mar 2020	129	8,674.00	Y		Jan 2014
2.1.6) Q2181 Laser Guided Bombs CCG (Lockheed)(†)		2019	Lockheed Martin Corporation LGB / Archbald, PA	C / IDIQ	Hill AFB, UT	Jul 2019	Mar 2021	315	8,822.22	Y		Jan 2014
2.1.6) Q2181 Laser Guided Bombs CCG (Lockheed)(†)	✓	2020	Lockheed Martin Corporation LGB / Archbald, PA	C / IDDQ	Hill AFB, UT	Jul 2020	Mar 2022	676	9,024.42	Y		Jan 2014
2.1.7) Q2187 Laser Guided Bombs AFG(†)		2017	Raytheon Missile Systems LGB (Raytheon)AFG / Tucson, AZ	C / IDIQ	Hill AFB, UT	Jul 2017	Mar 2019	2,552	4,417.00	Y		Jan 2012
2.1.7) Q2187 Laser Guided Bombs AFG(†)		2018	Raytheon Missile Systems LGB (Raytheon)AFG / Tucson, AZ	C / IDIQ	Hill AFB, UT	Oct 2017	Jun 2019	118	4,699.00	Y		Jan 2012

Exhibit P-5a, Procurement History and Planning: PB 2020 Navy		Date: March 2019
Appropriation / Budget Activity / Budget Sub Activity: 1508N / 01 / 1	P-1 Line Item Number / Title: 0145 / General Purpose Bombs	Item Number / Title [DODIC]: 1 / GP Bomb

Cost Elements	OCO	FY	Contractor and Location	Method/Type or Funding Vehicle	Location of PCO	Award Date	Date of First Delivery	Qty (Each)	Unit Cost ($)	Specs Avail Now?	Date Revision Available	RFP Issue Date
2.1.7) Q2187 Laser Guided Bombs AFG(†)	✓	2018	Raytheon Missile Systems LGB (Raytheon)AFG / Tucson, AZ	C / IDIQ	Hill AFB, UT	Jul 2018	Mar 2020	117	4,699.00	Y		Jan 2012
2.1.7) Q2187 Laser Guided Bombs AFG(†)		2019	Raytheon Missile Systems LGB (Raytheon)AFG / Tucson, AZ	C / IDIQ	Hill AFB, UT	Jul 2019	Mar 2021	1,306	4,788.62	Y		Jan 2012
2.1.7) Q2187 Laser Guided Bombs AFG(†)	✓	2020	Raytheon Missile Systems LGB (Raytheon)AFG / Tucson, AZ	C / IDIQ	Hill AFB, UT	Jul 2020	Mar 2022	1,352	4,893.00	Y		Jan 2012
3.1.2) Q2032 FMU-139 Electrical Fuze(†)		2014	L-3 FUZING & ORDNANCE SYSTEMS INC / CINCINATTI, OH	SS / FFP	NAVAIR, Pax River, MD	Mar 2015	Mar 2018	2,178	2,027.21	Y		Mar 2014
3.1.2) Q2032 FMU-139 Electrical Fuze(†)	✓	2015	L-3 FUZING & ORDNANCE SYSTEMS INC / CINCINATTI, OH	SS / FFP	NAVAIR, Pax River, MD	Mar 2015	Mar 2018	3,746	2,027.21	Y		Mar 2014
3.1.2) Q2032 FMU-139 Electrical Fuze(†)		2016	L-3 FUZING & ORDNANCE SYSTEMS INC / CINCINATTI, OH	SS / FFP	NAVAIR, Pax River, MD	Jul 2017	Jul 2019	1,610	2,237.05	Y		Mar 2014
3.1.2) Q2032 FMU-139 Electrical Fuze(†)		2018 (15)	Northrop Grumman / Rocket Center, WV	SS / FFP	NAVAIR, Pax River, MD	Nov 2018	Nov 2019	6,359	2,281.79	Y		Mar 2015
3.1.2) Q2032 FMU-139 Electrical Fuze(†)	✓	2018 (16)	Northrop Grumman / Rocket Center, WV	SS / FFP	NAVAIR, Pax River, MD	Nov 2018	Nov 2019	4,838	2,649.00	Y		Mar 2015
3.1.2) Q2032 FMU-139 Electrical Fuze(†)		2019	Northrop Grumman / Rocket Center, WV	SS / FFP	NAVAIR, Pax River, MD	Mar 2019	Mar 2020	8,993	2,327.45	Y		Mar 2015
3.1.2) Q2032 FMU-139 Electrical Fuze(†)	✓	2019	Northrop Grumman / Rocket Center, WV	SS / FFP	NAVAIR, Pax River, MD	Mar 2019	Mar 2020	3,130	2,327.45	Y		Mar 2015
3.1.2) Q2032 FMU-139 Electrical Fuze(†)	✓	2020	L-3 FUZING & ORDNANCE SYSTEMS INC / CINCINATTI, OH	SS / FFP	NAVAIR, Pax River, MD	Mar 2020	Mar 2022	6,519	2,374.00	Y		Mar 2015
3.1.3) Q2210 Hard Target Void Sensing Fuze(†)		2016	ATK Tactical Systems (HTVSF) / Keyser, WV	C / FFP	Eglin AFB, FL	Aug 2017	Aug 2018	450	11,346.00	Y		Nov 2012

(†) indicates the presence of a P-21

Footnotes:

(14) Award delayed due to late receipt of appropriated funds

(15) Non-recurring schedule extended to incorporate USAF unique requirements. Qualification of final design scheduled to complete 1Q FY 2019 followed by initial production award.

(16) Non-recurring schedule extended to incorporate USAF unique requirements. Qualification of final design scheduled to complete 1Q FY 2019 followed by initial production award.

Exhibit P-21, Production Schedule: PB 2020 Navy		Date: March 2019
Appropriation / Budget Activity / Budget Sub Activity: 1508N / 01 / 1	**P-1 Line Item Number / Title:** 0145 / General Purpose Bombs	**Item Number / Title [DODIC]:** 1 / GP Bomb

Cost Elements (Units in Each)							Fiscal Year 2015												Fiscal Year 2016												BALANCE
							Calendar Year 2015												Calendar Year 2016												
OCO	MFR #	FY	SERVICE	PROC QTY	ACCEPT PRIOR TO 1 OCT 2014	BAL DUE AS OF 1 OCT	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	
1.1.1) Q2191 BLU-111 (1)																															
Prior Years Deliveries: 7730																															
	1	2017	NAVY	1,096	0	1,096																									1,096
✓	1	2018	NAVY	4,500	0	4,500																									4,500
✓	1	2019	NAVY	1,403	0	1,403																									1,403
✓	1	2020	NAVY	405	0	405																									405
1.1.2) Q2192 BLU-110 (2)																															
Prior Years Deliveries: 131																															
✓	2	2018	NAVY	813	0	813																									813
✓	2	2019	NAVY	1,142	0	1,142																									1,142
✓	2	2020	NAVY	299	0	299																									299
1.1.3) Q2199 BLU-109 (3)																															
Prior Years Deliveries: 1207																															
	3	2015	NAVY	77	0	77																	A -	-	-	-	-	-	-	-	77
✓	3	2018	NAVY	372	0	372																									372
✓	3	2019	NAVY	77	0	77																									77
1.1.4) Q2160 BLU-117 (4)																															
✓	4	2019	NAVY	222	0	222																									222
✓	4	2020	NAVY	75	0	75																									75
1.1.5) Q2011 BSU-33 Con Fin (5)																															
	5	2019	NAVY	6,500	0	6,500																									6,500
✓	5	2020	NAVY	6,500	0	6,500																									6,500
2.1.1) Q2186 Guided Bomb Tailkits																															
Prior Years Deliveries: 5012																															
✓	6	2017	NAVY	4,643	0	4,643																									4,643
2.1.2) Q2230 GBU-49 Precision Kit (7)																															
	7	2019	NAVY	367	0	367																									367
2.1.3) Q2200 Laser Capability DSU-38																															
Prior Years Deliveries: 7822																															
	8	2016	NAVY	1,016	0	1,016																		A -	-	-	-	-	-	-	1,016
	8	2017	NAVY	1,059	0	1,059																									1,059
	8	2018	NAVY	521	0	521																									521
							OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	

Exhibit P-21, Production Schedule: PB 2020 Navy		Date: March 2019
Appropriation / Budget Activity / Budget Sub Activity: 1508N / 01 / 1	P-1 Line Item Number / Title: 0145 / General Purpose Bombs	Item Number / Title [DODIC]: 1 / GP Bomb

Cost Elements (Units in Each)							Fiscal Year 2015												Fiscal Year 2016												BALANCE
										Calendar Year 2015												Calendar Year 2016									
OCO	MFR #	FY	SERVICE	PROC QTY	ACCEPT PRIOR TO 1 OCT 2014	BAL DUE AS OF 1 OCT	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	
✓	8	2018	NAVY	754	0	754																									754
✓	8	2019	NAVY	436	0	436																									436
✓	8	2020	NAVY	104	0	104																									104
2.1.4) Q2220 Laser Capability DSU-42																															
	9	2019	NAVY	567	0	567																									567
✓	9	2020	NAVY	505	0	505																									505
2.1.5) Q2181 Laser Guided Bombs CCG (Raytheon)																															
Prior Years Deliveries: 1296																															
	10	2017	NAVY	400	0	400																									400
	10	2018	NAVY	129	0	129																									129
✓	10	2018	NAVY	117	0	117																									117
	10	2019	NAVY	315	0	315																									315
✓	10	2020	NAVY	676	0	676																									676
2.1.6) Q2181 Laser Guided Bombs CCG (Lockheed)																															
	11	2017	NAVY	400	0	400																									400
	11	2018	NAVY	129	0	129																									129
	11	2019	NAVY	315	0	315																									315
✓	11	2020	NAVY	676	0	676																									676
2.1.7) Q2187 Laser Guided Bombs AFG																															
	12	2017	NAVY	2,552	0	2,552																									2,552
	12	2018	NAVY	118	0	118																									118
✓	12	2018	NAVY	117	0	117																									117
	12	2019	NAVY	1,306	0	1,306																									1,306
✓	12	2020	NAVY	1,352	0	1,352																									1,352
3.1.2) Q2032 FMU-139 Electrical Fuze [9]																															
Prior Years Deliveries: 40909																															
	13	2014	NAVY	2,178	0	2,178						A -	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2,178
✓	13	2015	NAVY	3,746	0	3,746						A -	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3,746
	13	2016	NAVY	1,610	0	1,610																									1,610
	14	2018	NAVY	6,359	0	6,359																									6,359
✓	14	2018	NAVY	4,838	0	4,838																									4,838
	14	2019	NAVY	8,993	0	8,993																									8,993
✓	14	2019	NAVY	3,130	0	3,130																									3,130
							OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	

Exhibit P-21, Production Schedule: PB 2020 Navy		**Date:** March 2019
Appropriation / Budget Activity / Budget Sub Activity: 1508N / 01 / 1	**P-1 Line Item Number / Title:** 0145 / General Purpose Bombs	**Item Number / Title [DODIC]:** 1 / GP Bomb

Cost Elements (Units in Each)							Fiscal Year 2015												Fiscal Year 2016												BALANCE
										Calendar Year 2015												Calendar Year 2016									
OCO	MFR #	FY	SERVICE	PROC QTY	ACCEPT PRIOR TO 1 OCT 2014	BAL DUE AS OF 1 OCT	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	
✓	13	2020	NAVY	6,519	0	6,519																									6,519
3.1.3) Q2210 Hard Target Void Sensing Fuze																															
Prior Years Deliveries: 50																															
	15	2016	NAVY	450	0	450																									450
							OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	

Exhibit P-21, Production Schedule: PB 2020 Navy | **Date:** March 2019

Appropriation / Budget Activity / Budget Sub Activity: 1508N / 01 / 1 | **P-1 Line Item Number / Title:** 0145 / General Purpose Bombs | **Item Number / Title [DODIC]:** 1 / GP Bomb

Cost Elements (Units in Each)							Fiscal Year 2017												Fiscal Year 2018												BALANCE
							Calendar Year 2017												Calendar Year 2018												
OCO	MFR #	FY	SERVICE	PROC QTY	ACCEPT PRIOR TO 1 OCT 2016	BAL DUE AS OF 1 OCT	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	
1.1.1) Q2191 BLU-111 (1)																															
Prior Years Deliveries: 7730																															
	1	2017	NAVY	1,096	0	1,096								A -	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1,096
✓	1	2018	NAVY	4,500	0	4,500																				A -	-	-	-	-	4,500
✓	1	2019	NAVY	1,403	0	1,403																									1,403
✓	1	2020	NAVY	405	0	405																									405
1.1.2) Q2192 BLU-110 (2)																															
Prior Years Deliveries: 131																															
✓	2	2018	NAVY	813	0	813																						A -	-	-	813
✓	2	2019	NAVY	1,142	0	1,142																									1,142
✓	2	2020	NAVY	299	0	299																									299
1.1.3) Q2199 BLU-109 (3)																															
Prior Years Deliveries: 1207																															
	3	2015	NAVY	77	0	77	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	77
✓	3	2018	NAVY	372	0	372																	A -	-	-	-	-	-	-	-	372
✓	3	2019	NAVY	77	0	77																									77
1.1.4) Q2160 BLU-117 (4)																															
✓	4	2019	NAVY	222	0	222																									222
✓	4	2020	NAVY	75	0	75																									75
1.1.5) Q2011 BSU-33 Con Fin (5)																															
	5	2019	NAVY	6,500	0	6,500																									6,500
✓	5	2020	NAVY	6,500	0	6,500																									6,500
2.1.1) Q2186 Guided Bomb Tailkits																															
Prior Years Deliveries: 5012																															
✓	6	2017	NAVY	4,643	0	4,643					A -	-	-	-	-	-	-	-	-	-	-	-	-	397	386	386	386	386	386	386	1,930
2.1.2) Q2230 GBU-49 Precision Kit (7)																															
	7	2019	NAVY	367	0	367																									367
2.1.3) Q2200 Laser Capability DSU-38																															
Prior Years Deliveries: 7822																															
	8	2016	NAVY	1,016	0	1,016	-	-	-	-	-	136	80	80	80	80	80	80	80	80	80	80	80								0
	8	2017	NAVY	1,059	0	1,059						A -	-	-	-	-	-	-	-	-	-	-	-	93	120	120	120	120	120	61	305
	8	2018	NAVY	521	0	521																				A -	-	-	-	-	521
							OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	

Exhibit P-21, Production Schedule: PB 2020 Navy | **Date:** March 2019

Appropriation / Budget Activity / Budget Sub Activity: 1508N / 01 / 1 | **P-1 Line Item Number / Title:** 0145 / General Purpose Bombs | **Item Number / Title [DODIC]:** 1 / GP Bomb

Cost Elements (Units in Each)							Fiscal Year 2017												Fiscal Year 2018												
							Calendar Year 2017												Calendar Year 2018												
OCO	MFR #	FY	SERVICE	PROC QTY	ACCEPT PRIOR TO 1 OCT 2016	BAL DUE AS OF 1 OCT	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	BALANCE
✓	8	2018	NAVY	754	0	754																		A -	-	-	-	-	-	-	754
✓	8	2019	NAVY	436	0	436																									436
✓	8	2020	NAVY	104	0	104																									104
2.1.4) Q2220 Laser Capability DSU-42																															
	9	2019	NAVY	567	0	567																									567
✓	9	2020	NAVY	505	0	505																									505
2.1.5) Q2181 Laser Guided Bombs CCG (Raytheon)																															
Prior Years Deliveries: 1296																															
	10	2017	NAVY	400	0	400										A -	-	-	-	-	-	-	-	-	-	-	-	-	-	-	400
	10	2018	NAVY	129	0	129																						A -	-	-	129
✓	10	2018	NAVY	117	0	117																						A -	-	-	117
	10	2019	NAVY	315	0	315																									315
✓	10	2020	NAVY	676	0	676																									676
2.1.6) Q2181 Laser Guided Bombs CCG (Lockheed)																															
	11	2017	NAVY	400	0	400										A -	-	-	-	-	-	-	-	-	-	-	-	-	-	-	400
	11	2018	NAVY	129	0	129																						A -	-	-	129
	11	2019	NAVY	315	0	315																									315
✓	11	2020	NAVY	676	0	676																									676
2.1.7) Q2187 Laser Guided Bombs AFG																															
	12	2017	NAVY	2,552	0	2,552										A -	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2,552
	12	2018	NAVY	118	0	118													A -	-	-	-	-	-	-	-	-	-	-	-	118
✓	12	2018	NAVY	117	0	117																						A -	-	-	117
	12	2019	NAVY	1,306	0	1,306																									1,306
✓	12	2020	NAVY	1,352	0	1,352																									1,352
3.1.2) Q2032 FMU-139 Electrical Fuze [9]																															
Prior Years Deliveries: 40909																															
	13	2014	NAVY	2,178	0	2,178	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	98	180	180	180	180	180	180	1,000
✓	13	2015	NAVY	3,746	0	3,746	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	146	200	300	300	400	400	400	1,600
	13	2016	NAVY	1,610	0	1,610										A -	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1,610
	14	2018	NAVY	6,359	0	6,359																									6,359
✓	14	2018	NAVY	4,838	0	4,838																									4,838
	14	2019	NAVY	8,993	0	8,993																									8,993
✓	14	2019	NAVY	3,130	0	3,130																									3,130
							OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	

Exhibit P-21, Production Schedule: PB 2020 Navy		Date: March 2019
Appropriation / Budget Activity / Budget Sub Activity: 1508N / 01 / 1	**P-1 Line Item Number / Title:** 0145 / General Purpose Bombs	**Item Number / Title [DODIC]:** 1 / GP Bomb

Cost Elements (Units in Each)							Fiscal Year 2017												Fiscal Year 2018												BALANCE
							Calendar Year 2017												Calendar Year 2018												
OCO	MFR #	FY	SERVICE	PROC QTY	ACCEPT PRIOR TO 1 OCT 2016	BAL DUE AS OF 1 OCT	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	
✓	13	2020	NAVY	6,519	0	6,519																									6,519
3.1.3) Q2210 Hard Target Void Sensing Fuze																															
Prior Years Deliveries: 50																															
	15	2016	NAVY	450	0	450											A -	-	-	-	-	-	-	-	-	-	-	-	40	40	370
							OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	

Exhibit P-21, Production Schedule: PB 2020 Navy | **Date:** March 2019

Appropriation / Budget Activity / Budget Sub Activity: 1508N / 01 / 1 | **P-1 Line Item Number / Title:** 0145 / General Purpose Bombs | **Item Number / Title [DODIC]:** 1 / GP Bomb

Cost Elements (Units in Each)							Fiscal Year 2019												Fiscal Year 2020												BALANCE
							Calendar Year 2019												Calendar Year 2020												
OCO	MFR #	FY	SERVICE	PROC QTY	ACCEPT PRIOR TO 1 OCT 2018	BAL DUE AS OF 1 OCT	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	
1.1.1) Q2191 BLU-111 (1)																															
Prior Years Deliveries: 7730																															
	1	2017	NAVY	1,096	0	1,096	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	91	91	91	91	91	641
✓	1	2018	NAVY	4,500	0	4,500	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4,500
✓	1	2019	NAVY	1,403	0	1,403								A -	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1,403
✓	1	2020	NAVY	405	0	405																				A -	-	-	-	-	405
1.1.2) Q2192 BLU-110 (2)																															
Prior Years Deliveries: 131																															
✓	2	2018	NAVY	813	0	813	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	813
✓	2	2019	NAVY	1,142	0	1,142										A -	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1,142
✓	2	2020	NAVY	299	0	299																						A -	-	-	299
1.1.3) Q2199 BLU-109 (3)																															
Prior Years Deliveries: 1207																															
	3	2015	NAVY	77	0	77	-	-	-	-	-	-	-	-	-	-	-	-	-	-	77										0
✓	3	2018	NAVY	372	0	372	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	372
✓	3	2019	NAVY	77	0	77					A -	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	77
1.1.4) Q2160 BLU-117 (4)																															
✓	4	2019	NAVY	222	0	222									A -	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	222
✓	4	2020	NAVY	75	0	75																					A -	-	-	-	75
1.1.5) Q2011 BSU-33 Con Fin (5)																															
	5	2019	NAVY	6,500	0	6,500					A -	-	-	-	-	-	-	-	-	-	-	-	541	541	541	541	541	541	541	541	2,172
✓	5	2020	NAVY	6,500	0	6,500																	A -	-	-	-	-	-	-	-	6,500
2.1.1) Q2186 Guided Bomb Tailkits																															
Prior Years Deliveries: 5012																															
✓	6	2017	NAVY	4,643	2,713	1,930	386	386	386	386	386																				0
2.1.2) Q2230 GBU-49 Precision Kit (7)																															
	7	2019	NAVY	367	0	367		A -	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	37	30	300
2.1.3) Q2200 Laser Capability DSU-38																															
Prior Years Deliveries: 7822																															
	8	2016	NAVY	1,016	1,016	0																									0
	8	2017	NAVY	1,059	754	305	61	61	61	61	61																				0
	8	2018	NAVY	521	0	521	-	-	-	-	-	-	-	100	100	100	100	100	21												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	

Exhibit P-21, Production Schedule: PB 2020 Navy | **Date:** March 2019

Appropriation / Budget Activity / Budget Sub Activity: 1508N / 01 / 1 | **P-1 Line Item Number / Title:** 0145 / General Purpose Bombs | **Item Number / Title [DODIC]:** 1 / GP Bomb

Cost Elements (Units in Each)							Fiscal Year 2019												Fiscal Year 2020												BALANCE
										Calendar Year 2019												Calendar Year 2020									
OCO	MFR #	FY	SERVICE	PROC QTY	ACCEPT PRIOR TO 1 OCT 2018	BAL DUE AS OF 1 OCT	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	
✓	8	2018	NAVY	754	0	754	-	-	-	-	-	100	100	100	100	100	100	100	54												0
✓	8	2019	NAVY	436	0	436						A -	-	-	-	-	-	-	-	-	-	-	-	100	100	100	100	36			0
✓	8	2020	NAVY	104	0	104																		A -	-	-	-	-	-	-	104
2.1.4) Q2220 Laser Capability DSU-42																															
	9	2019	NAVY	567	0	567						A -	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	567
✓	9	2020	NAVY	505	0	505																		A -	-	-	-	-	-	-	505
2.1.5) Q2181 Laser Guided Bombs CCG (Raytheon)																															
Prior Years Deliveries: 1296																															
	10	2017	NAVY	400	0	400	-	-	-	-	-	200	200																		0
	10	2018	NAVY	129	0	129	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	129							0
✓	10	2018	NAVY	117	0	117	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	117							0
	10	2019	NAVY	315	0	315										A -	-	-	-	-	-	-	-	-	-	-	-	-	-	-	315
✓	10	2020	NAVY	676	0	676																						A -	-	-	676
2.1.6) Q2181 Laser Guided Bombs CCG (Lockheed)																															
	11	2017	NAVY	400	0	400	-	-	-	-	-	200	200																		0
	11	2018	NAVY	129	0	129	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	129							0
	11	2019	NAVY	315	0	315										A -	-	-	-	-	-	-	-	-	-	-	-	-	-	-	315
✓	11	2020	NAVY	676	0	676																						A -	-	-	676
2.1.7) Q2187 Laser Guided Bombs AFG																															
	12	2017	NAVY	2,552	0	2,552	-	-	-	-	-	212	212	212	212	212	212	212	212	212	212	212	220								0
	12	2018	NAVY	118	0	118	-	-	-	-	-	-	-	-	118																0
✓	12	2018	NAVY	117	0	117	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	117							0
	12	2019	NAVY	1,306	0	1,306										A -	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1,306
✓	12	2020	NAVY	1,352	0	1,352																						A -	-	-	1,352
3.1.2) Q2032 FMU-139 Electrical Fuze [9]																															
Prior Years Deliveries: 40909																															
	13	2014	NAVY	2,178	1,178	1,000	200	200	200	200	200																				0
✓	13	2015	NAVY	3,746	2,146	1,600	400	400	400	400																					0
	13	2016	NAVY	1,610	0	1,610	-	-	-	-	-	-	-	-	-	136	134	134	134	134	134	134	134	134	134	134	134				0
	14	2018	NAVY	6,359	0	6,359		A -	-	-	-	-	-	-	-	-	-	-	-	529	529	529	529	529	529	529	526	529	529	529	543
✓	14	2018	NAVY	4,838	0	4,838		A -	-	-	-	-	-	-	-	-	-	-	-	405	403	403	403	403	403	403	403	403	403	403	403
	14	2019	NAVY	8,993	0	8,993						A -	-	-	-	-	-	-	-	-	-	-	-	754	749	749	749	749	749	749	3,745
✓	14	2019	NAVY	3,130	0	3,130						A -	-	-	-	-	-	-	-	-	-	-	-	261	261	261	261	261	261	261	1,303
							OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	

Exhibit P-21, Production Schedule: PB 2020 Navy		**Date:** March 2019
Appropriation / Budget Activity / Budget Sub Activity: 1508N / 01 / 1	**P-1 Line Item Number / Title:** 0145 / General Purpose Bombs	**Item Number / Title [DODIC]:** 1 / GP Bomb

Cost Elements (Units in Each)							Fiscal Year 2019												Fiscal Year 2020												BALANCE
							Calendar Year 2019												Calendar Year 2020												
OCO	MFR #	FY	SERVICE	PROC QTY	ACCEPT PRIOR TO 1 OCT 2018	BAL DUE AS OF 1 OCT	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	
✓	13	2020	NAVY	6,519	0	6,519																		A -	-	-	-	-	-	-	6,519
3.1.3) Q2210 Hard Target Void Sensing Fuze																															
Prior Years Deliveries: 50																															
	15	2016	NAVY	450	80	370	40	40	40	40	40	40	40	40	40	10															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	

Exhibit P-21, Production Schedule: PB 2020 Navy | **Date:** March 2019

Appropriation / Budget Activity / Budget Sub Activity: 1508N / 01 / 1 | **P-1 Line Item Number / Title:** 0145 / General Purpose Bombs | **Item Number / Title [DODIC]:** 1 / GP Bomb

Cost Elements (Units in Each)							Fiscal Year 2021												Fiscal Year 2022												BALANCE
							Calendar Year 2021												Calendar Year 2022												
OCO	MFR #	FY	SERVICE	PROC QTY	ACCEPT PRIOR TO 1 OCT 2020	BAL DUE AS OF 1 OCT	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	
1.1.1) Q2191 BLU-111 (1)																															
Prior Years Deliveries: 7730																															
	1	2017	NAVY	1,096	455	641	91	91	91	91	91	91	95																		0
✓	1	2018	NAVY	4,500	0	4,500	-	-	-	-	-	-	-	375	375	375	375	375	375	375	375	375	375	375	375						0
✓	1	2019	NAVY	1,403	0	1,403	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	117	117	117	117	117	818
✓	1	2020	NAVY	405	0	405	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	405
1.1.2) Q2192 BLU-110 (2)																															
Prior Years Deliveries: 131																															
✓	2	2018	NAVY	813	0	813	-	-	-	-	-	-	-	-	-	68	68	68	68	68	68	68	68	68	67	67	67				0
✓	2	2019	NAVY	1,142	0	1,142	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	97	95	95	855
✓	2	2020	NAVY	299	0	299	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	299
1.1.3) Q2199 BLU-109 (3)																															
Prior Years Deliveries: 1207																															
	3	2015	NAVY	77	77	0																									0
✓	3	2018	NAVY	372	0	372	-	-	-	-	-	-	-	-	-	-	-	-	-	-	31	31	31	31	31	31	31	31	31	31	62
✓	3	2019	NAVY	77	0	77	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	77
1.1.4) Q2160 BLU-117 (4)																															
✓	4	2019	NAVY	222	0	222	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	22	19	18	18	18	18	18	91
✓	4	2020	NAVY	75	0	75	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	75
1.1.5) Q2011 BSU-33 Con Fin (5)																															
	5	2019	NAVY	6,500	4,328	2,172	541	541	541	549																					0
✓	5	2020	NAVY	6,500	0	6,500	-	-	-	-	541	541	541	541	541	541	541	541	541	541	541	549									0
2.1.1) Q2186 Guided Bomb Tailkits																															
Prior Years Deliveries: 5012																															
✓	6	2017	NAVY	4,643	4,643	0																									0
2.1.2) Q2230 GBU-49 Precision Kit (7)																															
	7	2019	NAVY	367	67	300	30	30	30	30	30	30	30	30	30	30															0
2.1.3) Q2200 Laser Capability DSU-38																															
Prior Years Deliveries: 7822																															
	8	2016	NAVY	1,016	1,016	0																									0
	8	2017	NAVY	1,059	1,059	0																									0
	8	2018	NAVY	521	521	0																									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	

Exhibit P-21, Production Schedule: PB 2020 Navy		**Date:** March 2019
Appropriation / Budget Activity / Budget Sub Activity: 1508N / 01 / 1	**P-1 Line Item Number / Title:** 0145 / General Purpose Bombs	**Item Number / Title [DODIC]:** 1 / GP Bomb

Cost Elements (Units in Each)							Fiscal Year 2021												Fiscal Year 2022												BALANCE
							Calendar Year 2021												Calendar Year 2022												
OCO	MFR #	FY	SERVICE	PROC QTY	ACCEPT PRIOR TO 1 OCT 2020	BAL DUE AS OF 1 OCT	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	
✓	8	2018	NAVY	754	754	0																									0
✓	8	2019	NAVY	436	436	0																									0
✓	8	2020	NAVY	104	0	104	-	-	-	-	-	54	50																		0
2.1.4) Q2220 Laser Capability DSU-42																															
	9	2019	NAVY	567	0	567	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	64	48	48	47	45	45	45	45	45	135
✓	9	2020	NAVY	505	0	505	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	505
2.1.5) Q2181 Laser Guided Bombs CCG (Raytheon)																															
Prior Years Deliveries: 1296																															
	10	2017	NAVY	400	400	0																									0
	10	2018	NAVY	129	129	0																									0
✓	10	2018	NAVY	117	117	0																									0
	10	2019	NAVY	315	0	315	-	-	-	-	-	200	115																		0
✓	10	2020	NAVY	676	0	676	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	200	200	200	76				0
2.1.6) Q2181 Laser Guided Bombs CCG (Lockheed)																															
	11	2017	NAVY	400	400	0																									0
	11	2018	NAVY	129	129	0																									0
	11	2019	NAVY	315	0	315	-	-	-	-	-	200	115																		0
✓	11	2020	NAVY	676	0	676	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	200	200	200	76				0
2.1.7) Q2187 Laser Guided Bombs AFG																															
	12	2017	NAVY	2,552	2,552	0																									0
	12	2018	NAVY	118	118	0																									0
✓	12	2018	NAVY	117	117	0																									0
	12	2019	NAVY	1,306	0	1,306	-	-	-	-	-	113	113	108	108	108	108	108	108	108	108	108	108								0
✓	12	2020	NAVY	1,352	0	1,352	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	200	200	200	200	200	200	152	0
3.1.2) Q2032 FMU-139 Electrical Fuze [9]																															
Prior Years Deliveries: 40909																															
	13	2014	NAVY	2,178	2,178	0																									0
✓	13	2015	NAVY	3,746	3,746	0																									0
	13	2016	NAVY	1,610	1,610	0																									0
	14	2018	NAVY	6,359	5,816	543	543																								0
✓	14	2018	NAVY	4,838	4,435	403	403																								0
	14	2019	NAVY	8,993	5,248	3,745	749	749	749	749	749																				0
✓	14	2019	NAVY	3,130	1,827	1,303	261	261	261	260	260																				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	

Exhibit P-21, Production Schedule: PB 2020 Navy		**Date:** March 2019
Appropriation / Budget Activity / Budget Sub Activity: 1508N / 01 / 1	**P-1 Line Item Number / Title:** 0145 / General Purpose Bombs	**Item Number / Title [DODIC]:** 1 / GP Bomb

Cost Elements (Units in Each)							Fiscal Year 2021												Fiscal Year 2022												BALANCE
							Calendar Year 2021															Calendar Year 2022									
OCO	MFR #	FY	SERVICE	PROC QTY	ACCEPT PRIOR TO 1 OCT 2020	BAL DUE AS OF 1 OCT	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	
✓	13	2020	NAVY	6,519	0	6,519	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	769	770	498	498	498	498	498	2,490
3.1.3) Q2210 Hard Target Void Sensing Fuze																															
Prior Years Deliveries: 50																															
	15	2016	NAVY	450	450	0																									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	

Exhibit P-21, Production Schedule: PB 2020 Navy		**Date:** March 2019
Appropriation / Budget Activity / Budget Sub Activity: 1508N / 01 / 1	**P-1 Line Item Number / Title:** 0145 / General Purpose Bombs	**Item Number / Title [DODIC]:** 1 / GP Bomb

Cost Elements (Units in Each)							Fiscal Year 2023												Fiscal Year 2024												BALANCE
							Calendar Year 2023												Calendar Year 2024												
OCO	MFR #	FY	SERVICE	PROC QTY	ACCEPT PRIOR TO 1 OCT 2022	BAL DUE AS OF 1 OCT	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	
1.1.1) Q2191 BLU-111 (1)																															
Prior Years Deliveries: 7730																															
	1	2017	NAVY	1,096	1,096	0																									0
✓	1	2018	NAVY	4,500	4,500	0																									0
✓	1	2019	NAVY	1,403	585	818	117	117	117	117	117	117	116																		0
✓	1	2020	NAVY	405	0	405	-	-	-	-	-	-	-	100	100	100	105														0
1.1.2) Q2192 BLU-110 (2)																															
Prior Years Deliveries: 131																															
✓	2	2018	NAVY	813	813	0																									0
✓	2	2019	NAVY	1,142	287	855	95	95	95	95	95	95	95	95	95																0
✓	2	2020	NAVY	299	0	299	-	-	-	-	-	-	-	-	-	24	24	24	24	25	25	25	25	25	26	26	26				0
1.1.3) Q2199 BLU-109 (3)																															
Prior Years Deliveries: 1207																															
	3	2015	NAVY	77	77	0																									0
✓	3	2018	NAVY	372	310	62	31	31																							0
✓	3	2019	NAVY	77	0	77	-	-	9	8	6	6	6	6	6	6	6	6	6	6											0
1.1.4) Q2160 BLU-117 (4)																															
✓	4	2019	NAVY	222	131	91	18	18	18	18	19																				0
✓	4	2020	NAVY	75	0	75	-	-	-	-	-	35	20	20																	0
1.1.5) Q2011 BSU-33 Con Fin (5)																															
	5	2019	NAVY	6,500	6,500	0																									0
✓	5	2020	NAVY	6,500	6,500	0																									0
2.1.1) Q2186 Guided Bomb Tailkits																															
Prior Years Deliveries: 5012																															
✓	6	2017	NAVY	4,643	4,643	0																									0
2.1.2) Q2230 GBU-49 Precision Kit (7)																															
	7	2019	NAVY	367	367	0																									0
2.1.3) Q2200 Laser Capability DSU-38																															
Prior Years Deliveries: 7822																															
	8	2016	NAVY	1,016	1,016	0																									0
	8	2017	NAVY	1,059	1,059	0																									0
	8	2018	NAVY	521	521	0																									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	

Exhibit P-21, Production Schedule: PB 2020 Navy		**Date:** March 2019
Appropriation / Budget Activity / Budget Sub Activity: 1508N / 01 / 1	**P-1 Line Item Number / Title:** 0145 / General Purpose Bombs	**Item Number / Title [DODIC]:** 1 / GP Bomb

Cost Elements (Units in Each)							Fiscal Year 2023												Fiscal Year 2024												BALANCE
							Calendar Year 2023												Calendar Year 2024												
OCO	MFR #	FY	SERVICE	PROC QTY	ACCEPT PRIOR TO 1 OCT 2022	BAL DUE AS OF 1 OCT	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	
✓	8	2018	NAVY	754	754	0																									0
✓	8	2019	NAVY	436	436	0																									0
✓	8	2020	NAVY	104	104	0																									0
2.1.4) Q2220 Laser Capability DSU-42																															
	9	2019	NAVY	567	432	135	45	45	45																						0
✓	9	2020	NAVY	505	0	505	-	-	-	-	-	42	42	42	42	42	42	42	42	42	42	42	43								0
2.1.5) Q2181 Laser Guided Bombs CCG (Raytheon)																															
Prior Years Deliveries: 1296																															
	10	2017	NAVY	400	400	0																									0
	10	2018	NAVY	129	129	0																									0
✓	10	2018	NAVY	117	117	0																									0
	10	2019	NAVY	315	315	0																									0
✓	10	2020	NAVY	676	676	0																									0
2.1.6) Q2181 Laser Guided Bombs CCG (Lockheed)																															
	11	2017	NAVY	400	400	0																									0
	11	2018	NAVY	129	129	0																									0
	11	2019	NAVY	315	315	0																									0
✓	11	2020	NAVY	676	676	0																									0
2.1.7) Q2187 Laser Guided Bombs AFG																															
	12	2017	NAVY	2,552	2,552	0																									0
	12	2018	NAVY	118	118	0																									0
✓	12	2018	NAVY	117	117	0																									0
	12	2019	NAVY	1,306	1,306	0																									0
✓	12	2020	NAVY	1,352	1,352	0																									0
3.1.2) Q2032 FMU-139 Electrical Fuze [9]																															
Prior Years Deliveries: 40909																															
	13	2014	NAVY	2,178	2,178	0																									0
✓	13	2015	NAVY	3,746	3,746	0																									0
	13	2016	NAVY	1,610	1,610	0																									0
	14	2018	NAVY	6,359	6,359	0																									0
✓	14	2018	NAVY	4,838	4,838	0																									0
	14	2019	NAVY	8,993	8,993	0																									0
✓	14	2019	NAVY	3,130	3,130	0																									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	

Exhibit P-21, Production Schedule: PB 2020 Navy		Date: March 2019
Appropriation / Budget Activity / Budget Sub Activity: 1508N / 01 / 1	**P-1 Line Item Number / Title:** 0145 / General Purpose Bombs	**Item Number / Title [DODIC]:** 1 / GP Bomb

Cost Elements (Units in Each)							Fiscal Year 2023												Fiscal Year 2024												BALANCE
										Calendar Year 2023												Calendar Year 2024									
OCO	MFR #	FY	SERVICE	PROC QTY	ACCEPT PRIOR TO 1 OCT 2022	BAL DUE AS OF 1 OCT	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	
✓	13	2020	NAVY	6,519	4,029	2,490	498	498	498	498	498																				0
3.1.3) Q2210 Hard Target Void Sensing Fuze																															
Prior Years Deliveries: 50																															
	15	2016	NAVY	450	450	0																									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	

Exhibit P-21, Production Schedule: PB 2020 Navy		Date: March 2019
Appropriation / Budget Activity / Budget Sub Activity: 1508N / 01 / 1	P-1 Line Item Number / Title: 0145 / General Purpose Bombs	Item Number / Title [DODIC]: 1 / GP Bomb

MFR Ref #	Manufacturer Name - Location	Production Rates (Each / Year)			Procurement Leadtime (Months)							
					Initial				Reorder			
		MSR For 2020	1-8-5 For 2020	MAX For 2020	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 BLU-111 - Garland, TX/MCAAP	21,359	38,544	100,200	0	10	24	34	0	8	36	44
2	General Dynamics BLU-110 - Garland TX/MCAAP	12,222	21,300	55,296	0	9	24	33	0	10	36	46
3	National Forge BLU-109 - Irving, PA/MCAPP	1,344	2,232	6,480	0	12	24	36	0	5	41	46
4	General Dynamics BLU-117 - Garland TX/MCAAP	400	1,200	7,400	0	9	33	42	0	9	33	42
5	CAPCO, INC - GRAND JUNCTION, CO	5,000	10,000	12,000	0	5	12	17	0	5	12	17
6	The Boeing Company Guided Bombs (Tailkits) - St. Charles, MO	4,000	10,000	36,000	0	12	12	24	0	5	12	17
7	Raytheon Missile Systems - Albuquerque, New Mexico	2,000	5,000	8,000	0	2	16	18	0	0	0	0
8	The Boeing Company DSU-38 - St. Charles, MO	1,200	4,800	5,760	0	6	12	18	0	6	12	18
9	The Boeing Company DSU-42 - St. Charles, MO	1,200	4,800	5,760	0	6	12	18	0	6	12	18
10	Raytheon Missile Systems LGB (Raytheon) - Tucson, AZ	1,800	4,800	14,400	0	7	20	27	0	10	20	30
11	Lockheed Martin Corporation LGB - Archbald, PA	1,728	4,500	36,000	0	7	20	27	0	10	20	30
12	Raytheon Missile Systems LGB (Raytheon)AFG - Tucson, AZ	1,800	4,800	14,400	0	7	20	27	0	10	20	30
13	L-3 FUZING & ORDNANCE SYSTEMS INC - CINCINATTI, OH	6,000	10,000	20,000	0	0	0	0	0	6	24	30
14	Northrop Grumman - Rocket Center, WV	2,000	50,000	50,000	0	6	12	18	0	6	12	18
15	ATK Tactical Systems (HTVSF) - Keyser, WV	166	773	992	0	10	12	22	0	23	12	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).

Exhibit P-40, Budget Line Item Justification: PB 2020 Navy	Date: March 2019
Appropriation / Budget Activity / Budget Sub Activity: 1508N: Procurement of Ammo, Navy & MC / BA 01: Proc Ammo, Navy / BSA 1: Navy Ammunition	**P-1 Line Item Number / Title:** 0148 / JT Direct Attack Munition (JDAM)

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: 503		

Resource Summary	Prior Years	FY 2018	FY 2019	FY 2020 Base	FY 2020 OCO	FY 2020 Total	FY 2021	FY 2022	FY 2023	FY 2024	To Complete	Total
Procurement Quantity *(Units in Each)*	-	7,758	7,594	-	3,388	3,388	3,409	3,108	3,246	3,247	Continuing	Continuing
Gross/Weapon System Cost *($ in Millions)*	0.000	164.284	180.919	0.000	82.676	82.676	84.529	79.792	84.877	86.571	Continuing	Continuing
Less PY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) *($ in Millions)*	0.000	164.284	180.919	0.000	82.676	82.676	84.529	79.792	84.877	86.571	Continuing	Continuing
Plus CY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority *($ in Millions)*	**0.000**	**164.284**	**180.919**	**0.000**	**82.676**	**82.676**	**84.529**	**79.792**	**84.877**	**86.571**	**Continuing**	**Continuing**
(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)*	-	-	-	-	-	-	-	-	-	-	-	-

Description:

FY 2020 funding totals include $0.0M for Base and $82.676M for Overseas Contingency Operations (OCO); of which $70.413M and 2,844 quantity is realigned as part of the OCO for Base Requirements. FY 2020 OCO for Base Requirements is OCO funding for base budget requirements in support of the National Defense Strategy. The Budget requests these funds in OCO to comply with the base budget defense caps included in the Budget Control Act of 2011.

The Joint Direct Attack Munition (JDAM) program is a joint Air Force/Navy program with the Air Force as the lead service. Designated ACAT 1C, this program upgrades the existing inventory of general purpose bombs (BLU-111, BLU-117, BLU-110, BLU-109, and BLU-126) by integrating the bombs with a field installed guidance kit using a Global Positioning System-aided Inertial Navigation System (GPS/INS). JDAM provides an accurate, adverse weather capability. JDAM is integrated with the B-52H, B-2A, B-1B, F-16 (all variants), F/A-18A+/C/D/E/F, F-15E, AV-8B, A-10C and F-22A aircraft. Integration with the MQ-9 and F-35 are in progress.

JDAM guides the bomb with movable surfaces that steer the bomb to a target based on a Global Positioning Satellite (GPS) coordinate. There is also a family of weapons which combine GPS and laser capabilities to provide a Dual Mode weapon (procured under 0145 General Purpose Bombs): Laser Joint Direct Attack Munition (LJDAM). The component that is added to the 500 lb. and 2,000 lb. JDAM to provide the Laser capability is the DSU-38 and DSU-42 respectively. The DSU-38 and DSU-42 Precision Laser Guidance Set (PLGS) contains a Semi-Active Laser to engage moving and stationary targets and an adjustable proximity sensor to provide an airburst capability. LJDAM is the material solution for the Direct Attack Moving Target Capability (DAMTC).

Pursuant to section 2308 of Title 10, U.S. Code, this program will seek cost efficiencies where available through production lot negotiations.

Exhibit P-40, Budget Line Item Justification: PB 2020 Navy		Date: March 2019
Appropriation / Budget Activity / Budget Sub Activity: 1508N: Procurement of Ammo, Navy & MC / BA 01: Proc Ammo, Navy / BSA 1: Navy Ammunition	**P-1 Line Item Number / Title:** 0148 / JT Direct Attack Munition (JDAM)	
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: 503		

Exhibits Schedule					Prior Years	FY 2018	FY 2019	FY 2020 Base	FY 2020 OCO	FY 2020 Total
Exhibit Type	Title*	Subexhibits	ID CD	MDAP/ MAIS Code	Quantity / Total Cost *(Each) I ($ M)*	Quantity / Total Cost *(Each) I ($ M)*	Quantity / Total Cost *(Each) I ($ M)*	Quantity / Total Cost *(Each) I ($ M)*	Quantity / Total Cost *(Each) I ($ M)*	Quantity / Total Cost *(Each) I ($ M)*
P-5	1 / JT Direct Attack Munition (JDAM) Tail Kit	P-5a, P-21			- / 0.000	7,758 / 164.284	7,594 / 180.919	- / 0.000	3,388 / 82.676	3,388 / 82.676
P-40	**Total Gross/Weapon System Cost**				**- / 0.000**	**7,758 / 164.284**	**7,594 / 180.919**	**- / 0.000**	**3,388 / 82.676**	**3,388 / 82.676**

*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 2020 OCO for baseline funding is required to meet Naval Munitions Requirements Process (NMRP) inventory objectives.

OCO:
FY 2020 Direct War OCO funding is required to replenish JDAM expended in direct support of Operation Inherent Resolve (OIR). Funding may be used to address production related issues.

Exhibit P-5, Cost Analysis: PB 2020 Navy		Date: March 2019
Appropriation / Budget Activity / Budget Sub Activity: 1508N / 01 / 1	**P-1 Line Item Number / Title:** 0148 / JT Direct Attack Munition (JDAM)	**Item Number / Title [DODIC]:** 1 / JT Direct Attack Munition (JDAM) Tail Kit
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	

Resource Summary	Prior Years	FY 2018	FY 2019	FY 2020 Base	FY 2020 OCO	FY 2020 Total
Procurement Quantity *(Units in Each)*	-	7,758	7,594	-	3,388	3,388
Gross/Weapon System Cost *($ in Millions)*	0.000	164.284	180.919	0.000	82.676	82.676
Less PY Advance Procurement *($ in Millions)*	-	-	-	-	-	-
Net Procurement (P-1) *($ in Millions)*	0.000	164.284	180.919	0.000	82.676	82.676
Plus CY Advance Procurement *($ in Millions)*	-	-	-	-	-	-
Total Obligation Authority *($ in Millions)*	**0.000**	**164.284**	**180.919**	**0.000**	**82.676**	**82.676**
(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)						
Initial Spares *($ in Millions)*	-	-	-	-	-	-
Gross/Weapon System Unit Cost *($ in Dollars)*	-	21,176.08	23,823.94	-	24,402.60	24,402.60

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

Cost Elements	Prior Years			FY 2018			FY 2019			FY 2020 Base			FY 2020 OCO			FY 2020 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) JD500-JDAM Tail Kit(†) (1)	-	-	-	20,864.00	7,758	161.863	23,460.00	7,594	178.155	-	-	0.000	23,929.00	3,346	80.066	23,929.00	3,346	80.066
Subtotal: Recurring Cost	-	-	-	-	-	*161.863*	-	-	*178.155*	-	-	*0.000*	-	-	*80.066*	-	-	*80.066*
Subtotal: Hardware Cost	**-**	**-**	**-**	**-**	**-**	***161.863***	**-**	**-**	***178.155***	**-**	**-**	***0.000***	**-**	**-**	***80.066***	**-**	**-**	***80.066***
Support Cost																		
2.1) JD800-Support - Integrated Logistics	-	-	-	-	-	0.250	-	-	0.252	-	-	0.000	-	-	0.257	-	-	0.257
2.2) JD830-Support - Production Engineering (2)	-	-	-	-	-	0.950	-	-	1.224	-	-	0.000	-	-	1.053	-	-	1.053
2.3) JD850-Support - Miscellaneous Support (3)	-	-	-	-	-	1.221	-	-	1.288	-	-	0.000	-	-	1.300	-	-	1.300
Subtotal: Support Cost	**-**	**-**	**-**	**-**	**-**	***2.421***	**-**	**-**	***2.764***	**-**	**-**	***0.000***	**-**	**-**	***2.610***	**-**	**-**	***2.610***
Gross/Weapon System Cost	**-**	**-**	**0.000**	**21,176.08**	**7,758**	**164.284**	**23,823.94**	**7,594**	**180.919**	**-**	**-**	**0.000**	**24,402.60**	**3,388**	**82.676**	**24,402.60**	**3,388**	**82.676**

(†) indicates the presence of a P-5a

Footnotes:

(1) JD500 - The OCO funding is required to support the reset of bomb components expended in combat operations.

Exhibit P-5, Cost Analysis: PB 2020 Navy		Date: March 2019
Appropriation / Budget Activity / Budget Sub Activity: 1508N / 01 / 1	**P-1 Line Item Number / Title:** 0148 / JT Direct Attack Munition (JDAM)	**Item Number / Title [DODIC]:** 1 / JT Direct Attack Munition (JDAM) Tail Kit
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	

(2) JD830 Support - Production Engineering was reduced due to refinement of the scope of tasking in support of JDAM production.

(3) JD850 Miscellaneous Support increases starting in FY 2020 are due to activities related to the integration of Global Positioning System (GPS) M-Code per DoD mandate, which impacts overall system to include computer processor. This cost element includes parts obsolescence, associated production acceptance and test, ancillary support cost and product improvement.

Exhibit P-5a, Procurement History and Planning: PB 2020 Navy		Date: March 2019
Appropriation / Budget Activity / Budget Sub Activity: 1508N / 01 / 1	P-1 Line Item Number / Title: 0148 / JT Direct Attack Munition (JDAM)	Item Number / Title [DODIC]: 1 / JT Direct Attack Munition (JDAM) Tail Kit

Cost Elements	OCO	FY	Contractor and Location	Method/Type or Funding Vehicle	Location of PCO	Award Date	Date of First Delivery	Qty (Each)	Unit Cost ($)	Specs Avail Now?	Date Revision Available	RFP Issue Date
1.1.1) JD500-JDAM Tail Kit(†)		2018	The Boeing Company / St. Charles, MO	SS / FPIF	AFLCMC Hill AFB	Apr 2018	May 2019	2,664	20,864.00	Y		Oct 2013
1.1.1) JD500-JDAM Tail Kit(†)	✓	2018	The Boeing Company / St. Charles, MO	SS / FPIF	AFLCMC Hill AFB	Apr 2018	May 2019	5,094	20,864.00	Y		Oct 2013
1.1.1) JD500-JDAM Tail Kit(†)		2019	The Boeing Company / St. Charles, MO	SS / FPIF	AFLCMC Hill AFB	Feb 2019	Mar 2020	3,688	23,460.00	Y		Jul 2017
1.1.1) JD500-JDAM Tail Kit(†)	✓	2019	The Boeing Company / St. Charles, MO	SS / FPIF	AFLCMC Hill AFB	Feb 2019	Mar 2020	3,906	23,460.00	Y		Jul 2017
1.1.1) JD500-JDAM Tail Kit(†)	✓	2020	The Boeing Company / St. Charles, MO	SS / FPIF	AFLCMC Hill AFB	Feb 2020	Mar 2021	3,346	23,929.00	Y		Jul 2017

(†) indicates the presence of a P-21

Exhibit P-21, Production Schedule: PB 2020 Navy		**Date:** March 2019
Appropriation / Budget Activity / Budget Sub Activity: 1508N / 01 / 1	**P-1 Line Item Number / Title:** 0148 / JT Direct Attack Munition (JDAM)	**Item Number / Title [DODIC]:** 1 / JT Direct Attack Munition (JDAM) Tail Kit

Cost Elements (Units in Each)							Fiscal Year 2018												Fiscal Year 2019												BALANCE
							Calendar Year 2018												Calendar Year 2019												
OCO	MFR #	FY	SERVICE	PROC QTY	ACCEPT PRIOR TO 1 OCT 2017	BAL DUE AS OF 1 OCT	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	
1.1.1) JD500-JDAM Tail Kit [1]																															
	1	2018	NAVY	2,664	0	2,664							A -	-	-	-	-	-	-	-	-	-	-	-	222	222	222	222	222	1,554
✓	1	2018	NAVY	5,094	0	5,094							A -	-	-	-	-	-	-	-	-	-	-	-	425	425	425	425	425	2,969
	1	2019	NAVY	3,688	0	3,688																	A -	-	-	-	-	-	-	3,688
✓	1	2019	NAVY	3,906	0	3,906																	A -	-	-	-	-	-	-	3,906
✓	1	2020	NAVY	3,346	0	3,346																								3,346
							OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	

Exhibit P-21, Production Schedule: PB 2020 Navy		**Date:** March 2019
Appropriation / Budget Activity / Budget Sub Activity: 1508N / 01 / 1	**P-1 Line Item Number / Title:** 0148 / JT Direct Attack Munition (JDAM)	**Item Number / Title [DODIC]:** 1 / JT Direct Attack Munition (JDAM) Tail Kit

Cost Elements (Units in Each)							Fiscal Year 2020												Fiscal Year 2021												BALANCE
							Calendar Year 2020												Calendar Year 2021												
OCO	MFR #	FY	SERVICE	PROC QTY	ACCEPT PRIOR TO 1 OCT 2019	BAL DUE AS OF 1 OCT	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	
1.1.1) JD500-JDAM Tail Kit [1]																															
	1	2018	NAVY	2,664	1,110	1,554	222	222	222	222	222	222	222																		0
✓	1	2018	NAVY	5,094	2,125	2,969	425	424	424	424	424	424	424																		0
	1	2019	NAVY	3,688	0	3,688	-	-	-	-	-	307	307	307	307	307	307	307	307	307	307	307	311								0
✓	1	2019	NAVY	3,906	0	3,906	-	-	-	-	-	364	322	322	322	322	322	322	322	322	322	322	322								0
✓	1	2020	NAVY	3,346	0	3,346					A -	-	-	-	-	-	-	-	-	-	-	-	-	488	488	237	237	237	237	237	1,185
							OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	

Exhibit P-21, Production Schedule: PB 2020 Navy		Date: March 2019
Appropriation / Budget Activity / Budget Sub Activity: 1508N / 01 / 1	**P-1 Line Item Number / Title:** 0148 / JT Direct Attack Munition (JDAM)	**Item Number / Title [DODIC]:** 1 / JT Direct Attack Munition (JDAM) Tail Kit

Cost Elements (Units in Each)							Fiscal Year 2022												Fiscal Year 2023												BALANCE
										Calendar Year 2022												Calendar Year 2023									
OCO	MFR #	FY	SERVICE	PROC QTY	ACCEPT PRIOR TO 1 OCT 2021	BAL DUE AS OF 1 OCT	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	
1.1.1) JD500-JDAM Tail Kit (1)																															
	1	2018	NAVY	2,664	2,664	0																									0
✓	1	2018	NAVY	5,094	5,094	0																									0
	1	2019	NAVY	3,688	3,688	0																									0
✓	1	2019	NAVY	3,906	3,906	0																									0
✓	1	2020	NAVY	3,346	2,161	1,185	237	237	237	237	237																				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	

Exhibit P-21, Production Schedule: PB 2020 Navy		**Date:** March 2019
Appropriation / Budget Activity / Budget Sub Activity: 1508N / 01 / 1	**P-1 Line Item Number / Title:** 0148 / JT Direct Attack Munition (JDAM)	**Item Number / Title [DODIC]:** 1 / JT Direct Attack Munition (JDAM) Tail Kit

MFR Ref #	Manufacturer Name - Location	Production Rates (Each / Year)			Procurement Leadtime (Months)							
					Initial				Reorder			
		MSR For 2020	1-8-5 For 2020	MAX For 2020	ALT Prior to Oct 1	ALT After Oct 1	Manufacturing PLT	Total After Oct 1	ALT Prior to Oct 1	ALT After Oct 1	Manufacturing PLT	Total After Oct 1
1	The Boeing Company - St. Charles, MO	7,501	18,900	42,000	0	0	0	0	15	5	13	18

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

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Exhibit P-40, Budget Line Item Justification: PB 2020 Navy	Date: March 2019
Appropriation / Budget Activity / Budget Sub Activity: 1508N: Procurement of Ammo, Navy & MC / BA 01: Proc Ammo, Navy / BSA 1: Navy Ammunition	**P-1 Line Item Number / Title:** 0151 / Airborne Rockets, All Types

ID Code (A=Service Ready, B=Not Service Ready): A	**Program Elements for Code B Items:** N/A	**Other Related Program Elements:** 0204162N, 0206138M
Line Item MDAP/MAIS Code: N/A		

Resource Summary	Prior Years	FY 2018	FY 2019	FY 2020 Base	FY 2020 OCO	FY 2020 Total	FY 2021	FY 2022	FY 2023	FY 2024	To Complete	Total
Procurement Quantity *(Units in Each)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost *($ in Millions)*	1,148.249	85.016	137.985	0.000	76.776	76.776	78.643	62.665	57.439	56.434	Continuing	Continuing
Less PY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) *($ in Millions)*	1,148.249	85.016	137.985	0.000	76.776	76.776	78.643	62.665	57.439	56.434	Continuing	Continuing
Plus CY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority *($ in Millions)*	**1,148.249**	**85.016**	**137.985**	**0.000**	**76.776**	**76.776**	**78.643**	**62.665**	**57.439**	**56.434**	**Continuing**	**Continuing**
(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)*	-	-	-	-	-	-	-	-	-	-	-	-

Description:

FY 2020 funding totals include $0.0M for Base and $76.776M for Overseas Contingency Operations (OCO); of which $31.756M is realigned as part of the OCO for Base Requirements. FY 2020 OCO for Base Requirements is OCO funding for base budget requirements in support of the National Defense Strategy. The Budget requests these funds in OCO to comply with the base budget defense caps included in the Budget Control Act of 2011.

Combat and training inventory requirements of rocket and rocket components establish the Total Munitions Requirement (TMR) in accordance with the Naval Munitions Requirements process (NMRP). Production is for complete units/operationally configured units to satisfy the requirement of applicable specifications of Airborne Rockets, All types.

The 2.75-inch and 5.00-inch rocket motor variants are employed by both rotary and fixed wing platforms in the Close Air Support (CAS), Military Operations in Urban Terrain (MOUT), and counter-Fast Attack Craft/Fast Inshore Attack Craft (counter-FAC/FIAC) mission areas. The 2.75-inch rocket configured with Advanced Precision Kill Weapon System (APKWS) enables a resilient and precise weapon in support of close combat lethality in complex terrain.

The variety of warheads enable fleet users to maintain operational flexibility, better target-mission matching for specific applications and effects, and permit logistic agility. Warheads include the Mk-152 Insensitive Munitions (IM) compliant warhead for shipboard operations with APKWS guidance sections, and M282 Multi-Purpose Penetrator (MPP)warhead. Inert warheads are used extensively when range restrictions preclude live applications.

The Smokey Sam Simulator System is a pyrotechnic visual cueing device primarily utilized in aircrew training to mimic a Surface to Air Missile threat. The system is currently qualified for land and at sea use.

Rocket Launchers provide guided and unguided rocket launch capability for 2.75 Inch Rockets including the LAU-61 G/A Digital Rocket Launcher (DRL),LAU-61 C/A, and LAU-68 F/A.

Advanced Precision Kill Weapon System (APKWS) is a low-cost Semi Active Laser (SAL) guidance section to enhance the precision of 2.75-inch unguided rockets. APKWS is a small, lightweight, mid-body guidance section that can be assembled with existing unguided rocket components and can be fired from 2.75-inch rocket launchers. Compared to unguided rockets, APKWS sustains Joint Force military advantage by offering greater precision, increased stored kills per aircraft sortie, reduces collateral damage, improves effectiveness against soft and lightly armored targets, and enhances close combat lethality and crew survivability through increased standoff ranges.

Exhibit P-40, Budget Line Item Justification: PB 2020 Navy		Date: March 2019
Appropriation / Budget Activity / Budget Sub Activity: 1508N: Procurement of Ammo, Navy & MC / BA 01: Proc Ammo, Navy / BSA 1: Navy Ammunition	**P-1 Line Item Number / Title:** 0151 / Airborne Rockets, All Types	
ID Code (A=Service Ready, B=Not Service Ready): A	**Program Elements for Code B Items:** N/A	**Other Related Program Elements:** 0204162N, 0206138M
Line Item MDAP/MAIS Code: N/A		

A variety of containers are required to support shipping, handling and storage of all up round rockets and rocket components. The program re-manufactures existing containers and procures new containers as needed.

Miscellaneous Items provides for procurement of various rocket components not to exceed a total cost of 500K per year per component.

Product Improvement (PIP) provides for rapid iterative modifications and upgrades to products within Airborne Rockets, All types. Efforts include configuration changes involving production, engineering, manufacturing, installation and testing that increases system or combat effectiveness to extend the useful military life of an item, and/or to improve the item within the current performance envelope.

Exhibit P-40, Budget Line Item Justification: PB 2020 Navy		Date: March 2019
Appropriation / Budget Activity / Budget Sub Activity: 1508N: Procurement of Ammo, Navy & MC / BA 01: Proc Ammo, Navy / BSA 1: Navy Ammunition	**P-1 Line Item Number / Title:** 0151 / Airborne Rockets, All Types	
ID Code (A=Service Ready, B=Not Service Ready): A	**Program Elements for Code B Items:** N/A	**Other Related Program Elements:** 0204162N, 0206138M
Line Item MDAP/MAIS Code: N/A		

Exhibits Schedule					Prior Years	FY 2018	FY 2019	FY 2020 Base	FY 2020 OCO	FY 2020 Total
Exhibit Type	Title*	Subexhibits	ID CD	MDAP/ MAIS Code	Quantity / Total Cost *(Each) I ($ M)*	Quantity / Total Cost *(Each) I ($ M)*	Quantity / Total Cost *(Each) I ($ M)*	Quantity / Total Cost *(Each) I ($ M)*	Quantity / Total Cost *(Each) I ($ M)*	Quantity / Total Cost *(Each) I ($ M)*
P-40a	Airborne Rockets, All Types	P-5a, P-21			- / 1,148.249	- / 85.016	- / 137.985	- / 0.000	- / 76.776	- / 76.776
P-40	**Total Gross/Weapon System Cost**				**- / 1,148.249**	**- / 85.016**	**- / 137.985**	**- / 0.000**	**- / 76.776**	**- / 76.776**

*Title represents 1) the Number / Title for Items; 2) the Number / Title [DODIC] for Ammunition; and/or 3) the Number / Title (Modification Type) for Modifications. 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 2020 OCO for baseline funding is required to procure 2.75-inch rocket components - to include rocket motors, warheads, Advanced Precision Kill Weapon System (APKWS) guidance sections, rocket launchers and containers - to enable low-cost area suppression as well as precision engagements from US Marine Corps (USMC) H-1, AV-8B, and F/A-18A-D aircraft in low collateral damage Close Air Support (CAS) operations, and from US Navy (USN) H-60 aircraft to neutralize Fast Attack Craft/Fast Inshore Attack Craft (FAC/FIAC) threats.

In addition, FY 2020 funding is required to address product improvements needed for obsolete components designed and produced over 40 years ago as well as the production engineering and integrated logistics support efforts needed for all 2.75-inch rocket components. Airborne Rockets product improvement efforts are required to reduce production cost, extend component life and to improve Combat effectiveness on pace with platform Combat system improvements.

The FY 2020 funding request was reduced by $4.500 million to account for the availability of prior year execution balances.

OCO:
FY 2020 Direct War OCO funding is required to replenish munitions and components that were expended in direct support of combat operations in theater. These operations were in support of Operation Inherent Resolve (OIR).

MK-66 rocket motors are required for combat operations and to maintain the rocket motor inventory required levels. The MK-66 motor is used as the component motor in all 2.75-inch rocket configurations. Due to an increase in pre-deployment training as well as combat operations, additional procurements are required to maintain the operational capability of the warfighter and to ensure inventory is maintained.

MK-152 warhead with the Mk-435 fuze allows the warfighter to engage the enemy at closer ranges, increases accuracy with a safer, more reliable warhead. This provides sufficient inventory to support the current OCO operational tempo with warheads thereby providing greater lethality and reducing collateral damage.

Rocket Launchers provide guided and unguided rocket launch capability for 2.75 Inch Rockets including the LAU-68 F/A and the LAU-61 C/A.

Advanced Precision Kill Weapon System (APKWS) OCO is required to replenish combat expenditures in support of OCO operations in direct support of Operation Inherent Resolve.

Containers OCO is required to support shipping, handling and storage of all up round rockets and rocket components being procured.

Exhibit P-40a, Budget Item Justification For Aggregated Items: PB 2020 Navy		Date: March 2019
Appropriation / Budget Activity / Budget Sub Activity: 1508N / 01 / 1	**P-1 Line Item Number / Title:** 0151 / Airborne Rockets, All Types	**Aggregated Items Title:** Airborne Rockets, All Types

Item Number / Title [DODIC]	ID CD	MDAP/ MAIS Code	Prior Years			FY 2018			FY 2019			FY 2020 Base			FY 2020 OCO			FY 2020 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) Rockets Hardware																				
1.1) (Q5040) MK 66 ROCKET MOTOR (MOD 4) (1)(†)	A		857.58	437,927	375.556	505.14	41,420	20.923	603.97	35,762	21.599	-	-	0.000	616.06	44,986	27.714	616.06	44,986	27.714
1.2) (Q5041) MK 71 ROCKET MOTOR	A		-	-	56.296	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1.3) (Q5042) MK 66 ROCKET MOTOR (MOD 6)	A		-	-	0.585	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1.4) (Q5200) SMOKEY SAM(†)	A		356.34	15,805	5.632	-	-	-	174.28	2,000	0.349	-	-	0.000	177.77	2,000	0.356	177.77	2,000	0.356
Subtotal: 1) Rockets Hardware			**-**	**-**	***438.069***	**-**	**-**	***20.923***	**-**	**-**	***21.948***	**-**	**-**	***0.000***	**-**	**-**	***28.070***	**-**	**-**	***28.070***
2) Rocket Warheads																				
2.1) (Q5030) WTU1/ B INERT WARHEAD (2)(†)	A		128.33	210,011	26.950	80.27	26,062	2.092	81.88	7,616	0.624	-	-	0.000	83.52	18,805	1.571	83.52	18,805	1.571
2.2) (Q5080) MK 146 HE WARHEAD (3)(†)	A		18,431.82	1,100	20.275	-	-	-	1,737.03	187	0.325	-	-	-	-	-	-	-	-	-
2.3) (Q5090) MK 149 WARHEAD (4)(†)	A		29,394.74	418	12.287	-	-	-	624.03	100	0.062	-	-	-	-	-	-	-	-	-
2.4) (Q5897) WTU-11/ B WARHEAD (5)	A		-	-	1.025	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2.5) (Q5898) M282 MULTI-PURPOSE PENETRATOR (MPP) (6)(†)	A		3,536.24	6,788	24.004	-	-	-	3,660.87	39	0.143	-	-	0.000	3,734.09	39	0.146	3,734.09	39	0.146
2.6) (Q5899) MK 152 WARHEAD (7)(†)	A		1,377.20	79,657	109.704	2,226.00	28	0.062	2,173.25	143	0.310	-	-	0.000	2,216.72	287	0.637	2,216.72	287	0.637
Subtotal: 2) Rocket Warheads			**-**	**-**	***194.245***	**-**	**-**	***2.154***	**-**	**-**	***1.464***	**-**	**-**	***0.000***	**-**	**-**	***2.354***	**-**	**-**	***2.354***
3) Rocket Launchers																				
3.1) (Q5895) LAU-68 F/A (2.75")(†)	A		18,461.22	2,643	48.793	18,620.97	184	3.426	18,737.76	184	3.448	-	-	0.000	19,000.00	198	3.762	19,000.00	198	3.762
3.2) (Q5900) LAU-61 G/A (2.75-Inch) DIGITAL ROCKET LAUNCHER (8)(†)	A		57,711.17	412	23.777	50,161.85	110	5.518	51,165.09	86	4.400	-	-	0.000	52,188.40	99	5.167	52,188.40	99	5.167
3.3) (QTBD) LAU-61 C/A (2.75-inch)(†)	A		-	-	-	-	-	-	-	-	-	-	-	0.000	38,000.00	20	0.760	38,000.00	20	0.760
Subtotal: 3) Rocket Launchers			**-**	**-**	***72.570***	**-**	**-**	***8.944***	**-**	**-**	***7.848***	**-**	**-**	***0.000***	**-**	**-**	***9.689***	**-**	**-**	***9.689***
4) APKWS																				

Exhibit P-40a, Budget Item Justification For Aggregated Items: PB 2020 Navy		Date: March 2019
Appropriation / Budget Activity / Budget Sub Activity: 1508N / 01 / 1	**P-1 Line Item Number / Title:** 0151 / Airborne Rockets, All Types	**Aggregated Items Title:** Airborne Rockets, All Types

Item Number / Title [DODIC]	ID CD	MDAP/ MAIS Code	Prior Years			FY 2018			FY 2019			FY 2020 Base			FY 2020 OCO			FY 2020 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)
4.1) (Q5896) APKWS G&C SECTIONS (9)(†)	A		24,926.37	11,856	295.527	22,820.00	1,228	28.023	24,749.04	3,488	86.325	-	-	0.000	25,244.03	1,123	28.349	25,244.03	1,123	28.349
Subtotal: 4) APKWS			**-**	**-**	***295.527***	**-**	**-**	***28.023***	**-**	**-**	***86.325***	**-**	**-**	***0.000***	**-**	**-**	***28.349***	**-**	**-**	***28.349***
5) Other																				
5.1) (Q5871) MISCELLANEOUS ITEMS	A		-	-	7.846	-	-	0.100	-	-	0.100	-	-	0.000	-	-	0.100	-	-	0.100
5.2) (Q5870) CONTAINERS	A		-	-	28.140	-	-	6.397	-	-	2.765	-	-	0.000	-	-	2.637	-	-	2.637
Subtotal: 5) Other			**-**	**-**	***35.986***	**-**	**-**	***6.497***	**-**	**-**	***2.865***	**-**	**-**	***0.000***	**-**	**-**	***2.737***	**-**	**-**	***2.737***
6) (Q5800) Integrated Logistics Support (ILS)																				
6.1) ROCKET WARHEADS-ILS	A		-	-	3.712	-	-	0.182	-	-	0.186	-	-	0.000	-	-	0.190	-	-	0.190
6.2) ROCKET LAUNCHERS-ILS	A		-	-	0.826	-	-	0.107	-	-	0.109	-	-	0.000	-	-	0.112	-	-	0.112
6.3) APKWS-ILS	A		-	-	0.695	-	-	0.052	-	-	0.053	-	-	0.000	-	-	0.055	-	-	0.055
6.4) OTHER-ILS	A		-	-	0.036	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Subtotal: 6) (Q5800) Integrated Logistics Support (ILS)			**-**	**-**	***5.269***	**-**	**-**	***0.341***	**-**	**-**	***0.348***	**-**	**-**	***0.000***	**-**	**-**	***0.357***	**-**	**-**	***0.357***
7) (Q5850) Product Improvement (PIP)																				
7.1) ROCKET MOTORS - PIP	A		-	-	0.051	-	-	0.052	-	-	0.053	-	-	0.000	-	-	0.055	-	-	0.055
7.2) ROCKET WARHEADS-PIP	A		-	-	14.319	-	-	0.221	-	-	0.230	-	-	0.000	-	-	0.235	-	-	0.235
7.3) ROCKET LAUNCHERS-PIP	A		-	-	0.522	-	-	0.553	-	-	0.576	-	-	0.000	-	-	0.588	-	-	0.588
7.4) APKWS-PIP (10)	A		-	-	22.471	-	-	12.291	-	-	13.356	-	-	0.000	-	-	2.104	-	-	2.104
Subtotal: 7) (Q5850) Product Improvement (PIP)			**-**	**-**	***37.363***	**-**	**-**	***13.117***	**-**	**-**	***14.215***	**-**	**-**	***0.000***	**-**	**-**	***2.982***	**-**	**-**	***2.982***
8) (Q5830) Production Engineering Support (PES)																				
8.1) ROCKET MOTORS-PES	A		-	-	14.250	-	-	0.747	-	-	0.728	-	-	0.000	-	-	0.536	-	-	0.536
8.2) ROCKET WARHEADS-PES	A		-	-	30.202	-	-	0.723	-	-	0.737	-	-	0.000	-	-	0.544	-	-	0.544
8.3) ROCKET LAUNCHERS-PES	A		-	-	6.719	-	-	0.197	-	-	0.201	-	-	0.000	-	-	0.205	-	-	0.205
8.4) APKWS-PES	A		-	-	18.049	-	-	3.350	-	-	1.306	-	-	0.000	-	-	0.953	-	-	0.953
Subtotal: 8) (Q5830) Production Engineering Support (PES)			**-**	**-**	***69.220***	**-**	**-**	***5.017***	**-**	**-**	***2.972***	**-**	**-**	***0.000***	**-**	**-**	***2.238***	**-**	**-**	***2.238***
Total			**-**	**-**	**1,148.249**	**-**	**-**	**85.016**	**-**	**-**	**137.985**	**-**	**-**	**0.000**	**-**	**-**	**76.776**	**-**	**-**	**76.776**

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

Exhibit P-40a, Budget Item Justification For Aggregated Items: PB 2020 Navy		Date: March 2019
Appropriation / Budget Activity / Budget Sub Activity: 1508N / 01 / 1	**P-1 Line Item Number / Title:** 0151 / Airborne Rockets, All Types	**Aggregated Items Title:** Airborne Rockets, All Types

Footnotes:

(1) (Q5040) MK 66 ROCKET MOTOR (MOD 4): Pricing is provided by the Army and incorporates other customer buys. The unit price fluctuates depending on the total procurement.

(2) (Q5030) WTU1/B INERT WARHEAD: Pricing provided by the Army and incorporates other services' buys. Baseline unit cost is dependent on total quantities from the Army. WTU-1/B quantities increasing to sustain pre-deployment readiness as a result of increased platform usage.

(3) (Q5080) MK 146 HE WARHEAD: Funds were reduced in FY 2020 as a result of a change in requirements in order to manage the Airborne Rockets portfolio.

(4) (Q5090) MK 149 WARHEAD: Funds were reduced as a result of a change in requirements in order to manage the Airborne Rockets portfolio.

(5) (Q5897) WTU-11/B WARHEAD: Funds were reduced as a result of a change in requirements in order to manage the Airborne Rockets portfolio.

(6) (Q5898) M282 MULTI-PURPOSE PENETRATOR: Pricing provided by the Army and incorporates other services' buys.

(7) (Q5899) MK 152 WARHEAD: Unit price fluctuates depending on total procurement.

(8) Q5900 LAU-61 G/A (2.75-inch) DRL: Unit Price fluctuates depending on total procurement.

(9) (Q5896) APKWS G&C SECTIONS: FY 2018 unit price updated for actuals since President's Budget 2019. Pricing is provided by the Navy and depends on other customer buys. The unit price fluctuates depending on the total procurement between other services and FMS customers.

(10) (Q5850) APKWS-PIP: Increase in FY 2018 and FY 2019 to support the streamlined rapid, iterative, modular upgrade of the APKWS guidance section to a single variant from the currently fielded on fixed wing and rotary wing platforms. The single variant APKWS will decrease the logistics footprint and enable resilient agile logistics, enhance close combat lethality across all service platforms, increase in-theater partner and operational flexibility, and sustain Joint Force military advantages.

Exhibit P-5a, Procurement History and Planning: PB 2020 Navy		Date: March 2019
Appropriation / Budget Activity / Budget Sub Activity: 1508N / 01 / 1	P-1 Line Item Number / Title: 0151 / Airborne Rockets, All Types	Aggregated Items: Airborne Rockets, All Types

Item Number / Title [DODIC]	OCO	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) Rockets Hardware												
1.1) (Q5040) MK 66 ROCKET MOTOR (MOD 4) (1)(†)		2017	General Dynamics / Burlington, VT	SS / FFP	Huntsville	Aug 2017	Dec 2018	14,216	495.23	Y		Oct 2013
1.1) (Q5040) MK 66 ROCKET MOTOR (MOD 4) (1)(†)	✓	2017	General Dynamics / Burlington, VT	SS / FFP	Huntsville	Jul 2018	Dec 2019	2,813	495.23	Y		Oct 2013
1.1) (Q5040) MK 66 ROCKET MOTOR (MOD 4) (1)(†)		2018	General Dynamics / Burlington, VT	SS / FFP	Huntsville	Jul 2018	Apr 2020	41,040	505.14	Y		Oct 2013
1.1) (Q5040) MK 66 ROCKET MOTOR (MOD 4) (1)(†)	✓	2018	General Dynamics / Burlington, VT	SS / FFP	Huntsville	Jul 2018	Apr 2020	380	505.14	Y		Oct 2013
1.1) (Q5040) MK 66 ROCKET MOTOR (MOD 4) (1)(†)		2019	TBD (11) / TBD	C / FFP	Huntsville	Jun 2019	Feb 2021	35,715	603.98	Y		Sep 2018
1.1) (Q5040) MK 66 ROCKET MOTOR (MOD 4) (1)(†)	✓	2019	TBD (11) / TBD	C / FFP	Huntsville	Jun 2019	Feb 2021	47	603.41	Y		Sep 2018
1.1) (Q5040) MK 66 ROCKET MOTOR (MOD 4) (1)(†)	✓	2020	TBD (11) / TBD	C / FFP	Huntsville	Jun 2020	Dec 2021	44,986	616.06	Y		Sep 2018
1.4) (Q5200) SMOKEY SAM		2019	NSWC INDIAN HEAD DIV / Indian Head, MD	Various	NSWC	Jun 2019	Jun 2020	2,000	174.28	Y		
1.4) (Q5200) SMOKEY SAM	✓	2020	NSWC INDIAN HEAD DIV / Indian Head, MD	Various	NSWC	Jun 2020	Jun 2021	2,000	177.77	Y		
2) Rocket Warheads												
2.1) (Q5030) WTU1/B INERT WARHEAD (2)		2016	General Dynamics / Burlington, VT	SS / FFP	Huntsville	Jul 2016	Jul 2017	7,649	95.18	Y		Oct 2013
2.1) (Q5030) WTU1/B INERT WARHEAD (2)		2017	General Dynamics / Burlington, VT	SS / FFP	Huntsville	Sep 2017	Sep 2018	7,643	78.69	Y		Oct 2013
2.1) (Q5030) WTU1/B INERT WARHEAD (2)		2018	General Dynamics / Burlington, VT	SS / FFP	Huntsville	May 2018	May 2019	26,062	80.27	Y		Oct 2013
2.1) (Q5030) WTU1/B INERT WARHEAD (2)		2019	TBD (12) / TBD	C / FFP	Huntsville	Jun 2019	Jun 2020	7,616	81.88	Y		Sep 2018
2.1) (Q5030) WTU1/B INERT WARHEAD (2)	✓	2020 (13)	TBD (12) / TBD	C / FFP	Huntsville	Jun 2020	Jun 2021	18,805	83.52	Y		Sep 2018
2.2) (Q5080) MK 146 HE WARHEAD (3)		2019	NSWC INDIAN HEAD DIV / Indian Head, MD	Various	NSWC	Jul 2019	Jul 2020	187	1,737.03	Y		
2.3) (Q5090) MK 149 WARHEAD (4)		2019	General Dynamics / Burlington, VT	SS / FFP	Huntsville	Jun 2019	Oct 2021	100	624.03	Y		

Exhibit P-5a, Procurement History and Planning: PB 2020 Navy		Date: March 2019
Appropriation / Budget Activity / Budget Sub Activity: 1508N / 01 / 1	P-1 Line Item Number / Title: 0151 / Airborne Rockets, All Types	Aggregated Items: Airborne Rockets, All Types

Item Number / Title [DODIC]	OCO	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
2.5) (Q5898) M282 MULTI-PURPOSE PENETRATOR (MPP) (6)		2019	General Dynamics (14) / Burlington, VT	C / FFP	Huntsville	Jun 2019	Jun 2020	39	3,660.87	Y		
2.5) (Q5898) M282 MULTI-PURPOSE PENETRATOR (MPP) (6)	✓	2020	General Dynamics (14) / Burlington, VT	C / FFP	Huntsville	Jun 2020	Jun 2021	39	3,734.09	Y		
2.6) (Q5899) MK 152 WARHEAD (7)	✓	2018 (15)	NSWC INDIAN HEAD DIV / Indian Head, MD	Various	NSWC	Feb 2019	Feb 2020	28	2,226.00	Y		
2.6) (Q5899) MK 152 WARHEAD (7)		2019	NSWC INDIAN HEAD DIV / Indian Head, MD	Various	NSWC	Feb 2019	Feb 2020	100	2,173.25	Y		
2.6) (Q5899) MK 152 WARHEAD (7)	✓	2019	NSWC INDIAN HEAD DIV / Indian Head, MD	Various	NSWC	Feb 2019	Feb 2020	43	2,173.25	Y		
2.6) (Q5899) MK 152 WARHEAD (7)	✓	2020	NSWC INDIAN HEAD DIV / Indian Head, MD	Various	NSWC	Jun 2020	Jun 2021	287	2,216.72	Y		
3) Rocket Launchers												
3.1) (Q5895) LAU-68 F/A (2.75")		2016	Arnold Defense / St. Louis, MO	C / FFP	NSWC	Sep 2017	Sep 2018	48	17,895.83	Y		Sep 2015
3.1) (Q5895) LAU-68 F/A (2.75")		2017	Arnold Defense / St. Louis, MO	C / FFP	NSWC	Sep 2017	Sep 2018	49	18,010.14	Y		Sep 2015
3.1) (Q5895) LAU-68 F/A (2.75")	✓	2017	Arnold Defense / St. Louis, MO	C / FFP	NSWC	Sep 2017	Sep 2018	53	18,264.15	Y		Sep 2015
3.1) (Q5895) LAU-68 F/A (2.75")		2018 (16)	Arnold Defense / St. Louis, MO	SS / FFP	NSWC	Feb 2019	Feb 2020	184	18,620.97	Y		Oct 2018
3.1) (Q5895) LAU-68 F/A (2.75")		2019 (17)	Arnold Defense / St. Louis, MO	SS / FFP	NSWC	Feb 2019	Feb 2020	184	18,737.76	Y		Oct 2018
3.1) (Q5895) LAU-68 F/A (2.75")	✓	2020	Arnold Defense / St. Louis, MO	SS / FFP	NSWC	Mar 2020	Mar 2021	198	19,000.00	Y		Oct 2018
3.2) (Q5900) LAU-61 G/A (2.75-Inch) DIGITAL ROCKET LAUNCHER (8)(†)		2016	Arnold Defense / St. Louis, MO	C / FFP	NSWC	Sep 2017	Sep 2018	29	58,470.48	Y		Sep 2015
3.2) (Q5900) LAU-61 G/A (2.75-Inch) DIGITAL ROCKET LAUNCHER (8)(†)		2017	Arnold Defense / St. Louis, MO	C / FFP	NSWC	Sep 2017	Sep 2018	59	49,178.28	Y		Sep 2015
3.2) (Q5900) LAU-61 G/A (2.75-Inch) DIGITAL ROCKET LAUNCHER (8)(†)	✓	2017	Arnold Defense / St. Louis, MO	C / FFP	NSWC	Sep 2017	Sep 2018	22	48,206.90	Y		Sep 2015
3.2) (Q5900) LAU-61 G/A (2.75-Inch) DIGITAL ROCKET LAUNCHER (8)(†)		2018 (18)	Arnold Defense / St. Louis, MO	SS / FFP	NSWC	Feb 2019	Apr 2020	110	50,161.85	Y		Oct 2018
3.2) (Q5900) LAU-61 G/A (2.75-Inch) DIGITAL ROCKET LAUNCHER (8)(†)		2019 (19)	Arnold Defense / St. Louis, MO	SS / FFP	NSWC	Feb 2019	Apr 2020	86	51,165.09	Y		Oct 2018

Exhibit P-5a, Procurement History and Planning: PB 2020 Navy		Date: March 2019
Appropriation / Budget Activity / Budget Sub Activity: 1508N / 01 / 1	P-1 Line Item Number / Title: 0151 / Airborne Rockets, All Types	Aggregated Items: Airborne Rockets, All Types

Item Number / Title [DODIC]	OCO	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
3.2) (Q5900) LAU-61 G/A (2.75-Inch) DIGITAL ROCKET LAUNCHER (8)(†)	✓	2020	Arnold Defense / St. Louis, MO	SS / FFP	NSWC	Mar 2020	Mar 2021	99	52,188.40	Y		Oct 2018
3.3) (QTBD) LAU-61 C/A (2.75-inch)	✓	2020	Arnold Defense / St. Louis, MO	SS / FFP	NSWC	Mar 2020	Mar 2021	20	38,000.00	Y		Oct 2018
4) APKWS												
4.1) (Q5896) APKWS G&C SECTIONS (9)(†)		2017	BAE SYSTEMS (20) / NASHUA, NH	SS / FFP	NAVAIR HQ	Apr 2017	Mar 2018	3,003	22,740.26	Y		Sep 2015
4.1) (Q5896) APKWS G&C SECTIONS (9)(†)	✓	2017	BAE SYSTEMS (20) / NASHUA, NH	SS / FFP	NAVAIR HQ	Apr 2017	Mar 2018	270	23,629.37	Y		Sep 2015
4.1) (Q5896) APKWS G&C SECTIONS (9)(†)		2018	BAE SYSTEMS (20) / NASHUA, NH	SS / FFP	NAVAIR HQ	Mar 2018	Feb 2019	1,188	22,820.00	Y		Sep 2015
4.1) (Q5896) APKWS G&C SECTIONS (9)(†)	✓	2018	BAE SYSTEMS (20) / NASHUA, NH	SS / FFP	NAVAIR HQ	Mar 2018	Feb 2019	40	22,820.00	Y		Sep 2015
4.1) (Q5896) APKWS G&C SECTIONS (9)(†)		2019	BAE SYSTEMS (20) / NASHUA, NH	SS / FFP	NAVAIR HQ	Mar 2019	Feb 2020	3,411	24,749.04	Y		Jul 2018
4.1) (Q5896) APKWS G&C SECTIONS (9)(†)	✓	2019	BAE SYSTEMS (20) / NASHUA, NH	SS / FFP	NAVAIR HQ	Mar 2019	Feb 2020	77	24,749.04	Y		Jul 2018
4.1) (Q5896) APKWS G&C SECTIONS (9)(†)	✓	2020	BAE SYSTEMS (20) / NASHUA, NH	SS / FFP	NAVAIR HQ	Mar 2020	Feb 2021	1,123	25,244.03	Y		Jul 2018

(†) indicates the presence of a P-21

Footnotes:

(11) (Q5040) MK66 Annual Production Rates are TBD and will be identified once the comptetitive contract is awarded in FY 2019.

(12) Annual Production Rates are TBD and will be identified once the comptetitive contract is awarded.

(13) (Q5030) FY 2020 WTU1/B INERT WARHEAD: Warheads are procured via competitive contract led by the Army.

(14) (Q5898) M282 MULTI-PURPOSE PENETRATOR: MSR will be met with purchases from the Army.

(15) (Q5899) FY 2018 OCO Mk-152 Warhead: Contract award date changed to February 2019 to align with larger buy and to take advantage of economy of scale.

(16) (Q5895) FY 2018 LAU-68F/A: Contract award date changed to February 2019 due to a change in contracting strategy and to coordinate other service requirements.

(17) (Q5895) FY 2019 LAU-68F/A: Contract award date changed to February 2019 due to a change in contracting strategy and to coordinate other service requirements.

(18) (Q5900) FY 2018 LAU-61 G/A DRL: Contract award date changed to February 2019 due to a change in contracting strategy and to coordinate other service requirements.

(19) (Q5900) FY 2019 LAU-61 G/A DRL: Contract award date changed to February 2019 due to a change in contracting strategy and to coordinate other service requirements.

(20) (Q5896) APKWS G&C SECTIONS : APKWS production rates increased to accommodate increased warfighter operational usage. Minimum Sustaining Rate is satisfied by multi-service procurements. Maximum production rate based on two shifts and does not include the potential for surge capability.

Exhibit P-21, Production Schedule: PB 2020 Navy | **Date:** March 2019

Appropriation / Budget Activity / Budget Sub Activity: 1508N / 01 / 1 | **P-1 Line Item Number / Title:** 0151 / Airborne Rockets, All Types | **Aggregated Items:** Airborne Rockets, All Types

Items (Units in Thousands)							Fiscal Year 2016												Fiscal Year 2017												BALANCE
										Calendar Year 2016												Calendar Year 2017									
OCO	MFR #	FY	SERVICE	PROC QTY	ACCEPT PRIOR TO 1 OCT 2015	BAL DUE AS OF 1 OCT	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) Rockets Hardware																															
1.1) (Q5040) MK 66 ROCKET MOTOR (MOD 4) (1)																															
Prior Years Deliveries: 420898																															
	1	2017	NAVY	14.216	.000	14.216																							A -	-	14.216
✓	1	2017	NAVY	2.813	.000	2.813																									2.813
	1	2018	NAVY	41.040	.000	41.040																									41.040
✓	1	2018	NAVY	.380	.000	.380																									.380
	2	2019	NAVY	35.715	.000	35.715																									35.715
✓	2	2019	NAVY	.047	.000	.047																									.047
✓	2	2020	NAVY	44.986	.000	44.986																									44.986
3) Rocket Launchers																															
3.2) (Q5900) LAU-61 G/A (2.75-Inch) DIGITAL ROCKET LAUNCHER (8)																															
Prior Years Deliveries: 302																															
	3	2016	NAVY	.029	.000	.029																								A -	.029
	3	2017	NAVY	.059	.000	.059																								A -	.059
✓	3	2017	NAVY	.022	.000	.022																								A -	.022
	3	2018	NAVY	.110	.000	.110																									.110
	3	2019	NAVY	.086	.000	.086																									.086
✓	3	2020	NAVY	.099	.000	.099																									.099
4) APKWS																															
4.1) (Q5896) APKWS G&C SECTIONS (9)																															
Prior Years Deliveries: 8583																															
	4	2017	NAVY	3.003	.000	3.003																			A -	-	-	-	-	-	3.003
✓	4	2017	NAVY	.270	.000	.270																			A -	-	-	-	-	-	.270
	4	2018	NAVY	1.188	.000	1.188																									1.188
✓	4	2018	NAVY	.040	.000	.040																									.040
	4	2019	NAVY	3.411	.000	3.411																									3.411
✓	4	2019	NAVY	.077	.000	.077																									.077
✓	4	2020	NAVY	1.123	.000	1.123																									1.123
							OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	

Exhibit P-21, Production Schedule: PB 2020 Navy | **Date:** March 2019

Appropriation / Budget Activity / Budget Sub Activity: 1508N / 01 / 1 | **P-1 Line Item Number / Title:** 0151 / Airborne Rockets, All Types | **Aggregated Items:** Airborne Rockets, All Types

Items (Units in Thousands)							Fiscal Year 2018												Fiscal Year 2019												BALANCE
							Calendar Year 2018												Calendar Year 2019												
OCO	MFR #	FY	SERVICE	PROC QTY	ACCEPT PRIOR TO 1 OCT 2017	BAL DUE AS OF 1 OCT	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) Rockets Hardware																															
1.1) (Q5040) MK 66 ROCKET MOTOR (MOD 4) (1)																															
Prior Years Deliveries: 420898																															
	1	2017	NAVY	14.216	.000	14.216	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1.184	1.184	1.184	1.184	1.185	1.185	1.185	1.185	1.185	1.185	2.370
✓	1	2017	NAVY	2.813	.000	2.813										A -	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2.813
	1	2018	NAVY	41.040	.000	41.040										A -	-	-	-	-	-	-	-	-	-	-	-	-	-	-	41.040
✓	1	2018	NAVY	.380	.000	.380										A -	-	-	-	-	-	-	-	-	-	-	-	-	-	-	.380
	2	2019	NAVY	35.715	.000	35.715																					A -	-	-	-	35.715
✓	2	2019	NAVY	.047	.000	.047																					A -	-	-	-	.047
✓	2	2020	NAVY	44.986	.000	44.986																									44.986
3) Rocket Launchers																															
3.2) (Q5900) LAU-61 G/A (2.75-Inch) DIGITAL ROCKET LAUNCHER (8)																															
Prior Years Deliveries: 302																															
	3	2016	NAVY	.029	.000	.029	-	-	-	-	-	-	-	-	-	-	-	.002	.002	.002	.002	.002	.002	.002	.003	.003	.003	.003	.003		.000
	3	2017	NAVY	.059	.000	.059	-	-	-	-	-	-	-	-	-	-	-	.005	.005	.005	.005	.005	.005	.005	.005	.005	.004	.005	.005		.000
✓	3	2017	NAVY	.022	.000	.022	-	-	-	-	-	-	-	-	-	-	-	.001	.001	.002	.002	.002	.002	.002	.002	.002	.002	.002	.002		.000
	3	2018	NAVY	.110	.000	.110																	A -	-	-	-	-	-	-	-	.110
	3	2019	NAVY	.086	.000	.086																	A -	-	-	-	-	-	-	-	.086
✓	3	2020	NAVY	.099	.000	.099																									.099
4) APKWS																															
4.1) (Q5896) APKWS G&C SECTIONS (9)																															
Prior Years Deliveries: 8583																															
	4	2017	NAVY	3.003	.000	3.003	-	-	-	-	-	.241	.250	.251	.251	.251	.251	.251	.251	.251	.251	.251	.253								.000
✓	4	2017	NAVY	.270	.000	.270	-	-	-	-	-	.022	.022	.022	.022	.022	.022	.023	.023	.023	.023	.023	.023								.000
	4	2018	NAVY	1.188	.000	1.188						A -	-	-	-	-	-	-	-	-	-	-	.099	.099	.099	.099	.099	.099	.099	.099	.396
✓	4	2018	NAVY	.040	.000	.040						A -	-	-	-	-	-	-	-	-	-	-	.003	.003	.003	.003	.003	.003	.003	.003	.016
	4	2019	NAVY	3.411	.000	3.411																		A -	-	-	-	-	-	-	3.411
✓	4	2019	NAVY	.077	.000	.077																		A -	-	-	-	-	-	-	.077
✓	4	2020	NAVY	1.123	.000	1.123																									1.123
							OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	

Exhibit P-21, Production Schedule: PB 2020 Navy | **Date:** March 2019

Appropriation / Budget Activity / Budget Sub Activity: 1508N / 01 / 1 | **P-1 Line Item Number / Title:** 0151 / Airborne Rockets, All Types | **Aggregated Items:** Airborne Rockets, All Types

Items (Units in Thousands)							Fiscal Year 2020												Fiscal Year 2021												BALANCE
							Calendar Year 2020												Calendar Year 2021												
OCO	MFR #	FY	SERVICE	PROC QTY	ACCEPT PRIOR TO 1 OCT 2019	BAL DUE AS OF 1 OCT	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) Rockets Hardware																															
1.1) (Q5040) MK 66 ROCKET MOTOR (MOD 4) [1]																															
Prior Years Deliveries: 420898																															
	1	2017	NAVY	14.216	11.846	2.370	1.185	1.185																							.000
✓	1	2017	NAVY	2.813	.000	2.813	-	-	.234	.234	.234	.234	.234	.234	.234	.235	.235	.235	.235	.235											.000
	1	2018	NAVY	41.040	.000	41.040	-	-	-	-	-	-	3.420	3.420	3.420	3.420	3.420	3.420	3.420	3.420	3.420	3.420	3.420	3.420							.000
✓	1	2018	NAVY	.380	.000	.380	-	-	-	-	-	-	.032	.032	.032	.032	.032	.032	.032	.032	.031	.031	.031	.031							.000
	2	2019	NAVY	35.715	.000	35.715	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2.802	2.802	2.802	2.802	2.802	2.802	2.802	2.802	13.299
✓	2	2019	NAVY	.047	.000	.047	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	.004	.004	.004	.004	.004	.004	.004	.004	.015
✓	2	2020	NAVY	44.986	.000	44.986									A -	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	44.986
3) Rocket Launchers																															
3.2) (Q5900) LAU-61 G/A (2.75-Inch) DIGITAL ROCKET LAUNCHER [8]																															
Prior Years Deliveries: 302																															
	3	2016	NAVY	.029	.029	.000																									.000
	3	2017	NAVY	.059	.059	.000																									.000
✓	3	2017	NAVY	.022	.022	.000																									.000
	3	2018	NAVY	.110	.000	.110	-	-	-	-	-	-	.009	.009	.009	.009	.009	.009	.009	.009	.009	.009	.009	.011							.000
	3	2019	NAVY	.086	.000	.086	-	-	-	-	-	-	.007	.007	.007	.007	.007	.007	.007	.007	.007	.007	.007	.009							.000
✓	3	2020	NAVY	.099	.000	.099						A -	-	-	-	-	-	-	-	-	-	-	-	.008	.008	.008	.008	.008	.008	.008	.043
4) APKWS																															
4.1) (Q5896) APKWS G&C SECTIONS [9]																															
Prior Years Deliveries: 8583																															
	4	2017	NAVY	3.003	3.003	.000																									.000
✓	4	2017	NAVY	.270	.270	.000																									.000
	4	2018	NAVY	1.188	.792	.396	.099	.099	.099	.099																					.000
✓	4	2018	NAVY	.040	.024	.016	.004	.004	.004	.004																					.000
	4	2019	NAVY	3.411	.000	3.411	-	-	-	-	.284	.285	.284	.285	.284	.285	.284	.284	.284	.284	.284	.284									.000
✓	4	2019	NAVY	.077	.000	.077	-	-	-	-	.007	.006	.007	.006	.007	.006	.007	.006	.007	.006	.006	.006									.000
✓	4	2020	NAVY	1.123	.000	1.123						A -	-	-	-	-	-	-	-	-	-	-	.093	.094	.093	.094	.093	.094	.093	.094	.375
							OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	

Exhibit P-21, Production Schedule: PB 2020 Navy | **Date:** March 2019

Appropriation / Budget Activity / Budget Sub Activity: 1508N / 01 / 1

P-1 Line Item Number / Title: 0151 / Airborne Rockets, All Types

Aggregated Items: Airborne Rockets, All Types

Items (Units in Thousands)							Fiscal Year 2022												Fiscal Year 2023												BALANCE
							Calendar Year 2022												Calendar Year 2023												
OCO	MFR #	FY	SERVICE	PROC QTY	ACCEPT PRIOR TO 1 OCT 2021	BAL DUE AS OF 1 OCT	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) Rockets Hardware																															
1.1) (Q5040) MK 66 ROCKET MOTOR (MOD 4) [1]																															
Prior Years Deliveries: 420898																															
	1	2017	NAVY	14.216	14.216	.000																									.000
✓	1	2017	NAVY	2.813	2.813	.000																									.000
	1	2018	NAVY	41.040	41.040	.000																									.000
✓	1	2018	NAVY	.380	.380	.000																									.000
	2	2019	NAVY	35.715	22.416	13.299	2.802	10.497																							.000
✓	2	2019	NAVY	.047	.032	.015	.004	.011																							.000
✓	2	2020	NAVY	44.986	.000	44.986	-	-	3.751	3.748	3.749	3.748	3.749	3.749	3.749	3.748	3.749	3.748	3.749	3.749											.000
3) Rocket Launchers																															
3.2) (Q5900) LAU-61 G/A (2.75-Inch) DIGITAL ROCKET LAUNCHER [8]																															
Prior Years Deliveries: 302																															
	3	2016	NAVY	.029	.029	.000																									.000
	3	2017	NAVY	.059	.059	.000																									.000
✓	3	2017	NAVY	.022	.022	.000																									.000
	3	2018	NAVY	.110	.110	.000																									.000
	3	2019	NAVY	.086	.086	.000																									.000
✓	3	2020	NAVY	.099	.056	.043	.008	.008	.008	.009	.010																				.000
4) APKWS																															
4.1) (Q5896) APKWS G&C SECTIONS [9]																															
Prior Years Deliveries: 8583																															
	4	2017	NAVY	3.003	3.003	.000																									.000
✓	4	2017	NAVY	.270	.270	.000																									.000
	4	2018	NAVY	1.188	1.188	.000																									.000
✓	4	2018	NAVY	.040	.040	.000																									.000
	4	2019	NAVY	3.411	3.411	.000																									.000
✓	4	2019	NAVY	.077	.077	.000																									.000
✓	4	2020	NAVY	1.123	.748	.375	.093	.094	.094	.094																					.000
							OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	

Exhibit P-21, Production Schedule: PB 2020 Navy		Date: March 2019
Appropriation / Budget Activity / Budget Sub Activity: 1508N / 01 / 1	**P-1 Line Item Number / Title:** 0151 / Airborne Rockets, All Types	**Aggregated Items:** Airborne Rockets, All Types

MFR Ref #	Manufacturer Name - Location	Production Rates (Each / Year)			Procurement Leadtime (Months)							
					Initial				Reorder			
		MSR For 2020	1-8-5 For 2020	MAX For 2020	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 - Burlington, VT	3,600	300,000	552,000	0	0	0	0	0	9	18	27
2	TBD (11) - TBD			TBD	0	0	0	0	0	9	18	27
3	Arnold Defense - St. Louis, MO	9	142	285	0	6	0	6	0	6	12	18
4	BAE SYSTEMS (20) - NASHUA, NH	2,000	12,000	25,000	0	0	0	0	0	6	11	17

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

Footnotes:
(11) (Q5040) MK66 Annual Production Rates are TBD and will be identified once the comptetitive contract is awarded in FY 2019.
(20) (Q5896) APKWS G&C SECTIONS : APKWS production rates increased to accommodate increased warfighter operational usage. Minimum Sustaining Rate is satisfied by multi-service procurements. Maximum production rate based on two shifts and does not include the potential for surge capability.

Exhibit P-40, Budget Line Item Justification: PB 2020 Navy	Date: March 2019
Appropriation / Budget Activity / Budget Sub Activity: 1508N: Procurement of Ammo, Navy & MC / BA 01: Proc Ammo, Navy / BSA 1: Navy Ammunition	**P-1 Line Item Number / Title:** 0155 / Machine Gun Ammunition

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

Line Item MDAP/MAIS Code: N/A

Resource Summary	Prior Years	FY 2018	FY 2019	FY 2020 Base	FY 2020 OCO	FY 2020 Total	FY 2021	FY 2022	FY 2023	FY 2024	To Complete	Total
Procurement Quantity *(Units in Each)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost *($ in Millions)*	656.901	14.112	16.344	0.000	38.370	38.370	36.465	11.392	11.617	11.849	Continuing	Continuing
Less PY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) *($ in Millions)*	656.901	14.112	16.344	0.000	38.370	38.370	36.465	11.392	11.617	11.849	Continuing	Continuing
Plus CY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority *($ in Millions)*	**656.901**	**14.112**	**16.344**	**0.000**	**38.370**	**38.370**	**36.465**	**11.392**	**11.617**	**11.849**	**Continuing**	**Continuing**
(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)*	-	-	-	-	-	-	-	-	-	-	-	-

Description:

FY 2020 funding totals include $0.0M for Base and $38.370M for Overseas Contingency Operations (OCO); of which $4.793M is realigned as part of the OCO for Base Requirements. FY 2020 OCO for Base Requirements is OCO funding for base budget requirements in support of the National Defense Strategy. The Budget requests these funds in OCO to comply with the base budget defense caps included in the Budget Control Act of 2011.

Provides procurement of 20MM/25MM ammunition that supports various aircraft gun systems for several Type/Model/Series (T/M/S) aircraft. Funding also includes the integrated logistics support, product engineering support and product improvement programs in support of the ammunition procurements.

The ammunition procurements fall into three categories: Target Practice (TP), High Explosive Incendiary (HEI), and inert. The TP and inert rounds are used for training. The HEI rounds are used for warfighting and training and also include Semi Armor Piercing High Explosive Incendiary(SAPHEI) rounds.

All 20MM/25MM ammunition is procured by the Joint Munitions Command, Rock Island, Illinois.

20MM rounds are procured in both linkless and linked configurations. The linkless (or bulk) rounds are used in the M61A1/A2 Gun Systems in the F/A-18 aircraft and the M197 Linkless Feed Gun System on the AH-1W/Z aircraft. The linked rounds are used in the M197 gun on MH60 aircraft for the Fixed Forward Firing Weapon (FFFW).

25MM rounds are procured in the linkless configuration and are used in the GAU-12 Gun System in the AV-8B aircraft and the GAU-22 Gun System in the F-35B&C.

Exhibit P-40, Budget Line Item Justification: PB 2020 Navy	Date: March 2019
Appropriation / Budget Activity / Budget Sub Activity: 1508N: Procurement of Ammo, Navy & MC / BA 01: Proc Ammo, Navy / BSA 1: Navy Ammunition	**P-1 Line Item Number / Title:** 0155 / Machine Gun Ammunition

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 2018	FY 2019	FY 2020 Base	FY 2020 OCO	FY 2020 Total
Exhibit Type	Title*	Subexhibits	ID CD	MDAP/ MAIS Code	Quantity / Total Cost *(Each) I ($ M)*	Quantity / Total Cost *(Each) I ($ M)*	Quantity / Total Cost *(Each) I ($ M)*	Quantity / Total Cost *(Each) I ($ M)*	Quantity / Total Cost *(Each) I ($ M)*	Quantity / Total Cost *(Each) I ($ M)*
P-5	1 / Machine Gun Ammunition	P-5a, P-21			- / 656.901	- / 14.112	- / 16.344	- / 0.000	- / 38.370	- / 38.370
P-40	**Total Gross/Weapon System Cost**				**- / 656.901**	**- / 14.112**	**- / 16.344**	**- / 0.000**	**- / 38.370**	**- / 38.370**

*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 2020 OCO for baseline funding is required to procure 20MM Linkless TP requirements and inert rounds and associated support. Provides procurement of 20MM ammunition that supports various aircraft gun systems for several Type/Model/Series (T/M/S) aircraft.

OCO:
Increase in Direct War OCO funding in FY 2020 is required to replenish stocks depleted by training and combat expenditures in support of Operation Inherent Resolve for the 20MM Linkless TP, TP-T, and HEI. In addition, OCO funding is provided to support combat and training expenditures in direct support of OCO operations.

Exhibit P-5, Cost Analysis: PB 2020 Navy		Date: March 2019
Appropriation / Budget Activity / Budget Sub Activity: 1508N / 01 / 1	P-1 Line Item Number / Title: 0155 / Machine Gun Ammunition	Item Number / Title [DODIC]: 1 / Machine Gun Ammunition
ID Code (A=Service Ready, B=Not Service Ready) :	MDAP/MAIS Code:	

Resource Summary	Prior Years	FY 2018	FY 2019	FY 2020 Base	FY 2020 OCO	FY 2020 Total
Procurement Quantity *(Units in Each)*	-	-	-	-	-	-
Gross/Weapon System Cost *($ in Millions)*	656.901	14.112	16.344	0.000	38.370	38.370
Less PY Advance Procurement *($ in Millions)*	-	-	-	-	-	-
Net Procurement (P-1) *($ in Millions)*	656.901	14.112	16.344	0.000	38.370	38.370
Plus CY Advance Procurement *($ in Millions)*	-	-	-	-	-	-
Total Obligation Authority *($ in Millions)*	**656.901**	**14.112**	**16.344**	**0.000**	**38.370**	**38.370**
(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 2018			FY 2019			FY 2020 Base			FY 2020 OCO			FY 2020 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 - Machine Gun Ammunition Cost																		
Recurring Cost																		
1.1.1) (Q4010) 20MM LINKLESS, TP(†)	17.18	12,467,060	214.215	10.87	899,448	9.777	-	-	-	-	-	0.000	11.29	2,123,383	23.973	11.29	2,123,383	23.973
1.1.2) (Q4050) 20MM LINKLESS, HEI(†)	31.91	4,612,710	147.189	-	-	-	23.14	216,094	5.000	-	-	0.000	23.60	330,508	7.800	23.60	330,508	7.800
1.1.3) (Q4060) 20MM LINKED, TP(†)	28.32	3,808,851	107.855	-	-	-	17.41	496,037	8.636	-	-	-	-	-	-	-	-	-
1.1.4) (Q4070) 20MM LINKED, HEI	112.39	673,448	75.690	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1.1.5) (Q4080) 20MM LINKLESS, TP-T(†) (1)	16.60	1,208,072	20.051	17.20	87,209	1.500	-	-	-	-	-	0.000	17.90	223,462	4.000	17.90	223,462	4.000
1.1.6) (Q4090) 25MM LINKLESS, TP	17.99	587,723	10.574	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1.1.7) (Q4150) 25MM LINKLESS, HEI	52.63	405,570	21.346	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1.1.8) (Q4200) INERT ROUND(†)	26.89	40,093	1.078	21.06	4,748	0.100	21.48	4,655	0.100	-	-	0.000	21.91	4,564	0.100	21.91	4,564	0.100
Subtotal: Recurring Cost	-	-	*597.998*	-	-	*11.377*	-	-	*13.736*	-	-	*0.000*	-	-	*35.873*	-	-	*35.873*
Subtotal: Hardware - Machine Gun Ammunition Cost	**-**	**-**	***597.998***	**-**	**-**	***11.377***	**-**	**-**	***13.736***	**-**	**-**	***0.000***	**-**	**-**	***35.873***	**-**	**-**	***35.873***
Support - Product Improvement Cost																		
2.1) (Q4850) Machine Gun Ammunition	-	-	12.581	-	-	0.700	-	-	0.636	-	-	0.000	-	-	0.563	-	-	0.563

Exhibit P-5, Cost Analysis: PB 2020 Navy		Date: March 2019
Appropriation / Budget Activity / Budget Sub Activity: 1508N / 01 / 1	P-1 Line Item Number / Title: 0155 / Machine Gun Ammunition	Item Number / Title [DODIC]: 1 / Machine Gun Ammunition
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 2018			FY 2019			FY 2020 Base			FY 2020 OCO			FY 2020 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)
Subtotal: Support - Product Improvement Cost	-	-	***12.581***	-	-	***0.700***	-	-	***0.636***	-	-	***0.000***	-	-	***0.563***	-	-	***0.563***
Support - Integrated Logistics Cost																		
3.1) (Q4800) Machine Gun Ammunition	-	-	9.367	-	-	0.655	-	-	0.608	-	-	0.000	-	-	0.563	-	-	0.563
Subtotal: Support - Integrated Logistics Cost	-	-	***9.367***	-	-	***0.655***	-	-	***0.608***	-	-	***0.000***	-	-	***0.563***	-	-	***0.563***
Support - Production Engineering Cost																		
4.1) (Q4830) Machine Gun Ammunition	-	-	36.955	-	-	1.380	-	-	1.364	-	-	0.000	-	-	1.371	-	-	1.371
Subtotal: Support - Production Engineering Cost	-	-	***36.955***	-	-	***1.380***	-	-	***1.364***	-	-	***0.000***	-	-	***1.371***	-	-	***1.371***
Gross/Weapon System Cost	-	-	**656.901**	-	-	**14.112**	-	-	**16.344**	-	-	**0.000**	-	-	**38.370**	-	-	**38.370**

Remarks:
Increase in OCO funding in FY 2020 includes $25.3M to replenish stocks depleted by training and combat expenditures in support of Operation Inherent Resolve for the 20MM Linkless TP, TP-T, and HEI. In addition, $8.277M is provided for the 20MM Linkless TP to support future planned combat and training expenditures in direct support of OCO operations.

(†) indicates the presence of a P-5a

Footnotes:
(1) [(Q4080) 20MM LINKLESS, TP-T]: FY 2018 through FY 2024 funding reflects procurement of items every other year to obtain the most economical buys.

Exhibit P-5a, Procurement History and Planning: PB 2020 Navy		Date: March 2019
Appropriation / Budget Activity / Budget Sub Activity: 1508N / 01 / 1	P-1 Line Item Number / Title: 0155 / Machine Gun Ammunition	Item Number / Title [DODIC]: 1 / Machine Gun Ammunition

Cost Elements	OCO	FY	Contractor and Location	Method/Type or Funding Vehicle	Location of PCO	Award Date	Date of First Delivery	Qty (Each)	Unit Cost ($)	Specs Avail Now?	Date Revision Available	RFP Issue Date
1.1.1) (Q4010) 20MM LINKLESS, TP(†)		2018 (2)	GENERAL DYNAMICS OTS/ATK / MARION, IL / LAKE CITY, MO	C / FFP	JMC ROCK ISLAND, ILLINOIS	Sep 2018	Sep 2019	899,448	10.87	Y		Apr 2018
1.1.1) (Q4010) 20MM LINKLESS, TP(†)	✓	2020	GENERAL DYNAMICS OTS/ATK / MARION, IL / LAKE CITY, MO	C / FFP	JMC ROCK ISLAND, ILLINOIS	Jul 2020	Jul 2021	2,123,383	11.29	Y		Apr 2018
1.1.2) (Q4050) 20MM LINKLESS, HEI(†)		2016 (3)	GENERAL DYNAMICS OTS/ATK / MARION, IL / LAKE CITY, MO	C / FFP	JMC ROCK ISLAND, ILLINOIS	Jul 2016	Apr 2019	346,341	22.14	Y		Sep 2013
1.1.2) (Q4050) 20MM LINKLESS, HEI(†)	✓	2016 (4)	GENERAL DYNAMICS OTS/ATK / MARION, IL / LAKE CITY, MO	C / FFP	JMC ROCK ISLAND, ILLINOIS	Jul 2016	Sep 2019	162,737	22.14	Y		Sep 2013
1.1.2) (Q4050) 20MM LINKLESS, HEI(†)	✓	2019	GENERAL DYNAMICS OTS/ATK / MARION, IL / LAKE CITY, MO	C / FFP	JMC ROCK ISLAND, ILLINOIS	Jul 2019	Jul 2020	216,094	23.14	Y		Sep 2018
1.1.2) (Q4050) 20MM LINKLESS, HEI(†)	✓	2020	GENERAL DYNAMICS OTS/ATK / MARION, IL / LAKE CITY, MO	C / FFP	JMC ROCK ISLAND, ILLINOIS	Jul 2020	Jul 2021	330,508	23.60	Y		Apr 2018
1.1.3) (Q4060) 20MM LINKED, TP(†)		2017 (5)	GENERAL DYNAMICS OTS/ATK / MARION, IL / LAKE CITY, MO	C / FFP	JMC ROCK ISLAND, ILLINOIS	Sep 2017	Jan 2019	321,578	16.73	Y		Sep 2013
1.1.3) (Q4060) 20MM LINKED, TP(†)		2019	GENERAL DYNAMICS OTS/ATK / MARION, IL / LAKE CITY, MO	C / FFP	JMC ROCK ISLAND, ILLINOIS	Jul 2019	Jul 2020	496,037	17.41	Y		Apr 2018
1.1.5) (Q4080) 20MM LINKLESS, TP-T(†)		2016 (6)	GENERAL DYNAMICS OTS/ATK / MARION, IL / LAKE CITY, MO	C / FFP	JMC ROCK ISLAND, ILLINOIS	Jul 2016	Jul 2018	332,527	16.54	Y		Sep 2013
1.1.5) (Q4080) 20MM LINKLESS, TP-T(†)		2018	GENERAL DYNAMICS OTS/ATK / MARION, IL / LAKE CITY, MO	C / FFP	JMC ROCK ISLAND, ILLINOIS	Sep 2018	Sep 2019	87,209	17.20	Y		Apr 2018
1.1.5) (Q4080) 20MM LINKLESS, TP-T(†)	✓	2020	GENERAL DYNAMICS OTS/ATK / MARION, IL / LAKE CITY, MO	C / FFP	JMC ROCK ISLAND, ILLINOIS	Jul 2020	Jul 2021	223,462	17.90	Y		Apr 2018
1.1.8) (Q4200) INERT ROUND		2018 (7)	GENERAL DYNAMICS OTS/ATK / MARION, IL / LAKE CITY, MO	C / FFP	JMC ROCK ISLAND, ILLINOIS	Sep 2018	Mar 2019	4,748	21.06	Y		Jul 2018
1.1.8) (Q4200) INERT ROUND		2019	GENERAL DYNAMICS OTS/ATK / MARION, IL / LAKE CITY, MO	C / FFP	JMC ROCK ISLAND, ILLINOIS	Jul 2019	Jul 2020	4,655	21.48	Y		Jul 2018
1.1.8) (Q4200) INERT ROUND	✓	2020	GENERAL DYNAMICS OTS/ATK / MARION, IL / LAKE CITY, MO	C / FFP	JMC ROCK ISLAND, ILLINOIS	Jul 2020	Jul 2021	4,564	21.91	Y		Jul 2018

(†) indicates the presence of a P-21

Footnotes:

(2) (Q4010) FY 2018: 20MM Linkless TP: Contract Awarded in September 2018. Award was a new 5 year Medium Caliber Contract.

(3) (Q4050) FY 2016: 20MM Linkless, HEI: Date of first delivery changed to April 2019 in order to support another services urgent production need.

(4) (Q4050) FY 2016: 20MM Linkless, HEI: Date of first delivery changed to September 2019 in order to support another services urgent production need.

Exhibit P-5a, Procurement History and Planning: PB 2020 Navy		**Date:** March 2019
Appropriation / Budget Activity / Budget Sub Activity: 1508N / 01 / 1	**P-1 Line Item Number / Title:** 0155 / Machine Gun Ammunition	**Item Number / Title [DODIC]:** 1 / Machine Gun Ammunition

(5) (Q4060) FY 2017: 20MM LINKED, TP: Delivery date was shifted to January 2019 to allow requisition of M14A2N Links upon completion of First Article Test.

(6) (Q4080) FY 2016: 20MM Linkless TP-T: Delivery date changed to July 2018 due to an issue in the First Article Test. An investigation was completed in July 2018 and production resumed. There are 14,000 rounds remaining to be delivered in May 2019.

(7) (Q4200) FY 2018: Inert Rounds: Date of First Delivery changed to March 2019 pending reciept of proposals to award a new 5 year Medium Caliber Contract.

Exhibit P-21, Production Schedule: PB 2020 Navy		Date: March 2019
Appropriation / Budget Activity / Budget Sub Activity: 1508N / 01 / 1	**P-1 Line Item Number / Title:** 0155 / Machine Gun Ammunition	**Item Number / Title [DODIC]:** 1 / Machine Gun Ammunition

Cost Elements (Units in Millions, * = < 500)							Fiscal Year 2016												Fiscal Year 2017												BALANCE
							Calendar Year 2016												Calendar Year 2017												
OCO	MFR #	FY	SERVICE	PROC QTY	ACCEPT PRIOR TO 1 OCT 2015	BAL DUE AS OF 1 OCT	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	
1.1.1) (Q4010) 20MM LINKLESS, TP																															
Prior Years Deliveries: 12467060																															
	1	2018	NAVY	.899	.000	.899																									.899
✓	1	2020	NAVY	2.123	.000	2.123																									2.123
1.1.2) (Q4050) 20MM LINKLESS, HEI																															
Prior Years Deliveries: 4103632																															
	2	2016	NAVY	.346	.000	.346										A -	-	-	-	-	-	-	-	-	-	-	-	-	-	-	.346
✓	2	2016	NAVY	.163	.000	.163										A -	-	-	-	-	-	-	-	-	-	-	-	-	-	-	.163
✓	2	2019	NAVY	.216	.000	.216																									.216
✓	2	2020	NAVY	.331	.000	.331																									.331
1.1.3) (Q4060) 20MM LINKED, TP																															
Prior Years Deliveries: 3487273																															
	3	2017	NAVY	.322	.000	.322																								A -	.322
	3	2019	NAVY	.496	.000	.496																									.496
1.1.5) (Q4080) 20MM LINKLESS, TP-T (1)																															
Prior Years Deliveries: 875545																															
	4	2016	NAVY	.333	.000	.333										A -	-	-	-	-	-	-	-	-	-	-	-	-	-	-	.333
	4	2018	NAVY	.087	.000	.087																									.087
✓	4	2020	NAVY	.223	.000	.223																									.223
							OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	

Exhibit P-21, Production Schedule: PB 2020 Navy | **Date:** March 2019

Appropriation / Budget Activity / Budget Sub Activity: 1508N / 01 / 1

P-1 Line Item Number / Title: 0155 / Machine Gun Ammunition

Item Number / Title [DODIC]: 1 / Machine Gun Ammunition

Cost Elements (Units in Millions, * = < 500)							Fiscal Year 2018												Fiscal Year 2019												BALANCE
							Calendar Year 2018												Calendar Year 2019												
OCO	MFR #	FY	SERVICE	PROC QTY	ACCEPT PRIOR TO 1 OCT 2017	BAL DUE AS OF 1 OCT	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	
1.1.1) (Q4010) 20MM LINKLESS, TP																															
Prior Years Deliveries: 12467060																															
	1	2018	NAVY	.899	.000	.899												A -	-	-	-	-	-	-	-	-	-	-	-	.075	.824
✓	1	2020	NAVY	2.123	.000	2.123																									2.123
1.1.2) (Q4050) 20MM LINKLESS, HEI																															
Prior Years Deliveries: 4103632																															
	2	2016	NAVY	.346	.000	.346	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	.075	.075	.075	.122			.000
✓	2	2016	NAVY	.163	.000	.163	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	.089	.074
✓	2	2019	NAVY	.216	.000	.216																						A -	-	-	.216
✓	2	2020	NAVY	.331	.000	.331																									.331
1.1.3) (Q4060) 20MM LINKED, TP																															
Prior Years Deliveries: 3487273																															
	3	2017	NAVY	.322	.000	.322	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	.082	.100	.100	.039						.000
	3	2019	NAVY	.496	.000	.496																						A -	-	-	.496
1.1.5) (Q4080) 20MM LINKLESS, TP-T (1)																															
Prior Years Deliveries: 875545																															
	4	2016	NAVY	.333	.000	.333	-	-	-	-	-	-	-	-	-	.098	.098	.098	.025	-	-	-	-	-	-	.014					.000
	4	2018	NAVY	.087	.000	.087												A -	-	-	-	-	-	-	-	-	-	-	-	.007	.080
✓	4	2020	NAVY	.223	.000	.223																									.223
							OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	

Exhibit P-21, Production Schedule: PB 2020 Navy | **Date:** March 2019

Appropriation / Budget Activity / Budget Sub Activity: 1508N / 01 / 1 | **P-1 Line Item Number / Title:** 0155 / Machine Gun Ammunition | **Item Number / Title [DODIC]:** 1 / Machine Gun Ammunition

Cost Elements (Units in Millions, * = < 500)							Fiscal Year 2020												Fiscal Year 2021												BALANCE
							Calendar Year 2020												Calendar Year 2021												
OCO	MFR #	FY	SERVICE	PROC QTY	ACCEPT PRIOR TO 1 OCT 2019	BAL DUE AS OF 1 OCT	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	
1.1.1) (Q4010) 20MM LINKLESS, TP																															
Prior Years Deliveries: 12467060																															
	1	2018	NAVY	.899	.075	.824	.075	.075	.075	.075	.075	.075	.075	.075	.075	.075	.075														.000
✓	1	2020	NAVY	2.123	.000	2.123										A -	-	-	-	-	-	-	-	-	-	-	.177	.177	.177		1.593
1.1.2) (Q4050) 20MM LINKLESS, HEI																															
Prior Years Deliveries: 4103632																															
	2	2016	NAVY	.346	.346	.000																									.000
✓	2	2016	NAVY	.163	.089	.074	.074																								.000
✓	2	2019	NAVY	.216	.000	.216	-	-	-	-	-	-	-	-	-	.018	.018	.018	.018	.018	.018	.018	.018	.018	.018	.018	.018				.000
✓	2	2020	NAVY	.331	.000	.331										A -	-	-	-	-	-	-	-	-	-	-	.028	.028	.028		.248
1.1.3) (Q4060) 20MM LINKED, TP																															
Prior Years Deliveries: 3487273																															
	3	2017	NAVY	.322	.322	.000																									.000
	3	2019	NAVY	.496	.000	.496	-	-	-	-	-	-	-	-	-	.041	.041	.041	.041	.041	.041	.041	.041	.041	.041	.042	.042				.000
1.1.5) (Q4080) 20MM LINKLESS, TP-T (1)																															
Prior Years Deliveries: 875545																															
	4	2016	NAVY	.333	.333	.000																									.000
	4	2018	NAVY	.087	.007	.080	.007	.007	.007	.007	.007	.007	.007	.007	.007	.007	.007														.000
✓	4	2020	NAVY	.223	.000	.223										A -	-	-	-	-	-	-	-	-	-	-	.019	.019	.019		.168
							OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	

Exhibit P-21, Production Schedule: PB 2020 Navy | **Date:** March 2019

Appropriation / Budget Activity / Budget Sub Activity: 1508N / 01 / 1 | **P-1 Line Item Number / Title:** 0155 / Machine Gun Ammunition | **Item Number / Title [DODIC]:** 1 / Machine Gun Ammunition

Cost Elements (Units in Millions, * = < 500)							Fiscal Year 2022												Fiscal Year 2023												BALANCE
							Calendar Year 2022												Calendar Year 2023												
OCO	MFR #	FY	SERVICE	PROC QTY	ACCEPT PRIOR TO 1 OCT 2021	BAL DUE AS OF 1 OCT	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	
1.1.1) (Q4010) 20MM LINKLESS, TP																															
Prior Years Deliveries: 12467060																															
	1	2018	NAVY	.899	.899	.000																									.000
✓	1	2020	NAVY	2.123	.531	1.593	.177	.177	.177	.177	.177	.177	.177	.177	.177																.000
1.1.2) (Q4050) 20MM LINKLESS, HEI																															
Prior Years Deliveries: 4103632																															
	2	2016	NAVY	.346	.346	.000																									.000
✓	2	2016	NAVY	.163	.163	.000																									.000
✓	2	2019	NAVY	.216	.216	.000																									.000
✓	2	2020	NAVY	.331	.083	.248	.028	.028	.028	.028	.028	.028	.028	.028	.028																.000
1.1.3) (Q4060) 20MM LINKED, TP																															
Prior Years Deliveries: 3487273																															
	3	2017	NAVY	.322	.322	.000																									.000
	3	2019	NAVY	.496	.496	.000																									.000
1.1.5) (Q4080) 20MM LINKLESS, TP-T (1)																															
Prior Years Deliveries: 875545																															
	4	2016	NAVY	.333	.333	.000																									.000
	4	2018	NAVY	.087	.087	.000																									.000
✓	4	2020	NAVY	.223	.056	.168	.019	.019	.019	.019	.019	.019	.019	.019	.019																.000
							OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	

Exhibit P-21, Production Schedule: PB 2020 Navy		Date: March 2019
Appropriation / Budget Activity / Budget Sub Activity: 1508N / 01 / 1	**P-1 Line Item Number / Title:** 0155 / Machine Gun Ammunition	**Item Number / Title [DODIC]:** 1 / Machine Gun Ammunition

MFR Ref #	Manufacturer Name - Location	Production Rates (Each / Year)			Procurement Leadtime (Months)							
					Initial				Reorder			
		MSR For 2020	1-8-5 For 2020	MAX For 2020	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 OTS/ ATK - MARION, IL / LAKE CITY, MO	500,000	2,350,000	3,350,000	0	0	0	0	0	9	12	21
2	GENERAL DYNAMICS OTS/ ATK - MARION, IL / LAKE CITY, MO	125,000	1,250,000	2,000,000	0	0	0	0	0	10	12	22
3	GENERAL DYNAMICS OTS/ ATK - MARION, IL / LAKE CITY, MO	200,000	800,000	1,200,000	0	0	0	0	0	10	12	22
4	GENERAL DYNAMICS OTS/ ATK - MARION, IL / LAKE CITY, MO	50,000	100,000	1,440,000	0	0	0	0	0	7	12	19

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

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Exhibit P-40, Budget Line Item Justification: PB 2020 Navy	Date: March 2019
Appropriation / Budget Activity / Budget Sub Activity: 1508N: Procurement of Ammo, Navy & MC / BA 01: Proc Ammo, Navy / BSA 1: Navy Ammunition	**P-1 Line Item Number / Title:** 0160 / Practice Bombs

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

Line Item MDAP/MAIS Code: N/A

Resource Summary	Prior Years	FY 2018	FY 2019	FY 2020 Base	FY 2020 OCO	FY 2020 Total	FY 2021	FY 2022	FY 2023	FY 2024	To Complete	Total
Procurement Quantity *(Units in Each)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost *($ in Millions)*	903.900	43.427	49.471	0.000	46.611	46.611	51.368	52.649	53.787	54.866	Continuing	Continuing
Less PY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) *($ in Millions)*	903.900	43.427	49.471	0.000	46.611	46.611	51.368	52.649	53.787	54.866	Continuing	Continuing
Plus CY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority *($ in Millions)*	**903.900**	**43.427**	**49.471**	**0.000**	**46.611**	**46.611**	**51.368**	**52.649**	**53.787**	**54.866**	**Continuing**	**Continuing**
(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)*	-	-	-	-	-	-	-	-	-	-	-	-

Description:

FY 2020 funding totals include $0.0M for Base and $46.611M for Overseas Contingency Operations (OCO); of which $34.708M is realigned as part of the OCO for Base Requirements. FY 2020 OCO for Base Requirements is OCO funding for base budget requirements in support of the National Defense Strategy. The Budget requests these funds in OCO to comply with the base budget defense caps included in the Budget Control Act of 2011.

The purpose of the Practice Bombs budget is to procure a variety of low cost alternative practice bombs components to be utilized in place of live, High Explosive bomb components during training in order to improve aircrew proficiency. The practice bombs support training for ground crews and aviators flying various Navy and Marine Corps aircraft. The munitions procured through this PE/BLI are procured by the Joint Munitions Command, the Single Manager for Conventional Ammunition, with the exception of the Laser Guided Training Round, which is procured by NAVAIR.

The MK-76 is a low cost 25lb tear dropped shaped practice bomb that simulates a MK-82 low drag configuration used by the Navy. The MK-82 is an unguided, low-drag practice bomb. The BLU-109 Inert is a full-scale 2,000lb inert Practice Bomb. Bomb bodies are filled with an inert material and have the same weight, size, center of gravity and ballistics of the live bomb configurations.

The Laser Guided Training Round (LGTR) simulates Laser Guided Weapons and provides a low cost alternative to the use of full scale munitions. The LGTR is capable of replicating the kinematics of LGBs and is suitable for launch from all Navy and Marine Corps aircraft used to deploy LGBs. The round allows the aviator to exercise the coordination between the aircrew and the laser designator and to emulate delivery options and multi-aircraft tactics. The development and retention of this skill set is extensive and the LGTR provides the capability to exercise the system in a cost effective manner.

The Miscellaneous Items line includes low cost items such as M70 series cables, MK-89 Adapters, Landyards, Lugs, Nose Plugs, containers, etc.

The Product Improvement Program (PIP) cost element funds efforts to investigate and incorporate design changes to address manufacturing, production and minor technology insertions to modify and improve practice stores system reliability and producability.

Exhibit P-40, Budget Line Item Justification: PB 2020 Navy	**Date:** March 2019
Appropriation / Budget Activity / Budget Sub Activity: 1508N: Procurement of Ammo, Navy & MC / BA 01: Proc Ammo, Navy / BSA 1: Navy Ammunition	**P-1 Line Item Number / Title:** 0160 / Practice Bombs

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 2018	FY 2019	FY 2020 Base	FY 2020 OCO	FY 2020 Total
Exhibit Type	Title*	Subexhibits	ID CD	MDAP/ MAIS Code	Quantity / Total Cost *(Each) I ($ M)*	Quantity / Total Cost *(Each) I ($ M)*	Quantity / Total Cost *(Each) I ($ M)*	Quantity / Total Cost *(Each) I ($ M)*	Quantity / Total Cost *(Each) I ($ M)*	Quantity / Total Cost *(Each) I ($ M)*
P-5	1 / Practice Bombs	P-5a, P-21			- / 903.900	- / 43.427	- / 49.471	- / 0.000	- / 46.611	- / 46.611
P-40	**Total Gross/Weapon System Cost**				**- / 903.900**	**- / 43.427**	**- / 49.471**	**- / 0.000**	**- / 46.611**	**- / 46.611**

*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 2020 OCO for baseline funding is provided for training munitions requirements are based on the needs of the Fleet Aviation Training and Tactical Squadrons and are updated with actual expenditures on annual basis. The munitions are essential in training and retaining weapons delivery proficiency.

This budget supports critical Navy Title 10 war reserve/operational, training, and test requirements as identified within the DoD Instruction 3000.04 (Munitions Requirements Process) and OPNAV INST 8011.9 (Navy Munitions Requirements Process). Practice Bomb procurements provide the Fleet subscale and/or inert stores in lieu of significantly more expensive full scale and/or high explosive stores procured with General Purpose Bombs funding; thereby reducing the overall cost in achieving fleet training readiness levels.

The annual disbursement of training munitions is done via a Non-Combat Expenditure Allocation (NCEA) and provides the individual units with an allocation under which they plan their annual training syllabuses. Additionally, training/inert munitions support the development, fielding, safety, and quality assurance of Navy munitions and equipment throughout their life cycle.

These munitions support the individual and collective training of Active and Reserve Component forces. The annual expenditures of practice stores prepares Naval Aviation units for deployment and is the largest driver of current and future munitions procurement. Procurements are primarily designed to replenish the practice bombs weapons used each year to achieve required readiness levels. Unlike procurement of capital assets, a large percentage of weapons are consumed in annual fleet training expenditures; thereby reducing the ability to simply slide procurements a year in response to budget reductions. Barring a reduction in fleet training expenditures and the correlating readiness degradation, any reductions in practice bomb procurements in a given year will be addressed through increased procurements in the out years to restore inventory to a level adequate to support NCEA and fleet readiness.

Exhibit P-5, Cost Analysis: PB 2020 Navy		Date: March 2019
Appropriation / Budget Activity / Budget Sub Activity: 1508N / 01 / 1	P-1 Line Item Number / Title: 0160 / Practice Bombs	Item Number / Title [DODIC]: 1 / Practice Bombs
ID Code (A=Service Ready, B=Not Service Ready) :	MDAP/MAIS Code:	

Resource Summary	Prior Years	FY 2018	FY 2019	FY 2020 Base	FY 2020 OCO	FY 2020 Total
Procurement Quantity *(Units in Each)*	-	-	-	-	-	-
Gross/Weapon System Cost *($ in Millions)*	903.900	43.427	49.471	0.000	46.611	46.611
Less PY Advance Procurement *($ in Millions)*	-	-	-	-	-	-
Net Procurement (P-1) *($ in Millions)*	903.900	43.427	49.471	0.000	46.611	46.611
Plus CY Advance Procurement *($ in Millions)*	-	-	-	-	-	-
Total Obligation Authority *($ in Millions)*	**903.900**	**43.427**	**49.471**	**0.000**	**46.611**	**46.611**
(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 2018			FY 2019			FY 2020 Base			FY 2020 OCO			FY 2020 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 - Practice Bombs Cost																		
Recurring Cost																		
1.1.1) Q1010 MK-76(†)	71.59	222,125	15.902	80.37	44,928	3.611	75.63	141,703	10.717	-	-	0.000	77.14	67,620	5.216	77.14	67,620	5.216
1.1.2) Q1040 MK-82 INERT(†)	2,205.71	13,616	30.033	2,530.00	2,538	6.421	2,203.00	3,840	8.460	-	-	0.000	2,247.00	3,400	7.640	2,247.00	3,400	7.640
1.1.3) Q1050 BLU-109 INERT(†)	24,343.04	309	7.522	26,537.00	67	1.778	25,537.00	72	1.839	-	-	0.000	26,048.00	43	1.120	26,048.00	43	1.120
Subtotal: Recurring Cost	-	-	*53.457*	-	-	*11.810*	-	-	*21.016*	-	-	*0.000*	-	-	*13.976*	-	-	*13.976*
Subtotal: Hardware - Practice Bombs Cost	**-**	**-**	***53.457***	**-**	**-**	***11.810***	**-**	**-**	***21.016***	**-**	**-**	***0.000***	**-**	**-**	***13.976***	**-**	**-**	***13.976***
Hardware - Precision Guided Practice Bombs Cost																		
Recurring Cost																		
2.1.1) Q1300 LGTR(†)	3,226.02	54,663	176.344	3,090.40	7,501	23.181	3,701.00	6,688	24.752	-	-	0.000	3,774.88	6,959	26.269	3,774.88	6,959	26.269
Subtotal: Recurring Cost	-	-	*176.344*	-	-	*23.181*	-	-	*24.752*	-	-	*0.000*	-	-	*26.269*	-	-	*26.269*
Subtotal: Hardware - Precision Guided Practice Bombs Cost	**-**	**-**	***176.344***	**-**	**-**	***23.181***	**-**	**-**	***24.752***	**-**	**-**	***0.000***	**-**	**-**	***26.269***	**-**	**-**	***26.269***
Hardware - Miscellaneous Cost																		
Recurring Cost																		
3.1.1) Q1062 Miscellaneous Items	-	-	5.259	-	-	0.656	-	-	0.669	-	-	0.000	-	-	0.682	-	-	0.682
Subtotal: Recurring Cost	-	-	*5.259*	-	-	*0.656*	-	-	*0.669*	-	-	*0.000*	-	-	*0.682*	-	-	*0.682*

Exhibit P-5, Cost Analysis: PB 2020 Navy		Date: March 2019
Appropriation / Budget Activity / Budget Sub Activity: 1508N / 01 / 1	P-1 Line Item Number / Title: 0160 / Practice Bombs	Item Number / Title [DODIC]: 1 / Practice Bombs
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 2018			FY 2019			FY 2020 Base			FY 2020 OCO			FY 2020 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)
Subtotal: Hardware - Miscellaneous Cost	**-**	**-**	***5.259***	**-**	**-**	***0.656***	**-**	**-**	***0.669***	**-**	**-**	***0.000***	**-**	**-**	***0.682***	**-**	**-**	***0.682***
Hardware - Prior Years Cost																		
Non Recurring Cost																		
4.1.1) Prior Years	-	-	635.595	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Subtotal: Non Recurring Cost	-	-	*635.595*	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Subtotal: Hardware - Prior Years Cost	**-**	**-**	***635.595***	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**
Support - Integrated Logistics Cost																		
5.1) Q1800 Practice Bombs ILS	-	-	0.518	-	-	0.086	-	-	0.087	-	-	0.000	-	-	0.085	-	-	0.085
5.2) Q1800 Precision Guided Practice Bombs ILS	-	-	0.935	-	-	0.235	-	-	0.137	-	-	0.000	-	-	0.135	-	-	0.135
Subtotal: Support - Integrated Logistics Cost	**-**	**-**	***1.453***	**-**	**-**	***0.321***	**-**	**-**	***0.224***	**-**	**-**	***0.000***	**-**	**-**	***0.220***	**-**	**-**	***0.220***
Support - Production Engineering Cost																		
6.1) Q1830 Practice Bombs PES	-	-	7.298	-	-	1.000	-	-	1.144	-	-	0.000	-	-	1.138	-	-	1.138
6.2) Q1830 Precision Guided Practice Bombs PES	-	-	12.705	-	-	0.983	-	-	1.003	-	-	0.000	-	-	0.997	-	-	0.997
Subtotal: Support - Production Engineering Cost	**-**	**-**	***20.003***	**-**	**-**	***1.983***	**-**	**-**	***2.147***	**-**	**-**	***0.000***	**-**	**-**	***2.135***	**-**	**-**	***2.135***
Support - Miscellaneous Support Cost																		
7.1) Q1850 Product Improvement Program (PIP) (1)	-	-	9.806	-	-	5.289	-	-	0.514	-	-	0.000	-	-	3.178	-	-	3.178
7.2) Q1894 Gaging	-	-	1.983	-	-	0.187	-	-	0.149	-	-	0.000	-	-	0.151	-	-	0.151
Subtotal: Support - Miscellaneous Support Cost	**-**	**-**	***11.789***	**-**	**-**	***5.476***	**-**	**-**	***0.663***	**-**	**-**	***0.000***	**-**	**-**	***3.329***	**-**	**-**	***3.329***
Gross/Weapon System Cost	**-**	**-**	**903.900**	**-**	**-**	**43.427**	**-**	**-**	**49.471**	**-**	**-**	**0.000**	**-**	**-**	**46.611**	**-**	**-**	**46.611**

(†) indicates the presence of a P-5a

Footnotes:

Exhibit P-5, Cost Analysis: PB 2020 Navy		Date: March 2019
Appropriation / Budget Activity / Budget Sub Activity: 1508N / 01 / 1	**P-1 Line Item Number / Title:** 0160 / Practice Bombs	**Item Number / Title [DODIC]:** 1 / Practice Bombs
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	

(1) Q1850 Increases in Product Improvement Program (PIP) funding across the FYDP is required to address service life modification and obsolescence of LGTR production sub-assemblies and related support equipment.

Exhibit P-5a, Procurement History and Planning: PB 2020 Navy		Date: March 2019
Appropriation / Budget Activity / Budget Sub Activity: 1508N / 01 / 1	P-1 Line Item Number / Title: 0160 / Practice Bombs	Item Number / Title [DODIC]: 1 / Practice Bombs

Cost Elements	OCO	FY	Contractor and Location	Method/Type or Funding Vehicle	Location of PCO	Award Date	Date of First Delivery	Qty (Each)	Unit Cost ($)	Specs Avail Now?	Date Revision Available	RFP Issue Date
1.1.1) Q1010 MK-76(†)		2016	Delfasco, LLC / Afton,TN	C / FFP	JMC, Rock Island, IL	Mar 2016	Mar 2018	107,856	71.56	Y		Feb 2013
1.1.1) Q1010 MK-76(†)		2018	Delfasco, LLC / Afton,TN	C / FFP	JMC, Rock Island, IL	Mar 2018	Mar 2020	44,928	80.37	Y		Feb 2013
1.1.1) Q1010 MK-76(†)		2019	Delfasco, LLC / Afton,TN	C / FFP	JMC, Rock Island, IL	Mar 2019	Mar 2021	141,703	75.63	Y		Feb 2013
1.1.1) Q1010 MK-76(†)	✓	2020	Delfasco, LLC / Afton,TN	C / FFP	JMC, Rock Island, IL	Mar 2020	Mar 2022	67,620	77.14	Y		Feb 2013
1.1.2) Q1040 MK-82 INERT(†)		2017	General Dynamics / Garland, TX / MCAAP	SS / FP	JMC, Rock Island, IL	Apr 2017	Apr 2020	4,848	2,118.10	Y		Nov 2013
1.1.2) Q1040 MK-82 INERT(†)		2018	General Dynamics / Garland, TX / MCAAP	SS / FP	JMC, Rock Island, IL	Apr 2018	Apr 2021	2,538	2,530.00	Y		Nov 2013
1.1.2) Q1040 MK-82 INERT(†)		2019	General Dynamics / Garland, TX / MCAAP	SS / FP	JMC, Rock Island, IL	Apr 2019	Apr 2022	3,840	2,203.00	Y		Nov 2013
1.1.2) Q1040 MK-82 INERT(†)	✓	2020	General Dynamics / Garland, TX / MCAAP	SS / FP	JMC, Rock Island, IL	Apr 2020	Apr 2023	3,400	2,247.00	Y		Nov 2013
1.1.3) Q1050 BLU-109 INERT(†)		2016	EllWood National Forge / Irvine, PA/MCAAP	C / FFP	JMC, Rock Island, IL	Jan 2016	Jan 2019	203	24,072.00	Y		Apr 2015
1.1.3) Q1050 BLU-109 INERT(†)		2017	EllWood National Forge / Irvine, PA/MCAAP	C / FFP	JMC, Rock Island, IL	Jan 2017	Jan 2020	106	24,858.00	Y		Apr 2015
1.1.3) Q1050 BLU-109 INERT(†)		2018	EllWood National Forge / Irvine, PA/MCAAP	C / FFP	JMC, Rock Island, IL	Jan 2018	Jan 2021	67	26,537.00	Y		Apr 2015
1.1.3) Q1050 BLU-109 INERT(†)		2019	EllWood National Forge / Irvine, PA/MCAAP	C / FFP	JMC, Rock Island, IL	Jan 2019	Jan 2022	72	25,537.00	Y		Apr 2015
1.1.3) Q1050 BLU-109 INERT(†)	✓	2020	EllWood National Forge / Irvine, PA/MCAAP	C / FFP	JMC, Rock Island, IL	Jan 2020	Jan 2023	43	26,048.00	Y		Apr 2015
2.1.1) Q1300 LGTR(†)		2016	Lockheed Martin Corporation LGTR / Archbald, PA	SS / IDIQ	NAVAIR, Pax River, MD	Mar 2016	Jan 2018	7,410	3,489.20	Y		Apr 2013
2.1.1) Q1300 LGTR(†)		2017	Lockheed Martin Corporation LGTR / Archbald, PA	SS / IDIQ	NAVAIR, Pax River, MD	Mar 2017	Jan 2019	7,300	3,558.00	Y		Feb 2015
2.1.1) Q1300 LGTR(†)		2018	Lockheed Martin Corporation LGTR / Archbald, PA	SS / IDIQ	NAVAIR, Pax River, MD	May 2018	Mar 2020	7,501	3,090.40	Y		Feb 2015
2.1.1) Q1300 LGTR(†)		2019	Lockheed Martin Corporation LGTR / Archbald, PA	SS / IDIQ	NAVAIR, Pax River, MD	Mar 2019	Jan 2021	6,688	3,701.00	Y		Feb 2015
2.1.1) Q1300 LGTR(†)	✓	2020	Lockheed Martin Corporation LGTR / Archbald, PA	SS / IDIQ	NAVAIR, Pax River, MD	Mar 2020	Jan 2022	6,959	3,774.88	Y		Feb 2015

(†) indicates the presence of a P-21

Exhibit P-21, Production Schedule: PB 2020 Navy		Date: March 2019
Appropriation / Budget Activity / Budget Sub Activity: 1508N / 01 / 1	**P-1 Line Item Number / Title:** 0160 / Practice Bombs	**Item Number / Title [DODIC]:** 1 / Practice Bombs

Cost Elements (Units in Thousands)							Fiscal Year 2016												Fiscal Year 2017												BALANCE
										Calendar Year 2016												Calendar Year 2017									
OCO	MFR #	FY	SERVICE	PROC QTY	ACCEPT PRIOR TO 1 OCT 2015	BAL DUE AS OF 1 OCT	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	
1.1.1) Q1010 MK-76																															
Prior Years Deliveries: 114269																															
	1	2016	NAVY	107.856	.000	107.856						A -	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	107.856
	1	2018	NAVY	44.928	.000	44.928																									44.928
	1	2019	NAVY	141.703	.000	141.703																									141.703
✓	1	2020	NAVY	67.620	.000	67.620																									67.620
1.1.2) Q1040 MK-82 INERT																															
Prior Years Deliveries: 8768																															
	2	2017	NAVY	4.848	.000	4.848																			A -	-	-	-	-	-	4.848
	2	2018	NAVY	2.538	.000	2.538																									2.538
	2	2019	NAVY	3.840	.000	3.840																									3.840
✓	2	2020	NAVY	3.400 (2)	.000	3.400																									3.400
1.1.3) Q1050 BLU-109 INERT																															
	3	2016	NAVY	.203 (3)	.000	.203				A -	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	.203
	3	2017	NAVY	.106 (4)	.000	.106																A -	-	-	-	-	-	-	-	-	.106
	3	2018	NAVY	.067 (5)	.000	.067																									.067
	3	2019	NAVY	.072 (6)	.000	.072																									.072
✓	3	2020	NAVY	.043 (7)	.000	.043																									.043
2.1.1) Q1300 LGTR																															
Prior Years Deliveries: 39953																															
	4	2016	NAVY	7.410	.000	7.410						A -	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	7.410
	4	2017	NAVY	7.300	.000	7.300																		A -	-	-	-	-	-	-	7.300
	4	2018	NAVY	7.501	.000	7.501																									7.501
	4	2019	NAVY	6.688	.000	6.688																									6.688
✓	4	2020	NAVY	6.959	.000	6.959																									6.959
							OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	

Exhibit P-21, Production Schedule: PB 2020 Navy | **Date:** March 2019

Appropriation / Budget Activity / Budget Sub Activity: 1508N / 01 / 1 | **P-1 Line Item Number / Title:** 0160 / Practice Bombs | **Item Number / Title [DODIC]:** 1 / Practice Bombs

Cost Elements (Units in Thousands)							Fiscal Year 2018												Fiscal Year 2019												BALANCE
										Calendar Year 2018												Calendar Year 2019									
OCO	MFR #	FY	SERVICE	PROC QTY	ACCEPT PRIOR TO 1 OCT 2017	BAL DUE AS OF 1 OCT	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	
1.1.1) Q1010 MK-76																															
Prior Years Deliveries: 114269																															
	1	2016	NAVY	107.856	.000	107.856	-	-	-	-	-	8.539	8.856	8.872	8.548	9.865	9.654	9.342	9.784	8.345	8.657	8.742	8.652								.000
	1	2018	NAVY	44.928	.000	44.928						A -	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	44.928
	1	2019	NAVY	141.703	.000	141.703																		A -	-	-	-	-	-	-	141.703
✓	1	2020	NAVY	67.620	.000	67.620																									67.620
1.1.2) Q1040 MK-82 INERT																															
Prior Years Deliveries: 8768																															
	2	2017	NAVY	4.848	.000	4.848	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4.848
	2	2018	NAVY	2.538	.000	2.538							A -	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2.538
	2	2019	NAVY	3.840	.000	3.840																			A -	-	-	-	-	-	3.840
✓	2	2020	NAVY	3.400 (2)	.000	3.400																									3.400
1.1.3) Q1050 BLU-109 INERT																															
	3	2016	NAVY	.203 (3)	.000	.203	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	.103	.100								.000
	3	2017	NAVY	.106 (4)	.000	.106	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	.106
	3	2018	NAVY	.067 (5)	.000	.067				A -	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	.067
	3	2019	NAVY	.072 (6)	.000	.072																A -	-	-	-	-	-	-	-	-	.072
✓	3	2020	NAVY	.043 (7)	.000	.043																									.043
2.1.1) Q1300 LGTR																															
Prior Years Deliveries: 39953																															
	4	2016	NAVY	7.410	.000	7.410	-	-	-	.618	.618	.618	.618	.618	.618	.617	.617	.617	.617	.617	.617										.000
	4	2017	NAVY	7.300	.000	7.300	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	.600	.600	.600	.600	.600	.600	.600	.600	.625	1.875
	4	2018	NAVY	7.501	.000	7.501								A -	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	7.501
	4	2019	NAVY	6.688	.000	6.688																		A -	-	-	-	-	-	-	6.688
✓	4	2020	NAVY	6.959	.000	6.959																									6.959
							OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	

Exhibit P-21, Production Schedule: PB 2020 Navy | **Date:** March 2019

Appropriation / Budget Activity / Budget Sub Activity: 1508N / 01 / 1 | **P-1 Line Item Number / Title:** 0160 / Practice Bombs | **Item Number / Title [DODIC]:** 1 / Practice Bombs

Cost Elements (Units in Thousands)							Fiscal Year 2020												Fiscal Year 2021												BALANCE
							Calendar Year 2020												Calendar Year 2021												
OCO	MFR #	FY	SERVICE	PROC QTY	ACCEPT PRIOR TO 1 OCT 2019	BAL DUE AS OF 1 OCT	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	
1.1.1) Q1010 MK-76																															
Prior Years Deliveries: 114269																															
	1	2016	NAVY	107.856	107.856	.000																									.000
	1	2018	NAVY	44.928	.000	44.928	-	-	-	-	-	3.744	3.744	3.744	3.744	3.744	3.744	3.744	3.744	3.744	3.744	3.744	3.744								.000
	1	2019	NAVY	141.703	.000	141.703	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	11.815	11.808	11.808	11.808	11.808	11.808	11.808	59.040
✓	1	2020	NAVY	67.620	.000	67.620						A -	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	67.620
1.1.2) Q1040 MK-82 INERT																															
Prior Years Deliveries: 8768																															
	2	2017	NAVY	4.848	.000	4.848	-	-	-	-	-	-	.404	.404	.404	.404	.404	.404	.404	.404	.404	.404	.404	.404							.000
	2	2018	NAVY	2.538	.000	2.538	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	.217	.211	.211	.211	.211	.211	1.266
	2	2019	NAVY	3.840	.000	3.840	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3.840
✓	2	2020	NAVY	3.400 (2)	.000	3.400							A -	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3.400
1.1.3) Q1050 BLU-109 INERT																															
	3	2016	NAVY	.203 (3)	.203	.000																									.000
	3	2017	NAVY	.106 (4)	.000	.106	-	-	-	.106																					.000
	3	2018	NAVY	.067 (5)	.000	.067	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	.067									.000
	3	2019	NAVY	.072 (6)	.000	.072	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	.072
✓	3	2020	NAVY	.043 (7)	.000	.043				A -	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	.043
2.1.1) Q1300 LGTR																															
Prior Years Deliveries: 39953																															
	4	2016	NAVY	7.410	7.410	.000																									.000
	4	2017	NAVY	7.300	5.425	1.875	.625	.625	.625																						.000
	4	2018	NAVY	7.501	.000	7.501	-	-	-	-	-	.626	.625	.625	.625	.625	.625	.625	.625	.625	.625	.625	.625								.000
	4	2019	NAVY	6.688	.000	6.688	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	.561	.557	.557	.557	.557	.557	.557	.557	.557	1.671
✓	4	2020	NAVY	6.959	.000	6.959						A -	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	6.959
							OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	

Exhibit P-21, Production Schedule: PB 2020 Navy | **Date:** March 2019

Appropriation / Budget Activity / Budget Sub Activity: 1508N / 01 / 1 | **P-1 Line Item Number / Title:** 0160 / Practice Bombs | **Item Number / Title [DODIC]:** 1 / Practice Bombs

Cost Elements (Units in Thousands)							Fiscal Year 2022													Fiscal Year 2023												BALANCE
							Calendar Year 2022																Calendar Year 2023									
OCO	MFR #	FY	SERVICE	PROC QTY	ACCEPT PRIOR TO 1 OCT 2021	BAL DUE AS OF 1 OCT	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	
1.1.1) Q1010 MK-76																																
Prior Years Deliveries: 114269																																
	1	2016	NAVY	107.856	107.856	.000																										.000
	1	2018	NAVY	44.928	44.928	.000																										.000
	1	2019	NAVY	141.703	82.663	59.040	11.808	11.808	11.808	11.808	11.808																					.000
✓	1	2020	NAVY	67.620	.000	67.620	-	-	-	-	-	5.635	5.635	5.635	5.635	5.635	5.635	5.635	5.635	5.635	5.635	5.635	5.635									.000
1.1.2) Q1040 MK-82 INERT																																
Prior Years Deliveries: 8768																																
	2	2017	NAVY	4.848	4.848	.000																										.000
	2	2018	NAVY	2.538	1.272	1.266	.211	.211	.211	.211	.211	.211																				.000
	2	2019	NAVY	3.840	.000	3.840	-	-	-	-	-	-	.320	.320	.320	.320	.320	.320	.320	.320	.320	.320	.320	.320								.000
✓	2	2020	NAVY	3.400 (2)	.000	3.400	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	.283	.283	.283	.283	.283	.283		1.702
1.1.3) Q1050 BLU-109 INERT																																
	3	2016	NAVY	.203 (3)	.203	.000																										.000
	3	2017	NAVY	.106 (4)	.106	.000																										.000
	3	2018	NAVY	.067 (5)	.067	.000																										.000
	3	2019	NAVY	.072 (6)	.000	.072	-	-	-	.072																						.000
✓	3	2020	NAVY	.043 (7)	.000	.043	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	.043										.000
2.1.1) Q1300 LGTR																																
Prior Years Deliveries: 39953																																
	4	2016	NAVY	7.410	7.410	.000																										.000
	4	2017	NAVY	7.300	7.300	.000																										.000
	4	2018	NAVY	7.501	7.501	.000																										.000
	4	2019	NAVY	6.688	5.017	1.671	.557	.557	.557																							.000
✓	4	2020	NAVY	6.959	.000	6.959	-	-	-	.579	.580	.580	.580	.580	.580	.580	.580	.580	.580	.580	.580											.000
							OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	

Exhibit P-21, Production Schedule: PB 2020 Navy | **Date:** March 2019

Appropriation / Budget Activity / Budget Sub Activity: 1508N / 01 / 1 | **P-1 Line Item Number / Title:** 0160 / Practice Bombs | **Item Number / Title [DODIC]:** 1 / Practice Bombs

Cost Elements (Units in Thousands)							Fiscal Year 2024												Fiscal Year 2025												BALANCE
										Calendar Year 2024												Calendar Year 2025									
OCO	MFR #	FY	SERVICE	PROC QTY	ACCEPT PRIOR TO 1 OCT 2023	BAL DUE AS OF 1 OCT	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	
1.1.1) Q1010 MK-76																															
Prior Years Deliveries: 114269																															
	1	2016	NAVY	107.856	107.856	.000																									.000
	1	2018	NAVY	44.928	44.928	.000																									.000
	1	2019	NAVY	141.703	141.703	.000																									.000
✓	1	2020	NAVY	67.620	67.620	.000																									.000
1.1.2) Q1040 MK-82 INERT																															
Prior Years Deliveries: 8768																															
	2	2017	NAVY	4.848	4.848	.000																									.000
	2	2018	NAVY	2.538	2.538	.000																									.000
	2	2019	NAVY	3.840	3.840	.000																									.000
✓	2	2020	NAVY	3.400 (2)	1.698	1.702	.283	.283	.284	.284	.284	.284																			.000
1.1.3) Q1050 BLU-109 INERT																															
	3	2016	NAVY	.203 (3)	.203	.000																									.000
	3	2017	NAVY	.106 (4)	.106	.000																									.000
	3	2018	NAVY	.067 (5)	.067	.000																									.000
	3	2019	NAVY	.072 (6)	.072	.000																									.000
✓	3	2020	NAVY	.043 (7)	.043	.000																									.000
2.1.1) Q1300 LGTR																															
Prior Years Deliveries: 39953																															
	4	2016	NAVY	7.410	7.410	.000																									.000
	4	2017	NAVY	7.300	7.300	.000																									.000
	4	2018	NAVY	7.501	7.501	.000																									.000
	4	2019	NAVY	6.688	6.688	.000																									.000
✓	4	2020	NAVY	6.959	6.959	.000																									.000
							OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	

Exhibit P-21, Production Schedule: PB 2020 Navy		Date: March 2019
Appropriation / Budget Activity / Budget Sub Activity: 1508N / 01 / 1	**P-1 Line Item Number / Title:** 0160 / Practice Bombs	**Item Number / Title [DODIC]:** 1 / Practice Bombs

MFR Ref #	Manufacturer Name - Location	Production Rates (Each / Year)			Procurement Leadtime (Months)							
					Initial				Reorder			
		MSR For 2020	1-8-5 For 2020	MAX For 2020	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	Delfasco, LLC - Afton,TN	20,000	113,000	300,000	0	0	0	0	0	6	24	30
2	General Dynamics - Garland, TX / MCAAP	21,359	38,544	100,200	0	0	0	0	0	7	36	43
3	EllWood National Forge - Irvine, PA/MCAAP	1,344	2,323	6,480	0	0	0	0	0	4	36	40
4	Lockheed Martin Corporation LGTR - Archbald, PA	4,000	8,400	22,000	0	0	0	0	0	6	22	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).

Footnotes:

(2) MK-82 procurements are combined with production requirements from other services; therefore, USN production rates may reflect quantities below Minimum Sustainment Rates (MSR).

(3) BLU 109 procurements are combined with production requirements from other services; therefore, USN production rates may reflect quantities below Minimum Sustainment Rates (MSR).

(4) BLU 109 procurements are combined with production requirements from other services; therefore, USN production rates may reflect quantities below Minimum Sustainment Rates (MSR).

(5) BLU 109 procurements are combined with production requirements from other services; therefore, USN production rates may reflect quantities below Minimum Sustainment Rates (MSR).

(6) BLU 109 procurements are combined with production requirements from other services; therefore, USN production rates may reflect quantities below Minimum Sustainment Rates (MSR).

(7) BLU 109 procurements are combined with production requirements from other services; therefore, USN production rates may reflect quantities below Minimum Sustainment Rates (MSR).

Exhibit P-40, Budget Line Item Justification: PB 2020 Navy	Date: March 2019
Appropriation / Budget Activity / Budget Sub Activity: 1508N: Procurement of Ammo, Navy & MC / BA 01: Proc Ammo, Navy / BSA 1: Navy Ammunition	**P-1 Line Item Number / Title:** 0180 / Cartridge Actuated Devices/Propellant Act Devices

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

Resource Summary	Prior Years	FY 2018	FY 2019	FY 2020 Base	FY 2020 OCO	FY 2020 Total	FY 2021	FY 2022	FY 2023	FY 2024	To Complete	Total
Procurement Quantity *(Units in Each)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost *($ in Millions)*	807.726	55.717	58.556	0.000	60.819	60.819	52.713	57.407	58.558	59.481	Continuing	Continuing
Less PY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) *($ in Millions)*	807.726	55.717	58.556	0.000	60.819	60.819	52.713	57.407	58.558	59.481	Continuing	Continuing
Plus CY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority *($ in Millions)*	**807.726**	**55.717**	**58.556**	**0.000**	**60.819**	**60.819**	**52.713**	**57.407**	**58.558**	**59.481**	**Continuing**	**Continuing**
(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)*	-	-	-	-	-	-	-	-	-	-	-	-

Description:

FY 2020 funding totals include $0.0M for Base and $60.819M for Overseas Contingency Operations (OCO); of which $45.738M is realigned as part of the OCO for Base Requirements. FY 2020 OCO for Base Requirements is OCO funding for base budget requirements in support of the National Defense Strategy. The Budget requests these funds in OCO to comply with the base budget defense caps included in the Budget Control Act of 2011.

Cartridge Actuated Devices/Propellant Actuated Devices (CAD/PAD) program's mission is to procure 676 distinct life-limited energetic devices utilized in aircraft egress and safety systems, personnel gear, and to release a weapon or other store from the United States Navy and United States Marine Corps aircraft platforms. The CAD/PAD yearly requirement is modeled upon the active aircraft in Office of the Naval Operations' (OPNAV) AII report and the assigned service life of the individual CAD/PADs. Due to the individually unique service lives, the yearly requirement of items and their respective quantities is variable.

Reduced inventory pipeline and decreased stock levels, in some cases down to zero stock availability, has significantly increased the need for service life extensions on critical components.

Hardware-Stores Release: Stores Release cartridges are utilized to release weapons and other stores from aircraft. The CCU-107 is utilized to release "light" weapons/stores from aircraft. The CCU-45 (MD65) is utilized to release "heavy" weapons/stores.

Hardware-Safety: Items such as safety/arming devices, sequence controls, shielded mild detonating cords, gas generators, initiators, thrusters, fire extinguisher cartridges, thermal batteries, rocket motors, catapults, and more, are used in aircraft emergency escape and safety systems. These explosives have finite service lives and are replaced during scheduled maintenance. An aircraft may be grounded if a single one of these items does not meet standard. Other items procured such as FLU-12/P Deck Crew Life Vest Inflator and the FLU-8B/P automatic life vest inflator are essential to crew survival after ejection or being thrown overboard.

T-6A (JPATS): Funding provides Under Seat Rocket Motor, Impulse Cartridge, Internal Canopy Mechanical Actuated Initiator, Seat Movement Mechanical Actuated Initiator, External Canopy Mechanical Actuated Initiator, Laser Initiator, Donor Assembly, Manifolds, Shielded Mild Detonating Cord Transfer Line and Holder Assembly.

Misc. Devices Under $500k: Safety CAD/PAD devices typically priced under $500k are procured yearly under this budget line, not limited to, but include: 1W18 Explosive Separator, JL96 Rocket Catapult, MJ98 Cartridge Actuated Initiator, SU58 Mild Detonating Cord Set, XW53 Explosive Sequence Control. Misc. Devices consist of roughly 608 unique components which range from $0.160k to $20k; The unit cost varies based on quantities procured which cause constant deviations from budget to budget for planned procurements.

Exhibit P-40, Budget Line Item Justification: PB 2020 Navy	Date: March 2019
Appropriation / Budget Activity / Budget Sub Activity: 1508N: Procurement of Ammo, Navy & MC / BA 01: Proc Ammo, Navy / BSA 1: Navy Ammunition	**P-1 Line Item Number / Title:** 0180 / Cartridge Actuated Devices/Propellant Act Devices

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 2018	FY 2019	FY 2020 Base	FY 2020 OCO	FY 2020 Total
Exhibit Type	Title*	Subexhibits	ID CD	MDAP/ MAIS Code	Quantity / Total Cost *(Each) I ($ M)*	Quantity / Total Cost *(Each) I ($ M)*	Quantity / Total Cost *(Each) I ($ M)*	Quantity / Total Cost *(Each) I ($ M)*	Quantity / Total Cost *(Each) I ($ M)*	Quantity / Total Cost *(Each) I ($ M)*
P-40a	Cartridge Actuated Devices/Propellant Act Devices	P-5a, P-21			- / 807.726	- / 55.717	- / 58.556	- / 0.000	- / 60.819	- / 60.819
P-40	**Total Gross/Weapon System Cost**				**- / 807.726**	**- / 55.717**	**- / 58.556**	**- / 0.000**	**- / 60.819**	**- / 60.819**

*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 2020 OCO for baseline funding is required to support fleet requirements that take into account the aircraft inventory, maintenance cycle and aircraft installed Cartridge Actuated Devices/Propellant Act Devices (CAD/PAD) data, service life data, on-hand inventory data, procurement lead-time data, historical cost data and projected contract delivery date data. Funding is also required for engineering and lot acceptance testing regarding devices needed for change-outs. Product improvement programs are scheduled to produce the safety devices required to support aircraft ejection systems, fire suppression systems and stores release systems.

The yearly requirements are modeled based upon the active aircraft in the OPNAV A-II Aircraft Inventory Budget, which feeds into the CAD/PAD Requirements Determination Module (RDM). The RDM accounts for the changing number of aircraft, platform availability, and unique component service lives of all procured commodities and respective quantities, which are variable from year to year.

OCO:
FY 2020 Direct War OCO request funds the Parachute Deployment Rocket Motors (PDRM), JAU-74 Initiator/CCU146 Cartridge (WB15/16), Cartridge Actuated Initiator (WB55), and Miscellaneous Devices in order to replenish inventory in support of Operation Inherent Resolve (OIR).

Exhibit P-40a, Budget Item Justification For Aggregated Items: PB 2020 Navy		Date: March 2019
Appropriation / Budget Activity / Budget Sub Activity: 1508N / 01 / 1	**P-1 Line Item Number / Title:** 0180 / Cartridge Actuated Devices/Propellant Act Devices	**Aggregated Items Title:** Cartridge Actuated Devices/Propellant Act Devices

Item Number / Title [DODIC]	ID CD	MDAP/ MAIS Code	Prior Years			FY 2018			FY 2019			FY 2020 Base			FY 2020 OCO			FY 2020 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) Hardware-Stores Release																				
1.1) (Q8090) JAU-22/ B Initiator CTG (MF64)	A		25.53	342,960	8.756	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1.2) (Q8200) CCU-107 Impulse CTG (MT95/JM92)(†)	A		8.47	669,760	5.671	9.51	40,000	0.380	8.62	40,000	0.345	-	-	0.000	8.80	40,000	0.352	8.80	40,000	0.352
1.3) (Q8201) CCU-45 Impulse CTG (MD65)(†)	A		8.96	412,194	3.692	15.85	19,576	0.310	9.55	19,576	0.187	-	-	0.000	9.73	19,576	0.190	9.73	19,576	0.190
Subtotal: 1) Hardware-Stores Release			**-**	**-**	***18.119***	**-**	**-**	***0.690***	**-**	**-**	***0.532***	**-**	**-**	***0.000***	**-**	**-**	***0.542***	**-**	**-**	***0.542***
2) Hardware Safety																				
2.1) (Q8060) Thermal Battery (CWDR) (1)(†)	A		4,605.82	1,512	6.964	4,840.00	200	0.968	-	-	-	-	-	0.000	4,935.00	200	0.987	4,935.00	200	0.987
2.2) (Q2070) MK 122 Parachute Deploy RCKT (MT29/JN30) - NSWC, Indian Head	A		1,704.36	2,750	4.687	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2.3) (Q2070) MK 122 Parachute Deploy RCKT (MT29/JN30) (2)(†)	A		3,551.90	5,135	18.239	4,280.13	921	3.942	4,357.22	1,095	4.771	-	-	0.000	4,444.22	1,207	5.365	4,444.22	1,207	5.365
2.4) (Q8071) MK 123 Underseat RCKT Motor (MT30) (3)(†)	A		9,639.64	333	3.210	10,277.78	18	0.185	10,320.00	33	0.341	-	-	0.000	9,000.00	63	0.567	9,000.00	63	0.567
2.5) (Q8081) MK 124 Underseat RCKT Motor (MT31) (4)(†)	A		9,444.92	463	4.373	10,285.71	28	0.288	9,750.00	78	0.761	-	-	0.000	8,965.00	107	0.959	8,965.00	107	0.959
2.6) (Q8140) FLU-8/9/12 Inflators (FW98/BY81JL09) (5)	A		-	-	16.777	-	-	1.530	-	-	1.561	-	-	0.000	-	-	1.842	-	-	1.842
2.7) (Q8160) JAU-74 INIT/CCU-146 CTG (WB15/16) (6)	A		-	-	15.493	-	-	1.791	-	-	2.858	-	-	0.000	-	-	2.173	-	-	2.173
2.8) (Q8180) F-18 DIFRS (SR95/WB19) (7)	A		-	-	11.106	-	-	0.789	-	-	0.748	-	-	0.000	-	-	0.763	-	-	0.763
2.9) (Q8300) Navy Aircrew Common Ejection Seats (8)	A		-	-	14.324	-	-	1.719	-	-	1.470	-	-	0.000	-	-	1.863	-	-	1.863

Exhibit P-40a, Budget Item Justification For Aggregated Items: PB 2020 Navy		Date: March 2019
Appropriation / Budget Activity / Budget Sub Activity: 1508N / 01 / 1	**P-1 Line Item Number / Title:** 0180 / Cartridge Actuated Devices/Propellant Act Devices	**Aggregated Items Title:** Cartridge Actuated Devices/Propellant Act Devices

Item Number / Title [DODIC]	ID CD	MDAP/ MAIS Code	Prior Years			FY 2018			FY 2019			FY 2020 Base			FY 2020 OCO			FY 2020 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)
2.10) (Q8301) F-18E/ F/G & V-22 Fire Suppression Gas (9)	A		-	-	20.602	-	-	3.526	-	-	5.000	-	-	0.000	-	-	4.693	-	-	4.693
2.11) (Q8302) T-6A (JPATS) CAD/PADs (10)	A		-	-	43.790	-	-	10.812	-	-	11.028	-	-	0.000	-	-	8.249	-	-	8.249
Subtotal: 2) Hardware Safety			**-**	**-**	***159.565***	**-**	**-**	***25.550***	**-**	**-**	***28.538***	**-**	**-**	***0.000***	**-**	**-**	***27.461***	**-**	**-**	***27.461***
3) Hardware-Misc. Devices																				
3.1) (Q8600) Misc. Devices Under $500k (11)	A		-	-	110.304	-	-	16.080	-	-	16.108	-	-	0.000	-	-	14.587	-	-	14.587
Subtotal: 3) Hardware-Misc. Devices			**-**	**-**	***110.304***	**-**	**-**	***16.080***	**-**	**-**	***16.108***	**-**	**-**	***0.000***	**-**	**-**	***14.587***	**-**	**-**	***14.587***
4) (Q8800) Intergrated Logistics Support																				
4.1) Stores Release ILS	A		-	-	1.687	-	-	0.259	-	-	0.264	-	-	0.000	-	-	0.269	-	-	0.269
4.2) Safety ILS	A		-	-	5.896	-	-	0.841	-	-	0.857	-	-	0.000	-	-	0.874	-	-	0.874
4.3) Misc. Devices ILS	A		-	-	2.812	-	-	0.306	-	-	0.312	-	-	0.000	-	-	0.318	-	-	0.318
Subtotal: 4) (Q8800) Intergrated Logistics Support			**-**	**-**	***10.395***	**-**	**-**	***1.406***	**-**	**-**	***1.433***	**-**	**-**	***0.000***	**-**	**-**	***1.461***	**-**	**-**	***1.461***
5) (Q8820) Reliability Life																				
5.1) Stores Release Reliability Life	A		-	-	0.933	-	-	0.135	-	-	0.137	-	-	0.000	-	-	0.139	-	-	0.139
5.2) Safety Reliability Life	A		-	-	2.909	-	-	0.302	-	-	0.309	-	-	0.000	-	-	0.315	-	-	0.315
5.3) Misc. Devices Reliability Life	A		-	-	1.656	-	-	0.162	-	-	0.165	-	-	0.000	-	-	0.168	-	-	0.168
Subtotal: 5) (Q8820) Reliability Life			**-**	**-**	***5.498***	**-**	**-**	***0.599***	**-**	**-**	***0.611***	**-**	**-**	***0.000***	**-**	**-**	***0.622***	**-**	**-**	***0.622***
6) (Q8830) Production Engineering																				
6.1) Stores Release PES	A		-	-	7.133	-	-	1.149	-	-	1.169	-	-	0.000	-	-	1.196	-	-	1.196
6.2) Safety PES	A		-	-	23.831	-	-	3.469	-	-	3.405	-	-	0.000	-	-	3.598	-	-	3.598
6.3) Misc. Devices PES	A		-	-	8.429	-	-	0.784	-	-	0.799	-	-	0.000	-	-	0.819	-	-	0.819
Subtotal: 6) (Q8830) Production Engineering			**-**	**-**	***39.393***	**-**	**-**	***5.402***	**-**	**-**	***5.373***	**-**	**-**	***0.000***	**-**	**-**	***5.613***	**-**	**-**	***5.613***
7) (Q8840) Quality Assurance																				
7.1) Stores Release QA	A		-	-	0.920	-	-	0.138	-	-	0.140	-	-	0.000	-	-	0.146	-	-	0.146
7.2) Safety QA	A		-	-	3.290	-	-	0.442	-	-	0.450	-	-	0.000	-	-	0.461	-	-	0.461
7.3) Misc. Devices QA	A		-	-	1.539	-	-	0.168	-	-	0.171	-	-	0.000	-	-	0.174	-	-	0.174

Exhibit P-40a, Budget Item Justification For Aggregated Items: PB 2020 Navy		Date: March 2019
Appropriation / Budget Activity / Budget Sub Activity: 1508N / 01 / 1	**P-1 Line Item Number / Title:** 0180 / Cartridge Actuated Devices/Propellant Act Devices	**Aggregated Items Title:** Cartridge Actuated Devices/Propellant Act Devices

Item Number / Title [DODIC]	ID CD	MDAP/ MAIS Code	Prior Years			FY 2018			FY 2019			FY 2020 Base			FY 2020 OCO			FY 2020 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)
Subtotal: 7) (Q8840) Quality Assurance			**-**	**-**	***5.749***	**-**	**-**	***0.748***	**-**	**-**	***0.761***	**-**	**-**	***0.000***	**-**	**-**	***0.781***	**-**	**-**	***0.781***
8) (Q8850) Product Improvement																				
8.1) Stores Release PIP	A		-	-	4.014	-	-	0.611	-	-	0.624	-	-	0.000	-	-	0.636	-	-	0.636
8.2) Safety PIP	A		-	-	14.610	-	-	2.085	-	-	1.983	-	-	0.000	-	-	2.165	-	-	2.165
8.3) Misc. Devices PIP	A		-	-	6.686	-	-	0.721	-	-	0.734	-	-	0.000	-	-	0.749	-	-	0.749
Subtotal: 8) (Q8850) Product Improvement			**-**	**-**	***25.310***	**-**	**-**	***3.417***	**-**	**-**	***3.341***	**-**	**-**	***0.000***	**-**	**-**	***3.550***	**-**	**-**	***3.550***
9) (Q8860) Acceptance Testing																				
9.1) Stores Release Acceptance Testing	A		-	-	3.561	-	-	0.467	-	-	0.476	-	-	0.000	-	-	0.485	-	-	0.485
9.2) Safety Acceptance Testing	A		-	-	10.467	-	-	0.785	-	-	0.800	-	-	0.000	-	-	0.815	-	-	0.815
9.3) Misc. Devices Acceptance Testing	A		-	-	6.733	-	-	0.573	-	-	0.583	-	-	0.000	-	-	0.595	-	-	0.595
Subtotal: 9) (Q8860) Acceptance Testing			**-**	**-**	***20.761***	**-**	**-**	***1.825***	**-**	**-**	***1.859***	**-**	**-**	***0.000***	**-**	**-**	***1.895***	**-**	**-**	***1.895***
10) (Q8870) Obsolescence (12)																				
10.1) Stores Release Obsolescence	A		-	-	-	-	-	-	-	-	-	-	-	0.000	-	-	0.775	-	-	0.775
10.2) Safety Obsolescence	A		-	-	-	-	-	-	-	-	-	-	-	0.000	-	-	2.584	-	-	2.584
10.3) Misc. Devices Obsolescence	A		-	-	-	-	-	-	-	-	-	-	-	0.000	-	-	0.948	-	-	0.948
Subtotal: 10) (Q8870) Obsolescence			**-**	**-**	***0.000***	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	***0.000***	**-**	**-**	***4.307***	**-**	**-**	***4.307***
11) Prior Years																				
11.1) Prior Years Cumulative Funding	A		-	-	412.632	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Subtotal: 11) Prior Years			**-**	**-**	***412.632***	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**
Total			**-**	**-**	**807.726**	**-**	**-**	**55.717**	**-**	**-**	**58.556**	**-**	**-**	**0.000**	**-**	**-**	**60.819**	**-**	**-**	**60.819**

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) 2.1) (Q8060) Thermal Battery (CWDR) FY 2019 Reduction of $.968M due to contract award delay.

(2) 2.3) (Q2070) MK 122 Parachute Deploy RCKT Motor (MT29/JN30) - Fluctuations in the requirements across the FYDP are based on the Fleet's actual need. Requirements are determined using the number of active aircraft in the OPNAV A-II Aircraft Inventory Budget and then processed in the Requirements Determination Model which calculates the requirements using the unique service life data, on-hand inventory, procurement lead times, historical cost and projected contract delivery dates. OCO funding received in order to replenish in support of Operation Inherent Resolve (OIR) FY 2019 reduction of $2.037M (baseline and OCO) due to unit cost growth.

Exhibit P-40a, Budget Item Justification For Aggregated Items: PB 2020 Navy		Date: March 2019
Appropriation / Budget Activity / Budget Sub Activity: 1508N / 01 / 1	**P-1 Line Item Number / Title:** 0180 / Cartridge Actuated Devices/Propellant Act Devices	**Aggregated Items Title:** Cartridge Actuated Devices/Propellant Act Devices

(3) 2.4) (Q8071) MK 123 Underseat RCKT Motor (MT30) - Fluctuations in the requirements across the FYDP are based on the Fleet's actual need. Requirements are determined using the number of active aircraft in the OPNAV A-II Aircraft Inventory Budget and then processed in the Requirements Determination Model which calculates the requirements using the unique service life data, on-hand inventory, procurement lead times, historical cost and projected contract delivery dates.

(4) 2.5) (Q8081) MK 124 Underseat RCKT Motor (MT31) - Fluctuations in the requirements across the FYDP are based on the Fleet's actual need. Requirements are determined using the number of active aircraft in the OPNAV A-II Aircraft Inventory Budget and then processed in the Requirements Determination Model which calculates the requirements using the unique service life data, on-hand inventory, procurement lead times, historical cost and projected contract delivery dates.

(5) 2.6) (Q8140) FLU-8/9/12 Inflators - The FLU-8/9/12 cost element only funds 2 of the 3 items now: the FLU-8 (FW98 - used on the LPU-23 and LPU-36 Life Preservers) and the FLU-12 (JL09 - used on the MK-1 Life Preserver) Automatic Inflation Devices. Fluctuations in the requirements across the FYDP are based on the Fleet's actual need. Requirements are determined using the number of active aircraft in the OPNAV A-II Aircraft Inventory Budget and then processed in the Requirements Determination Model which calculates the requirements using the unique service life data, on-hand inventory, procurement lead times, historical cost and projected contract delivery dates.

(6) 2.7) (Q8160) JAU-74 INIT / CCU-146 CTG (WB15/16) cost element funds 2 items. Fluctuations in the requirements across the FYDP are based on the Fleet's actual need. Requirements are determined using the number of active aircraft in the OPNAV A-II Aircraft Inventory Budget and then processed in the Requirements Determination Model which calculates the requirements using the unique service life data, on-hand inventory, procurement lead times, historical cost and projected contract delivery dates. OCO funding received in order to replenish in support of Operation Inherent Resolve (OIR)

(7) 2.8) (Q8180) F-18 DIFRS (SR95/WB19) - Fluctuations in the requirements across the FYDP are based on the Fleet's actual need. Requirements are determined using the number of active aircraft in the OPNAV A-II Aircraft Inventory Budget and then processed in the Requirements Determination Model which calculates the requirements using the unique service life data, on-hand inventory, procurement lead times, historical cost and projected contract delivery dates.

(8) 2.9) (Q8300) Navy Aircrew Common Ejection Seats - cost element funds 7 items - Fluctuations in the requirements across the FYDP are based on the Fleet's actual need. Requirements are determined using the number of active aircraft in the OPNAV A-II Aircraft Inventory Budget and then processed in the Requirements Determination Model which calculates the requirements using the unique service life data, on-hand inventory, procurement lead times, historical cost and projected contract delivery dates.

(9) 2.10)(Q8301) F-18/E/F/G and V-22 Fire Suppression Gas - this cost element funds 6 items - Fluctuations in the requirements across the FYDP are based on the Fleet's actual need. Requirements are determined using the number of active aircraft in the OPNAV A-II Aircraft Inventory Budget and then processed in the Requirements Determination Model which calculates the requirements using the unique service life data, on-hand inventory, procurement lead times, historical cost and projected contract delivery dates.

(10) 2.11) (Q8302) T-6A (JPATS) CAD/PADs cost element funds 28 safety CAD/PAD items that are unique to the T-6 and are awarded over 5 contracts. These devices are within the aircraft's escape and safety systems. Fluctuations in the requirements across the FYDP are based on the Fleet's actual need. Requirements are determined using the number of active aircraft in the OPNAV A-II Aircraft Inventory Budget and then processed in the Requirements Determination Model which calculates the requirements using the unique service life data, on-hand inventory, procurement lead times, historical cost and projected contract delivery dates.

(11) 3.1) (Q8600) Misc. Devices Under $500k cost element - Fluctuations to the MISC Devices Under $500K to support fleet requirements to replenish diminishing inventory as a result of active aircraft, platform availability and component service life. The number of active aircraft reported in the OPNAV A-II Aircraft Inventory Budget that CAD/PAD supports directly correlates to fluctuations in requirements to ensure adequate assets are available for Fleet support and operational readiness. OCO funding received in order to replenish in support of Operation Inherent Resolve (OIR)

(12) 10) (Q8870) Obsolescence Cost element added in FY 2020 which identifies and qualifies replacement propellants for CAD/PAD due to obsolescence of ingredients and/or diminishing sources of supply.

Exhibit P-5a, Procurement History and Planning: PB 2020 Navy		Date: March 2019
Appropriation / Budget Activity / Budget Sub Activity: 1508N / 01 / 1	P-1 Line Item Number / Title: 0180 / Cartridge Actuated Devices/Propellant Act Devices	Aggregated Items: Cartridge Actuated Devices/Propellant Act Devices

Item Number / Title [DODIC]	OCO	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) Hardware-Stores Release												
1.2) (Q8200) CCU-107 Impulse CTG (MT95/JM92)		2016 (13)	Pyrotechnic Specialities / Byron, GA	C / FP	NAVSUP	Jul 2016	Feb 2019	19,760	10.73	Y		Oct 2015
1.2) (Q8200) CCU-107 Impulse CTG (MT95/JM92)		2017 (14)	Pyrotechnic Specialities / Byron, GA	C / FP	NAVSUP	Mar 2017	Jul 2019	40,000	9.30	Y		Oct 2016
1.2) (Q8200) CCU-107 Impulse CTG (MT95/JM92)		2018 (15)	Pyrotechnic Specialities / Byron, GA	C / FP	NAVSUP	Feb 2018	Dec 2019	40,000	9.51	Y		Oct 2017
1.2) (Q8200) CCU-107 Impulse CTG (MT95/JM92)		2019	TBD / TBD	C / FP	NAVSUP	May 2019	May 2020	40,000	8.62	Y		Oct 2018
1.2) (Q8200) CCU-107 Impulse CTG (MT95/JM92)	✓	2020	TBD / TBD	C / FP	NAVSUP	Apr 2020	Apr 2021	40,000	8.80	Y		Oct 2019
1.3) (Q8201) CCU-45 Impulse CTG (MD65)		2016 (16)	AMTEC Corporation / Clear Lake, SD	C / FP	NAVSUP	Sep 2016	Mar 2019	16,575	17.50	Y		Oct 2015
1.3) (Q8201) CCU-45 Impulse CTG (MD65)		2017 (17)	Pyrotechnic Specialities / Byron, GA	C / FP	NAVSUP	May 2017	Apr 2019	16,576	16.00	Y		Oct 2016
1.3) (Q8201) CCU-45 Impulse CTG (MD65)		2018 (18)	Pyrotechnic Specialities / Byron, GA	C / FP	NAVSUP	Nov 2017	May 2019	19,576	15.85	Y		Oct 2017
1.3) (Q8201) CCU-45 Impulse CTG (MD65)		2019	TBD / TBD	C / FP	NAVSUP	Apr 2019	Apr 2020	19,576	9.55	Y		Oct 2018
1.3) (Q8201) CCU-45 Impulse CTG (MD65)	✓	2020	TBD / TBD	C / FP	NAVSUP	Apr 2020	Apr 2021	19,576	9.73	Y		Oct 2019
2) Hardware Safety												
2.1) (Q8060) Thermal Battery (CWDR) (1)		2017 (19)	TBD / TBD	C / FP	NAVSUP	Apr 2019	Apr 2020	200	4,840.00	Y		Aug 2016
2.1) (Q8060) Thermal Battery (CWDR) (1)		2018 (20)	TBD / TBD	C / FP	NAVSUP	Apr 2019	Apr 2020	200	4,840.00	Y		Oct 2017
2.1) (Q8060) Thermal Battery (CWDR) (1)	✓	2020	TBD / TBD	C / FP	NAVSUP	Apr 2020	Apr 2021	200	4,935.00	Y		Dec 2019
2.3) (Q2070) MK 122 Parachute Deploy RCKT (MT29/JN30) (2)(†)		2017 (21)	MARTIN-BAKER A/CRT C / MIDDLESEX, GB	C / FP	NAVSUP	Apr 2017	Feb 2019	553	3,406.30	Y		Oct 2016
2.3) (Q2070) MK 122 Parachute Deploy RCKT (MT29/JN30) (2)(†)		2018 (22)	MARTIN-BAKER A/CRT C / MIDDLESEX, GB	C / FP	NAVSUP	Mar 2019	Mar 2020	921	4,280.13	Y		Oct 2017
2.3) (Q2070) MK 122 Parachute Deploy RCKT (MT29/JN30) (2)(†)		2019	MARTIN-BAKER A/CRT C / MIDDLESEX, GB	C / FP	NAVSUP	Apr 2019	Apr 2020	453	4,357.22	Y		Oct 2018
2.3) (Q2070) MK 122 Parachute Deploy RCKT (MT29/JN30) (2)(†)	✓	2019	MARTIN-BAKER A/CRT C / MIDDLESEX, GB	C / FP	NAVSUP	Apr 2019	Apr 2020	642	4,357.22	Y		Oct 2018

Exhibit P-5a, Procurement History and Planning: PB 2020 Navy		Date: March 2019
Appropriation / Budget Activity / Budget Sub Activity: 1508N / 01 / 1	P-1 Line Item Number / Title: 0180 / Cartridge Actuated Devices/Propellant Act Devices	Aggregated Items: Cartridge Actuated Devices/Propellant Act Devices

Item Number / Title [DODIC]	OCO	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
2.3) (Q2070) MK 122 Parachute Deploy RCKT (MT29/JN30) (2)(†)	✓	2020	MARTIN-BAKER A/CRT C / MIDDLESEX, GB	C / FP	NAVSUP	Apr 2020	Apr 2021	1,207	4,444.22	Y		Oct 2019
2.4) (Q8071) MK 123 Underseat RCKT Motor (MT30) (3)		2016 (23)	MARTIN-BAKER A/ CFT / MIDDLESEX, GB	C / FP	NAVSUP	Sep 2016	Mar 2019	88	9,875.00	Y		Oct 2015
2.4) (Q8071) MK 123 Underseat RCKT Motor (MT30) (3)		2017 (24)	MARTIN-BAKER A/ CFT / MIDDLESEX, GB	C / FP	NAVSUP	Dec 2016	Mar 2019	24	9,368.68	Y		Oct 2016
2.4) (Q8071) MK 123 Underseat RCKT Motor (MT30) (3)		2018 (25)	MARTIN-BAKER A/ CFT / MIDDLESEX, GB	C / FP	NAVSUP	Mar 2019	Jun 2020	18	10,277.78	Y		Oct 2017
2.4) (Q8071) MK 123 Underseat RCKT Motor (MT30) (3)		2019	MARTIN-BAKER A/ CFT / MIDDLESEX, GB	C / FP	NAVSUP	Apr 2019	Jul 2020	25	10,320.00	Y		Oct 2018
2.4) (Q8071) MK 123 Underseat RCKT Motor (MT30) (3)	✓	2019	MARTIN-BAKER A/ CFT / MIDDLESEX, GB	C / FP	NAVSUP	Apr 2019	Jul 2020	8	10,320.00	Y		Oct 2018
2.4) (Q8071) MK 123 Underseat RCKT Motor (MT30) (3)	✓	2020	MARTIN-BAKER A/ CFT / MIDDLESEX, GB	C / FP	NAVSUP	Apr 2020	Jul 2021	63	9,000.00	Y		Oct 2019
2.5) (Q8081) MK 124 Underseat RCKT Motor (MT31) (4)		2016 (26)	MARTIN-BAKER A/ CFT / MIDDLESEX, GB	C / FP	NAVSUP	Sep 2016	Mar 2019	131	9,877.86	Y		Oct 2015
2.5) (Q8081) MK 124 Underseat RCKT Motor (MT31) (4)		2017 (27)	MARTIN-BAKER A/ CFT / MIDDLESEX, GB	C / FP	NAVSUP	Dec 2016	Mar 2019	37	8,324.32	Y		Oct 2016
2.5) (Q8081) MK 124 Underseat RCKT Motor (MT31) (4)		2018 (28)	MARTIN-BAKER A/ CFT / MIDDLESEX, GB	C / FP	NAVSUP	Mar 2019	Jun 2020	28	10,285.71	Y		Oct 2017
2.5) (Q8081) MK 124 Underseat RCKT Motor (MT31) (4)		2019	MARTIN-BAKER A/ CFT / MIDDLESEX, GB	C / FP	NAVSUP	Apr 2019	Jul 2020	60	9,750.00	Y		Oct 2018
2.5) (Q8081) MK 124 Underseat RCKT Motor (MT31) (4)	✓	2019	MARTIN-BAKER A/ CFT / MIDDLESEX, GB	C / FP	NAVSUP	Apr 2019	Jul 2020	18	9,750.00	Y		Oct 2018
2.5) (Q8081) MK 124 Underseat RCKT Motor (MT31) (4)	✓	2020	MARTIN-BAKER A/ CFT / MIDDLESEX, GB	C / FP	NAVSUP	Apr 2020	Jul 2021	107	8,965.00	Y		Oct 2019

(†) indicates the presence of a P-21

Footnotes:

(13) Date of First Delivery has slipped to February 2019 due to contractor production schedule delays.

(14) Date of First Delivery has slipped to July 2019 due to contractor production schedule delays.

(15) Date of First Delivery has slipped to December 2019 due to contractor production schedule delays.

(16) Date of First Delivery has slipped to March 2019 due to contractor production schedule delays.

Exhibit P-5a, Procurement History and Planning: PB 2020 Navy		**Date:** March 2019
Appropriation / Budget Activity / Budget Sub Activity: 1508N / 01 / 1	**P-1 Line Item Number / Title:** 0180 / Cartridge Actuated Devices/Propellant Act Devices	**Aggregated Items:** Cartridge Actuated Devices/Propellant Act Devices

(17) Date of First Delivery has slipped to April 2019 due to contractor production schedule delays.

(18) Date of First Delivery has slipped to May 2019 due to contractor production schedule delays.

(19) Award date slipped to April 2019 due to material obsolescence issue and qualification schedule for replacement item and vendor. Procurements for FY17-FY18 will be combined in one procurement. Delay of contract award causes delay of delivery to April 2020

(20) Award date slipped to April 2019 due to material obsolescence issue and qualification schedule for replacement item and vendor. Procurements for FY17-FY18 will be combined in one procurement. Delay of contract award causes delay of delivery to April 2020

(21) Date of First Delivery has slipped to February 2019 due to production delays at the overseas contractor facility.

(22) Award date slipped to March 2019 due to lengthy negotiations with overseas contractor. Delay of contract award causes delay of delivery until March 2020.

(23) Date of First Delivery has slipped to March 2019 due to production delays at the overseas contractor facility.

(24) Date of First Delivery has slipped to March 2019 due to production delays at the overseas contractor facility.

(25) Award date slipped to March 2019 due to lengthy negotiations with overseas contractor. Delay of contract award causes delay of delivery to June 2020.

(26) Date of First Delivery has slipped to March 2019 due to production delays at the overseas contractor facility.

(27) Date of First Delivery has slipped to March 2019 due to production delays at the overseas contractor facility.

(28) Award date slipped to March 2019 due to lengthy negotiations with overseas contractor. Delay of contract award causes delay of delivery to June 2020

Exhibit P-21, Production Schedule: PB 2020 Navy		**Date:** March 2019
Appropriation / Budget Activity / Budget Sub Activity: 1508N / 01 / 1	**P-1 Line Item Number / Title:** 0180 / Cartridge Actuated Devices/Propellant Act Devices	**Aggregated Items:** Cartridge Actuated Devices/Propellant Act Devices

Items (Units in Each)							Fiscal Year 2016												Fiscal Year 2017												BALANCE
										Calendar Year 2016												Calendar Year 2017									
OCO	MFR #	FY	SERVICE	PROC QTY	ACCEPT PRIOR TO 1 OCT 2015	BAL DUE AS OF 1 OCT	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	
2) Hardware Safety																															
2.3) (Q2070) MK 122 Parachute Deploy RCKT (MT29/JN30) [2]																															
Prior Years Deliveries: 4582																															
	5	2017	NAVY	553	0	553																			A -	-	-	-	-	-	553
	5	2018	NAVY	921	0	921																									921
	5	2019	NAVY	453	0	453																									453
✓	5	2019	NAVY	642	0	642																									642
✓	5	2020	NAVY	1,207	0	1,207																									1,207
							OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	

Exhibit P-21, Production Schedule: PB 2020 Navy		**Date:** March 2019
Appropriation / Budget Activity / Budget Sub Activity: 1508N / 01 / 1	**P-1 Line Item Number / Title:** 0180 / Cartridge Actuated Devices/Propellant Act Devices	**Aggregated Items:** Cartridge Actuated Devices/Propellant Act Devices

Items (Units in Each)							Fiscal Year 2018												Fiscal Year 2019												BALANCE
							Calendar Year 2018												Calendar Year 2019												
OCO	MFR #	FY	SERVICE	PROC QTY	ACCEPT PRIOR TO 1 OCT 2017	BAL DUE AS OF 1 OCT	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	
2) Hardware Safety																															
2.3) (Q2070) MK 122 Parachute Deploy RCKT (MT29/JN30) [2]																															
Prior Years Deliveries: 4582																															
	5	2017	NAVY	553	0	553	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	277	276							0
	5	2018	NAVY	921	0	921																		A -	-	-	-	-	-	-	921
	5	2019	NAVY	453	0	453																			A -	-	-	-	-	-	453
✓	5	2019	NAVY	642	0	642																			A -	-	-	-	-	-	642
✓	5	2020	NAVY	1,207	0	1,207																									1,207
							OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	

Exhibit P-21, Production Schedule: PB 2020 Navy		**Date:** March 2019
Appropriation / Budget Activity / Budget Sub Activity: 1508N / 01 / 1	**P-1 Line Item Number / Title:** 0180 / Cartridge Actuated Devices/Propellant Act Devices	**Aggregated Items:** Cartridge Actuated Devices/Propellant Act Devices

Items (Units in Each)							Fiscal Year 2020												Fiscal Year 2021												BALANCE
							Calendar Year 2020												Calendar Year 2021												
OCO	MFR #	FY	SERVICE	PROC QTY	ACCEPT PRIOR TO 1 OCT 2019	BAL DUE AS OF 1 OCT	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	
2) Hardware Safety																															
2.3) (Q2070) MK 122 Parachute Deploy RCKT (MT29/JN30) [2]																															
Prior Years Deliveries: 4582																															
	5	2017	NAVY	553	553	0																									0
	5	2018	NAVY	921	0	921	-	-	-	-	-	231	230	230	230																0
	5	2019	NAVY	453	0	453	-	-	-	-	-	-	227	226																	0
✓	5	2019	NAVY	642	0	642	-	-	-	-	-	-	214	214	214																0
✓	5	2020	NAVY	1,207	0	1,207							A -	-	-	-	-	-	-	-	-	-	-	-	495	494	218				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	

Exhibit P-21, Production Schedule: PB 2020 Navy		Date: March 2019
Appropriation / Budget Activity / Budget Sub Activity: 1508N / 01 / 1	**P-1 Line Item Number / Title:** 0180 / Cartridge Actuated Devices/Propellant Act Devices	**Aggregated Items:** Cartridge Actuated Devices/Propellant Act Devices

MFR Ref #	Manufacturer Name - Location	Production Rates (Each / Year)			Procurement Leadtime (Months)							
					Initial				Reorder			
		MSR For 2020	1-8-5 For 2020	MAX For 2020	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	MARTIN-BAKER A/CRT C - MIDDLESEX, GB	100	500	1,250	0	12	12	24	0	7	12	19

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

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Exhibit P-40, Budget Line Item Justification: PB 2020 Navy	Date: March 2019
Appropriation / Budget Activity / Budget Sub Activity: 1508N: Procurement of Ammo, Navy & MC / BA 01: Proc Ammo, Navy / BSA 1: Navy Ammunition	**P-1 Line Item Number / Title:** 0182 / Air Expendable Countermeasures

ID Code (A=Service Ready, B=Not Service Ready): A	Program Elements for Code B Items: N/A	Other Related Program Elements: 0604270N

Line Item MDAP/MAIS Code: N/A

Resource Summary	Prior Years	FY 2018	FY 2019	FY 2020 Base	FY 2020 OCO	FY 2020 Total	FY 2021	FY 2022	FY 2023	FY 2024	To Complete	Total
Procurement Quantity *(Units in Each)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost *($ in Millions)*	1,315.557	78.608	102.962	0.000	94.212	94.212	68.706	49.506	73.617	75.081	Continuing	Continuing
Less PY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) *($ in Millions)*	1,315.557	78.608	102.962	0.000	94.212	94.212	68.706	49.506	73.617	75.081	Continuing	Continuing
Plus CY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority *($ in Millions)*	**1,315.557**	**78.608**	**102.962**	**0.000**	**94.212**	**94.212**	**68.706**	**49.506**	**73.617**	**75.081**	**Continuing**	**Continuing**
(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)*	-	-	-	-	-	-	-	-	-	-	-	-

Description:

FY 2020 funding totals include $0.0M for Base and $94.212M for Overseas Contingency Operations (OCO); of which $77.301M is realigned as part of the OCO for Base Requirements. FY 2020 OCO for Base Requirements is OCO funding for base budget requirements in support of the National Defense Strategy. The Budget requests these funds in OCO to comply with the base budget defense caps included in the Budget Control Act of 2011.

The Air Expendable Countermeasures (AECM) line provides funding for procurement of countermeasure self-protection devices for all United States Navy (USN) and United States Marine Corps (USMC) tactical, rotary and other fixed-wing aircraft. AECM supports fleet aircrew training, readiness and operational combat requirements for all USN and USMC aircraft. The AECM Program is divided into the following threat related groupings: (1) Active Jammers (2) Infrared (IR) Decoys (3) associated impulse cartridges (4) Chaff Countermeasures and (5) F-35 Countermeasures.

ACTIVE JAMMERS: Current Active Jammer is ALE-55 Fiber Optic Towed Decoy (FOTD). The FOTD, when integrated with the rest of the F/A-18E/F Electronic Warfare (EW) suite (i.e., ALQ-214, ALR-67(V)3, ALE-47, ALE-50) and with the associated cockpit controls, displays and other avionics, significantly improves the survivability of the host aircraft in a Radio Frequency (RF) threat environment. The FOTD is part of the Integrated Defensive Electronic Countermeasure (IDECM) Radio Frequency Countermeasure (RFCM) Block 3 (IB-3) program. ALE-55 Milestone (MS) III was conducted July 2011. Initial Operational Capability (IOC) was achieved July 2011. FOTD was developed utilizing Research, Development, Test & Evaluation, Navy, Program Element 0604270N, Project Unit 2175. Dual Band Decoy (DBD) is a future active jammer with a development contract scheduled for award in 2019. DBD will replace the ALE-55 FOTD and significantly improve F/A-18E/F survivability against emerging radar guided threats. DBD will utilize Research, Development, Test & Evaluation, Navy, Program Element 0604270N, Project Unit 2175.

IR DECOYS: The MJU-32/38/49 are currently used by all aircraft except the KC130J/T to provide self-protection from surface-to-air/air-to-air IR missiles. The MJU-61 and MJU-64 are used on the KC-130J/T, UC-35D, UC-12W and F-35B/C aircraft to provide self-protection from surface-to-air/air-to-air IR missiles. The SM-875 is a dedicated, low cost training device. The MJU-61 is also a low cost F-35B/C training device. The MJU-57 provides a kinematic IR Countermeasure to defeat specific Man-Portable Air Defense Systems (MANPADS) used on the F/A-18, MV-22 and KC-130J. Procurement of MJU-66 advanced spectral countermeasure began in FY 2013 in support of KC-130J/T and UC-35D. The MJU-67 Multi-spectral flare provides an enhanced spectral signature required for USN/USMC aircraft self-protection against accelerated proliferation of advanced MANPADS.

IMPULSE CARTRIDGES: Used to propel the self-protection devices away from the aircraft. The CCU-136 is used by all airframes except the KC-130J/T, UC-12W and UC-35D. The CCU-145 is used on KC-130J/T, UC-35D, UC-12W and F-35B/C.

Exhibit P-40, Budget Line Item Justification: PB 2020 Navy		Date: March 2019
Appropriation / Budget Activity / Budget Sub Activity: 1508N: Procurement of Ammo, Navy & MC / BA 01: Proc Ammo, Navy / BSA 1: Navy Ammunition	**P-1 Line Item Number / Title:** 0182 / Air Expendable Countermeasures	
ID Code (A=Service Ready, B=Not Service Ready): A	**Program Elements for Code B Items:** N/A	**Other Related Program Elements:** 0604270N
Line Item MDAP/MAIS Code: N/A		

CHAFF COUNTERMEASURES: The RR-129 is the operational round used on all Navy aircraft platforms. The RR-144 is a dedicated training round used on all airframes except the USMC KC-130J/T, UC-12W and UC-35D. The RR-144 training round does not interfere with Federal Aviation Administration (FAA) tracking radars. The RR-170 is the operational round procured in support of the KC-130J/T, UC-12W and UC-35D.

F-35 COUNTERMEASURES: PMA272 operating under a PEO(JSF)-PEO(T) Memorandum of Agreement will procure F-35 countermeasures for all global participants under a combined contracting strategy to gain unit price efficiencies while meeting global operational requirements. F-35 program includes unique countermeasures that provide self-protection for the Joint Strike Fighter (JSF) aircraft, specifically ALE-70 and MJU-68. In addition to F-35B/C unique countermeasures, MJU-64/66s are also used for F-35B/C self-protection.

Exhibit P-40, Budget Line Item Justification: PB 2020 Navy		Date: March 2019
Appropriation / Budget Activity / Budget Sub Activity: 1508N: Procurement of Ammo, Navy & MC / BA 01: Proc Ammo, Navy / BSA 1: Navy Ammunition	**P-1 Line Item Number / Title:** 0182 / Air Expendable Countermeasures	
ID Code (A=Service Ready, B=Not Service Ready): A	**Program Elements for Code B Items:** N/A	**Other Related Program Elements:** 0604270N
Line Item MDAP/MAIS Code: N/A		

Exhibits Schedule					Prior Years	FY 2018	FY 2019	FY 2020 Base	FY 2020 OCO	FY 2020 Total
Exhibit Type	Title*	Subexhibits	ID CD	MDAP/ MAIS Code	Quantity / Total Cost *(Each) I ($ M)*	Quantity / Total Cost *(Each) I ($ M)*	Quantity / Total Cost *(Each) I ($ M)*	Quantity / Total Cost *(Each) I ($ M)*	Quantity / Total Cost *(Each) I ($ M)*	Quantity / Total Cost *(Each) I ($ M)*
P-40a	Air Expendable Countermeasures	P-5a, P-21			- / 1,315.557	- / 78.608	- / 102.962	- / 0.000	- / 94.212	- / 94.212
P-40	**Total Gross/Weapon System Cost**				**- / 1,315.557**	**- / 78.608**	**- / 102.962**	**- / 0.000**	**- / 94.212**	**- / 94.212**

*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:
In accordance with ORD: #512-88-89 dated 28 May 99, Air Expendable Countermeasures program is tasked with maintaining an operationally effective mixture of countermeasures that can degrade and/or neutralize the effectiveness of current and/or projected threats and provide pre-emptive, area and point source devices that must be compatible with Night Vision Goggles (NVG). ORD: #512-88-89 mandates Product Improvement Program (PIP) and Production Engineering Support (PES) to ensure expendables are cost effective, environmentally friendly and Hazards of Electromagnetic Radiation to Ordnance (HERO) safe.

FY 2020 OCO for baseline funding is required to procure Active Jammers, IR Decoys, Impulse Cartridges, Chaff Countermeasures, F-35B/C Countermeasures and associated support for USN and USMC tactical, rotary and other fixed-wing aircraft to meet Fleet inventory levels requirements, based on Naval Munitions Requirements Process (NMRP) Combat Requirement. FY 2020 MJU-68 funding was increased to support F-35B deployments. These proven countermeasure devices provide pre-emptive or terminal and reactive self-protection for all Navy and Marine Corps strike, assault, rotary wing, and other fixed wing aircraft from Radio Frequency (RF) or IR guided missile attack and other advanced threats.

OCO:
FY 2020 Direct War OCO funding request supports countermeasure replenishment of self-protection devices that have been expended in direct support of combat operations for Operation Inherent Resolve.

Exhibit P-40a, Budget Item Justification For Aggregated Items: PB 2020 Navy | **Date:** March 2019

Appropriation / Budget Activity / Budget Sub Activity: 1508N / 01 / 1

P-1 Line Item Number / Title: 0182 / Air Expendable Countermeasures

Aggregated Items Title: Air Expendable Countermeasures (1)

Item Number / Title [DODIC]	ID CD	MDAP/ MAIS Code	Prior Years			FY 2018			FY 2019			FY 2020 Base			FY 2020 OCO			FY 2020 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) ACTIVE JAMMERS																				
1.1) ALE-50 (AAED)	A		-	-	54.095	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1.2) ALE-55 (FOTD) (2)(†)	A		82,336.74	2,248	185.093	72,029.00	303	21.825	66,843.00	329	21.991	-	-	0.000	85,677.00	195	16.707	85,677.00	195	16.707
1.4) TECHNICAL SUPPORT (ACTIVE JAMMER)	A		-	-	2.693	-	-	0.864	-	-	0.881	-	-	0.000	-	-	0.593	-	-	0.593
Subtotal: 1) ACTIVE JAMMERS			**-**	**-**	***241.881***	**-**	**-**	***22.689***	**-**	**-**	***22.872***	**-**	**-**	***0.000***	**-**	**-**	***17.300***	**-**	**-**	***17.300***
2) IR DECOYS																				
2.1) MJU-32(†)	A		111.44	468,366	52.197	-	-	-	-	-	-	-	-	0.000	74.96	66,640	4.995	74.96	66,640	4.995
2.2) MJU-38	A		136.44	316,485	43.180	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2.3) MJU-49	A		563.39	370,391	208.673	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2.4) MJU-55	A		-	-	20.105	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2.5) MJU-57(†)	A		320.88	238,913	76.663	-	-	-	131.52	12,439	1.636	-	-	-	-	-	-	-	-	-
2.6) MJU-61 (3)(†)	A		74.89	110,328	8.263	86.44	25,959	2.244	70.02	57,306	4.013	-	-	0.000	71.35	79,168	5.649	71.35	79,168	5.649
2.7) MJU-64(†)	A		91.40	163,165	14.913	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2.8) MJU-66(†)	A		125.08	98,122	12.273	-	-	-	110.97	21,121	2.344	-	-	0.000	113.07	26,425	2.988	113.07	26,425	2.988
2.9) MJU-67(†)	A		409.51	55,210	22.609	426.40	29,670	12.651	338.27	48,913	16.546	-	-	0.000	345.04	19,574	6.754	345.04	19,574	6.754
2.10) SM875 (4)(†)	A		33.02	2,038,030	67.296	23.95	263,214	6.304	23.71	250,738	5.945	-	-	0.000	25.46	103,429	2.633	25.46	103,429	2.633
Subtotal: 2) IR DECOYS			**-**	**-**	***526.172***	**-**	**-**	***21.199***	**-**	**-**	***30.484***	**-**	**-**	***0.000***	**-**	**-**	***23.019***	**-**	**-**	***23.019***
3) IMPULSE CARTRIDGES																				
3.1) CCU-136(†)	A		8.28	6,378,212	52.833	3.79	367,200	1.392	3.86	1,555,200	6.003	-	-	0.000	3.93	311,900	1.226	3.93	311,900	1.226
3.2) CCU-145	A		6.58	1,367,105	8.992	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Subtotal: 3) IMPULSE CARTRIDGES			**-**	**-**	***61.825***	**-**	**-**	***1.392***	**-**	**-**	***6.003***	**-**	**-**	***0.000***	**-**	**-**	***1.226***	**-**	**-**	***1.226***
4) CHAFF COUNTERMEASURES																				
4.1) RR-129	A		12.73	518,009	6.592	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
4.2) RR-144 (5)(†)	A		30.61	675,588	20.680	16.28	91,984	1.497	16.28	504,915	8.220	-	-	0.000	16.60	130,602	2.168	16.60	130,602	2.168
4.3) RR-170	A		7.91	86,907	0.687	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
4.4) RR-188	A		-	-	0.121	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Subtotal: 4) CHAFF COUNTERMEASURES			**-**	**-**	***28.080***	**-**	**-**	***1.497***	**-**	**-**	***8.220***	**-**	**-**	***0.000***	**-**	**-**	***2.168***	**-**	**-**	***2.168***
5) F-35 COUNTERMEASURES																				
5.1) ALE-70 (6)(†)	A		56,345.35	666	37.526	54,239.24	252	13.668	55,269.78	264	14.591	-	-	0.000	56,375.17	272	15.334	56,375.17	272	15.334
5.2) MJU-68 (7)(†)	A		2,364.33	9,516	22.499	2,263.01	2,934	6.640	2,306.00	2,886	6.655	-	-	0.000	2,349.82	8,751	20.563	2,349.82	8,751	20.563
5.3) MJU-69	A		2,242.67	2,081	4.667	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Exhibit P-40a, Budget Item Justification For Aggregated Items: PB 2020 Navy		Date: March 2019
Appropriation / Budget Activity / Budget Sub Activity: 1508N / 01 / 1	P-1 Line Item Number / Title: 0182 / Air Expendable Countermeasures	Aggregated Items Title: Air Expendable Countermeasures (1)

Item Number / Title [DODIC]	ID CD	MDAP/ MAIS Code	Prior Years			FY 2018			FY 2019			FY 2020 Base			FY 2020 OCO			FY 2020 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)
5.4) CCU-168	A		327.87	2,257	0.740	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Subtotal: 5) F-35 COUNTERMEASURES			**-**	**-**	***65.432***	**-**	**-**	***20.308***	**-**	**-**	***21.246***	**-**	**-**	***0.000***	**-**	**-**	***35.897***	**-**	**-**	***35.897***
6) INTEGRATED LOGISTICS SUPPORT																				
6.1) ACTIVE JAMMERS			-	-	3.260	-	-	0.213	-	-	0.230	-	-	0.000	-	-	0.234	-	-	0.234
6.2) IR DECOYS			-	-	23.042	-	-	1.662	-	-	1.387	-	-	0.000	-	-	1.303	-	-	1.303
6.3) IMPULSE CARTRIDGES			-	-	1.610	-	-	0.050	-	-	0.052	-	-	0.000	-	-	0.053	-	-	0.053
6.4) CHAFF COUNTERMEASURES			-	-	1.206	-	-	0.049	-	-	0.056	-	-	0.000	-	-	0.057	-	-	0.057
6.5) F-35 COUNTERMEASURES			-	-	1.601	-	-	0.607	-	-	0.608	-	-	0.000	-	-	0.620	-	-	0.620
Subtotal: 6) INTEGRATED LOGISTICS SUPPORT			**-**	**-**	***30.719***	**-**	**-**	***2.581***	**-**	**-**	***2.333***	**-**	**-**	***0.000***	**-**	**-**	***2.267***	**-**	**-**	***2.267***
7) PRODUCTION ENGINEERING SUPPORT																				
7.1) ACTIVE JAMMERS			-	-	31.170	-	-	0.632	-	-	0.610	-	-	0.000	-	-	0.576	-	-	0.576
7.2) IR DECOYS			-	-	71.229	-	-	1.942	-	-	2.070	-	-	0.000	-	-	2.111	-	-	2.111
7.3) IMPULSE CARTRIDGES			-	-	5.444	-	-	0.120	-	-	0.173	-	-	0.000	-	-	0.176	-	-	0.176
7.4) CHAFF COUNTERMEASURES			-	-	2.906	-	-	0.050	-	-	0.069	-	-	0.000	-	-	0.070	-	-	0.070
7.5) F-35 COUNTERMEASURES			-	-	8.537	-	-	1.260	-	-	0.877	-	-	0.000	-	-	0.894	-	-	0.894
Subtotal: 7) PRODUCTION ENGINEERING SUPPORT			**-**	**-**	***119.286***	**-**	**-**	***4.004***	**-**	**-**	***3.799***	**-**	**-**	***0.000***	**-**	**-**	***3.827***	**-**	**-**	***3.827***
8) PRODUCT IMPROVEMENT PROGRAM																				
8.1) IR DECOYS			-	-	94.741	-	-	1.029	-	-	1.048	-	-	0.000	-	-	1.068	-	-	1.068
8.2) IMPULSE CARTRIDGES			-	-	12.351	-	-	0.242	-	-	0.246	-	-	0.000	-	-	0.250	-	-	0.250
8.3) CHAFF COUNTERMEASURES			-	-	0.748	-	-	0.015	-	-	0.015	-	-	0.000	-	-	0.015	-	-	0.015
8.4) F-35 COUNTERMEASURES			-	-	0.409	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Subtotal: 8) PRODUCT IMPROVEMENT PROGRAM			**-**	**-**	***108.249***	**-**	**-**	***1.286***	**-**	**-**	***1.309***	**-**	**-**	***0.000***	**-**	**-**	***1.333***	**-**	**-**	***1.333***
9) ACCEPTANCE TEST & EVALUATION (8)																				
9.1) IR DECOYS (9)			-	-	111.158	-	-	2.645	-	-	5.601	-	-	0.000	-	-	5.713	-	-	5.713
9.2) IMPULSE CARTRIDGES			-	-	16.046	-	-	0.175	-	-	0.168	-	-	0.000	-	-	0.171	-	-	0.171

Exhibit P-40a, Budget Item Justification For Aggregated Items: PB 2020 Navy		Date: March 2019
Appropriation / Budget Activity / Budget Sub Activity: 1508N / 01 / 1	**P-1 Line Item Number / Title:** 0182 / Air Expendable Countermeasures	**Aggregated Items Title:** Air Expendable Countermeasures (1)

Item Number / Title [DODIC]	ID CD	MDAP/ MAIS Code	Prior Years			FY 2018			FY 2019			FY 2020 Base			FY 2020 OCO			FY 2020 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)
9.3) CHAFF COUNTERMEASURES			-	-	5.195	-	-	0.050	-	-	0.042	-	-	0.000	-	-	0.042	-	-	0.042
9.4) F-35 COUNTERMEASURES (10)			-	-	1.514	-	-	0.782	-	-	0.885	-	-	0.000	-	-	1.249	-	-	1.249
Subtotal: 9) ACCEPTANCE TEST & EVALUATION			**-**	**-**	***133.913***	**-**	**-**	***3.652***	**-**	**-**	***6.696***	**-**	**-**	***0.000***	**-**	**-**	***7.175***	**-**	**-**	***7.175***
Total			**-**	**-**	**1,315.557**	**-**	**-**	**78.608**	**-**	**-**	**102.962**	**-**	**-**	**0.000**	**-**	**-**	**94.212**	**-**	**-**	**94.212**

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) (a) Unit cost for hardware in FY 2020 reflect either actual contact pricing or inflation of previous year's unit cost. (b) Deliveries funded by different fiscal year appropriations occasionally overlap (P21 Delivery Schedule) to ensure inventory goals are met without exceeding maximum production rates.

(2) ALE-55 (FOTD) FY 2020 unit cost increases from lower quantity buy.

(3) MJU-61 FY 2018 unit cost increase due to First Article Test.

(4) SM875 FY 2019 OCO quantities reduced and funding re-aligned to RR-144 based on Navy priorities and requirement for aircrew training chaff at CONUS training areas to avoid interference with Air Traffic Control radars. FY 2020 unit cost increase above inflation based on actual contract step ladder pricing for lower quantity procurement.

(5) RR-144 FY 2018 quantities realigned from RR-129 in accordance with Navy priorities due to training requirements and restriction on use of RR-129 chaff in CONUS training areas due to interference with Air Traffic Control radars. FY 2019 OCO quantities realigned from SM875 in accordance with Navy priorities.

(6) ALE-70 FY 2018 funding begins to build the inventory defined by the Naval Munitions Requirements Process (NMRP) to support ship fill/sailing schedules for USN Carrier Battle Groups and USMC Amphibious Assault Groups deployments.

(7) MJU-68 FY 2019 to FY 2020 increase to address existing, known procurement shortfalls to support F-35B deployments. FY 2019 unit cost reflects expected savings due to combined confirmed procurements with other DoD and partners.

(8) Acceptance Test and Evaluation funding varies annually based on countermeasure production deliveries and type of Lot Acceptance Testing required.

(9) 9.1 (ATE Infrared Decoys) FY 2019 increase is due to procurement of hardware/test assets for IR Decoy Acceptance Tests.

(10) 9.4 (ATE F-35 Countermeasures) FY 2020 increase above inflation for lot acceptance test requirements associated with increased quantity for MJU-68 procurement to support F-35B deployments.

Exhibit P-5a, Procurement History and Planning: PB 2020 Navy		Date: March 2019
Appropriation / Budget Activity / Budget Sub Activity: 1508N / 01 / 1	P-1 Line Item Number / Title: 0182 / Air Expendable Countermeasures	Aggregated Items: Air Expendable Countermeasures (1)

Item Number / Title [DODIC]	OCO	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) ACTIVE JAMMERS												
1.2) ALE-55 (FOTD) (2)(†)		2018	BAE Systems / Nashua, NH	SS / FP	NAVAIR	Nov 2017	Dec 2018	303	72,029.00	Y		Jun 2016
1.2) ALE-55 (FOTD) (2)(†)		2019	BAE Systems / Nashua, NH	SS / FP	NAVAIR	Dec 2018	Dec 2019	329	66,843.00	Y		Jun 2016
1.2) ALE-55 (FOTD) (2)(†)	✓	2020	BAE Systems / Nashua, NH	SS / FP	NAVAIR	Nov 2019	Dec 2020	195	85,677.00	Y		Feb 2019
2) IR DECOYS												
2.1) MJU-32	✓	2020	TBD (11) / TBD	C / TBD	NAVSUP WSS	Mar 2020	Mar 2021	66,640	74.96	Y		Jun 2019
2.5) MJU-57		2017 (12)	Crane Army Ammunition Activity / Crane, IN	MIPR	CRANE, IN	Mar 2017	Sep 2017	8,374	126.54	Y		Feb 2017
2.5) MJU-57	✓	2019 (13)	Crane Army Ammunition Activity / Crane, IN	MIPR	CRANE, IN	Jan 2019	Sep 2019	12,439	131.52	Y		Feb 2017
2.6) MJU-61 (3)(†)		2017	Crane Army Ammunition Activity / Crane, IN	MIPR	CRANE, IN	Jan 2017	Aug 2017	32,585	67.38	Y		Jan 2013
2.6) MJU-61 (3)(†)	✓	2018 (14)	Armtec Countermeasures Co./ Kilgore Flares Company, LLC (15) / Camden AR/Toone TN	C / IDIQ	NAVSUP WSS	Sep 2018	Jul 2019	25,959	86.44	Y		Feb 2018
2.6) MJU-61 (3)(†)		2019	Armtec Countermeasures Co./ Kilgore Flares Company, LLC (15) / Camden AR/Toone TN	C / IDIQ	NAVSUP WSS	Mar 2019	Nov 2019	29,243	70.02	Y		Feb 2018
2.6) MJU-61 (3)(†)	✓	2019	Armtec Countermeasures Co./ Kilgore Flares Company, LLC (15) / Camden AR/Toone TN	C / IDIQ	NAVSUP WSS	Mar 2019	Nov 2019	28,063	70.02	Y		Feb 2018
2.6) MJU-61 (3)(†)	✓	2020	Armtec Countermeasures Co./ Kilgore Flares Company, LLC (15) / Camden AR/Toone TN	C / IDIQ	NAVSUP WSS	Mar 2020	Nov 2020	79,168	71.35	Y		Feb 2018
2.7) MJU-64	✓	2013 (16)	Armtec Defense, Inc. / Coachella, CA	C / IDIQ	NAVSUP WSS	Nov 2014	Nov 2017	21,788	90.78	Y		Apr 2014
2.7) MJU-64		2014 (17)	Armtec Defense, Inc. / Coachella, CA	C / IDIQ	NAVSUP WSS	Nov 2014	Nov 2017	38,309	90.78	Y		Apr 2014
2.7) MJU-64	✓	2014 (18)	Armtec Defense, Inc. / Coachella, CA	C / IDIQ	NAVSUP WSS	Nov 2014	Nov 2017	20,411	90.78	Y		Apr 2014
2.7) MJU-64		2015	Armtec Defense, Inc. / Coachella, CA	C / IDIQ	NAVSUP WSS	Jul 2015	Sep 2018	397	90.78	Y		Apr 2014
2.7) MJU-64	✓	2015	Armtec Defense, Inc. / Coachella, CA	C / IDIQ	NAVSUP WSS	Jul 2015	Sep 2018	66,930	90.78	Y		Apr 2014
2.7) MJU-64		2016	Armtec Defense, Inc. / Coachella, CA	C / IDIQ	NAVSUP WSS	Jun 2016	Aug 2019	10,788	97.31	Y		Apr 2014
2.7) MJU-64	✓	2016	Armtec Defense, Inc. / Coachella, CA	C / IDIQ	NAVSUP WSS	Jun 2016	Aug 2019	4,542	97.31	Y		Apr 2014
2.8) MJU-66	✓	2019	Alloy Surfaces Company, Inc / Chester, PA	C / IDIQ	NAVSUP WSS	Mar 2019	Mar 2020	21,121	110.97	Y		Oct 2017
2.8) MJU-66	✓	2020	Alloy Surfaces Company, Inc / Chester, PA	C / IDIQ	NAVSUP WSS	Jan 2020	Jan 2021	26,425	113.07	Y		Oct 2017

Exhibit P-5a, Procurement History and Planning: PB 2020 Navy		Date: March 2019
Appropriation / Budget Activity / Budget Sub Activity: 1508N / 01 / 1	P-1 Line Item Number / Title: 0182 / Air Expendable Countermeasures	Aggregated Items: Air Expendable Countermeasures (1)

Item Number / Title [DODIC]	OCO	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
2.9) MJU-67(†)	✓	2017 (19)	Crane Army Ammunition Activity / Crane, IN	MIPR	CRANE, IN	Dec 2017	Apr 2019	16,690	423.00	Y		Jan 2016
2.9) MJU-67(†)		2017 (20)	IMI Systems Ltd / Israel	SS / IDIQ	SOCOM, Fort Eustis, Va	Aug 2018	Apr 2019	12,193	423.00	Y		Jan 2016
2.9) MJU-67(†)		2018 (21)	Esterline Defense Technologies / Camden, AR	SS / BOA	CRANE, IN	Jan 2018	Apr 2018	10,746	426.40	Y		May 2017
2.9) MJU-67(†)	✓	2018 (22)	Esterline Defense Technologies / Camden, AR	SS / BOA	CRANE, IN	Jun 2018	Sep 2018	18,924	426.40	Y		May 2017
2.9) MJU-67(†)		2019	Crane Army Ammunition Activity / Crane, IN	MIPR	CRANE, IN	Apr 2019	Aug 2020	20,711	338.27	Y		May 2017
2.9) MJU-67(†)	✓	2019	Crane Army Ammunition Activity / Crane, IN	MIPR	CRANE, IN	Apr 2019	Aug 2020	28,202	338.27	Y		May 2017
2.9) MJU-67(†)	✓	2020	Crane Army Ammunition Activity / Crane, IN	MIPR	CRANE, IN	Apr 2020	Aug 2021	19,574	345.04	Y		May 2017
2.10) SM875 (4)		2016	Armtec Defense, Inc. / Coachella, CA	C / IDIQ	NAVSUP WSS	Mar 2016	Mar 2018	165,915	23.00	Y		Jul 2013
2.10) SM875 (4)	✓	2016	Armtec Defense, Inc. / Coachella, CA	C / IDIQ	NAVSUP WSS	Mar 2016	Mar 2018	348,726	23.00	Y		Jul 2013
2.10) SM875 (4)		2017	Kilgore Flares / Toone, TN	C / IDIQ	NAVSUP WSS	Aug 2017	May 2019	126,633	24.48	Y		Feb 2017
2.10) SM875 (4)		2018	Kilgore Flares / Toone, TN	C / IDIQ	NAVSUP WSS	Jan 2018	Oct 2019	68,100	23.95	Y		Feb 2017
2.10) SM875 (4)	✓	2018	Kilgore Flares / Toone, TN	C / IDIQ	NAVSUP WSS	Jan 2018	Oct 2019	195,114	23.95	Y		Feb 2017
2.10) SM875 (4)	✓	2019	Kilgore Flares / Toone, TN	C / IDIQ	NAVSUP WSS	Jan 2019	Oct 2020	250,738	23.71	Y		Feb 2017
2.10) SM875 (4)	✓	2020	Kilgore Flares / Toone, TN	C / IDIQ	NAVSUP WSS	Jan 2020	Oct 2021	103,429	25.46	Y		Feb 2017
3) IMPULSE CARTRIDGES												
3.1) CCU-136		2018	Capco Inc. / Grand Junction, CO	C / IDIQ	NAVSUP WSS	Apr 2018	Sep 2018	367,200	3.79	Y		Jun 2017
3.1) CCU-136	✓	2019	Capco Inc. / Grand Junction, CO	C / IDIQ	NAVSUP WSS	Jan 2019	Sep 2019	1,555,200	3.86	Y		Jun 2017
3.1) CCU-136	✓	2020	Capco Inc. / Grand Junction, CO	C / IDIQ	NAVSUP WSS	Jan 2020	Sep 2020	311,900	3.93	Y		Jun 2017
4) CHAFF COUNTERMEASURES												
4.2) RR-144 (5)		2018	Armtec Defense, Inc. / Lillington, NC	C / IDIQ	NAVSUP WSS	Jun 2018	Oct 2018	91,984	16.28	Y		Feb 2017
4.2) RR-144 (5)		2019	Armtec Defense, Inc. / Lillington, NC	C / IDIQ	NAVSUP WSS	Dec 2018	Apr 2019	85,688	16.28	Y		Feb 2017
4.2) RR-144 (5)	✓	2019	Armtec Defense, Inc. / Lillington, NC	C / IDIQ	NAVSUP WSS	Dec 2018	Apr 2019	419,227	16.28	Y		Feb 2017
4.2) RR-144 (5)	✓	2020	Armtec Defense, Inc. / Lillington, NC	C / IDIQ	NAVSUP WSS	Feb 2020	Jun 2020	130,602	16.60	Y		Feb 2017
5) F-35 COUNTERMEASURES												
5.1) ALE-70 (6)(†)		2017	BAE Systems / Nashua, NH	SS / BOA	NAVSUP WSS	Nov 2017	Oct 2019	74	55,310.81	Y		Aug 2016
5.1) ALE-70 (6)(†)		2018 (23)	BAE Systems / Nashua, NH	SS / BOA	NAVSUP WSS	Aug 2018	Aug 2020	252	54,239.24	Y		Dec 2017

Exhibit P-5a, Procurement History and Planning: PB 2020 Navy		Date: March 2019
Appropriation / Budget Activity / Budget Sub Activity: 1508N / 01 / 1	P-1 Line Item Number / Title: 0182 / Air Expendable Countermeasures	Aggregated Items: Air Expendable Countermeasures (1)

Item Number / Title [DODIC]	OCO	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
5.1) ALE-70 (6)(†)		2019 (24)	BAE Systems / Nashua, NH	SS / FFP	NAVAIR	Mar 2019	Mar 2021	264	55,269.78	Y		Mar 2018
5.1) ALE-70 (6)(†)	✓	2020	BAE Systems / Nashua, NH	SS / FFP	NAVAIR	Mar 2020	Mar 2022	272	56,375.17	Y		Mar 2018
5.2) MJU-68 (7)(†)		2017	BAE Systems / Nashua, NH	SS / BOA	NAVSUP WSS	Sep 2017	Dec 2018	3,042	2,223.00	Y		Jan 2017
5.2) MJU-68 (7)(†)		2018 (25)	Chemring Australia (26) / Lara, AU	SS / FFP	NAVAIR	Jun 2019	Mar 2020	2,934	2,263.01	Y		Jan 2019
5.2) MJU-68 (7)(†)		2019	Chemring Australia (26) / Lara, AU	SS / FFP	NAVAIR	Jun 2019	Mar 2020	2,886	2,306.00	Y		Jan 2019
5.2) MJU-68 (7)(†)	✓	2020	Chemring Australia (26) / Lara, AU	SS / FFP	NAVAIR	Jun 2020	Mar 2021	8,751	2,349.82	Y		Jan 2019

(†) indicates the presence of a P-21

Footnotes:

(11) MJU-32 FY 2020, competitive award will determine vendor and production rate.

(12) MJU-57 FY 2017 production interrupted due to higher priority workload. The first article test build to resume production is scheduled for October 2019.

(13) MJU-57 FY 2019 Program delay awaiting first article test build.

(14) MJU-61 FY 2018 OCO contract award moved from June 2018 to September 2018 due to delay in Business Clearance.

(15) MJU-61 FY 2018 contract was multiple award to Armtec Countermeasures Co. and Kilgore Flares Company, LLC. FY 2020 MSR will be met due to anticipated combined procurements with other services.

(16) MJU-64 FY 2013 date of first delivery reflects lot acceptance test failure. Deliveries began in November 2017. Lot acceptance test failure resulted in break in production, final delivery expected April 2019.

(17) MJU-64 FY 2014 date of first delivery reflects lot acceptance test failure. Deliveries began in November 2017. Lot acceptance test failure resulted in break in production, final delivery expected October 2019.

(18) MJU-64 FY 2014 OCO date of first delivery reflects lot acceptance test failure. Deliveries began in November 2017. Lot acceptance test failure resulted in break in production, final delivery expected June 2019.

(19) MJU-67 FY 2017 OCO new contract vehicle using a new organic production line at Crane Army Ammunition Activity (CAAA) to reduce unit cost. Deliveries begin April 2019 due to required first article testing.

(20) MJU-67 FY 2017 contract award delayed to August 2018 due to late DCAA audit of foreign supplier. FY 2017 new contract vehicle using a new organic production line at Crane Army Ammunition Activity (CAAA) to reduce unit cost. Deliveries begin April 2019 due to required first article testing.

(21) MJU-67 FY 2018 order on a BOA to existing manufacturer and production continued from a previous order resulted in deliveries beginning prior to FY 2017 funded deliveries.

(22) MJU-67 FY 2018 OCO order on a BOA to existing manufacturer and production continued from a previous order resulted in deliveries beginning prior to FY 2017 funded deliveries.

(23) ALE-70 FY 2018 contract award delayed until August 2018 due to delayed receipt of certified pricing.

(24) ALE-70 FY 2019 award date changed based on request from contractor for additional time to respond to proposal for 5 year production contract.

(25) MJU-68 FY 2018 contract strategy changed to move FY18 quantities to pending NAVAIR contract with second source Chemring, Australia. Strategy change implemented in order to increase overall through put to meet Navy F-35C IOC requirements.

(26) MJU-68 FY 2019 annual production rates TBD pending contract award.

Exhibit P-21, Production Schedule: PB 2020 Navy		Date: March 2019
Appropriation / Budget Activity / Budget Sub Activity: 1508N / 01 / 1	**P-1 Line Item Number / Title:** 0182 / Air Expendable Countermeasures	**Aggregated Items:** Air Expendable Countermeasures (1)

Items (Units in Thousands)							Fiscal Year 2015												Fiscal Year 2016												BALANCE
										Calendar Year 2015												Calendar Year 2016									
OCO	MFR #	FY	SERVICE	PROC QTY	ACCEPT PRIOR TO 1 OCT 2014	BAL DUE AS OF 1 OCT	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) ACTIVE JAMMERS																															
1.2) ALE-55 (FOTD) (2)																															
Prior Years Deliveries: 2248																															
	6	2018	NAVY	.303	.000	.303																									.303
	6	2019	NAVY	.329	.000	.329																									.329
✓	6	2020	NAVY	.195	.000	.195																									.195
2) IR DECOYS																															
2.6) MJU-61 (3)																															
Prior Years Deliveries: 77743																															
	7	2017	NAVY	32.585 (27)	.000	32.585																									32.585
✓	8	2018	NAVY	25.959	.000	25.959																									25.959
	8	2019	NAVY	29.243	.000	29.243																									29.243
✓	8	2019	NAVY	28.063	.000	28.063																									28.063
✓	8	2020	NAVY	79.168	.000	79.168																									79.168
2.9) MJU-67																															
Prior Years Deliveries: 26327																															
	11	2017	NAVY	12.193	.000	12.193																									12.193
✓	10	2017	NAVY	16.690	.000	16.690																									16.690
	9	2018	NAVY	10.746	.000	10.746																									10.746
✓	9	2018	NAVY	18.924	.000	18.924																									18.924
	10	2019	NAVY	20.711	.000	20.711																									20.711
✓	10	2019	NAVY	28.202	.000	28.202																									28.202
✓	10	2020	NAVY	19.574	.000	19.574																									19.574
5) F-35 COUNTERMEASURES																															
5.1) ALE-70 (6)																															
Prior Years Deliveries: 592																															
	12	2017	NAVY	.074	.000	.074																									.074
	12	2017	AF (‡)	.496	.000	.496																									.496
	12	**2017**	**Total**	**.570**	**.000**	**.570**																									**.570**
	12	2018	NAVY	.252	.000	.252																									.252
	12	2018	AF (‡)	.615	.000	.615																									.615
							OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	

Exhibit P-21, Production Schedule: PB 2020 Navy		**Date:** March 2019
Appropriation / Budget Activity / Budget Sub Activity: 1508N / 01 / 1	**P-1 Line Item Number / Title:** 0182 / Air Expendable Countermeasures	**Aggregated Items:** Air Expendable Countermeasures (1)

Items (Units in Thousands)							Fiscal Year 2015												Fiscal Year 2016												BALANCE
										Calendar Year 2015												Calendar Year 2016									
OCO	MFR #	FY	SERVICE	PROC QTY	ACCEPT PRIOR TO 1 OCT 2014	BAL DUE AS OF 1 OCT	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	
	12	**2018**	**Total**	**.867**	**.000**	**.867**																									**.867**
	12	2019	NAVY	.264	.000	.264																									.264
	12	2019	AF (‡)	.696	.000	.696																									.696
	12	**2019**	**Total**	**.960**	**.000**	**.960**																									**.960**
✓	12	2020	NAVY	.272	.000	.272																									.272
✓	12	2020	AF (‡)	.744	.000	.744																									.744
✓	**12**	**2020**	**Total OCO**	**1.016**	**.000**	**1.016**																									**1.016**
5.2) MJU-68 (7)																															
Prior Years Deliveries: 6474																															
	13	2017	NAVY	3.042	.000	3.042																									3.042
	13	2017	AF (‡)	14.639	.000	14.639																									14.639
	13	**2017**	**Total**	**17.681**	**.000**	**17.681**																									**17.681**
	14	2018	NAVY	2.934	.000	2.934																									2.934
	14	2018	AF (‡)	4.272	.000	4.272																									4.272
	14	**2018**	**Total**	**7.206**	**.000**	**7.206**																									**7.206**
	14	2019	NAVY	2.886	.000	2.886																									2.886
	14	2019	AF (‡)	7.814	.000	7.814																									7.814
	14	**2019**	**Total**	**10.700**	**.000**	**10.700**																									**10.700**
✓	14	2020	NAVY	8.751	.000	8.751																									8.751
✓	14	2020	AF (‡)	7.814	.000	7.814																									7.814
✓	**14**	**2020**	**Total OCO**	**16.565**	**.000**	**16.565**																									**16.565**
							OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	

Exhibit P-21, Production Schedule: PB 2020 Navy | **Date:** March 2019

Appropriation / Budget Activity / Budget Sub Activity: 1508N / 01 / 1

P-1 Line Item Number / Title: 0182 / Air Expendable Countermeasures

Aggregated Items: Air Expendable Countermeasures (1)

Items (Units in Thousands)							Fiscal Year 2017												Fiscal Year 2018												BALANCE
										Calendar Year 2017												Calendar Year 2018									
OCO	MFR #	FY	SERVICE	PROC QTY	ACCEPT PRIOR TO 1 OCT 2016	BAL DUE AS OF 1 OCT	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) ACTIVE JAMMERS																															
1.2) ALE-55 (FOTD) (2)																															
Prior Years Deliveries: 2248																															
	6	2018	NAVY	.303	.000	.303														A -	-	-	-	-	-	-	-	-	-	-	.303
	6	2019	NAVY	.329	.000	.329																									.329
✓	6	2020	NAVY	.195	.000	.195																									.195
2) IR DECOYS																															
2.6) MJU-61 (3)																															
Prior Years Deliveries: 77743																															
	7	2017	NAVY	32.585 (27)	.000	32.585				A -	-	-	-	-	-	-	2.716	2.716	2.716	2.716	2.716	2.715	2.715	2.715	2.715	2.715	-	-	-	-	5.430
✓	8	2018	NAVY	25.959	.000	25.959																								A -	25.959
	8	2019	NAVY	29.243	.000	29.243																									29.243
✓	8	2019	NAVY	28.063	.000	28.063																									28.063
✓	8	2020	NAVY	79.168	.000	79.168																									79.168
2.9) MJU-67																															
Prior Years Deliveries: 26327																															
	11	2017	NAVY	12.193	.000	12.193																							A -	-	12.193
✓	10	2017	NAVY	16.690	.000	16.690															A -	-	-	-	-	-	-	-	-	-	16.690
	9	2018	NAVY	10.746	.000	10.746																A -	-	-	.896	.896	.896	.896	.896	.896	5.370
✓	9	2018	NAVY	18.924	.000	18.924																					A -	-	-	1.577	17.347
	10	2019	NAVY	20.711	.000	20.711																									20.711
✓	10	2019	NAVY	28.202	.000	28.202																									28.202
✓	10	2020	NAVY	19.574	.000	19.574																									19.574
5) F-35 COUNTERMEASURES																															
5.1) ALE-70 (6)																															
Prior Years Deliveries: 592																															
	12	2017	NAVY	.074	.000	.074														A -	-	-	-	-	-	-	-	-	-	-	.074
	12	2017	AF (‡)	.496	.000	.496														A -	-	-	-	-	-	-	-	-	-	-	.496
	12	**2017**	**Total**	**.570**	**.000**	**.570**														**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**.570**
	12	2018	NAVY	.252	.000	.252																							A -	-	.252
	12	2018	AF (‡)	.615	.000	.615																							A -	-	.615
							OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	

Exhibit P-21, Production Schedule: PB 2020 Navy		Date: March 2019
Appropriation / Budget Activity / Budget Sub Activity: 1508N / 01 / 1	**P-1 Line Item Number / Title:** 0182 / Air Expendable Countermeasures	**Aggregated Items:** Air Expendable Countermeasures (1)

Items (Units in Thousands)							Fiscal Year 2017												Fiscal Year 2018												BALANCE
										Calendar Year 2017												Calendar Year 2018									
OCO	MFR #	FY	SERVICE	PROC QTY	ACCEPT PRIOR TO 1 OCT 2016	BAL DUE AS OF 1 OCT	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	
	12	**2018**	**Total**	**.867**	**.000**	**.867**																							**-**	**-**	**.867**
	12	2019	NAVY	.264	.000	.264																									.264
	12	2019	AF (‡)	.696	.000	.696																									.696
	12	**2019**	**Total**	**.960**	**.000**	**.960**																									**.960**
✓	12	2020	NAVY	.272	.000	.272																									.272
✓	12	2020	AF (‡)	.744	.000	.744																									.744
✓	**12**	**2020**	**Total OCO**	**1.016**	**.000**	**1.016**																									**1.016**
5.2) MJU-68 (7)																															
Prior Years Deliveries: 6474																															
	13	2017	NAVY	3.042	.000	3.042												A -	-	-	-	-	-	-	-	-	-	-	-	-	3.042
	13	2017	AF (‡)	14.639	.000	14.639												A -	-	-	-	-	-	-	-	-	-	-	-	-	14.639
	13	**2017**	**Total**	**17.681**	**.000**	**17.681**												**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**17.681**
	14	2018	NAVY	2.934	.000	2.934																									2.934
	14	2018	AF (‡)	4.272	.000	4.272																									4.272
	14	**2018**	**Total**	**7.206**	**.000**	**7.206**																									**7.206**
	14	2019	NAVY	2.886	.000	2.886																									2.886
	14	2019	AF (‡)	7.814	.000	7.814																									7.814
	14	**2019**	**Total**	**10.700**	**.000**	**10.700**																									**10.700**
✓	14	2020	NAVY	8.751	.000	8.751																									8.751
✓	14	2020	AF (‡)	7.814	.000	7.814																									7.814
✓	**14**	**2020**	**Total OCO**	**16.565**	**.000**	**16.565**																									**16.565**
							OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	

Exhibit P-21, Production Schedule: PB 2020 Navy | **Date:** March 2019

Appropriation / Budget Activity / Budget Sub Activity: 1508N / 01 / 1

P-1 Line Item Number / Title: 0182 / Air Expendable Countermeasures

Aggregated Items: Air Expendable Countermeasures (1)

Items (Units in Thousands)							Fiscal Year 2019												Fiscal Year 2020												BALANCE
										Calendar Year 2019												Calendar Year 2020									
OCO	MFR #	FY	SERVICE	PROC QTY	ACCEPT PRIOR TO 1 OCT 2018	BAL DUE AS OF 1 OCT	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) ACTIVE JAMMERS																															
1.2) ALE-55 (FOTD) (2)																															
Prior Years Deliveries: 2248																															
	6	2018	NAVY	.303	.000	.303	-	-	.026	.026	.026	.025	.025	.025	.025	.025	.025	.025	.025	.025											.000
	6	2019	NAVY	.329	.000	.329			A -	-	-	-	-	-	-	-	-	-	-	-	.021	.021	.021	.021	.021	.021	.021	.021	.038	.041	.082
✓	6	2020	NAVY	.195	.000	.195														A -	-	-	-	-	-	-	-	-	-	-	.195
2) IR DECOYS																															
2.6) MJU-61 (3)																															
Prior Years Deliveries: 77743																															
	7	2017	NAVY	32.585 (27)	27.155	5.430	-	-	-	-	2.715	2.715																			.000
✓	8	2018	NAVY	25.959	.000	25.959	-	-	-	-	-	-	-	-	-	2.164	2.164	2.164	2.163	2.163	2.163	2.163	2.163	2.163	2.163	2.163	2.163				.000
	8	2019	NAVY	29.243	.000	29.243						A -	-	-	-	-	-	-	-	2.437	2.437	2.437	2.437	2.437	2.437	2.437	2.437	2.437	2.437	2.437	2.436
✓	8	2019	NAVY	28.063	.000	28.063						A -	-	-	-	-	-	-	-	2.339	2.339	2.339	2.339	2.339	2.339	2.339	2.338	2.338	2.338	2.338	2.338
✓	8	2020	NAVY	79.168	.000	79.168																		A -	-	-	-	-	-	-	79.168
2.9) MJU-67																															
Prior Years Deliveries: 26327																															
	11	2017	NAVY	12.193	.000	12.193	-	-	-	-	-	-	1.017	1.016	1.016	1.016	1.016	1.016	1.016	1.016	1.016	1.016	1.016	1.016							.000
✓	10	2017	NAVY	16.690	.000	16.690	-	-	-	-	-	-	1.391	1.391	1.391	1.391	1.391	1.391	1.391	1.391	1.391	1.391	1.390	1.390							.000
	9	2018	NAVY	10.746	5.376	5.370	.895	.895	.895	.895	.895	.895																			.000
✓	9	2018	NAVY	18.924	1.577	17.347	1.577	1.577	1.577	1.577	1.577	1.577	1.577	1.577	1.577	1.577	1.577														.000
	10	2019	NAVY	20.711	.000	20.711							A -	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1.726	1.726	17.259
✓	10	2019	NAVY	28.202	.000	28.202							A -	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2.350	2.350	23.502
✓	10	2020	NAVY	19.574	.000	19.574																			A -	-	-	-	-	-	19.574
5) F-35 COUNTERMEASURES																															
5.1) ALE-70 (6)																															
Prior Years Deliveries: 592																															
	12	2017	NAVY	.074	.000	.074	-	-	-	-	-	-	-	-	-	-	-	-	.040	.034	-	-	-	-	-	-					.000
	12	2017	AF (‡)	.496	.000	.496	-	-	-	-	-	-	-	-	-	-	-	-	-	-	.083	.083	.083	.083	.082	.082					.000
	12	**2017**	**Total**	**.570**	**.000**	**.570**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**.040**	**.034**	**.083**	**.083**	**.083**	**.083**	**.082**	**.082**	**-**	**-**	**-**	**-**	**.000**
	12	2018	NAVY	.252	.000	.252	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	.040	.040	.172
	12	2018	AF (‡)	.615	.000	.615	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	.016	.040	.559
							OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	

Exhibit P-21, Production Schedule: PB 2020 Navy | **Date:** March 2019

Appropriation / Budget Activity / Budget Sub Activity: 1508N / 01 / 1

P-1 Line Item Number / Title: 0182 / Air Expendable Countermeasures

Aggregated Items: Air Expendable Countermeasures (1)

Items (Units in Thousands)							Fiscal Year 2019												Fiscal Year 2020												BALANCE
										Calendar Year 2019												Calendar Year 2020									
OCO	MFR #	FY	SERVICE	PROC QTY	ACCEPT PRIOR TO 1 OCT 2018	BAL DUE AS OF 1 OCT	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	
	12	**2018**	**Total**	**.867**	**.000**	**.867**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**.056**	**.080**	**.731**
	12	2019	NAVY	.264	.000	.264						A -	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	.264
	12	2019	AF (‡)	.696	.000	.696						A -	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	.696
	12	**2019**	**Total**	**.960**	**.000**	**.960**						**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**.960**
✓	12	2020	NAVY	.272	.000	.272																		A -	-	-	-	-	-	.272
✓	12	2020	AF (‡)	.744	.000	.744																		A -	-	-	-	-	-	.744
✓	**12**	**2020**	**Total OCO**	**1.016**	**.000**	**1.016**																		**-**	**-**	**-**	**-**	**-**	**-**	**1.016**
5.2) MJU-68 (7)																															
Prior Years Deliveries: 6474																															
	13	2017	NAVY	3.042	.000	3.042	-	-	.254	.254	.254	.254	.254	.254	.253	.253	.253	.253	.253	.253											.000
	13	2017	AF (‡)	14.639	.000	14.639	-	-	1.220	1.220	1.220	1.220	1.220	1.220	1.220	1.220	1.220	1.220	1.220	1.219											.000
	13	**2017**	**Total**	**17.681**	**.000**	**17.681**	**-**	**-**	**1.474**	**1.474**	**1.474**	**1.474**	**1.474**	**1.474**	**1.473**	**1.473**	**1.473**	**1.473**	**1.473**	**1.472**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**.000**
	14	2018	NAVY	2.934	.000	2.934									A -	-	-	-	-	-	-	-	-	.245	.245	.245	.245	.245	.245	.244	1.220
	14	2018	AF (‡)	4.272	.000	4.272									A -	-	-	-	-	-	-	-	-	.356	.356	.356	.356	.356	.356	.356	1.780
	14	**2018**	**Total**	**7.206**	**.000**	**7.206**									**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**.601**	**.601**	**.601**	**.601**	**.601**	**.601**	**.600**	**3.000**
	14	2019	NAVY	2.886	.000	2.886									A -	-	-	-	-	-	-	-	-	.241	.241	.241	.241	.241	.241	.240	1.200
	14	2019	AF (‡)	7.814	.000	7.814									A -	-	-	-	-	-	-	-	-	.652	.652	.651	.651	.651	.651	.651	3.255
	14	**2019**	**Total**	**10.700**	**.000**	**10.700**									**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**.893**	**.893**	**.892**	**.892**	**.892**	**.892**	**.891**	**4.455**
✓	14	2020	NAVY	8.751	.000	8.751																					A -	-	-	-	8.751
✓	14	2020	AF (‡)	7.814	.000	7.814																					A -	-	-	-	7.814
✓	**14**	**2020**	**Total OCO**	**16.565**	**.000**	**16.565**																					**-**	**-**	**-**	**-**	**16.565**
							OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	

Exhibit P-21, Production Schedule: PB 2020 Navy | **Date:** March 2019

Appropriation / Budget Activity / Budget Sub Activity: 1508N / 01 / 1

P-1 Line Item Number / Title: 0182 / Air Expendable Countermeasures

Aggregated Items: Air Expendable Countermeasures (1)

Items (Units in Thousands)							Fiscal Year 2021												Fiscal Year 2022												BALANCE
										Calendar Year 2021												Calendar Year 2022									
OCO	MFR #	FY	SERVICE	PROC QTY	ACCEPT PRIOR TO 1 OCT 2020	BAL DUE AS OF 1 OCT	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) ACTIVE JAMMERS																															
1.2) ALE-55 (FOTD) (2)																															
Prior Years Deliveries: 2248																															
	6	2018	NAVY	.303	.303	.000																									.000
	6	2019	NAVY	.329	.247	.082	.041	.041																							.000
✓	6	2020	NAVY	.195	.000	.195	-	-	.017	.017	.017	.016	.016	.016	.016	.016	.016	.016	.016	.016											.000
2) IR DECOYS																															
2.6) MJU-61 (3)																															
Prior Years Deliveries: 77743																															
	7	2017	NAVY	32.585 (27)	32.585	.000																									.000
✓	8	2018	NAVY	25.959	25.959	.000																									.000
	8	2019	NAVY	29.243	26.807	2.436	2.436																								.000
✓	8	2019	NAVY	28.063	25.725	2.338	2.338																								.000
✓	8	2020	NAVY	79.168	.000	79.168	-	6.597	6.597	6.597	6.597	6.597	6.597	6.597	6.597	6.598	6.598	6.598	6.598												.000
2.9) MJU-67																															
Prior Years Deliveries: 26327																															
	11	2017	NAVY	12.193	12.193	.000																									.000
✓	10	2017	NAVY	16.690	16.690	.000																									.000
	9	2018	NAVY	10.746	10.746	.000																									.000
✓	9	2018	NAVY	18.924	18.924	.000																									.000
	10	2019	NAVY	20.711	3.452	17.259	1.726	1.726	1.726	1.726	1.726	1.726	1.726	1.726	1.726	1.725															.000
✓	10	2019	NAVY	28.202	4.700	23.502	2.350	2.350	2.350	2.350	2.350	2.350	2.350	2.350	2.351	2.351															.000
✓	10	2020	NAVY	19.574	.000	19.574	-	-	-	-	-	-	-	-	-	-	1.632	1.632	1.631	1.631	1.631	1.631	1.631	1.631	1.631	1.631	1.631	1.631			.000
5) F-35 COUNTERMEASURES																															
5.1) ALE-70 (6)																															
Prior Years Deliveries: 592																															
	12	2017	NAVY	.074	.074	.000																									.000
	12	2017	AF (‡)	.496	.496	.000																									.000
	12	**2017**	**Total**	**.570**	**.570**	**.000**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**.000**
	12	2018	NAVY	.252	.080	.172	.040	.024	.025	.025	.025	.025	.008	-	-	-															.000
	12	2018	AF (‡)	.615	.056	.559	.040	.056	.055	.055	.055	.055	.060	.061	.061	.061															.000
							OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	

Exhibit P-21, Production Schedule: PB 2020 Navy | **Date:** March 2019

Appropriation / Budget Activity / Budget Sub Activity: 1508N / 01 / 1

P-1 Line Item Number / Title: 0182 / Air Expendable Countermeasures

Aggregated Items: Air Expendable Countermeasures (1)

Items (Units in Thousands)							Fiscal Year 2021												Fiscal Year 2022												BALANCE
										Calendar Year 2021												Calendar Year 2022									
OCO	MFR #	FY	SERVICE	PROC QTY	ACCEPT PRIOR TO 1 OCT 2020	BAL DUE AS OF 1 OCT	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	
	12	**2018**	**Total**	**.867**	**.136**	**.731**	**.080**	**.080**	**.080**	**.080**	**.080**	**.080**	**.068**	**.061**	**.061**	**.061**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**.000**
	12	2019	NAVY	.264	.000	.264	-	-	-	-	-	.022	.022	.022	.022	.022	.022	.022	.022	.022	.022	.022	.022								.000
	12	2019	AF (‡)	.696	.000	.696	-	-	-	-	-	.034	.034	.034	.042	.042	.075	.075	.072	.072	.072	.072	.072								.000
	12	**2019**	**Total**	**.960**	**.000**	**.960**	**-**	**-**	**-**	**-**	**-**	**.056**	**.056**	**.056**	**.064**	**.064**	**.097**	**.097**	**.094**	**.094**	**.094**	**.094**	**.094**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**.000**
✓	12	2020	NAVY	.272	.000	.272	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	.023	.023	.023	.023	.023	.023	.023	.111
✓	12	2020	AF (‡)	.744	.000	.744	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	.062	.062	.062	.062	.062	.062	.062	.310
✓	**12**	**2020**	**Total OCO**	**1.016**	**.000**	**1.016**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**.085**	**.085**	**.085**	**.085**	**.085**	**.085**	**.085**	**.421**
	5.2) MJU-68 (7)																														
	Prior Years Deliveries: 6474																														
	13	2017	NAVY	3.042	3.042	.000																									.000
	13	2017	AF (‡)	14.639	14.639	.000																									.000
	13	**2017**	**Total**	**17.681**	**17.681**	**.000**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**.000**
	14	2018	NAVY	2.934	1.714	1.220	.244	.244	.244	.244	.244																				.000
	14	2018	AF (‡)	4.272	2.492	1.780	.356	.356	.356	.356	.356																				.000
	14	**2018**	**Total**	**7.206**	**4.206**	**3.000**	**.600**	**.600**	**.600**	**.600**	**.600**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**.000**
	14	2019	NAVY	2.886	1.686	1.200	.240	.240	.240	.240	.240																				.000
	14	2019	AF (‡)	7.814	4.559	3.255	.651	.651	.651	.651	.651																				.000
	14	**2019**	**Total**	**10.700**	**6.245**	**4.455**	**.891**	**.891**	**.891**	**.891**	**.891**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**.000**
✓	14	2020	NAVY	8.751	.000	8.751	-	-	-	-	-	.730	.730	.730	.729	.729	.729	.729	.729	.729	.729	.729	.729								.000
✓	14	2020	AF (‡)	7.814	.000	7.814	-	-	-	-	-	.652	.652	.651	.651	.651	.651	.651	.651	.651	.651	.651	.651								.000
✓	**14**	**2020**	**Total OCO**	**16.565**	**.000**	**16.565**	**-**	**-**	**-**	**-**	**-**	**1.382**	**1.382**	**1.381**	**1.380**	**1.380**	**1.380**	**1.380**	**1.380**	**1.380**	**1.380**	**1.380**	**1.380**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**.000**
							OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	

Exhibit P-21, Production Schedule: PB 2020 Navy		Date: March 2019
Appropriation / Budget Activity / Budget Sub Activity: 1508N / 01 / 1	**P-1 Line Item Number / Title:** 0182 / Air Expendable Countermeasures	**Aggregated Items:** Air Expendable Countermeasures (1)

Items (Units in Thousands)							Fiscal Year 2023												Fiscal Year 2024												BALANCE
										Calendar Year 2023												Calendar Year 2024									
OCO	MFR #	FY	SERVICE	PROC QTY	ACCEPT PRIOR TO 1 OCT 2022	BAL DUE AS OF 1 OCT	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) ACTIVE JAMMERS																															
1.2) ALE-55 (FOTD) (2)																															
Prior Years Deliveries: 2248																															
	6	2018	NAVY	.303	.303	.000																									.000
	6	2019	NAVY	.329	.329	.000																									.000
✓	6	2020	NAVY	.195	.195	.000																									.000
2) IR DECOYS																															
2.6) MJU-61 (3)																															
Prior Years Deliveries: 77743																															
	7	2017	NAVY	32.585 (27)	32.585	.000																									.000
✓	8	2018	NAVY	25.959	25.959	.000																									.000
	8	2019	NAVY	29.243	29.243	.000																									.000
✓	8	2019	NAVY	28.063	28.063	.000																									.000
✓	8	2020	NAVY	79.168	79.168	.000																									.000
2.9) MJU-67																															
Prior Years Deliveries: 26327																															
	11	2017	NAVY	12.193	12.193	.000																									.000
✓	10	2017	NAVY	16.690	16.690	.000																									.000
	9	2018	NAVY	10.746	10.746	.000																									.000
✓	9	2018	NAVY	18.924	18.924	.000																									.000
	10	2019	NAVY	20.711	20.711	.000																									.000
✓	10	2019	NAVY	28.202	28.202	.000																									.000
✓	10	2020	NAVY	19.574	19.574	.000																									.000
5) F-35 COUNTERMEASURES																															
5.1) ALE-70 (6)																															
Prior Years Deliveries: 592																															
	12	2017	NAVY	.074	.074	.000																									.000
	12	2017	AF (‡)	.496	.496	.000																									.000
	12	**2017**	**Total**	**.570**	**.570**	**.000**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	**.000**
	12	2018	NAVY	.252	.252	.000																									.000
	12	2018	AF (‡)	.615	.615	.000																									.000
							OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	

Exhibit P-21, Production Schedule: PB 2020 Navy | **Date:** March 2019

Appropriation / Budget Activity / Budget Sub Activity: 1508N / 01 / 1

P-1 Line Item Number / Title: 0182 / Air Expendable Countermeasures

Aggregated Items: Air Expendable Countermeasures (1)

Items (Units in Thousands)							Fiscal Year 2023												Fiscal Year 2024												BALANCE
										Calendar Year 2023												Calendar Year 2024									
OCO	MFR #	FY	SERVICE	PROC QTY	ACCEPT PRIOR TO 1 OCT 2022	BAL DUE AS OF 1 OCT	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	
	12	**2018**	**Total**	**.867**	**.867**	**.000**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	**.000**
	12	2019	NAVY	.264	.264	.000																									.000
	12	2019	AF (‡)	.696	.696	.000																									.000
	12	**2019**	**Total**	**.960**	**.960**	**.000**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	**.000**
✓	12	2020	NAVY	.272	.161	.111	.023	.022	.022	.022	.022																				.000
✓	12	2020	AF (‡)	.744	.434	.310	.062	.062	.062	.062	.062																				.000
✓	**12**	**2020**	**Total OCO**	**1.016**	**.595**	**.421**	**.085**	**.084**	**.084**	**.084**	**.084**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	**.000**
	5.2) MJU-68 (7)																														
	Prior Years Deliveries: 6474																														
	13	2017	NAVY	3.042	3.042	.000																									.000
	13	2017	AF (‡)	14.639	14.639	.000																									.000
	13	**2017**	**Total**	**17.681**	**17.681**	**.000**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	**.000**
	14	2018	NAVY	2.934	2.934	.000																									.000
	14	2018	AF (‡)	4.272	4.272	.000																									.000
	14	**2018**	**Total**	**7.206**	**7.206**	**.000**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	**.000**
	14	2019	NAVY	2.886	2.886	.000																									.000
	14	2019	AF (‡)	7.814	7.814	.000																									.000
	14	**2019**	**Total**	**10.700**	**10.700**	**.000**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	**.000**
✓	14	2020	NAVY	8.751	8.751	.000																									.000
✓	14	2020	AF (‡)	7.814	7.814	.000																									.000
✓	**14**	**2020**	**Total OCO**	**16.565**	**16.565**	**.000**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	**.000**
							OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	

Exhibit P-21, Production Schedule: PB 2020 Navy		Date: March 2019
Appropriation / Budget Activity / Budget Sub Activity: 1508N / 01 / 1	**P-1 Line Item Number / Title:** 0182 / Air Expendable Countermeasures	**Aggregated Items:** Air Expendable Countermeasures (1)

MFR Ref #	Manufacturer Name - Location	Production Rates (Each / Year)			Procurement Leadtime (Months)							
					Initial				Reorder			
		MSR For 2020	1-8-5 For 2020	MAX For 2020	ALT Prior to Oct 1	ALT After Oct 1	Manufacturing PLT	Total After Oct 1	ALT Prior to Oct 1	ALT After Oct 1	Manufacturing PLT	Total After Oct 1
1	BAE Systems - Nashua, NH	192	360	600	0	2	13	15	0	3	13	16
2	Crane Army Ammunition Activity - Crane, IN	12,000	86,400	129,000	0	0	0	0	0	4	7	11
3	Armtec Countermeasures Co./Kilgore Flares Company, LLC (15) - Camden AR/Toone TN	100,800	201,600	342,000	0	12	10	22	0	6	8	14
4	Esterline Defense Technologies - Camden, AR	5,000	20,000	35,000	0	0	0	0	0	4	3	7
5	Crane Army Ammunition Activity - Crane, IN	5,000	30,000	55,000	0	15	16	31	0	7	16	23
6	IMI Systems Ltd - Israel	4,600	60,000	72,000	0	11	8	19	0	0	0	0
7	BAE Systems - Nashua, NH	120	1,200	1,440	0	6	24	30	0	6	24	30
8	BAE Systems - Nashua, NH	1,000	12,000	30,000	0	12	15	27	0	12	15	27
9	Chemring Australia (26) - Lara, AU			TBD	0	9	9	18	0	9	9	18

(‡) 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:
(15) MJU-61 FY 2018 contract was multiple award to Armtec Countermeasures Co. and Kilgore Flares Company, LLC. FY 2020 MSR will be met due to anticipated combined procurements with other services.
(26) MJU-68 FY 2019 annual production rates TBD pending contract award.
(27) MJU-61 FY 2017 organic production line is down awaiting igniter parts resulting in an 8-month break in deliveries.

Exhibit P-40, Budget Line Item Justification: PB 2020 Navy	Date: March 2019
Appropriation / Budget Activity / Budget Sub Activity: 1508N: Procurement of Ammo, Navy & MC / BA 01: Proc Ammo, Navy / BSA 1: Navy Ammunition	**P-1 Line Item Number / Title:** 0194 / Jet Assisted Take Off (JATOs)

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

Line Item MDAP/MAIS Code: N/A

Resource Summary	Prior Years	FY 2018	FY 2019	FY 2020 Base	FY 2020 OCO	FY 2020 Total	FY 2021	FY 2022	FY 2023	FY 2024	To Complete	Total
Procurement Quantity *(Units in Each)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost *($ in Millions)*	67.252	3.435	3.654	0.000	7.262	7.262	6.645	6.716	7.173	7.334	Continuing	Continuing
Less PY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) *($ in Millions)*	67.252	3.435	3.654	0.000	7.262	7.262	6.645	6.716	7.173	7.334	Continuing	Continuing
Plus CY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority *($ in Millions)*	**67.252**	**3.435**	**3.654**	**0.000**	**7.262**	**7.262**	**6.645**	**6.716**	**7.173**	**7.334**	**Continuing**	**Continuing**
(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)*	-	-	-	-	-	-	-	-	-	-	-	-

Description:

FY 2020 funding totals include $0.0M for Base and $7.262M for Overseas Contingency Operations (OCO); of which $7.262M is realigned as part of the OCO for Base Requirements. FY 2020 OCO for Base Requirements is OCO funding for base budget requirements in support of the National Defense Strategy. The Budget requests these funds in OCO to comply with the base budget defense caps included in the Budget Control Act of 2011.

Jet Assisted Take Off (JATO) / Rocket Assisted Take Off (RATO) are solid propellant rocket motors used in matched pairs to launch subsonic aerial targets in support of fleet training wholeness initiative, and test and evaluation, in support of Acquisition Category (ACAT) programs.

RATO increases through the Future Years Defense Program (FYDP) are needed to support the BQM-177A fleet operational and joint exercise requirements. Funding and quantities are in accordance with the fleet needs/fielding and to maintain inventory levels for fleet training and qualification usage in support of Subsonic Aerial targets.

Exhibit P-40, Budget Line Item Justification: PB 2020 Navy	**Date:** March 2019
Appropriation / Budget Activity / Budget Sub Activity: 1508N: Procurement of Ammo, Navy & MC / BA 01: Proc Ammo, Navy / BSA 1: Navy Ammunition	**P-1 Line Item Number / Title:** 0194 / Jet Assisted Take Off (JATOs)

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 2018	FY 2019	FY 2020 Base	FY 2020 OCO	FY 2020 Total
Exhibit Type	Title*	Subexhibits	ID CD	MDAP/ MAIS Code	Quantity / Total Cost *(Each) I ($ M)*	Quantity / Total Cost *(Each) I ($ M)*	Quantity / Total Cost *(Each) I ($ M)*	Quantity / Total Cost *(Each) I ($ M)*	Quantity / Total Cost *(Each) I ($ M)*	Quantity / Total Cost *(Each) I ($ M)*
P-40a	Jet Assisted Take Off (JATOs)/Rocket Assisted Take Off (RATOs)	P-5a, P-21			- / 67.252	- / 3.435	- / 3.654	- / 0.000	- / 7.262	- / 7.262
P-40	**Total Gross/Weapon System Cost**				**- / 67.252**	**- / 3.435**	**- / 3.654**	**- / 0.000**	**- / 7.262**	**- / 7.262**

*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 2020 OCO for baseline funding is required to support the procurement of rocket motors in matched pairs to launch subsonic aerial targets. The increase in quantities are in accordance with the fleet needs/ fielding and to maintain inventory levels for fleet training and qualification usage in support of the Subsonic Aerial Targets. Additional baseline funding is required for production engineering support, integrated logistics support, safety, product improvement, quality assurance and acceptance testing to support both variants.

Exhibit P-40a, Budget Item Justification For Aggregated Items: PB 2020 Navy		Date: March 2019
Appropriation / Budget Activity / Budget Sub Activity: 1508N / 01 / 1	**P-1 Line Item Number / Title:** 0194 / Jet Assisted Take Off (JATOs)	**Aggregated Items Title:** Jet Assisted Take Off (JATOs)/Rocket Assisted Take Off (RATOs)

Item Number / Title [DODIC]	ID CD	MDAP/ MAIS Code	Prior Years			FY 2018			FY 2019			FY 2020 Base			FY 2020 OCO			FY 2020 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) JATO / RATO																				
1.1) Mk 85 RATO (1)(†)	A		-	-	-	12,212.75	178	2.174	12,457.00	200	2.491	-	-	0.000	12,706.14	420	5.337	12,706.14	420	5.337
1.2) Mk 117 MOD O ROCKET MOTORS (2)(†)	A		3,070.28	16,249	49.889	6,102.27	88	0.537	6,225.00	120	0.747	-	-	0.000	6,350.00	162	1.029	6,350.00	162	1.029
Subtotal: 1) JATO / RATO			**-**	**-**	***49.889***	**-**	**-**	***2.711***	**-**	**-**	***3.238***	**-**	**-**	***0.000***	**-**	**-**	***6.366***	**-**	**-**	***6.366***
2) Support																				
2.1) Production Support RATO (3)	A		-	-	-	-	-	0.424	-	-	0.231	-	-	0.000	-	-	0.719	-	-	0.719
2.2) Production Support JATO	A		-	-	-	-	-	0.221	-	-	0.110	-	-	0.000	-	-	0.099	-	-	0.099
2.3) OTHER COSTS	A		-	-	17.363	-	-	0.079	-	-	0.075	-	-	0.000	-	-	0.078	-	-	0.078
Subtotal: 2) Support			**-**	**-**	***17.363***	**-**	**-**	***0.724***	**-**	**-**	***0.416***	**-**	**-**	***0.000***	**-**	**-**	***0.896***	**-**	**-**	***0.896***
Total			**-**	**-**	**67.252**	**-**	**-**	**3.435**	**-**	**-**	**3.654**	**-**	**-**	**0.000**	**-**	**-**	**7.262**	**-**	**-**	**7.262**

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) Mk 85 RATO: FY 2020-FY 2024 increase in quantities support BQM-177A Fleet operational training and joint exercise requirements.

(2) Mk-117 MOD O ROCKET MOTORS: FY 2020 quantity supports BQM-74 Fleet operational training and joint exercise requirements.

(3) FY 2020 RATO Production Support increase is to support the manufacturing infrastructure for higher quantities. This support is tied directly to the production end item and is dependent on quantities being procured each fiscal year.

Exhibit P-5a, Procurement History and Planning: PB 2020 Navy		Date: March 2019
Appropriation / Budget Activity / Budget Sub Activity: 1508N / 01 / 1	P-1 Line Item Number / Title: 0194 / Jet Assisted Take Off (JATOs)	Aggregated Items: Jet Assisted Take Off (JATOs)/Rocket Assisted Take Off (RATOs)

Item Number / Title [DODIC]	OCO	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) JATO / RATO												
1.1) Mk 85 RATO (1)(†)		2018	NSWC INDIAN HEAD DIV / Indian Head, MD	PO	NSWC	Nov 2017	May 2019	178	12,212.75	Y		
1.1) Mk 85 RATO (1)(†)		2019	NSWC INDIAN HEAD DIV / Indian Head, MD	PO	NSWC	Dec 2018	May 2020	200	12,457.00	Y		
1.1) Mk 85 RATO (1)(†)	✓	2020	NSWC INDIAN HEAD DIV / Indian Head, MD	PO	NSWC	Dec 2019	May 2021	420	12,706.14	Y		
1.2) Mk 117 MOD O ROCKET MOTORS (2)(†)		2017	NSWC INDIAN HEAD DIV (4) / Indian Head, MD	PO	NSWC	Nov 2016	May 2018	300	6,959.00	Y		
1.2) Mk 117 MOD O ROCKET MOTORS (2)(†)	✓	2018	NSWC INDIAN HEAD DIV (4) / Indian Head, MD	PO	NSWC	Aug 2018	Jan 2020	88	6,102.27	Y		
1.2) Mk 117 MOD O ROCKET MOTORS (2)(†)	✓	2019	NSWC INDIAN HEAD DIV (4) / Indian Head, MD	PO	NSWC	Dec 2018	May 2020	120	6,225.00	Y		
1.2) Mk 117 MOD O ROCKET MOTORS (2)(†)	✓	2020	NSWC INDIAN HEAD DIV (4) / Indian Head, MD	PO	NSWC	Dec 2019	May 2021	162	6,350.00	Y		

(†) indicates the presence of a P-21

Footnotes:

(4) NSWC Indian Head Production rates represent combined Mk-85 and Mk-117 rates.

Exhibit P-21, Production Schedule: PB 2020 Navy		Date: March 2019
Appropriation / Budget Activity / Budget Sub Activity: 1508N / 01 / 1	**P-1 Line Item Number / Title:** 0194 / Jet Assisted Take Off (JATOs)	**Aggregated Items:** Jet Assisted Take Off (JATOs)/Rocket Assisted Take Off (RATOs)

Items (Units in Each)							Fiscal Year 2017												Fiscal Year 2018												BALANCE
							Calendar Year 2017												Calendar Year 2018												
OCO	MFR #	FY	SERVICE	PROC QTY	ACCEPT PRIOR TO 1 OCT 2016	BAL DUE AS OF 1 OCT	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) JATO / RATO																															
1.1) Mk 85 RATO (1)																															
	15	2018	NAVY	178	0	178														A -	-	-	-	-	-	-	-	-	-	-	178
	15	2019	NAVY	200	0	200																									200
✓	15	2020	NAVY	420	0	420																									420
1.2) Mk 117 MOD O ROCKET MOTORS (2)																															
Prior Years Deliveries: 15949																															
	16	2017	NAVY	300	0	300		A -	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	25	25	25	25	25	175
✓	16	2018	NAVY	88	0	88																							A -	-	88
✓	16	2019	NAVY	120	0	120																									120
✓	16	2020	NAVY	162	0	162																									162
							OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	

Exhibit P-21, Production Schedule: PB 2020 Navy		**Date:** March 2019
Appropriation / Budget Activity / Budget Sub Activity: 1508N / 01 / 1	**P-1 Line Item Number / Title:** 0194 / Jet Assisted Take Off (JATOs)	**Aggregated Items:** Jet Assisted Take Off (JATOs)/Rocket Assisted Take Off (RATOs)

Items (Units in Each)							Fiscal Year 2019												Fiscal Year 2020												BALANCE
										Calendar Year 2019												Calendar Year 2020									
OCO	MFR #	FY	SERVICE	PROC QTY	ACCEPT PRIOR TO 1 OCT 2018	BAL DUE AS OF 1 OCT	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) JATO / RATO																															
1.1) Mk 85 RATO (1)																															
	15	2018	NAVY	178	0	178	-	-	-	-	-	-	-	15	15	15	15	15	15	15	15	15	15	15	13						0
	15	2019	NAVY	200	0	200			A -	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	17	17	17	17	17	115
✓	15	2020	NAVY	420	0	420															A -	-	-	-	-	-	-	-	-	-	420
1.2) Mk 117 MOD O ROCKET MOTORS (2)																															
Prior Years Deliveries: 15949																															
	16	2017	NAVY	300	125	175	25	25	25	25	25	25	25																		0
✓	16	2018	NAVY	88	0	88	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	7	7	7	7	7	7	7	7	8	24
✓	16	2019	NAVY	120	0	120			A -	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	10	10	10	10	10	70
✓	16	2020	NAVY	162	0	162															A -	-	-	-	-	-	-	-	-	-	162
							OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	

Exhibit P-21, Production Schedule: PB 2020 Navy		**Date:** March 2019
Appropriation / Budget Activity / Budget Sub Activity: 1508N / 01 / 1	**P-1 Line Item Number / Title:** 0194 / Jet Assisted Take Off (JATOs)	**Aggregated Items:** Jet Assisted Take Off (JATOs)/Rocket Assisted Take Off (RATOs)

Items (Units in Each)							Fiscal Year 2021												Fiscal Year 2022												BALANCE
										Calendar Year 2021												Calendar Year 2022									
OCO	MFR #	FY	SERVICE	PROC QTY	ACCEPT PRIOR TO 1 OCT 2020	BAL DUE AS OF 1 OCT	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) JATO / RATO																															
1.1) Mk 85 RATO (1)																															
	15	2018	NAVY	178	178	0																									0
	15	2019	NAVY	200	85	115	17	17	17	16	16	16	16																		0
✓	15	2020	NAVY	420	0	420	-	-	-	-	-	-	-	35	35	35	35	35	35	35	35	35	35	35	35						0
1.2) Mk 117 MOD O ROCKET MOTORS (2)																															
Prior Years Deliveries: 15949																															
	16	2017	NAVY	300	300	0																									0
✓	16	2018	NAVY	88	64	24	8	8	8																						0
✓	16	2019	NAVY	120	50	70	10	10	10	10	10	10	10																		0
✓	16	2020	NAVY	162	0	162	-	-	-	-	-	-	-	14	13	14	13	14	13	14	13	14	13	14	13						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	

Exhibit P-21, Production Schedule: PB 2020 Navy		**Date:** March 2019
Appropriation / Budget Activity / Budget Sub Activity: 1508N / 01 / 1	**P-1 Line Item Number / Title:** 0194 / Jet Assisted Take Off (JATOs)	**Aggregated Items:** Jet Assisted Take Off (JATOs)/Rocket Assisted Take Off (RATOs)

MFR Ref #	Manufacturer Name - Location	Production Rates (Each / Year)			Procurement Leadtime (Months)							
					Initial				Reorder			
		MSR For 2020	1-8-5 For 2020	MAX For 2020	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 INDIAN HEAD DIV - Indian Head, MD	200	500	6,000	0	3	18	21	0	3	17	20
2	NSWC INDIAN HEAD DIV (4) - Indian Head, MD	200	500	6,000	0	0	0	0	0	3	17	20

"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:
(4) NSWC Indian Head Production rates represent combined Mk-85 and Mk-117 rates.

Exhibit P-40, Budget Line Item Justification: PB 2020 Navy	Date: March 2019
Appropriation / Budget Activity / Budget Sub Activity: 1508N: Procurement of Ammo, Navy & MC / BA 01: Proc Ammo, Navy / BSA 1: Navy Ammunition	**P-1 Line Item Number / Title:** 0250 / 5 Inch/54 Gun Ammunition

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

Resource Summary	Prior Years	FY 2018	FY 2019	FY 2020 Base	FY 2020 OCO	FY 2020 Total	FY 2021	FY 2022	FY 2023	FY 2024	To Complete	Total
Procurement Quantity *(Units in Each)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost *($ in Millions)*	272.399	22.112	70.058	0.000	22.594	22.594	31.358	30.947	29.505	30.095	Continuing	Continuing
Less PY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) *($ in Millions)*	272.399	22.112	70.058	0.000	22.594	22.594	31.358	30.947	29.505	30.095	Continuing	Continuing
Plus CY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority *($ in Millions)*	**272.399**	**22.112**	**70.058**	**0.000**	**22.594**	**22.594**	**31.358**	**30.947**	**29.505**	**30.095**	**Continuing**	**Continuing**
(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)*	-	-	-	-	-	-	-	-	-	-	-	-

Description:

FY 2020 funding totals include $0.0M for Base and $22.594M for Overseas Contingency Operations (OCO); of which $22.594M is realigned as part of the OCO for Base Requirements. FY 2020 OCO for Base Requirements is OCO funding for base budget requirements in support of the National Defense Strategy. The Budget requests these funds in OCO to comply with the base budget defense caps included in the Budget Control Act of 2011.

Program procures 5"/54 ammunition fired from Cruiser and Destroyer combatant ships against air, surface, and shore targets. Ammunition items procured includes propelling charges, high-explosive projectiles and training rounds.

Exhibit P-40, Budget Line Item Justification: PB 2020 Navy		Date: March 2019
Appropriation / Budget Activity / Budget Sub Activity: 1508N: Procurement of Ammo, Navy & MC / BA 01: Proc Ammo, Navy / BSA 1: Navy Ammunition	**P-1 Line Item Number / Title:** 0250 / 5 Inch/54 Gun Ammunition	
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 2018	FY 2019	FY 2020 Base	FY 2020 OCO	FY 2020 Total
Exhibit Type	Title*	Subexhibits	ID CD	MDAP/ MAIS Code	Quantity / Total Cost *(Each) I ($ M)*	Quantity / Total Cost *(Each) I ($ M)*	Quantity / Total Cost *(Each) I ($ M)*	Quantity / Total Cost *(Each) I ($ M)*	Quantity / Total Cost *(Each) I ($ M)*	Quantity / Total Cost *(Each) I ($ M)*
P-5	1 / 5 Inch/54 Gun Ammunition	P-5a, P-21			- / 272.399	- / 22.112	- / 70.058	- / 0.000	- / 22.594	- / 22.594
P-40	**Total Gross/Weapon System Cost**				**- / 272.399**	**- / 22.112**	**- / 70.058**	**- / 0.000**	**- / 22.594**	**- / 22.594**

*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:
FY2020 OCO for Baseline funding procures new MK 187 Projectiles in sufficient quantity to replace projectiles which have been used in operations and training. The MK 187 provides all fuze modes for Naval Surface Fire Support, as well as superior Fast Attack Craft/Fast In-Shore Attack Craft (FAC/FIAC) capability, Anti Air Warfare (AAW) and Anti Ship Cruise Missile (ASCM) defense. Propelling Charges and training projectiles are procured to sustain training and operational requirements.

Baseline program also funds Production Engineering and Gauge requirements for all 5"/54 ammunition. FY2020 Product Improvement Program will address cyber security for fuzes.

FY2020 funding request was reduced by $5.000 million to account for the availability of prior year execution balances.

Exhibit P-5, Cost Analysis: PB 2020 Navy		Date: March 2019
Appropriation / Budget Activity / Budget Sub Activity: 1508N / 01 / 1	**P-1 Line Item Number / Title:** 0250 / 5 Inch/54 Gun Ammunition	**Item Number / Title [DODIC]:** 1 / 5 Inch/54 Gun Ammunition
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	

Resource Summary	Prior Years	FY 2018	FY 2019	FY 2020 Base	FY 2020 OCO	FY 2020 Total
Procurement Quantity *(Units in Each)*	-	-	-	-	-	-
Gross/Weapon System Cost *($ in Millions)*	272.399	22.112	70.058	0.000	22.594	22.594
Less PY Advance Procurement *($ in Millions)*	-	-	-	-	-	-
Net Procurement (P-1) *($ in Millions)*	272.399	22.112	70.058	0.000	22.594	22.594
Plus CY Advance Procurement *($ in Millions)*	-	-	-	-	-	-
Total Obligation Authority *($ in Millions)*	**272.399**	**22.112**	**70.058**	**0.000**	**22.594**	**22.594**
(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 2018			FY 2019			FY 2020 Base			FY 2020 OCO			FY 2020 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 - AC100 5"/54 AMMUNITION HARDWARE Cost																		
Recurring Cost																		
1.1.1) 5"54 CHG, PROP, CLEARING, MK65 (D296)	1,087.58	491	0.534	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1.1.2) 5/54 CHG, PROP, FULL (D326)(†)	909.40	74,327	67.593	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1.1.3) 5"/54 CHG, PROP, FULL (DA65)(†)	-	-	-	1,145.34	13,494	15.455	1,145.34	6,591	7.549	-	-	0.000	1,204.96	5,499	6.626	1,204.96	5,499	6.626
1.1.4) 5"54 PROJ, BLP/T (D349)(†)	438.22	51,937	22.760	-	-	-	-	-	-	-	-	0.000	499.01	3,840	1.916	499.01	3,840	1.916
1.1.5) 5"/54 PROJ, MULTI OPTION FUZE (DA48)	1,941.27	28,944	56.188	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1.1.6) MK187 MOD 0 PROJECTILE (DA53)(†) (1)	-	-	-	-	-	-	3,486.22	14,902	51.952	-	-	0.000	4,127.18	2,500	10.318	4,127.18	2,500	10.318
1.1.7) MK14 Tank (2)	-	-	-	-	-	0.500	-	-	1.540	-	-	-	-	-	-	-	-	-
1.1.8) TRANSPORTATION ACCT CODE	-	-	2.637	-	-	0.517	-	-	0.279	-	-	0.000	-	-	0.184	-	-	0.184
1.1.9) PE/QA SMCA	-	-	1.324	-	-	0.025	-	-	0.026	-	-	-	-	-	-	-	-	-
1.1.10) PRIOR YEARS CUMULATIVE FUNDING	-	-	25.388	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Exhibit P-5, Cost Analysis: PB 2020 Navy		Date: March 2019
Appropriation / Budget Activity / Budget Sub Activity: 1508N / 01 / 1	P-1 Line Item Number / Title: 0250 / 5 Inch/54 Gun Ammunition	Item Number / Title [DODIC]: 1 / 5 Inch/54 Gun Ammunition
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 2018			FY 2019			FY 2020 Base			FY 2020 OCO			FY 2020 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)
Subtotal: Recurring Cost	-	-	*176.424*	-	-	*16.497*	-	-	*61.346*	-	-	*0.000*	-	-	*19.044*	-	-	*19.044*
Subtotal: Hardware - AC100 5"/54 AMMUNITION HARDWARE Cost	**-**	**-**	***176.424***	**-**	**-**	***16.497***	**-**	**-**	***61.346***	**-**	**-**	***0.000***	**-**	**-**	***19.044***	**-**	**-**	***19.044***
Hardware - AC850 PRODUCT IMPROVEMENT Cost																		
Recurring Cost																		
2.1.1) PRODUCT IMPROVEMENT (3)	-	-	22.288	-	-	0.830	-	-	0.615	-	-	0.000	-	-	0.203	-	-	0.203
Subtotal: Recurring Cost	-	-	*22.288*	-	-	*0.830*	-	-	*0.615*	-	-	*0.000*	-	-	*0.203*	-	-	*0.203*
Subtotal: Hardware - AC850 PRODUCT IMPROVEMENT Cost	**-**	**-**	***22.288***	**-**	**-**	***0.830***	**-**	**-**	***0.615***	**-**	**-**	***0.000***	**-**	**-**	***0.203***	**-**	**-**	***0.203***
Hardware - AC893 RENOVATION COMPONENTS Cost																		
Recurring Cost																		
3.1.1) RENOVATION COMPONENTS	-	-	35.291	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Subtotal: Recurring Cost	-	-	*35.291*	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Subtotal: Hardware - AC893 RENOVATION COMPONENTS Cost	**-**	**-**	***35.291***	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**
Hardware - AC894 GAUGE REQUIREMENTS Cost																		
Recurring Cost																		
4.1.1) GAUGE REQUIREMENTS	-	-	3.314	-	-	0.350	-	-	0.360	-	-	0.000	-	-	0.315	-	-	0.315
Subtotal: Recurring Cost	-	-	*3.314*	-	-	*0.350*	-	-	*0.360*	-	-	*0.000*	-	-	*0.315*	-	-	*0.315*
Subtotal: Hardware - AC894 GAUGE REQUIREMENTS Cost	**-**	**-**	***3.314***	**-**	**-**	***0.350***	**-**	**-**	***0.360***	**-**	**-**	***0.000***	**-**	**-**	***0.315***	**-**	**-**	***0.315***
Hardware - ACG86 Overseas Contingency Operations (OCO) Cost																		
Non Recurring Cost																		
5.1.1) Overseas Contingency Operations (OCO)	-	-	0.001	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Subtotal: Non Recurring Cost	-	-	*0.001*	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Subtotal: Hardware - ACG86 Overseas Contingency Operations (OCO) Cost	**-**	**-**	***0.001***	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**
Hardware - (AC850) NON-STANDARD Cost																		
Non Recurring Cost																		

Exhibit P-5, Cost Analysis: PB 2020 Navy		Date: March 2019
Appropriation / Budget Activity / Budget Sub Activity: 1508N / 01 / 1	P-1 Line Item Number / Title: 0250 / 5 Inch/54 Gun Ammunition	Item Number / Title [DODIC]: 1 / 5 Inch/54 Gun Ammunition
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 2018			FY 2019			FY 2020 Base			FY 2020 OCO			FY 2020 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)
6.1.1) NON-STANDARD	-	-	2.286	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Subtotal: Non Recurring Cost	-	-	*2.286*	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Subtotal: Hardware - (AC850) NON-STANDARD Cost	**-**	**-**	***2.286***	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**
Support - AC830 PRODUCTION ENGINEERING Cost																		
7.1) PRODUCTION ENGINEERING	-	-	32.795	-	-	3.435	-	-	3.187	-	-	0.000	-	-	3.032	-	-	3.032
7.2) QCCCF PE Support (4)	-	-	-	-	-	1.000	-	-	4.550	-	-	-	-	-	-	-	-	-
Subtotal: Support - AC830 PRODUCTION ENGINEERING Cost	**-**	**-**	***32.795***	**-**	**-**	***4.435***	**-**	**-**	***7.737***	**-**	**-**	***0.000***	**-**	**-**	***3.032***	**-**	**-**	***3.032***
Gross/Weapon System Cost	**-**	**-**	**272.399**	**-**	**-**	**22.112**	**-**	**-**	**70.058**	**-**	**-**	**0.000**	**-**	**-**	**22.594**	**-**	**-**	**22.594**

Remarks:

[Hardware] AC100: 5"54 Ammunition Hardware includes costs to procure components, load and assembly of complete rounds, and acceptance tests. Costs associated with Transportation Account Code (TAC) are for first destination of delivery of production items. Unit costs and quantities are adjusted during year of execution.

[Hardware] AC850: Product Improvement engineering services and related efforts by government activities, the producing contractor or manufacturing installation, are executed to extend the useful military life of an item or to improve the item within the current performance envelope.

[Hardware] AC893: Renovation components upgrade unserviceable rounds into ready-for-issue condition.

[Hardware] AC894: Gauge Requirements are for the procurement of gauges, auxiliary and test equipment and support costs necessary for ammunition metrology to check critical dimensions/parameters of ammunition items and their parts.

[Hardware] AC850: Non Standard funding procures reusable packaging required for transportation and storage of projectiles and propelling charges.

[Support Cost] AC830: Production engineering for engineering services to support new acquisition and in production ammunition.

(†) indicates the presence of a P-5a

Footnotes:

(1) FY2020 price increase attributed to lower procurement quantity.

Exhibit P-5, Cost Analysis: PB 2020 Navy		Date: March 2019
Appropriation / Budget Activity / Budget Sub Activity: 1508N / 01 / 1	**P-1 Line Item Number / Title:** 0250 / 5 Inch/54 Gun Ammunition	**Item Number / Title [DODIC]:** 1 / 5 Inch/54 Gun Ammunition
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	

(2) This line supports the procurement of new MK 14 cartridge tanks. MK 14 cartridge tanks are used to ship and store 5"/54 Full Propelling Charges. Historically, 5"/54 Full Propelling Charges leveraged fleet returned tanks. Due to age and degradation of reused tanks, new tanks are needed to support future production.

(3) FY2020 Product Improvement Program will address anti tamper technologies for multi mode fuzes.

(4) This line supports the reactivation of Quad Cities Cartridge Case Facility (QCCCF) located at Rock Island Arsenal, to produce new 5" cartridge cases. These cartridge cases are required for production of 5"/54 Full Propelling Charges. Recent procurements of 5"/54 Full Propelling Charges have used cartridges cases produced nearly 10 years ago prior to closure of the previous cartridge case facility.

Exhibit P-5a, Procurement History and Planning: PB 2020 Navy		Date: March 2019
Appropriation / Budget Activity / Budget Sub Activity: 1508N / 01 / 1	P-1 Line Item Number / Title: 0250 / 5 Inch/54 Gun Ammunition	Item Number / Title [DODIC]: 1 / 5 Inch/54 Gun Ammunition

Cost Elements	OCO	FY	Contractor and Location	Method/Type or Funding Vehicle	Location of PCO	Award Date	Date of First Delivery	Qty (Each)	Unit Cost ($)	Specs Avail Now?	Date Revision Available	RFP Issue Date
1.1.2) 5/54 CHG, PROP, FULL (D326)(†)		2015	MCALESTER AAP3 / MCALESTER, OK	C / FFP	JMC ROCK ISLAND	Mar 2015	Aug 2018	18,330	907.75	Y		Nov 2014
1.1.2) 5/54 CHG, PROP, FULL (D326)(†)		2016	MCALESTER AAP3 / MCALESTER, OK	C / FFP	JMC ROCK ISLAND	Mar 2016	Feb 2019	9,005	925.93	Y		Nov 2015
1.1.3) 5"/54 CHG, PROP, FULL (DA65)(†)		2018	GDOTS/CCC / VALLEY FIELD, CA	C / FFP	NSWC IH	Oct 2018	Nov 2020	13,494	1,145.34	Y		Jun 2018
1.1.3) 5"/54 CHG, PROP, FULL (DA65)(†)		2019	GDOTS/CCC / VALLEY FIELD, CA	C / FFP	NSWC IH	Oct 2018	Feb 2021	6,591	1,145.34	Y		Jun 2018
1.1.3) 5"/54 CHG, PROP, FULL (DA65)(†)	✓	2020	GDOTS/CCC / VALLEY FIELD, CA	C / FFP	NSWC IH	Mar 2020	Sep 2021	5,499	1,204.96	Y		Jun 2018
1.1.4) 5"54 PROJ, BLP/T (D349)(†)	✓	2020	TBD / TBD	C / FFP	NSWC IH	Mar 2020	Mar 2022	3,840	499.01	Y		Jan 2019
1.1.6) MK187 MOD 0 PROJECTILE (DA53)(†)		2019	TBD / TBD	C / FFP	NSWC IH	Jun 2019	Aug 2022	14,902	3,486.22	Y		Jan 2019
1.1.6) MK187 MOD 0 PROJECTILE (DA53)(†)	✓	2020	TBD / TBD	C / FFP	NSWC IH	Mar 2020	Mar 2022	2,500	4,127.18	Y		Jan 2019

(†) indicates the presence of a P-21

Exhibit P-21, Production Schedule: PB 2020 Navy		Date: March 2019
Appropriation / Budget Activity / Budget Sub Activity: 1508N / 01 / 1	**P-1 Line Item Number / Title:** 0250 / 5 Inch/54 Gun Ammunition	**Item Number / Title [DODIC]:** 1 / 5 Inch/54 Gun Ammunition

Cost Elements (Units in Thousands)							Fiscal Year 2015												Fiscal Year 2016												BALANCE
										Calendar Year 2015												Calendar Year 2016									
OCO	MFR #	FY	SERVICE	PROC QTY	ACCEPT PRIOR TO 1 OCT 2014	BAL DUE AS OF 1 OCT	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	
1.1.2) 5/54 CHG, PROP, FULL (D326)																															
Prior Years Deliveries: 46992																															
	1	2015	NAVY	18.330	.000	18.330						A -	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	18.330
	1	2016	NAVY	9.005	.000	9.005																		A -	-	-	-	-	-	-	9.005
1.1.3) 5"/54 CHG, PROP, FULL (DA65)																															
	2	2018	NAVY	13.494	.000	13.494																									13.494
	2	2019	NAVY	6.591	.000	6.591																									6.591
✓	2	2020	NAVY	5.499	.000	5.499																									5.499
1.1.4) 5"54 PROJ, BLP/T (D349)																															
Prior Years Deliveries: 51937																															
✓	3	2020	NAVY	3.840	.000	3.840																									3.840
1.1.6) MK187 MOD 0 PROJECTILE (DA53) (1)																															
	4	2019	NAVY	14.902	.000	14.902																									14.902
✓	4	2020	NAVY	2.500	.000	2.500																									2.500
							OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	

Exhibit P-21, Production Schedule: PB 2020 Navy | **Date:** March 2019

Appropriation / Budget Activity / Budget Sub Activity: 1508N / 01 / 1

P-1 Line Item Number / Title: 0250 / 5 Inch/54 Gun Ammunition

Item Number / Title [DODIC]: 1 / 5 Inch/54 Gun Ammunition

Cost Elements (Units in Thousands)							Fiscal Year 2017												Fiscal Year 2018												BALANCE
										Calendar Year 2017												Calendar Year 2018									
OCO	MFR #	FY	SERVICE	PROC QTY	ACCEPT PRIOR TO 1 OCT 2016	BAL DUE AS OF 1 OCT	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	
1.1.2) 5/54 CHG, PROP, FULL (D326)																															
Prior Years Deliveries: 46992																															
	1	2015	NAVY	18.330	.000	18.330	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	10.000	8.330	.000
	1	2016	NAVY	9.005	.000	9.005	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	9.005
1.1.3) 5"/54 CHG, PROP, FULL (DA65)																															
	2	2018	NAVY	13.494	.000	13.494																									13.494
	2	2019	NAVY	6.591	.000	6.591																									6.591
✓	2	2020	NAVY	5.499	.000	5.499																									5.499
1.1.4) 5"54 PROJ, BLP/T (D349)																															
Prior Years Deliveries: 51937																															
✓	3	2020	NAVY	3.840	.000	3.840																									3.840
1.1.6) MK187 MOD 0 PROJECTILE (DA53) (1)																															
	4	2019	NAVY	14.902	.000	14.902																									14.902
✓	4	2020	NAVY	2.500	.000	2.500																									2.500
							OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	

Exhibit P-21, Production Schedule: PB 2020 Navy		Date: March 2019
Appropriation / Budget Activity / Budget Sub Activity: 1508N / 01 / 1	**P-1 Line Item Number / Title:** 0250 / 5 Inch/54 Gun Ammunition	**Item Number / Title [DODIC]:** 1 / 5 Inch/54 Gun Ammunition

Cost Elements (Units in Thousands)							Fiscal Year 2019												Fiscal Year 2020												BALANCE
										Calendar Year 2019												Calendar Year 2020									
OCO	MFR #	FY	SERVICE	PROC QTY	ACCEPT PRIOR TO 1 OCT 2018	BAL DUE AS OF 1 OCT	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	
1.1.2) 5/54 CHG, PROP, FULL (D326)																															
Prior Years Deliveries: 46992																															
	1	2015	NAVY	18.330	18.330	.000																									.000
	1	2016	NAVY	9.005	.000	9.005	-	-	-	-	5.000	4.005																			.000
1.1.3) 5"/54 CHG, PROP, FULL (DA65)																															
	2	2018	NAVY	13.494	.000	13.494	A -	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	13.494
	2	2019	NAVY	6.591	.000	6.591	A -	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	6.591
✓	2	2020	NAVY	5.499	.000	5.499																		A -	-	-	-	-	-	-	5.499
1.1.4) 5"54 PROJ, BLP/T (D349)																															
Prior Years Deliveries: 51937																															
✓	3	2020	NAVY	3.840	.000	3.840																		A -	-	-	-	-	-	-	3.840
1.1.6) MK187 MOD 0 PROJECTILE (DA53) (1)																															
	4	2019	NAVY	14.902	.000	14.902									A -	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	14.902
✓	4	2020	NAVY	2.500	.000	2.500																		A -	-	-	-	-	-	-	2.500
							OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	

Exhibit P-21, Production Schedule: PB 2020 Navy		Date: March 2019
Appropriation / Budget Activity / Budget Sub Activity: 1508N / 01 / 1	**P-1 Line Item Number / Title:** 0250 / 5 Inch/54 Gun Ammunition	**Item Number / Title [DODIC]:** 1 / 5 Inch/54 Gun Ammunition

Cost Elements (Units in Thousands)							Fiscal Year 2021												Fiscal Year 2022												BALANCE
										Calendar Year 2021												Calendar Year 2022									
OCO	MFR #	FY	SERVICE	PROC QTY	ACCEPT PRIOR TO 1 OCT 2020	BAL DUE AS OF 1 OCT	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	
1.1.2) 5/54 CHG, PROP, FULL (D326)																															
Prior Years Deliveries: 46992																															
	1	2015	NAVY	18.330	18.330	.000																									.000
	1	2016	NAVY	9.005	9.005	.000																									.000
1.1.3) 5"/54 CHG, PROP, FULL (DA65)																															
	2	2018	NAVY	13.494	.000	13.494	-	7.500	-	5.994																					.000
	2	2019	NAVY	6.591	.000	6.591	-	-	-	-	5.000	1.591																			.000
✓	2	2020	NAVY	5.499	.000	5.499	-	-	-	-	-	-	-	-	-	-	-	4.000	1.499												.000
1.1.4) 5"54 PROJ, BLP/T (D349)																															
Prior Years Deliveries: 51937																															
✓	3	2020	NAVY	3.840	.000	3.840	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2.800	1.040						.000
1.1.6) MK187 MOD 0 PROJECTILE (DA53) (1)																															
	4	2019	NAVY	14.902	.000	14.902	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	5.000	5.000	4.902
✓	4	2020	NAVY	2.500	.000	2.500	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2.500							.000
							OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	

Exhibit P-21, Production Schedule: PB 2020 Navy		Date: March 2019
Appropriation / Budget Activity / Budget Sub Activity: 1508N / 01 / 1	**P-1 Line Item Number / Title:** 0250 / 5 Inch/54 Gun Ammunition	**Item Number / Title [DODIC]:** 1 / 5 Inch/54 Gun Ammunition

Cost Elements (Units in Thousands)							Fiscal Year 2023												Fiscal Year 2024												BALANCE
										Calendar Year 2023												Calendar Year 2024									
OCO	MFR #	FY	SERVICE	PROC QTY	ACCEPT PRIOR TO 1 OCT 2022	BAL DUE AS OF 1 OCT	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	
1.1.2) 5/54 CHG, PROP, FULL (D326)																															
Prior Years Deliveries: 46992																															
	1	2015	NAVY	18.330	18.330	.000																									.000
	1	2016	NAVY	9.005	9.005	.000																									.000
1.1.3) 5"/54 CHG, PROP, FULL (DA65)																															
	2	2018	NAVY	13.494	13.494	.000																									.000
	2	2019	NAVY	6.591	6.591	.000																									.000
✓	2	2020	NAVY	5.499	5.499	.000																									.000
1.1.4) 5"54 PROJ, BLP/T (D349)																															
Prior Years Deliveries: 51937																															
✓	3	2020	NAVY	3.840	3.840	.000																									.000
1.1.6) MK187 MOD 0 PROJECTILE (DA53) (1)																															
	4	2019	NAVY	14.902	10.000	4.902	4.902																								.000
✓	4	2020	NAVY	2.500	2.500	.000																									.000
							OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	

Exhibit P-21, Production Schedule: PB 2020 Navy		Date: March 2019
Appropriation / Budget Activity / Budget Sub Activity: 1508N / 01 / 1	**P-1 Line Item Number / Title:** 0250 / 5 Inch/54 Gun Ammunition	**Item Number / Title [DODIC]:** 1 / 5 Inch/54 Gun Ammunition

MFR Ref #	Manufacturer Name - Location	Production Rates (Each / Year)			Procurement Leadtime (Months)							
					Initial				Reorder			
		MSR For 2020	1-8-5 For 2020	MAX For 2020	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	MCALESTER AAP3 - MCALESTER, OK	5,000	60,000	120,000	6	6	33	39	6	6	34	40
2	GDOTS/CCC - VALLEY FIELD, CA	5,000	60,000	120,000	6	6	23	29	6	6	18	24
3	TBD - TBD	3,000	36,000	60,000	6	6	27	33	6	6	24	30
4	TBD - TBD	3,000	6,000	15,000	6	3	30	33	6	3	24	27

"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 2020 Navy	Date: March 2019
Appropriation / Budget Activity / Budget Sub Activity: 1508N: Procurement of Ammo, Navy & MC / BA 01: Proc Ammo, Navy / BSA 1: Navy Ammunition	**P-1 Line Item Number / Title:** 0266 / Intermediate Caliber Gun Ammo

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

Line Item MDAP/MAIS Code: N/A

Resource Summary	Prior Years	FY 2018	FY 2019	FY 2020 Base	FY 2020 OCO	FY 2020 Total	FY 2021	FY 2022	FY 2023	FY 2024	To Complete	Total
Procurement Quantity *(Units in Each)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost *($ in Millions)*	161.496	12.804	32.151	0.000	37.193	37.193	37.892	38.659	39.418	40.206	-	399.819
Less PY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) *($ in Millions)*	161.496	12.804	32.151	0.000	37.193	37.193	37.892	38.659	39.418	40.206	-	399.819
Plus CY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority *($ in Millions)*	**161.496**	**12.804**	**32.151**	**0.000**	**37.193**	**37.193**	**37.892**	**38.659**	**39.418**	**40.206**	**-**	**399.819**
(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)*	-	-	-	-	-	-	-	-	-	-	-	-

Description:

FY 2020 funding totals include $0.0M for Base and $37.193M for Overseas Contingency Operations (OCO); of which $37.193M is realigned as part of the OCO for Base Requirements. FY 2020 OCO for Base Requirements is OCO funding for base budget requirements in support of the National Defense Strategy. The Budget requests these funds in OCO to comply with the base budget defense caps included in the Budget Control Act of 2011.

Program procures intermediate caliber family of fixed ammunition for United States Navy and United States Coast Guard (USCG) use. The Navy's primary use for intermediate caliber ammunition is to engage both surface and air targets. USCG primary use is for drug interdiction, homeland defense, and Visit, Board, Search and Seizure (VBSS). Intermediate caliber ammunition is currently employed on the Littoral Combat Ship (LCS) and the USCG National Security Cutter.

[P40A / CART., 57MM TP MK296 (BA23)]: 57MM ammunition is used in the MK110 Gun to provide Anti Air Warfare, Anti Surface Warfare and Fast Attack Craft/Fast Attack In-Shore Craft (FAC/FAIC) defense on USN LCS and USCG Maritime Security Cutter Large platforms.

Exhibit P-40, Budget Line Item Justification: PB 2020 Navy	Date: March 2019
Appropriation / Budget Activity / Budget Sub Activity: 1508N: Procurement of Ammo, Navy & MC / BA 01: Proc Ammo, Navy / BSA 1: Navy Ammunition	**P-1 Line Item Number / Title:** 0266 / Intermediate Caliber Gun Ammo

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 2018	FY 2019	FY 2020 Base	FY 2020 OCO	FY 2020 Total
Exhibit Type	Title*	Subexhibits	ID CD	MDAP/ MAIS Code	Quantity / Total Cost *(Each) I ($ M)*	Quantity / Total Cost *(Each) I ($ M)*	Quantity / Total Cost *(Each) I ($ M)*	Quantity / Total Cost *(Each) I ($ M)*	Quantity / Total Cost *(Each) I ($ M)*	Quantity / Total Cost *(Each) I ($ M)*
P-40a	Intermediate Caliber Gun Ammo	P-5a, P-21			- / 161.496	- / 12.804	- / 32.151	- / 0.000	- / 37.193	- / 37.193
P-40	**Total Gross/Weapon System Cost**				**- / 161.496**	**- / 12.804**	**- / 32.151**	**- / 0.000**	**- / 37.193**	**- / 37.193**

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

FY2020 funding increase supports Advanced Low Cost Munition Ordnance (ALaMO) transition to full-rate production and procurement of 57MM TP MK296 (BA23).

FY2020 production engineering and gauge requirements increased slightly to account for additional quantities.

Exhibit P-40a, Budget Item Justification For Aggregated Items: PB 2020 Navy		Date: March 2019
Appropriation / Budget Activity / Budget Sub Activity: 1508N / 01 / 1	P-1 Line Item Number / Title: 0266 / Intermediate Caliber Gun Ammo	Aggregated Items Title: Intermediate Caliber Gun Ammo

Item Number / Title [DODIC]	ID CD	MDAP/ MAIS Code	Prior Years			FY 2018			FY 2019			FY 2020 Base			FY 2020 OCO			FY 2020 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) AL100 TRANSPORTATION ACCOUNT CODE (1)																				
1.1) TRANSPORTATION ACCOUNT CODE	A		-	-	0.315	-	-	0.062	-	-	0.068	-	-	0.000	-	-	0.069	-	-	0.069
Subtotal: 1) AL100 TRANSPORTATION ACCOUNT CODE			**-**	**-**	***0.315***	**-**	**-**	***0.062***	**-**	**-**	***0.068***	**-**	**-**	***0.000***	**-**	**-**	***0.069***	**-**	**-**	***0.069***
2) AL100 INTERMEDIATE CALIBER GUN AMMUNITION HARDWARE																				
2.1) CART., 57MM DUMMY, RAMMABLE (BA50)(†)	A		323.77	244	0.079	-	-	-	490.00	600	0.294	-	-	-	-	-	-	-	-	-
2.2) CART., 57MM, 3P MK295 (BA22)(†)	A		4,695.69	16,457	77.277	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2.3) CART., 57MM TP MK296 (BA23) (2)(†)	A		2,527.27	15,899	40.181	2,291.02	3,872	8.871	-	-	-	-	-	0.000	1,245.47	5,997	7.469	1,245.47	5,997	7.469
2.4) CART 57MM ALaMO (HE-4G) (3)(†)	A		-	-	-	-	-	-	22,000.00	886	19.492	-	-	0.000	14,000.00	1,935	27.090	14,000.00	1,935	27.090
2.5) CART., 57MM, HE-PD (4)(†)	A		2,520.93	4,300	10.840	1,500.00	1,370	2.055	1,750.00	5,780	10.115	-	-	-	-	-	-	-	-	-
Subtotal: 2) AL100 INTERMEDIATE CALIBER GUN AMMUNITION HARDWARE			**-**	**-**	***128.377***	**-**	**-**	***10.926***	**-**	**-**	***29.901***	**-**	**-**	***0.000***	**-**	**-**	***34.559***	**-**	**-**	***34.559***
3) AL830 PRODUCTION ENGINEERING (5)																				
3.1) PRODUCTION ENGINEERING	A		-	-	14.394	-	-	1.658	-	-	2.142	-	-	0.000	-	-	2.505	-	-	2.505
Subtotal: 3) AL830 PRODUCTION ENGINEERING			**-**	**-**	***14.394***	**-**	**-**	***1.658***	**-**	**-**	***2.142***	**-**	**-**	***0.000***	**-**	**-**	***2.505***	**-**	**-**	***2.505***
4) AL850 PRODUCT IMPROVEMENT (6)																				
4.1) PRODUCT IMPROVEMENT	A		-	-	17.635	-	-	0.128	-	-	-	-	-	-	-	-	-	-	-	-
Subtotal: 4) AL850 PRODUCT IMPROVEMENT			**-**	**-**	***17.635***	**-**	**-**	***0.128***	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**
5) AL894 GAUGE REQUIREMENTS (7)																				
5.1) GAUGE REQUIREMENTS	A		-	-	0.775	-	-	0.030	-	-	0.040	-	-	0.000	-	-	0.060	-	-	0.060
Subtotal: 5) AL894 GAUGE REQUIREMENTS			**-**	**-**	***0.775***	**-**	**-**	***0.030***	**-**	**-**	***0.040***	**-**	**-**	***0.000***	**-**	**-**	***0.060***	**-**	**-**	***0.060***
Total			**-**	**-**	**161.496**	**-**	**-**	**12.804**	**-**	**-**	**32.151**	**-**	**-**	**0.000**	**-**	**-**	**37.193**	**-**	**-**	**37.193**

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:

Exhibit P-40a, Budget Item Justification For Aggregated Items: PB 2020 Navy		Date: March 2019
Appropriation / Budget Activity / Budget Sub Activity: 1508N / 01 / 1	**P-1 Line Item Number / Title:** 0266 / Intermediate Caliber Gun Ammo	**Aggregated Items Title:** Intermediate Caliber Gun Ammo

(1) AL100: Provides for complete rounds and conducts acceptance testing of intermediate caliber ammunition. Procurement includes intermediate caliber ammunition, all types, and includes high explosive service rounds, Target Practice and dummy rounds. Provides for cost associated with Transportation Account Code (TAC) that are for first destination of delivery of production items.

(2) No FY2019 57MM TP CART procurement planned to maximize new award of 57MM ALaMO (HE-4G).

(3) 57MM ALaMO (HE-4G) procurement increased from FY2019 to FY2020 as there is no procurement of HE-PD planned for FY2020.

(4) 57MM HE-PD procurement alternates years following FY2019 to ensure economic order quantities are met.

(5) AL830: Production Engineering - Provides for production engineering services to support new acquisition and in production ammunition.

(6) AL850: Product Improvement engineering services and related efforts by government activities, the producing contractor or manufacturing installation, are executed to extend the useful military life of an item or to improve the item within the current performance envelope.

(7) AL894: Gauge Requirements - Provides for procurement of gauges, auxiliary and test equipment and support costs necessary for ammunition metrology to check critical dimensions/parameters of ammunition items and their parts. This is to assure proper mating of parts and subassemblies, assure correct interfacing between the ammunition and guns, and proper ammunition performance.

Exhibit P-5a, Procurement History and Planning: PB 2020 Navy		Date: March 2019
Appropriation / Budget Activity / Budget Sub Activity: 1508N / 01 / 1	P-1 Line Item Number / Title: 0266 / Intermediate Caliber Gun Ammo	Aggregated Items: Intermediate Caliber Gun Ammo

Item Number / Title [DODIC]	OCO	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) AL100 INTERMEDIATE CALIBER GUN AMMUNITION HARDWARE												
2.1) CART., 57MM DUMMY, RAMMABLE (BA50)		2019	TBD / TBD	C / FFP	NSWC-IH	Aug 2019	Feb 2020	600	490.00	N	Jan 2019	Mar 2019
2.2) CART., 57MM, 3P MK295 (BA22)(†)		2013	BAE SYSTEMS / MINNESOTA	SS / FFP	Picatinny, NJ	Apr 2014	Jun 2020	2,500	6,790.47	Y		Aug 2013
2.2) CART., 57MM, 3P MK295 (BA22)(†)		2014	BAE SYSTEMS / MINNESOTA	SS / FFP	NSWC-IH	May 2015	Dec 2020	6,360	4,113.40	Y		Oct 2014
2.2) CART., 57MM, 3P MK295 (BA22)(†)		2016	BAE SYSTEMS / MINNESOTA	SS / FFP	Picatinny, NJ	Aug 2016	Oct 2021	3,580	4,278.47	Y		Jan 2016
2.3) CART., 57MM TP MK296 (BA23) (2)(†)		2017	BAE SYSTEMS / MINNESOTA	SS / FFP	Picatinny, NJ	Aug 2018	Oct 2021	3,690	2,096.19	Y		Oct 2017
2.3) CART., 57MM TP MK296 (BA23) (2)(†)		2018	BAE SYSTEMS / MINNESOTA	SS / FFP	Picatinny, NJ	Aug 2018	Oct 2021	3,872	2,291.02	Y		Oct 2017
2.3) CART., 57MM TP MK296 (BA23) (2)(†)	✓	2020	TBD / TBD	C / FFP	Picatinny, NJ	Mar 2020	Mar 2022	5,997	1,245.47	Y		Oct 2019
2.4) CART 57MM ALaMO (HE-4G) (3)(†)		2019	L-3 MUSTANG / DALLAS, TX	SS / FFP	NAVSEA	Jun 2019	Jun 2020	886	22,000.00	Y		May 2018
2.4) CART 57MM ALaMO (HE-4G) (3)(†)	✓	2020	L-3 MUSTANG / DALLAS, TX	SS / FFP	NAVSEA	Apr 2020	Jun 2021	1,935	14,000.00	Y		May 2018
2.5) CART., 57MM, HE-PD (4)(†)		2016 (8)	VARIOUS / VARIOUS	C / FFP	Picatinny, NJ	Nov 2016	Mar 2018	2,800	1,550.00	Y		Feb 2016
2.5) CART., 57MM, HE-PD (4)(†)		2017 (9)	VARIOUS / VARIOUS	C / FFP	Picatinny, NJ	Nov 2017	Mar 2019	1,500	4,333.33	Y		Feb 2016
2.5) CART., 57MM, HE-PD (4)(†)		2018	TBD / TBD	C / FFP	NSWC-IH	Jan 2019	Jan 2021	1,370	1,500.00	Y		Sep 2018
2.5) CART., 57MM, HE-PD (4)(†)		2019	TBD / TBD	C / FFP	NSWC-IH	Jan 2019	Jan 2021	5,780	1,750.00	Y		Sep 2018

(†) indicates the presence of a P-21

Footnotes:

(8) Contract modifications to existing awards to produce supplemental 57mm high explosive point detonating (HE-PD) qualification test assets. These HE-PD configurations will be used for future competitive procurements. Manufacturers are GENERAL DYNAMICS, NAMMO TALLEY, and CHEMRING ORDNANCE.

(9) Contract modifications to existing awards to produce supplemental 57mm high explosive point detonating (HE-PD) qualification test assets. These HE-PD configurations will be used for future competitive procurements. Manufacturers are GENERAL DYNAMICS, NAMMO TALLEY, and CHEMRING ORDNANCE.

Exhibit P-21, Production Schedule: PB 2020 Navy | **Date:** March 2019

Appropriation / Budget Activity / Budget Sub Activity: 1508N / 01 / 1

P-1 Line Item Number / Title: 0266 / Intermediate Caliber Gun Ammo

Aggregated Items: Intermediate Caliber Gun Ammo

Items (Units in Each)							Fiscal Year 2014												Fiscal Year 2015												BALANCE
							Calendar Year 2014												Calendar Year 2015												
OCO	MFR #	FY	SERVICE	PROC QTY	ACCEPT PRIOR TO 1 OCT 2013	BAL DUE AS OF 1 OCT	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	
2) AL100 INTERMEDIATE CALIBER GUN AMMUNITION HARDWARE																															
2.2) CART., 57MM, 3P MK295 (BA22)																															
Prior Years Deliveries: 4017																															
	17	2013	NAVY	2,500	0	2,500							A -	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2,500
	18	2014	NAVY	6,360	0	6,360																				A -	-	-	-	-	6,360
	18	2016	NAVY	3,580	0	3,580																									3,580
2.3) CART., 57MM TP MK296 (BA23) (2)																															
Prior Years Deliveries: 12209																															
	19	2017	NAVY	3,690	0	3,690																									3,690
	19	2018	NAVY	3,872	0	3,872																									3,872
✓	20	2020	NAVY	5,997	0	5,997																									5,997
2.4) CART 57MM ALaMO (HE-4G) (3)																															
	21	2019	NAVY	886	0	886																									886
✓	21	2020	NAVY	1,935	0	1,935																									1,935
2.5) CART., 57MM, HE-PD (4)																															
	23	2016	NAVY	2,800	0	2,800																									2,800
	23	2017	NAVY	1,500	0	1,500																									1,500
	22	2018	NAVY	1,370	0	1,370																									1,370
	22	2019	NAVY	5,780	0	5,780																									5,780
							OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	

Exhibit P-21, Production Schedule: PB 2020 Navy | **Date:** March 2019

Appropriation / Budget Activity / Budget Sub Activity: 1508N / 01 / 1

P-1 Line Item Number / Title: 0266 / Intermediate Caliber Gun Ammo

Aggregated Items: Intermediate Caliber Gun Ammo

Items (Units in Each)							Fiscal Year 2016												Fiscal Year 2017												BALANCE
										Calendar Year 2016												Calendar Year 2017									
OCO	MFR #	FY	SERVICE	PROC QTY	ACCEPT PRIOR TO 1 OCT 2015	BAL DUE AS OF 1 OCT	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	
2) AL100 INTERMEDIATE CALIBER GUN AMMUNITION HARDWARE																															
2.2) CART., 57MM, 3P MK295 (BA22)																															
Prior Years Deliveries: 4017																															
	17	2013	NAVY	2,500	0	2,500	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2,500
	18	2014	NAVY	6,360	0	6,360	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	6,360
	18	2016	NAVY	3,580	0	3,580											A -	-	-	-	-	-	-	-	-	-	-	-	-	-	3,580
2.3) CART., 57MM TP MK296 (BA23) (2)																															
Prior Years Deliveries: 12209																															
	19	2017	NAVY	3,690	0	3,690																									3,690
	19	2018	NAVY	3,872	0	3,872																									3,872
✓	20	2020	NAVY	5,997	0	5,997																									5,997
2.4) CART 57MM ALaMO (HE-4G) (3)																															
	21	2019	NAVY	886	0	886																									886
✓	21	2020	NAVY	1,935	0	1,935																									1,935
2.5) CART., 57MM, HE-PD (4)																															
	23	2016	NAVY	2,800	0	2,800														A -	-	-	-	-	-	-	-	-	-	-	2,800
	23	2017	NAVY	1,500	0	1,500																									1,500
	22	2018	NAVY	1,370	0	1,370																									1,370
	22	2019	NAVY	5,780	0	5,780																									5,780
							OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	

Exhibit P-21, Production Schedule: PB 2020 Navy | **Date:** March 2019

Appropriation / Budget Activity / Budget Sub Activity: 1508N / 01 / 1

P-1 Line Item Number / Title: 0266 / Intermediate Caliber Gun Ammo

Aggregated Items: Intermediate Caliber Gun Ammo

Items (Units in Each)							Fiscal Year 2018												Fiscal Year 2019												BALANCE
							Calendar Year 2018												Calendar Year 2019												
OCO	MFR #	FY	SERVICE	PROC QTY	ACCEPT PRIOR TO 1 OCT 2017	BAL DUE AS OF 1 OCT	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	
2) AL100 INTERMEDIATE CALIBER GUN AMMUNITION HARDWARE																															
2.2) CART., 57MM, 3P MK295 (BA22)																															
Prior Years Deliveries: 4017																															
	17	2013	NAVY	2,500	0	2,500	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2,500
	18	2014	NAVY	6,360	0	6,360	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	6,360
	18	2016	NAVY	3,580	0	3,580	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3,580
2.3) CART., 57MM TP MK296 (BA23) (2)																															
Prior Years Deliveries: 12209																															
	19	2017	NAVY	3,690	0	3,690											A -	-	-	-	-	-	-	-	-	-	-	-	-	-	3,690
	19	2018	NAVY	3,872	0	3,872											A -	-	-	-	-	-	-	-	-	-	-	-	-	-	3,872
✓	20	2020	NAVY	5,997	0	5,997																									5,997
2.4) CART 57MM ALaMO (HE-4G) (3)																															
	21	2019	NAVY	886	0	886																					A -	-	-	-	886
✓	21	2020	NAVY	1,935	0	1,935																									1,935
2.5) CART., 57MM, HE-PD (4)																															
	23	2016	NAVY	2,800	0	2,800	-	-	-	-	-	2,800																			0
	23	2017	NAVY	1,500	0	1,500		A -	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1,500							0
	22	2018	NAVY	1,370	0	1,370																A -	-	-	-	-	-	-	-	-	1,370
	22	2019	NAVY	5,780	0	5,780																A -	-	-	-	-	-	-	-	-	5,780
							OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	

Exhibit P-21, Production Schedule: PB 2020 Navy | **Date:** March 2019

Appropriation / Budget Activity / Budget Sub Activity: 1508N / 01 / 1

P-1 Line Item Number / Title: 0266 / Intermediate Caliber Gun Ammo

Aggregated Items: Intermediate Caliber Gun Ammo

Items (Units in Each)							Fiscal Year 2020												Fiscal Year 2021												BALANCE
							Calendar Year 2020												Calendar Year 2021												
OCO	MFR #	FY	SERVICE	PROC QTY	ACCEPT PRIOR TO 1 OCT 2019	BAL DUE AS OF 1 OCT	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	
2) AL100 INTERMEDIATE CALIBER GUN AMMUNITION HARDWARE																															
2.2) CART., 57MM, 3P MK295 (BA22)																															
Prior Years Deliveries: 4017																															
	17	2013	NAVY	2,500	0	2,500	-	-	-	-	-	-	-	-	2,500																0
	18	2014	NAVY	6,360	0	6,360	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3,000	3,360									0
	18	2016	NAVY	3,580	0	3,580	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3,580
2.3) CART., 57MM TP MK296 (BA23) (2)																															
Prior Years Deliveries: 12209																															
	19	2017	NAVY	3,690	0	3,690	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3,690
	19	2018	NAVY	3,872	0	3,872	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3,872
✓	20	2020	NAVY	5,997	0	5,997						A	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	5,997
2.4) CART 57MM ALaMO (HE-4G) (3)																															
	21	2019	NAVY	886	0	886	-	-	-	-	-	-	-	-	500	386															0
✓	21	2020	NAVY	1,935	0	1,935							A	-	-	-	-	-	-	-	-	-	-	-	-	-	1,935				0
2.5) CART., 57MM, HE-PD (4)																															
	23	2016	NAVY	2,800	2,800	0																									0
	23	2017	NAVY	1,500	1,500	0																									0
	22	2018	NAVY	1,370	0	1,370	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1,370									0
	22	2019	NAVY	5,780	0	5,780	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2,616	2,000	1,164							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	

Exhibit P-21, Production Schedule: PB 2020 Navy | **Date:** March 2019

Appropriation / Budget Activity / Budget Sub Activity: 1508N / 01 / 1

P-1 Line Item Number / Title: 0266 / Intermediate Caliber Gun Ammo

Aggregated Items: Intermediate Caliber Gun Ammo

Items (Units in Each)							Fiscal Year 2022												Fiscal Year 2023												BALANCE
							Calendar Year 2022												Calendar Year 2023												
OCO	MFR #	FY	SERVICE	PROC QTY	ACCEPT PRIOR TO 1 OCT 2021	BAL DUE AS OF 1 OCT	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	
2) AL100 INTERMEDIATE CALIBER GUN AMMUNITION HARDWARE																															
2.2) CART., 57MM, 3P MK295 (BA22)																															
Prior Years Deliveries: 4017																															
	17	2013	NAVY	2,500	2,500	0																									0
	18	2014	NAVY	6,360	6,360	0																									0
	18	2016	NAVY	3,580	0	3,580	1,000	1,000	1,000	580																					0
2.3) CART., 57MM TP MK296 (BA23) (2)																															
Prior Years Deliveries: 12209																															
	19	2017	NAVY	3,690	0	3,690	2,000	1,690																							0
	19	2018	NAVY	3,872	0	3,872	2,000	1,872																							0
✓	20	2020	NAVY	5,997	0	5,997	-	-	-	-	-	3,000	2,997																		0
2.4) CART 57MM ALaMO (HE-4G) (3)																															
	21	2019	NAVY	886	886	0																									0
✓	21	2020	NAVY	1,935	1,935	0																									0
2.5) CART., 57MM, HE-PD (4)																															
	23	2016	NAVY	2,800	2,800	0																									0
	23	2017	NAVY	1,500	1,500	0																									0
	22	2018	NAVY	1,370	1,370	0																									0
	22	2019	NAVY	5,780	5,780	0																									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	

Exhibit P-21, Production Schedule: PB 2020 Navy		**Date:** March 2019
Appropriation / Budget Activity / Budget Sub Activity: 1508N / 01 / 1	**P-1 Line Item Number / Title:** 0266 / Intermediate Caliber Gun Ammo	**Aggregated Items:** Intermediate Caliber Gun Ammo

MFR Ref #	Manufacturer Name - Location	Production Rates (Each / Year)			Procurement Leadtime (Months)							
					Initial				Reorder			
		MSR For 2020	1-8-5 For 2020	MAX For 2020	ALT Prior to Oct 1	ALT After Oct 1	Manufacturing PLT	Total After Oct 1	ALT Prior to Oct 1	ALT After Oct 1	Manufacturing PLT	Total After Oct 1
1	BAE SYSTEMS - MINNESOTA	10,000	12,600	35,280	6	6	74	80	6	6	29	35
2	BAE SYSTEMS - MINNESOTA	2,300	7,500	15,000	6	8	67	75	6	6	60	66
3	BAE SYSTEMS - MINNESOTA	2,300	7,500	15,000	6	6	38	44	6	6	12	18
4	TBD - TBD	2,300	7,500	15,000	6	6	24	30	6	6	18	24
5	L-3 MUSTANG - DALLAS, TX	500	5,000	10,000	6	3	14	17	6	3	12	15
6	TBD - TBD	10,000	12,000	30,000	6	5	24	29	6	5	20	25
7	VARIOUS - VARIOUS	10,000	12,000	30,000	6	6	12	18	6	6	12	18

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

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Exhibit P-40, Budget Line Item Justification: PB 2020 Navy	Date: March 2019
Appropriation / Budget Activity / Budget Sub Activity: 1508N: Procurement of Ammo, Navy & MC / BA 01: Proc Ammo, Navy / BSA 1: Navy Ammunition	**P-1 Line Item Number / Title:** 0270 / Other Ship Gun Ammunition

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: 000

Resource Summary	Prior Years	FY 2018	FY 2019	FY 2020 Base	FY 2020 OCO	FY 2020 Total	FY 2021	FY 2022	FY 2023	FY 2024	To Complete	Total
Procurement Quantity *(Units in Each)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost *($ in Millions)*	10,257.658	59.539	44.680	0.000	42.753	42.753	41.561	39.068	39.785	40.656	-	10,565.700
Less PY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) *($ in Millions)*	10,257.658	59.539	44.680	0.000	42.753	42.753	41.561	39.068	39.785	40.656	-	10,565.700
Plus CY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority *($ in Millions)*	**10,257.658**	**59.539**	**44.680**	**0.000**	**42.753**	**42.753**	**41.561**	**39.068**	**39.785**	**40.656**	**-**	**10,565.700**
(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)*	-	-	-	-	-	-	-	-	-	-	-	-

Description:

FY 2020 funding totals include $0.0M for Base and $42.753M for Overseas Contingency Operations (OCO); of which $39.491M is realigned as part of the OCO for Base Requirements. FY 2020 OCO for Base Requirements is OCO funding for base budget requirements in support of the National Defense Strategy. The Budget requests these funds in OCO to comply with the base budget defense caps included in the Budget Control Act of 2011.

Program provides for Other Ship Gun Ammunition which consists of medium caliber types (20MM, 25MM, 30MM, 40MM). This supports Navy ships, and active and reserve ashore warfare forces including Naval Expeditionary Combat Command (NECC), Mobile Security Forces (MSF), fleet combat readiness groups, inshore undersea warfare groups and several other types of operational units. Program includes support for emergent anti-terrorism/force protection and homeland defense requirements.

This program also supports Naval Special Warfare (NSW) service common munitions which are required to provide US Navy SEAL teams, NSW small tactical units and task groups and Special Boat Teams with a fire power advantage, area target engagement, standoff and extended range capability, as well as an anti-armor capability. This includes medium caliber mortars and stand-off weapons systems such as 40MM, 60MM and 81MM and Javelin. These munitions provide NSW an essential force protection capability and increases the combat power of NSW tactical elements.

Secondary Distribution		FY 2018	FY 2019	FY 2020 Base	FY 2020 OCO	FY 2020 Total	FY 2021	FY 2022	FY 2023	FY 2024
Navy	Quantity	-	-	-	-	-	-	-	-	-
	Total Obligation Authority	59.483	44.623	0.000	42.698	42.698	41.505	39.011	39.727	40.597
NR	Quantity	-	-	-	-	-	-	-	-	-
	Total Obligation Authority	0.056	0.057	0.000	0.055	0.055	0.056	0.057	0.058	0.059
Total: Secondary Distribution	**Quantity**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**
	Total Obligation Authority	**59.539**	**44.680**	**0.000**	**42.753**	**42.753**	**41.561**	**39.068**	**39.785**	**40.656**

Exhibit P-40, Budget Line Item Justification: PB 2020 Navy		Date: March 2019
Appropriation / Budget Activity / Budget Sub Activity: 1508N: Procurement of Ammo, Navy & MC / BA 01: Proc Ammo, Navy / BSA 1: Navy Ammunition	**P-1 Line Item Number / Title:** 0270 / Other Ship Gun Ammunition	
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: 000		

Exhibits Schedule					Prior Years	FY 2018	FY 2019	FY 2020 Base	FY 2020 OCO	FY 2020 Total
Exhibit Type	Title*	Subexhibits	ID CD	MDAP/ MAIS Code	Quantity / Total Cost (Each) / ($ M)	Quantity / Total Cost (Each) / ($ M)	Quantity / Total Cost (Each) / ($ M)	Quantity / Total Cost (Each) / ($ M)	Quantity / Total Cost (Each) / ($ M)	Quantity / Total Cost (Each) / ($ M)
P-5	1 / Integrated Warfare Systems	P-5a, P-21			- / 242.297	- / 37.687	- / 38.214	- / 0.000	- / 33.483	- / 33.483
P-5	2 / Naval Special Warfare	P-5a, P-21			- / 10,015.361	- / 21.852	- / 6.466	- / 0.000	- / 9.270	- / 9.270
P-40	**Total Gross/Weapon System Cost**				**- / 10,257.658**	**- / 59.539**	**- / 44.680**	**- / 0.000**	**- / 42.753**	**- / 42.753**

*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 2020 OCO for baseline funding procures 20MM ammunition used for ship defense in MK15 Close-In Weapon System, 25MM ammunition used for Fast Attack Craft/Fast Attack In-Shore Craft (FAC/FIAC) defense in MK38 Machine Gun System on all platforms other than LPD and LCS, and 30MM ammunition used for FAC/FIAC defense in MK46 MOD 2 Gun Weapon System on LPD and LCS. Baseline funding also provides Production Engineering and Gauge requirements for 20MM, 25MM, and 30MM ammunition.

FY 2020 funding also procures Naval Special Warfare (NSW) stand off weapon rounds including 66MM munitions for the M72 Light Anti-armor Weapon. Baseline program funds are also necessary for production engineering as required by DoD and Navy safety and acquisition regulations.

OCO:
FY 2020 Direct War OCO funds will be used to procure 66MM munitions for the M72 light anti-armor weapon. OCO funds support the replacement of munitions expended in theater and will directly support future combat operations.

Exhibit P-5, Cost Analysis: PB 2020 Navy		Date: March 2019
Appropriation / Budget Activity / Budget Sub Activity: 1508N / 01 / 1	P-1 Line Item Number / Title: 0270 / Other Ship Gun Ammunition	Item Number / Title [DODIC]: 1 / Integrated Warfare Systems
ID Code (A=Service Ready, B=Not Service Ready) :	MDAP/MAIS Code:	

Resource Summary	Prior Years	FY 2018	FY 2019	FY 2020 Base	FY 2020 OCO	FY 2020 Total
Procurement Quantity *(Units in Each)*	-	-	-	-	-	-
Gross/Weapon System Cost *($ in Millions)*	242.297	37.687	38.214	0.000	33.483	33.483
Less PY Advance Procurement *($ in Millions)*	-	-	-	-	-	-
Net Procurement (P-1) *($ in Millions)*	242.297	37.687	38.214	0.000	33.483	33.483
Plus CY Advance Procurement *($ in Millions)*	-	-	-	-	-	-
Total Obligation Authority *($ in Millions)*	**242.297**	**37.687**	**38.214**	**0.000**	**33.483**	**33.483**
(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 2018			FY 2019			FY 2020 Base			FY 2020 OCO			FY 2020 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 - 25MM - (AG100) CARTRIDGES Cost																		
Recurring Cost																		
1.1.1) CART., 25MM M APDS-T (A974)	94.02	45,000	4.231	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000
1.1.2) CTG, 25MM, TP-T, M793 (A976)(†)	55.60	224,594	12.487	27.64	115,998	3.206	26.82	88,000	2.360	-	-	0.000	27.35	88,000	2.407	27.35	88,000	2.407
Subtotal: Recurring Cost	-	-	*16.718*	-	-	*3.206*	-	-	*2.360*	-	-	*0.000*	-	-	*2.407*	-	-	*2.407*
Subtotal: Hardware - 25MM - (AG100) CARTRIDGES Cost	**-**	**-**	***16.718***	**-**	**-**	***3.206***	**-**	**-**	***2.360***	**-**	**-**	***0.000***	**-**	**-**	***2.407***	**-**	**-**	***2.407***
Hardware - 30MM - (AG100) CARTRIDGES Cost																		
Recurring Cost																		
2.1.1) CART., 30MM APFSDS-T (AB51)(†)	387.06	111,789	43.269	413.65	23,882	9.879	421.51	29,980	12.637	-	-	0.000	429.52	20,190	8.672	429.52	20,190	8.672
2.1.2) CART., 30MM TP-T LKD (AA90)(†)	53.67	149,852	8.043	84.92	17,055	1.448	-	-	0.000	-	-	0.000	33.50	15,000	0.503	33.50	15,000	0.503
2.1.3) CARTRIDGE, 30MM X 173, LINKED (AB44)(†)	131.83	290,442	38.289	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000
Subtotal: Recurring Cost	-	-	*89.601*	-	-	*11.327*	-	-	*12.637*	-	-	*0.000*	-	-	*9.175*	-	-	*9.175*
Subtotal: Hardware - 30MM - (AG100) CARTRIDGES Cost	**-**	**-**	***89.601***	**-**	**-**	***11.327***	**-**	**-**	***12.637***	**-**	**-**	***0.000***	**-**	**-**	***9.175***	**-**	**-**	***9.175***
Hardware - 40MM - (AG100) CARTRIDGES Cost																		

Exhibit P-5, Cost Analysis: PB 2020 Navy		Date: March 2019
Appropriation / Budget Activity / Budget Sub Activity: 1508N / 01 / 1	P-1 Line Item Number / Title: 0270 / Other Ship Gun Ammunition	Item Number / Title [DODIC]: 1 / Integrated Warfare Systems
ID Code (A=Service Ready, B=Not Service Ready) :	MDAP/MAIS Code:	

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

Cost Elements	Prior Years			FY 2018			FY 2019			FY 2020 Base			FY 2020 OCO			FY 2020 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)
Recurring Cost																		
3.1.1) CTG 40MM HEDP (B546)	43.82	81,106	3.554	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000
3.1.2) CTG, 40MM, FIXED, PRAC., F/MK (B576)	15.36	1,363,866	20.945	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000
3.1.3) CTG, 40MM, BLANK, SAL 200 GRAMS BRASS (B650)	43.88	27,918	1.225	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000
3.1.4) CTG., 40MM M583A1 (B535)	44.18	31,460	1.390	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000
3.1.5) CTG., 40MM, BLANK, SAL 50 GRAMS STEEL (B550)	55.87	6,300	0.352	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000
Subtotal: Recurring Cost	-	-	*27.466*	-	-	*0.000*	-	-	*0.000*	-	-	*0.000*	-	-	*0.000*	-	-	*0.000*
Subtotal: Hardware - 40MM - (AG100) CARTRIDGES Cost	**-**	**-**	***27.466***	**-**	**-**	***0.000***	**-**	**-**	***0.000***	**-**	**-**	***0.000***	**-**	**-**	***0.000***	**-**	**-**	***0.000***
Hardware - OTHER - (AG100) CARTRIDGES Cost																		
Recurring Cost																		
4.1.1) TRANSPORTATION ACCT CODE	-	-	2.932	-	-	0.312	-	-	0.318	-	-	0.000	-	-	0.324	-	-	0.324
4.1.2) PE/QA SMCA	-	-	1.962	-	-	0.175	-	-	0.563	-	-	0.000	-	-	0.569	-	-	0.569
Subtotal: Recurring Cost	-	-	*4.894*	-	-	*0.487*	-	-	*0.881*	-	-	*0.000*	-	-	*0.893*	-	-	*0.893*
Subtotal: Hardware - OTHER - (AG100) CARTRIDGES Cost	**-**	**-**	***4.894***	**-**	**-**	***0.487***	**-**	**-**	***0.881***	**-**	**-**	***0.000***	**-**	**-**	***0.893***	**-**	**-**	***0.893***
Hardware - (AG200) CARTRIDGES Cost																		
Recurring Cost																		
5.1.1) CART., 20MM DUMMY, M51A4N (AA20)(†)	11.62	283,290	3.291	14.66	20,800	0.305	14.95	24,960	0.373	-	-	0.000	15.27	27,800	0.425	15.27	27,800	0.425
5.1.2) CART., 20MM MK 244 ELC (AA61)(†)	33.29	2,699,040	89.845	33.40	588,203	19.646	33.40	568,500	18.988	-	-	0.000	34.04	491,300	16.724	34.04	491,300	16.724
Subtotal: Recurring Cost	-	-	*93.136*	-	-	*19.951*	-	-	*19.361*	-	-	*0.000*	-	-	*17.149*	-	-	*17.149*
Subtotal: Hardware - (AG200) CARTRIDGES Cost	**-**	**-**	***93.136***	**-**	**-**	***19.951***	**-**	**-**	***19.361***	**-**	**-**	***0.000***	**-**	**-**	***17.149***	**-**	**-**	***17.149***

Exhibit P-5, Cost Analysis: PB 2020 Navy		Date: March 2019
Appropriation / Budget Activity / Budget Sub Activity: 1508N / 01 / 1	P-1 Line Item Number / Title: 0270 / Other Ship Gun Ammunition	Item Number / Title [DODIC]: 1 / Integrated Warfare Systems
ID Code (A=Service Ready, B=Not Service Ready) :	MDAP/MAIS Code:	

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

Cost Elements	Prior Years			FY 2018			FY 2019			FY 2020 Base			FY 2020 OCO			FY 2020 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 - OTHER - (AG200) CARTRIDGES Cost																		
Recurring Cost																		
6.1.1) PE/QA SMCA-AG200	-	-	1.148	-	-	0.008	-	-	0.451	-	-	0.000	-	-	0.460	-	-	0.460
Subtotal: Recurring Cost	-	-	*1.148*	-	-	*0.008*	-	-	*0.451*	-	-	*0.000*	-	-	*0.460*	-	-	*0.460*
Subtotal: Hardware - OTHER - (AG200) CARTRIDGES Cost	**-**	**-**	***1.148***	**-**	**-**	***0.008***	**-**	**-**	***0.451***	**-**	**-**	***0.000***	**-**	**-**	***0.460***	**-**	**-**	***0.460***
Hardware - (AG894) GAUGE REQUIREMENTS Cost																		
Recurring Cost																		
7.1.1) GAUGE REQUIREMENTS	-	-	0.500	-	-	0.110	-	-	0.039	-	-	0.000	-	-	0.040	-	-	0.040
Subtotal: Recurring Cost	-	-	*0.500*	-	-	*0.110*	-	-	*0.039*	-	-	*0.000*	-	-	*0.040*	-	-	*0.040*
Subtotal: Hardware - (AG894) GAUGE REQUIREMENTS Cost	**-**	**-**	***0.500***	**-**	**-**	***0.110***	**-**	**-**	***0.039***	**-**	**-**	***0.000***	**-**	**-**	***0.040***	**-**	**-**	***0.040***
Hardware - Product Improvement Program (AG850) Cost																		
Recurring Cost																		
8.1.1) (AG850) Product Improvement Program (1)	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000	-	-	1.000	-	-	1.000
Subtotal: Recurring Cost	-	-	*0.000*	-	-	*0.000*	-	-	*0.000*	-	-	*0.000*	-	-	*1.000*	-	-	*1.000*
Subtotal: Hardware - Product Improvement Program (AG850) Cost	**-**	**-**	***0.000***	**-**	**-**	***0.000***	**-**	**-**	***0.000***	**-**	**-**	***0.000***	**-**	**-**	***1.000***	**-**	**-**	***1.000***
Support - (AG830) PRODUCTION ENGINEERING Cost																		
9.1) PRODUCTION ENGINEERING	-	-	8.834	-	-	2.598	-	-	2.485	-	-	0.000	-	-	2.359	-	-	2.359
Subtotal: Support - (AG830) PRODUCTION ENGINEERING Cost	**-**	**-**	***8.834***	**-**	**-**	***2.598***	**-**	**-**	***2.485***	**-**	**-**	***0.000***	**-**	**-**	***2.359***	**-**	**-**	***2.359***
Gross/Weapon System Cost	**-**	**-**	**242.297**	**-**	**-**	**37.687**	**-**	**-**	**38.214**	**-**	**-**	**0.000**	**-**	**-**	**33.483**	**-**	**-**	**33.483**

Remarks:

[Hardware] AG100/AG200: INTEGRATED WARFARE SYSTEMS - Provides all up rounds and acceptance testing. Unit costs and quantities are adjusted during year of execution. Provides for Transportation Account Code (TAC) first destination delivery of production items and Single Manager Conventional Ammunition (SMCA) related costs.

[Hardware] AG894: GAUGE REQUIREMENTS - Provides for procurement of gauges, auxiliary and test equipment, and support costs necessary for ammunition metrology to check critical dimensions/ parameters of ammunition items and their parts. This is to assure proper mating of parts and subassemblies, assure correct interfacing between the ammunition and guns, and proper ammunition performance

Exhibit P-5, Cost Analysis: PB 2020 Navy		Date: March 2019
Appropriation / Budget Activity / Budget Sub Activity: 1508N / 01 / 1	**P-1 Line Item Number / Title:** 0270 / Other Ship Gun Ammunition	**Item Number / Title [DODIC]:** 1 / Integrated Warfare Systems
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	

[Support Cost] AG830: PRODUCTION ENGINEERING - Provides for production engineering services to support new acquisition and in production ammunition.

(†) indicates the presence of a P-5a

Footnotes:

(1) FY2020 Product Improvement to support joint service counter unmanned aerial system cartridge qualification.

Exhibit P-5a, Procurement History and Planning: PB 2020 Navy		Date: March 2019
Appropriation / Budget Activity / Budget Sub Activity: 1508N / 01 / 1	P-1 Line Item Number / Title: 0270 / Other Ship Gun Ammunition	Item Number / Title [DODIC]: 1 / Integrated Warfare Systems

Cost Elements	OCO	FY	Contractor and Location	Method/Type or Funding Vehicle	Location of PCO	Award Date	Date of First Delivery	Qty (Each)	Unit Cost ($)	Specs Avail Now?	Date Revision Available	RFP Issue Date
1.1.2) CTG, 25MM, TP-T, M793 (A976)		2016	GENERAL DYNAMICS OTS / MARION, IL	C / FFP	JMC ROCK ISLAND	Sep 2016	Jan 2018	133,680	25.27	Y		Oct 2015
1.1.2) CTG, 25MM, TP-T, M793 (A976)		2017 (2)	GENERAL DYNAMICS OTS / MARION, IL	C / FFP	JMC ROCK ISLAND	Jul 2017	Aug 2019	90,914	31.74	Y		Oct 2015
1.1.2) CTG, 25MM, TP-T, M793 (A976)		2018	GENERAL DYNAMICS OTS / MARION, IL	C / FFP	JMC ROCK ISLAND	Mar 2018	Jun 2019	115,998	27.64	Y		Oct 2015
1.1.2) CTG, 25MM, TP-T, M793 (A976)		2019	TBD / TBD	C / FFP	JMC ROCK ISLAND	Mar 2019	Mar 2020	88,000	26.82	Y		Oct 2017
1.1.2) CTG, 25MM, TP-T, M793 (A976)	✓	2020	TBD / TBD	C / FFP	JMC ROCK ISLAND	Mar 2020	Mar 2021	88,000	27.35	Y		Oct 2017
2.1.1) CART., 30MM APFSDS-T (AB51)(†)		2017	GENERAL DYNAMICS OTS / MARION, IL.	C / FFP	ACC-NJ	Nov 2017	Feb 2019	51,993	365.58	Y		Jun 2015
2.1.1) CART., 30MM APFSDS-T (AB51)(†)		2018	GENERAL DYNAMICS OTS / MARION, IL.	C / FFP	ACC-NJ	Jun 2018	Apr 2020	23,882	413.65	Y		Jun 2015
2.1.1) CART., 30MM APFSDS-T (AB51)(†)		2019	GENERAL DYNAMICS OTS / MARION, IL.	C / FFP	ACC-NJ	Jun 2019	May 2021	29,980	421.51	Y		Jun 2015
2.1.1) CART., 30MM APFSDS-T (AB51)(†)	✓	2020	GENERAL DYNAMICS OTS / MARION, IL.	C / FFP	ACC-NJ	Jun 2020	May 2022	20,190	429.52	Y		Jun 2015
2.1.2) CART., 30MM TP-T LKD (AA90)		2016	GENERAL DYNAMICS OTS / MARION, IL	C / FFP	JMC ROCK ISLAND	Sep 2016	Jan 2018	112,992	55.34	Y		Sep 2012
2.1.2) CART., 30MM TP-T LKD (AA90)		2018	GENERAL DYNAMICS OTS / MARION, IL	C / FFP	JMC ROCK ISLAND	Mar 2018	May 2019	17,055	84.92	Y		Oct 2017
2.1.2) CART., 30MM TP-T LKD (AA90)	✓	2020	TBD / TBD	C / FFP	JMC ROCK ISLAND	Mar 2020	May 2021	15,000	33.50	Y		Oct 2019
2.1.3) CARTRIDGE, 30MM X 173, LINKED (AB44)(†)		2015	NGIS / RADFORD, VA	C / FFP	JMC ROCK ISLAND	Jul 2015	Feb 2018	36,510	146.78	Y		Jul 2012
2.1.3) CARTRIDGE, 30MM X 173, LINKED (AB44)(†)		2016	NGIS / RADFORD, VA	C / FFP	JMC ROCK ISLAND	Sep 2017	Aug 2019	82,020	159.76	Y		Jul 2012
2.1.3) CARTRIDGE, 30MM X 173, LINKED (AB44)(†)		2017	NGIS / RADFORD, VA	C / FFP	JMC ROCK ISLAND	Sep 2017	Jul 2018	21,284	135.81	Y		Jul 2016
5.1.1) CART., 20MM DUMMY, M51A4N (AA20)		2018	TBD / TBD	C / FFP	NSWC IHD	Mar 2019	Sep 2020	20,800	14.66	Y		Nov 2017
5.1.1) CART., 20MM DUMMY, M51A4N (AA20)		2019	TBD / TBD	C / FFP	NSWC IHD	Mar 2019	Sep 2020	24,960	14.95	Y		Aug 2018
5.1.1) CART., 20MM DUMMY, M51A4N (AA20)	✓	2020	TBD / TBD	C / FFP	NSWC IHD	Mar 2020	Mar 2021	27,800	15.27	Y		Aug 2018
5.1.2) CART., 20MM MK 244 ELC (AA61)(†)		2016 (3)	GD-OTS AND NGIS / MARION, IL AND LAKE CITY, MO	C / FFP	JMC ROCK ISLAND	Jul 2016	Jan 2018	476,155	32.63	Y		Dec 2012

Exhibit P-5a, Procurement History and Planning: PB 2020 Navy		Date: March 2019
Appropriation / Budget Activity / Budget Sub Activity: 1508N / 01 / 1	P-1 Line Item Number / Title: 0270 / Other Ship Gun Ammunition	Item Number / Title [DODIC]: 1 / Integrated Warfare Systems

Cost Elements	OCO	FY	Contractor and Location	Method/Type or Funding Vehicle	Location of PCO	Award Date	Date of First Delivery	Qty (Each)	Unit Cost ($)	Specs Avail Now?	Date Revision Available	RFP Issue Date
5.1.2) CART., 20MM MK 244 ELC (AA61)(†)		2017	GD-OTS / MARION, IL	C / FFP	JMC ROCK ISLAND	Sep 2017	Jul 2018	478,850	30.84	Y		Dec 2012
5.1.2) CART., 20MM MK 244 ELC (AA61)(†)		2018	TBD / TBD	C / FFP	JMC ROCK ISLAND	Mar 2019	Dec 2020	588,203	33.40	Y		Oct 2017
5.1.2) CART., 20MM MK 244 ELC (AA61)(†)		2019	TBD / TBD	C / FFP	JMC ROCK ISLAND	Mar 2019	Dec 2020	568,500	33.40	Y		Oct 2017
5.1.2) CART., 20MM MK 244 ELC (AA61)(†)	✓	2020	TBD / TBD	C / FFP	JMC ROCK ISLAND	Mar 2020	Dec 2021	491,300	34.04	Y		Oct 2017

(†) indicates the presence of a P-21

Footnotes:

(2) Delivery schedule is set by the US Army Single Manager for Conventional Ammunition (SMCA). Date of first delivery on SMCA family buys can vary, depending on other customer's orders.

(3) FY16 ORDER IS A DUAL AWARD TO BOTH GD-OTS, MARION, IL AND ORBITAL ATK, LAKE CITY, MO.

Exhibit P-21, Production Schedule: PB 2020 Navy | **Date:** March 2019

Appropriation / Budget Activity / Budget Sub Activity: 1508N / 01 / 1

P-1 Line Item Number / Title: 0270 / Other Ship Gun Ammunition

Item Number / Title [DODIC]: 1 / Integrated Warfare Systems

Cost Elements (Units in Thousands)							Fiscal Year 2015												Fiscal Year 2016												BALANCE
										Calendar Year 2015												Calendar Year 2016									
OCO	MFR #	FY	SERVICE	PROC QTY	ACCEPT PRIOR TO 1 OCT 2014	BAL DUE AS OF 1 OCT	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	
2.1.1) CART., 30MM APFSDS-T (AB51)																															
Prior Years Deliveries: 59796																															
	1	2017	NAVY	51.993	.000	51.993																									51.993
	1	2018	NAVY	23.882	.000	23.882																									23.882
	1	2019	NAVY	29.980	.000	29.980																									29.980
✓	1	2020	NAVY	20.190	.000	20.190																									20.190
2.1.3) CARTRIDGE, 30MM X 173, LINKED (AB44)																															
Prior Years Deliveries: 150628																															
	2	2015	NAVY	36.510	.000	36.510										A -	-	-	-	-	-	-	-	-	-	-	-	-	-	-	36.510
	2	2016	NAVY	82.020	.000	82.020																									82.020
	2	2017	NAVY	21.284	.000	21.284																									21.284
5.1.2) CART., 20MM MK 244 ELC (AA61)																															
Prior Years Deliveries: 1744035																															
	4	2016	NAVY	476.155	.000	476.155																						A -	-	-	476.155
	3	2017	NAVY	478.850	.000	478.850																									478.850
	5	2018	NAVY	588.203	.000	588.203																									588.203
	5	2019	NAVY	568.500	.000	568.500																									568.500
✓	5	2020	NAVY	491.300	.000	491.300																									491.300
							OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	

Exhibit P-21, Production Schedule: PB 2020 Navy		**Date:** March 2019
Appropriation / Budget Activity / Budget Sub Activity: 1508N / 01 / 1	**P-1 Line Item Number / Title:** 0270 / Other Ship Gun Ammunition	**Item Number / Title [DODIC]:** 1 / Integrated Warfare Systems

Cost Elements (Units in Thousands)							Fiscal Year 2017												Fiscal Year 2018												BALANCE
							Calendar Year 2017															Calendar Year 2018									
OCO	MFR #	FY	SERVICE	PROC QTY	ACCEPT PRIOR TO 1 OCT 2016	BAL DUE AS OF 1 OCT	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	
2.1.1) CART., 30MM APFSDS-T (AB51)																															
Prior Years Deliveries: 59796																															
	1	2017	NAVY	51.993	.000	51.993														A -	-	-	-	-	-	-	-	-	-	-	51.993
	1	2018	NAVY	23.882	.000	23.882																					A -	-	-	-	23.882
	1	2019	NAVY	29.980	.000	29.980																									29.980
✓	1	2020	NAVY	20.190	.000	20.190																									20.190
2.1.3) CARTRIDGE, 30MM X 173, LINKED (AB44)																															
Prior Years Deliveries: 150628																															
	2	2015	NAVY	36.510	.000	36.510	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	36.510								.000
	2	2016	NAVY	82.020	.000	82.020												A -	-	-	-	-	-	-	-	-	-	-	-	-	82.020
	2	2017	NAVY	21.284	.000	21.284												A -	-	-	-	-	-	-	-	-	-	10.000	11.284		.000
5.1.2) CART., 20MM MK 244 ELC (AA61)																															
Prior Years Deliveries: 1744035																															
	4	2016	NAVY	476.155	.000	476.155	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	200.000	200.000	76.155							.000
	3	2017	NAVY	478.850	.000	478.850												A -	-	-	-	-	-	-	-	-	-	250.400	228.450		.000
	5	2018	NAVY	588.203	.000	588.203																									588.203
	5	2019	NAVY	568.500	.000	568.500																									568.500
✓	5	2020	NAVY	491.300	.000	491.300																									491.300
							OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	

Exhibit P-21, Production Schedule: PB 2020 Navy		Date: March 2019
Appropriation / Budget Activity / Budget Sub Activity: 1508N / 01 / 1	**P-1 Line Item Number / Title:** 0270 / Other Ship Gun Ammunition	**Item Number / Title [DODIC]:** 1 / Integrated Warfare Systems

Cost Elements (Units in Thousands)							Fiscal Year 2019												Fiscal Year 2020												BALANCE
							Calendar Year 2019												Calendar Year 2020												
OCO	MFR #	FY	SERVICE	PROC QTY	ACCEPT PRIOR TO 1 OCT 2018	BAL DUE AS OF 1 OCT	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	
2.1.1) CART., 30MM APFSDS-T (AB51)																															
Prior Years Deliveries: 59796																															
	1	2017	NAVY	51.993	.000	51.993	-	-	-	-	10.000	10.000	10.000	10.000	11.993																.000
	1	2018	NAVY	23.882	.000	23.882	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	14.812	4.198	4.872				.000
	1	2019	NAVY	29.980	.000	29.980									A -	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	29.980
✓	1	2020	NAVY	20.190	.000	20.190																					A -	-	-	-	20.190
2.1.3) CARTRIDGE, 30MM X 173, LINKED (AB44)																															
Prior Years Deliveries: 150628																															
	2	2015	NAVY	36.510	36.510	.000																									.000
	2	2016	NAVY	82.020	.000	82.020	-	-	-	-	-	-	-	-	-	-	41.000	41.020													.000
	2	2017	NAVY	21.284	21.284	.000																									.000
5.1.2) CART., 20MM MK 244 ELC (AA61)																															
Prior Years Deliveries: 1744035																															
	4	2016	NAVY	476.155	476.155	.000																									.000
	3	2017	NAVY	478.850	478.850	.000																									.000
	5	2018	NAVY	588.203	.000	588.203						A -	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	588.203
	5	2019	NAVY	568.500	.000	568.500						A -	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	568.500
✓	5	2020	NAVY	491.300	.000	491.300																		A -	-	-	-	-	-	-	491.300
							OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	

Exhibit P-21, Production Schedule: PB 2020 Navy | **Date:** March 2019

Appropriation / Budget Activity / Budget Sub Activity: 1508N / 01 / 1 | **P-1 Line Item Number / Title:** 0270 / Other Ship Gun Ammunition | **Item Number / Title [DODIC]:** 1 / Integrated Warfare Systems

Cost Elements (Units in Thousands)							Fiscal Year 2021												Fiscal Year 2022												BALANCE
										Calendar Year 2021												Calendar Year 2022									
OCO	MFR #	FY	SERVICE	PROC QTY	ACCEPT PRIOR TO 1 OCT 2020	BAL DUE AS OF 1 OCT	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	
2.1.1) CART., 30MM APFSDS-T (AB51)																															
Prior Years Deliveries: 59796																															
	1	2017	NAVY	51.993	51.993	.000																									.000
	1	2018	NAVY	23.882	23.882	.000																									.000
	1	2019	NAVY	29.980	.000	29.980	-	-	-	-	-	-	-	10.000	10.000	9.980															.000
✓	1	2020	NAVY	20.190	.000	20.190	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	10.000	10.190				.000
2.1.3) CARTRIDGE, 30MM X 173, LINKED (AB44)																															
Prior Years Deliveries: 150628																															
	2	2015	NAVY	36.510	36.510	.000																									.000
	2	2016	NAVY	82.020	82.020	.000																									.000
	2	2017	NAVY	21.284	21.284	.000																									.000
5.1.2) CART., 20MM MK 244 ELC (AA61)																															
Prior Years Deliveries: 1744035																															
	4	2016	NAVY	476.155	476.155	.000																									.000
	3	2017	NAVY	478.850	478.850	.000																									.000
	5	2018	NAVY	588.203	.000	588.203	-	-	200.000	200.000	188.203																				.000
	5	2019	NAVY	568.500	.000	568.500	-	-	200.000	200.000	168.500																				.000
✓	5	2020	NAVY	491.300	.000	491.300	-	-	-	-	-	-	-	-	-	-	-	-	-	-	200.000	200.000	91.300								.000
							OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	

Exhibit P-21, Production Schedule: PB 2020 Navy		Date: March 2019
Appropriation / Budget Activity / Budget Sub Activity: 1508N / 01 / 1	**P-1 Line Item Number / Title:** 0270 / Other Ship Gun Ammunition	**Item Number / Title [DODIC]:** 1 / Integrated Warfare Systems

MFR Ref #	Manufacturer Name - Location	Production Rates (Each / Year)			Procurement Leadtime (Months)							
					Initial				Reorder			
		MSR For 2020	1-8-5 For 2020	MAX For 2020	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 OTS - MARION, IL.	70	840,000	1,700,000	6	6	14	20	6	10	9	19
2	NGIS - RADFORD, VA	70	840,000	1,700,000	10	10	23	33	10	10	7	17
3	GD-OTS - MARION, IL	70	840,000	1,700,000	6	6	10	16	6	6	5	11
4	GD-OTS AND NGIS - MARION, IL AND LAKE CITY, MO	70	840,000	1,700,000	6	6	12	18	6	6	16	22
5	TBD - TBD	70	840,000	1,700,000	6	6	12	18	6	6	8	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).

Exhibit P-5, Cost Analysis: PB 2020 Navy		Date: March 2019
Appropriation / Budget Activity / Budget Sub Activity: 1508N / 01 / 1	**P-1 Line Item Number / Title:** 0270 / Other Ship Gun Ammunition	**Item Number / Title [DODIC]:** 2 / Naval Special Warfare
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	

Resource Summary	Prior Years	FY 2018	FY 2019	FY 2020 Base	FY 2020 OCO	FY 2020 Total
Procurement Quantity *(Units in Each)*	-	-	-	-	-	-
Gross/Weapon System Cost *($ in Millions)*	10,015.361	21.852	6.466	0.000	9.270	9.270
Less PY Advance Procurement *($ in Millions)*	-	-	-	-	-	-
Net Procurement (P-1) *($ in Millions)*	10,015.361	21.852	6.466	0.000	9.270	9.270
Plus CY Advance Procurement *($ in Millions)*	-	-	-	-	-	-
Total Obligation Authority *($ in Millions)*	**10,015.361**	**21.852**	**6.466**	**0.000**	**9.270**	**9.270**
(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 2018			FY 2019			FY 2020 Base			FY 2020 OCO			FY 2020 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 - AGNSW PE/QA SMCA Cost																		
Recurring Cost																		
1.1.1) AGNSW PE/QA SMCA	-	-	0.488	-	-	1.337	-	-	0.120	-	-	0.000	-	-	0.732	-	-	0.732
Subtotal: Recurring Cost	-	-	*0.488*	-	-	*1.337*	-	-	*0.120*	-	-	*0.000*	-	-	*0.732*	-	-	*0.732*
Subtotal: Hardware - AGNSW PE/QA SMCA Cost	**-**	**-**	***0.488***	**-**	**-**	***1.337***	**-**	**-**	***0.120***	**-**	**-**	***0.000***	**-**	**-**	***0.732***	**-**	**-**	***0.732***
Hardware - NSW Hardware Cost																		
Recurring Cost																		
2.1.1) CTG, 60MM, FULL RANGE PRACTICE, M769 (BA15)(†)	208.27	5,008	1.043	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000
2.1.2) C868 81MM HE M821A2(†)	818.60	1,957	1.602	933.00	999	0.932	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000
2.1.3) C869 81MM HE M889A1(†)	391.93	768	0.301	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000
2.1.4) CTG., 40MM PRACTICE M781 f/ M203 Gren Launcher (B519)(†)	4.38	145,000	0.635	4.65	12,533	0.058	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000
2.1.5) CTG 40MM PRACTICE M395A1 (B576)(†)	16.82	118,836	1.999	19.51	17,316	0.338	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000

Exhibit P-5, Cost Analysis: PB 2020 Navy		Date: March 2019
Appropriation / Budget Activity / Budget Sub Activity: 1508N / 01 / 1	P-1 Line Item Number / Title: 0270 / Other Ship Gun Ammunition	Item Number / Title [DODIC]: 2 / Naval Special Warfare
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 2018			FY 2019			FY 2020 Base			FY 2020 OCO			FY 2020 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)
2.1.6) CTG., 40MM PRACTICE, DAY/ NIGHT MARKER MK281 (BA21)(†)	34.05	57,269	1.950	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000
2.1.7) CTG, 60 MM HE-PD M88 M935 (B643)(†)	442.74	11,709	5.184	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000
2.1.8) CTG, MORTAR 81MM HE M821A2 SERIES,(CA61) (4)	-	-	9,999.000	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000
2.1.10) ROCKET, 66MM, M72A8 LAW, FFE (HB26)(†)	-	-	0.000	-	-	0.000	3,500.00	996	3.486	-	-	0.000	-	-	0.000	-	-	0.000
2.1.11) ROCKET, 66MM, ANTI-STRUCTURE M72A10 LAW FFE, (HB25)(†)	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000	3,600.00	2,287	8.233	3,600.00	2,287	8.233
2.1.12) CTG 81MM ILLUM M853A1 W/ FUZE TIME (C871)(†)	-	-	0.000	426.80	485	0.207	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000
2.1.14) JAVELIN BLOCK 1 FGM148F(†)	145,000.00	13	1.885	166,104.00	108	17.939	172,000.00	12	2.064	-	-	0.000	-	-	0.000	-	-	0.000
2.1.15) JAVELIN COMPONENTS (5)	-	-	0.115	-	-	0.166	-	-	0.496	-	-	0.000	-	-	0.000	-	-	0.000
Subtotal: Recurring Cost	-	-	*10,013.714*	-	-	*19.640*	-	-	*6.046*	-	-	*0.000*	-	-	*8.233*	-	-	*8.233*
Subtotal: Hardware - NSW Hardware Cost	**-**	**-**	***10,013.714***	**-**	**-**	***19.640***	**-**	**-**	***6.046***	**-**	**-**	***0.000***	**-**	**-**	***8.233***	**-**	**-**	***8.233***
Hardware - AGNSW TRANSPORTATION CODE Cost																		
Recurring Cost																		
3.1.1) AGNSW TAC CODE	-	-	0.000	-	-	0.500	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000
Subtotal: Recurring Cost	-	-	*0.000*	-	-	*0.500*	-	-	*0.000*	-	-	*0.000*	-	-	*0.000*	-	-	*0.000*
Subtotal: Hardware - AGNSW TRANSPORTATION CODE Cost	**-**	**-**	***0.000***	**-**	**-**	***0.500***	**-**	**-**	***0.000***	**-**	**-**	***0.000***	**-**	**-**	***0.000***	**-**	**-**	***0.000***
Support - (NS830) PRODUCTION ENGINEERING Cost																		
4.1) Production Engineering	-	-	1.159	-	-	0.375	-	-	0.300	-	-	0.000	-	-	0.305	-	-	0.305

Exhibit P-5, Cost Analysis: PB 2020 Navy		Date: March 2019
Appropriation / Budget Activity / Budget Sub Activity: 1508N / 01 / 1	P-1 Line Item Number / Title: 0270 / Other Ship Gun Ammunition	Item Number / Title [DODIC]: 2 / Naval Special Warfare
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 2018			FY 2019			FY 2020 Base			FY 2020 OCO			FY 2020 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)
Subtotal: Support - (NS830) PRODUCTION ENGINEERING Cost	-	-	*1.159*	-	-	*0.375*	-	-	*0.300*	-	-	*0.000*	-	-	*0.305*	-	-	*0.305*
Gross/Weapon System Cost	-	-	10,015.361	-	-	21.852	-	-	6.466	-	-	0.000	-	-	9.270	-	-	9.270

Remarks:
[Support Cost] AG830: PRODUCTION ENGINEERING - Provides for production engineering services.

(†) indicates the presence of a P-5a

Footnotes:
(4) Pricing is provided by the Army Single Manager for Conventional Ammunition (SMCA) and incorporates other service buys. The unit cost will fluctuate depending on the total procurement. Beginning in FY18 the M821A2 round is an upgraded round, unit price includes first article and production verification testing costs.
(5) Provides for required reset components including command launch units, battery coolant units and renovation components used to upgrade unserviceable rounds into ready-for-issue condition.

Exhibit P-5a, Procurement History and Planning: PB 2020 Navy		Date: March 2019
Appropriation / Budget Activity / Budget Sub Activity: 1508N / 01 / 1	P-1 Line Item Number / Title: 0270 / Other Ship Gun Ammunition	Item Number / Title [DODIC]: 2 / Naval Special Warfare

Cost Elements	OCO	FY	Contractor and Location	Method/Type or Funding Vehicle	Location of PCO	Award Date	Date of First Delivery	Qty (Each)	Unit Cost ($)	Specs Avail Now?	Date Revision Available	RFP Issue Date
2.1.1) CTG, 60MM, FULL RANGE PRACTICE, M769 (BA15)		2017	DAY & ZIMMERMANN LONE STAR / CAMDEM, AR	C / CPFF	CAMDEN, AR	Dec 2018	Jun 2020	5,008	208.27	N	Jun 2020	Dec 2018
2.1.2) C868 81MM HE M821A2		2017	JMC ROCK ISLAND / ROCK ISLAND, IL	MIPR	JMC ROCK ISLAND	Sep 2017	Sep 2017	1,957	818.43	N	Sep 2017	Sep 2017
2.1.2) C868 81MM HE M821A2		2018	JMC ROCK ISLAND / ROCK ISLAND, IL	MIPR	JMC ROCK ISLAND	Jan 2018	Jan 2018	999	933.00	N	Jan 2018	Jan 2018
2.1.3) C869 81MM HE M889A1		2017	JMC ROCK ISLAND / ROCK ISLAND, IL	MIPR	JMC ROCK ISLAND	Sep 2017	Sep 2017	768	391.93	N	Sep 2017	Sep 2017
2.1.4) CTG., 40MM PRACTICE M781 f/M203 Gren Launcher (B519)		2016	AMTEC CORPORATION / JANESVILE, WI	C / FFP	JMC ROCK ISLAND	Mar 2016	Jul 2018	60,000	4.78	Y		Oct 2015
2.1.4) CTG., 40MM PRACTICE M781 f/M203 Gren Launcher (B519)		2018	AMTEC CORPORATION / JANESVILE, WI	C / CPFF	JMC ROCK ISLAND	Mar 2018	Jan 2019	12,533	4.65	Y		Dec 2017
2.1.5) CTG 40MM PRACTICE M395A1 (B576)		2016	AMTEC CORPORATION / JANESVILE, WI	C / FFP	JMC ROCK ISLAND	Mar 2016	Aug 2017	40,000	19.15	Y		Dec 2015
2.1.5) CTG 40MM PRACTICE M395A1 (B576)		2018	AMTEC CORPORATION / JANESVILE, WI	C / FFP	JMC ROCK ISLAND	Apr 2018	Sep 2019	17,316	19.51	N	Dec 2020	Apr 2018
2.1.6) CTG., 40MM PRACTICE, DAY/NIGHT MARKER MK281 (BA21)(†)		2016	RHEINMETALL / GERMANY	C / FFP	USMC Quantico	Apr 2016	Oct 2017	57,269	34.05	Y		Dec 2014
2.1.7) CTG, 60 MM HE-PD M88 M935 (B643)(†)		2016	AMERICAN ORDNANCE LLC (IAAP) / MIDDLETOWN, IA	C / FFP	JMC ROCK ISLAND	Mar 2016	Oct 2017	1,152	442.76	Y		Dec 2014
2.1.7) CTG, 60 MM HE-PD M88 M935 (B643)(†)	✓	2016	AMERICAN ORDNANCE LLC (IAAP) / MIDDLETOWN, IA	C / FFP	JMC ROCK ISLAND	Mar 2016	Oct 2017	10,557	442.76	Y		Dec 2014
2.1.10) ROCKET, 66MM, M72A8 LAW, FFE (HB26)		2019	NAMMO Talley Defense Systems / Mesa, AZ	C / TBD	Mesa,Az	Dec 2018	Jun 2020	996	3,500.00	N	Dec 2018	Dec 2018
2.1.11) ROCKET, 66MM, ANTI-STRUCTURE M72A10 LAW FFE, (HB25)(†)	✓	2020	NAMMO Talley Defense Systems / Mesa, AZ	C / TBD	Mesa,Az	Dec 2019	Dec 2022	2,287	3,600.00	N	Dec 2019	Dec 2019
2.1.12) CTG 81MM ILLUM M853A1 W/FUZE TIME (C871)		2018	JMC ROCK ISLAND / ROCK ISLAND, IL	MIPR	JMC ROCK ISLAND	Feb 2018	Feb 2018	485	426.80	N	Feb 2018	Feb 2018
2.1.14) JAVELIN BLOCK 1 FGM148F		2017	RAYTHEON/LOCKHEED MARTIN JAVELIN JOINT VENTURE / TUCSON, AZ	C / FFP	REDSTONE	Oct 2017	Apr 2020	13	145,000.00	Y		Jul 2017
2.1.14) JAVELIN BLOCK 1 FGM148F		2018	RAYTHEON/LOCKHEED MARTIN JAVELIN JOINT VENTURE / TUCSON, AZ	C / FFP	REDSTONE	Jul 2018	Jan 2021	8	166,104.00	N		Jan 2018

Exhibit P-5a, Procurement History and Planning: PB 2020 Navy		Date: March 2019
Appropriation / Budget Activity / Budget Sub Activity: 1508N / 01 / 1	P-1 Line Item Number / Title: 0270 / Other Ship Gun Ammunition	Item Number / Title [DODIC]: 2 / Naval Special Warfare

Cost Elements	OCO	FY	Contractor and Location	Method/Type or Funding Vehicle	Location of PCO	Award Date	Date of First Delivery	Qty (Each)	Unit Cost ($)	Specs Avail Now?	Date Revision Available	RFP Issue Date
2.1.14) JAVELIN BLOCK 1 FGM148F	✓	2018	RAYTHEON/LOCKHEED MARTIN JAVELIN JOINT VENTURE / TUCSON, AZ	C / FFP	REDSTONE	Jun 2018	Dec 2020	100	166,104.00	Y		Jan 2018
2.1.14) JAVELIN BLOCK 1 FGM148F	✓	2019	RAYTHEON/LOCKHEED MARTIN JAVELIN JOINT VENTURE / TUCSON, AZ	C / FFP	REDSTONE	Jun 2019	Dec 2021	12	172,000.00	Y		Jan 2019

(†) indicates the presence of a P-21

Exhibit P-21, Production Schedule: PB 2020 Navy		Date: March 2019
Appropriation / Budget Activity / Budget Sub Activity: 1508N / 01 / 1	**P-1 Line Item Number / Title:** 0270 / Other Ship Gun Ammunition	**Item Number / Title [DODIC]:** 2 / Naval Special Warfare

Cost Elements (Units in Thousands)							Fiscal Year 2016												Fiscal Year 2017												BALANCE
							Calendar Year 2016												Calendar Year 2017												
OCO	MFR #	FY	SERVICE	PROC QTY	ACCEPT PRIOR TO 1 OCT 2015	BAL DUE AS OF 1 OCT	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	
2.1.6) CTG., 40MM PRACTICE, DAY/NIGHT MARKER MK281 (BA21)																															
	1	2016	NAVY	57.269	.000	57.269							A -	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	57.269
2.1.7) CTG, 60 MM HE-PD M88 M935 (B643)																															
	2	2016	NAVY	1.152	.000	1.152						A -	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1.152
✓	2	2016	NAVY	10.557	.000	10.557						A -	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	10.557
2.1.11) ROCKET, 66MM, ANTI-STRUCTURE M72A10 LAW FFE, (HB25)																															
✓	3	2020	NAVY	2.287	.000	2.287																									2.287
							OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	

Exhibit P-21, Production Schedule: PB 2020 Navy		**Date:** March 2019
Appropriation / Budget Activity / Budget Sub Activity: 1508N / 01 / 1	**P-1 Line Item Number / Title:** 0270 / Other Ship Gun Ammunition	**Item Number / Title [DODIC]:** 2 / Naval Special Warfare

Cost Elements (Units in Thousands)							Fiscal Year 2018												Fiscal Year 2019												BALANCE
										Calendar Year 2018												Calendar Year 2019									
OCO	MFR #	FY	SERVICE	PROC QTY	ACCEPT PRIOR TO 1 OCT 2017	BAL DUE AS OF 1 OCT	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	
2.1.6) CTG., 40MM PRACTICE, DAY/NIGHT MARKER MK281 (BA21)																															
	1	2016	NAVY	57.269	.000	57.269	57.269																								.000
2.1.7) CTG, 60 MM HE-PD M88 M935 (B643)																															
	2	2016	NAVY	1.152	.000	1.152	1.152																								.000
✓	2	2016	NAVY	10.557	.000	10.557	10.557																								.000
2.1.11) ROCKET, 66MM, ANTI-STRUCTURE M72A10 LAW FFE, (HB25)																															
✓	3	2020	NAVY	2.287	.000	2.287																									2.287
							OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	

Exhibit P-21, Production Schedule: PB 2020 Navy		Date: March 2019
Appropriation / Budget Activity / Budget Sub Activity: 1508N / 01 / 1	**P-1 Line Item Number / Title:** 0270 / Other Ship Gun Ammunition	**Item Number / Title [DODIC]:** 2 / Naval Special Warfare

Cost Elements (Units in Thousands)							Fiscal Year 2020												Fiscal Year 2021												BALANCE
							Calendar Year 2020												Calendar Year 2021												
OCO	MFR #	FY	SERVICE	PROC QTY	ACCEPT PRIOR TO 1 OCT 2019	BAL DUE AS OF 1 OCT	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	
2.1.6) CTG., 40MM PRACTICE, DAY/NIGHT MARKER MK281 (BA21)																															
	1	2016	NAVY	57.269	57.269	.000																									.000
2.1.7) CTG, 60 MM HE-PD M88 M935 (B643)																															
	2	2016	NAVY	1.152	1.152	.000																									.000
✓	2	2016	NAVY	10.557	10.557	.000																									.000
2.1.11) ROCKET, 66MM, ANTI-STRUCTURE M72A10 LAW FFE, (HB25)																															
✓	3	2020	NAVY	2.287	.000	2.287			A -	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2.287
							OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	

Exhibit P-21, Production Schedule: PB 2020 Navy		Date: March 2019
Appropriation / Budget Activity / Budget Sub Activity: 1508N / 01 / 1	**P-1 Line Item Number / Title:** 0270 / Other Ship Gun Ammunition	**Item Number / Title [DODIC]:** 2 / Naval Special Warfare

Cost Elements (Units in Thousands)							Fiscal Year 2022												Fiscal Year 2023												BALANCE
							Calendar Year 2022												Calendar Year 2023												
OCO	MFR #	FY	SERVICE	PROC QTY	ACCEPT PRIOR TO 1 OCT 2021	BAL DUE AS OF 1 OCT	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	
2.1.6) CTG., 40MM PRACTICE, DAY/NIGHT MARKER MK281 (BA21)																															
	1	2016	NAVY	57.269	57.269	.000																									.000
2.1.7) CTG, 60 MM HE-PD M88 M935 (B643)																															
	2	2016	NAVY	1.152	1.152	.000																									.000
✓	2	2016	NAVY	10.557	10.557	.000																									.000
2.1.11) ROCKET, 66MM, ANTI-STRUCTURE M72A10 LAW FFE, (HB25)																															
✓	3	2020	NAVY	2.287	.000	2.287	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2.287										.000
							OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	

Exhibit P-21, Production Schedule: PB 2020 Navy		Date: March 2019
Appropriation / Budget Activity / Budget Sub Activity: 1508N / 01 / 1	**P-1 Line Item Number / Title:** 0270 / Other Ship Gun Ammunition	**Item Number / Title [DODIC]:** 2 / Naval Special Warfare

MFR Ref #	Manufacturer Name - Location	Production Rates (Each / Year)			Procurement Leadtime (Months)							
					Initial				Reorder			
		MSR For 2020	1-8-5 For 2020	MAX For 2020	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	RHEINMETALL - GERMANY	80	70,000	1,640,000	6	6	18	24	6	6	18	24
2	AMERICAN ORDNANCE LLC (IAAP) - MIDDLETOWN, IA			TBD	6	6	19	25	6	6	7	13
3	NAMMO Talley Defense Systems - Mesa, AZ			TBD	0	0	18	18	0	0	0	0

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

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Exhibit P-40, Budget Line Item Justification: PB 2020 Navy	Date: March 2019
Appropriation / Budget Activity / Budget Sub Activity: 1508N: Procurement of Ammo, Navy & MC / BA 01: Proc Ammo, Navy / BSA 1: Navy Ammunition	**P-1 Line Item Number / Title:** 0335 / Small Arms & Lndg Party Ammo

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

Line Item MDAP/MAIS Code: N/A

Resource Summary	Prior Years	FY 2018	FY 2019	FY 2020 Base	FY 2020 OCO	FY 2020 Total	FY 2021	FY 2022	FY 2023	FY 2024	To Complete	Total
Procurement Quantity *(Units in Each)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost *($ in Millions)*	406.050	50.784	49.888	0.000	48.906	48.906	49.389	49.208	50.213	51.164	-	755.602
Less PY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) *($ in Millions)*	406.050	50.784	49.888	0.000	48.906	48.906	49.389	49.208	50.213	51.164	-	755.602
Plus CY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority *($ in Millions)*	**406.050**	**50.784**	**49.888**	**0.000**	**48.906**	**48.906**	**49.389**	**49.208**	**50.213**	**51.164**	**-**	**755.602**
(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)*	-	-	-	-	-	-	-	-	-	-	-	-

Description:

FY 2020 funding totals include $0.0M for Base and $48.906M for Overseas Contingency Operations (OCO); of which $47.896M is realigned as part of the OCO for Base Requirements. FY 2020 OCO for Base Requirements is OCO funding for base budget requirements in support of the National Defense Strategy. The Budget requests these funds in OCO to comply with the base budget defense caps included in the Budget Control Act of 2011.

Program procures ammunition in support of Navy ships and for active and reserve ashore warfare forces. Small Arms (22 -.50 Cal) ammunition and Landing Party ammunition includes hand grenades, riot control agents and defensive land mines for the Military Sea Lift Command, Naval Criminal Investigate Service (NCIS), Marine and Navy Air-wings, Maritime Force Protection Command, and Naval Expeditionary Combat Command.

Additionally, the Naval Special Warfare (NSW) small arms ammunition program includes 5.56mm, 7.62mm, and .50 caliber rounds required for the organic weapon systems carried by US Navy SEALs, while the various hand grenades and mines are employed for force protection, break contact maneuvers, ambushes, and target assaults.

Secondary Distribution		FY 2018	FY 2019	FY 2020 Base	FY 2020 OCO	FY 2020 Total	FY 2021	FY 2022	FY 2023	FY 2024
Navy	Quantity	-	-	-	-	-	-	-	-	-
	Total Obligation Authority	50.428	49.479	0.000	48.446	48.446	48.920	48.730	49.726	50.668
NR	Quantity	-	-	-	-	-	-	-	-	-
	Total Obligation Authority	0.356	0.409	0.000	0.460	0.460	0.469	0.478	0.487	0.496
Total: Secondary Distribution	**Quantity**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**
	Total Obligation Authority	**50.784**	**49.888**	**0.000**	**48.906**	**48.906**	**49.389**	**49.208**	**50.213**	**51.164**

Exhibit P-40, Budget Line Item Justification: PB 2020 Navy		Date: March 2019
Appropriation / Budget Activity / Budget Sub Activity: 1508N: Procurement of Ammo, Navy & MC / BA 01: Proc Ammo, Navy / BSA 1: Navy Ammunition	**P-1 Line Item Number / Title:** 0335 / Small Arms & Lndg Party Ammo	
ID Code (A=Service Ready, B=Not Service Ready): B	**Program Elements for Code B Items:** N/A	**Other Related Program Elements:** N/A
Line Item MDAP/MAIS Code: N/A		

Exhibits Schedule					Prior Years	FY 2018	FY 2019	FY 2020 Base	FY 2020 OCO	FY 2020 Total
Exhibit Type	Title*	Subexhibits	ID CD	MDAP/ MAIS Code	Quantity / Total Cost (Each) / ($ M)	Quantity / Total Cost (Each) / ($ M)	Quantity / Total Cost (Each) / ($ M)	Quantity / Total Cost (Each) / ($ M)	Quantity / Total Cost (Each) / ($ M)	Quantity / Total Cost (Each) / ($ M)
P-5	1 / Integrated Warfare Systems	P-5a, P-21			- / 284.118	- / 29.892	- / 30.770	- / 0.000	- / 28.351	- / 28.351
P-5	2 / Naval Special Warfare (NSW)	P-5a, P-21			- / 121.932	- / 20.892	- / 19.118	- / 0.000	- / 20.555	- / 20.555
P-40	**Total Gross/Weapon System Cost**				**- / 406.050**	**- / 50.784**	**- / 49.888**	**- / 0.000**	**- / 48.906**	**- / 48.906**

*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 2020 OCO for baseline funding procures ammunition to support shotguns, handguns, rifles, machine guns, grenades and land mines. 12 Gauge, 5.56MM, 7.62MM, 9MM, 38 Caliber, 40 Caliber, 45 Caliber, 50 Caliber, Hand and Smoke Grenades, and Mines are used for all Active Navy Ships and all Active and Reserve Ashore warfare forces, including Navy Expeditionary Combat Command, Maritime Expeditionary Security Forces, Inshore Undersea Warfare Groups, Military Sea Lift Command, Marine and Navy Air-Wing units, and Naval Criminal Investigative Service. Baseline funding also provides production Engineering and Gauge requirements for Small Arms Ammunition, Grenades, and Mines.

FY 2020 funding also procures Naval Special Warfare (NSW) ammunition to support shotguns, handguns, rifles, machine guns, grenades and land mines tactically employed by US Navy SEALs, Special Boat Teams, NSW Task Units/Groups and other NSW support groups. Procurement in FY 2018 includes 12 Gauge, 5.56MM, 7.62MM, 9MM, 45 Caliber, 50 Caliber, Hand and Smoke Grenades,and Mines. Baseline program funds are also necessary for production engineering as required by DoD and Navy safety and acquisition regulations.

OCO:
FY 2020 Direct War OCO funding will reset and stabilize the M67 Hand Grenade inventory, which was impacted by an increased operational tempo and associated expenditures. The funding will also allow the MK 311 and MK 316 inventories to be replenished to required levels to support future combat deployments.

Exhibit P-5, Cost Analysis: PB 2020 Navy		Date: March 2019
Appropriation / Budget Activity / Budget Sub Activity: 1508N / 01 / 1	P-1 Line Item Number / Title: 0335 / Small Arms & Lndg Party Ammo	Item Number / Title [DODIC]: 1 / Integrated Warfare Systems
ID Code (A=Service Ready, B=Not Service Ready) :	MDAP/MAIS Code:	

Resource Summary	Prior Years	FY 2018	FY 2019	FY 2020 Base	FY 2020 OCO	FY 2020 Total
Procurement Quantity *(Units in Each)*	-	-	-	-	-	-
Gross/Weapon System Cost *($ in Millions)*	284.118	29.892	30.770	0.000	28.351	28.351
Less PY Advance Procurement *($ in Millions)*	-	-	-	-	-	-
Net Procurement (P-1) *($ in Millions)*	284.118	29.892	30.770	0.000	28.351	28.351
Plus CY Advance Procurement *($ in Millions)*	-	-	-	-	-	-
Total Obligation Authority *($ in Millions)*	**284.118**	**29.892**	**30.770**	**0.000**	**28.351**	**28.351**
(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 2018			FY 2019			FY 2020 Base			FY 2020 OCO			FY 2020 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 - (AH100) PE/QA SMCA Cost																		
Recurring Cost																		
1.1.1) PE/QA SMCA	-	-	9.782	-	-	1.558	-	-	1.797	-	-	0.000	-	-	1.463	-	-	1.463
Subtotal: Recurring Cost	-	-	*9.782*	-	-	*1.558*	-	-	*1.797*	-	-	*0.000*	-	-	*1.463*	-	-	*1.463*
Subtotal: Hardware - (AH100) PE/QA SMCA Cost	**-**	**-**	***9.782***	**-**	**-**	***1.558***	**-**	**-**	***1.797***	**-**	**-**	***0.000***	**-**	**-**	***1.463***	**-**	**-**	***1.463***
Hardware - (AH100) TRANSPORTATION ACCOUNT CODE (TAC) Cost																		
Recurring Cost																		
2.1.1) TRANSPORTATION ACCOUNT CODE (TAC)	-	-	6.611	-	-	1.300	-	-	1.400	-	-	0.000	-	-	1.446	-	-	1.446
Subtotal: Recurring Cost	-	-	*6.611*	-	-	*1.300*	-	-	*1.400*	-	-	*0.000*	-	-	*1.446*	-	-	*1.446*
Subtotal: Hardware - (AH100) TRANSPORTATION ACCOUNT CODE (TAC) Cost	**-**	**-**	***6.611***	**-**	**-**	***1.300***	**-**	**-**	***1.400***	**-**	**-**	***0.000***	**-**	**-**	***1.446***	**-**	**-**	***1.446***
Hardware - (AH100) .40 CAL CARTRIDGES Cost																		
Recurring Cost																		
3.1.1) CARTRIDGE, MK 308 MOD 0, .40 (DWGW)(†)	0.29	2,374,200	0.699	-	-	0.000	0.33	100,000	0.033	-	-	0.000	0.34	250,000	0.085	0.34	250,000	0.085
3.1.2) CARTRIDGE .40 CALS&W (DWGX)(†)	0.29	774,463	0.222	-	-	0.000	0.31	200,000	0.062	-	-	0.000	0.31	200,000	0.062	0.31	200,000	0.062

Exhibit P-5, Cost Analysis: PB 2020 Navy		Date: March 2019
Appropriation / Budget Activity / Budget Sub Activity: 1508N / 01 / 1	P-1 Line Item Number / Title: 0335 / Small Arms & Lndg Party Ammo	Item Number / Title [DODIC]: 1 / Integrated Warfare Systems
ID Code (A=Service Ready, B=Not Service Ready) :	MDAP/MAIS Code:	

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

Cost Elements	Prior Years			FY 2018			FY 2019			FY 2020 Base			FY 2020 OCO			FY 2020 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)
3.1.3) CARTRIDGE, .40 CALIBER, S&W FRANGIBLE, MK 326 MOD 0 (CWRD)	0.42	785,129	0.329	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000
Subtotal: Recurring Cost	-	-	*1.250*	-	-	*0.000*	-	-	*0.095*	-	-	*0.000*	-	-	*0.147*	-	-	*0.147*
Subtotal: Hardware - (AH100) .40 CAL CARTRIDGES Cost	**-**	**-**	***1.250***	**-**	**-**	***0.000***	**-**	**-**	***0.095***	**-**	**-**	***0.000***	**-**	**-**	***0.147***	**-**	**-**	***0.147***
Hardware - (AH100) 50 CAL CARTRIDGES Cost																		
Recurring Cost																		
4.1.1) .50 CAL BLANK (A598)	1.37	1,921,958	2.634	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000
4.1.2) CTG, .50 LINKED (A576)(†)	2.22	6,703,716	14.852	1.98	600,000	1.188	1.98	550,500	1.090	-	-	0.000	2.04	350,000	0.714	2.04	350,000	0.714
4.1.3) CTG, 50 CAL, MK 211, APIT, M (AA06)	-	-	5.985	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000
4.1.4) CTG, 50 CAL, LKD, BALL (A555)(†)	1.88	12,763,400	24.026	1.74	1,477,586	2.571	1.77	805,000	1.425	-	-	0.000	1.82	1,384,600	2.520	1.82	1,384,600	2.520
4.1.5) CTG, 50 CAL, LKD & TRACER (A557)(†)	1.82	33,832,690	61.452	1.79	5,197,200	9.303	1.83	2,836,500	5.191	-	-	0.000	1.88	4,871,200	9.158	1.88	4,871,200	9.158
Subtotal: Recurring Cost	-	-	*108.949*	-	-	*13.062*	-	-	*7.706*	-	-	*0.000*	-	-	*12.392*	-	-	*12.392*
Subtotal: Hardware - (AH100) 50 CAL CARTRIDGES Cost	**-**	**-**	***108.949***	**-**	**-**	***13.062***	**-**	**-**	***7.706***	**-**	**-**	***0.000***	**-**	**-**	***12.392***	**-**	**-**	***12.392***
Hardware - (AH100) 5.56MM CARTRIDGES Cost																		
Recurring Cost																		
5.1.1) CTG, CAL 5.56MM, FRANGIBLE (AA40)	0.43	33,827,694	14.587	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000
5.1.2) CTG, 5.56MM M855 (A059)(†)	0.24	73,106,985	17.802	0.23	8,969,520	2.036	0.24	6,000,000	1.440	-	-	0.000	0.25	4,944,000	1.236	0.25	4,944,000	1.236
5.1.3) CTG., 5.56MM, BLANK (A080)	0.24	9,069,440	2.176	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000
5.1.4) CTG, 5.56MM, SRTR AMMO (AA68)	0.43	1,020,785	0.439	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000
5.1.5) CTG, 5.56MM, SRTR AMMO (AB67)(†)	1.33	237,600	0.316	0.98	387,000	0.379	1.36	300,000	0.408	-	-	0.000	1.39	360,000	0.500	1.39	360,000	0.500

Exhibit P-5, Cost Analysis: PB 2020 Navy		Date: March 2019
Appropriation / Budget Activity / Budget Sub Activity: 1508N / 01 / 1	P-1 Line Item Number / Title: 0335 / Small Arms & Lndg Party Ammo	Item Number / Title [DODIC]: 1 / Integrated Warfare Systems
ID Code (A=Service Ready, B=Not Service Ready) :	MDAP/MAIS Code:	

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

Cost Elements	Prior Years			FY 2018			FY 2019			FY 2020 Base			FY 2020 OCO			FY 2020 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)
Subtotal: Recurring Cost	-	-	*35.320*	-	-	*2.415*	-	-	*1.848*	-	-	*0.000*	-	-	*1.736*	-	-	*1.736*
Subtotal: Hardware - (AH100) 5.56MM CARTRIDGES Cost	**-**	**-**	***35.320***	**-**	**-**	***2.415***	**-**	**-**	***1.848***	**-**	**-**	***0.000***	**-**	**-**	***1.736***	**-**	**-**	***1.736***
Hardware - (AH100) 7.62MM CARTRIDGES Cost																		
Recurring Cost																		
6.1.1) CTG. 7.62MM (A257)(†)	0.49	2,910,000	1.427	0.49	315,000	0.154	0.48	350,000	0.168	-	-	0.000	0.49	350,000	0.172	0.49	350,000	0.172
6.1.2) CARTR, 7.62MM (AA11)	1.05	1,729,780	1.809	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000
6.1.3) CTG, 7.62MM, SRTA, BALL, LINKED M973 (AB60)(†)	1.85	1,241,026	2.295	1.83	187,200	0.343	1.86	200,000	0.372	-	-	0.000	1.90	200,000	0.380	1.90	200,000	0.380
6.1.4) CTG, 7.62MM, LKD, BALL AND TR (A131)(†)	0.80	42,306,029	33.822	0.52	6,158,400	3.218	0.54	6,000,000	3.240	-	-	0.000	0.56	5,500,000	3.080	0.56	5,500,000	3.080
6.1.5) CTG, 7.62MM, BALL, M80, LKD (A143)(†)	0.62	9,978,254	6.150	0.50	876,800	0.436	0.52	850,000	0.442	-	-	0.000	0.54	900,000	0.486	0.54	900,000	0.486
6.1.6) CTG, 7.62MM, LKD (A165)(†)	0.61	33,797,202	20.510	0.53	2,450,000	1.299	0.48	2,000,000	0.960	-	-	0.000	0.49	2,000,000	0.980	0.49	2,000,000	0.980
Subtotal: Recurring Cost	-	-	*66.013*	-	-	*5.450*	-	-	*5.182*	-	-	*0.000*	-	-	*5.098*	-	-	*5.098*
Subtotal: Hardware - (AH100) 7.62MM CARTRIDGES Cost	**-**	**-**	***66.013***	**-**	**-**	***5.450***	**-**	**-**	***5.182***	**-**	**-**	***0.000***	**-**	**-**	***5.098***	**-**	**-**	***5.098***
Hardware - (AH100) 38CAL CARTRIDGES Cost																		
Recurring Cost																		
7.1.1) CTG, .38 BLANK (A403)(†)	0.27	62,750	0.017	-	-	0.000	0.30	10,000	0.003	-	-	0.000	-	-	0.000	-	-	0.000
Subtotal: Recurring Cost	-	-	*0.017*	-	-	*0.000*	-	-	*0.003*	-	-	*0.000*	-	-	*0.000*	-	-	*0.000*
Subtotal: Hardware - (AH100) 38CAL CARTRIDGES Cost	**-**	**-**	***0.017***	**-**	**-**	***0.000***	**-**	**-**	***0.003***	**-**	**-**	***0.000***	**-**	**-**	***0.000***	**-**	**-**	***0.000***
Hardware - (AH100) 45 CAL CARTRIDGES Cost																		
Recurring Cost																		
8.1.1) CTG, .45 CAL BALL (A475)	0.27	384,000	0.102	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000
Subtotal: Recurring Cost	-	-	*0.102*	-	-	*0.000*	-	-	*0.000*	-	-	*0.000*	-	-	*0.000*	-	-	*0.000*

Exhibit P-5, Cost Analysis: PB 2020 Navy		Date: March 2019
Appropriation / Budget Activity / Budget Sub Activity: 1508N / 01 / 1	P-1 Line Item Number / Title: 0335 / Small Arms & Lndg Party Ammo	Item Number / Title [DODIC]: 1 / Integrated Warfare Systems
ID Code (A=Service Ready, B=Not Service Ready) :	MDAP/MAIS Code:	

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

Cost Elements	Prior Years			FY 2018			FY 2019			FY 2020 Base			FY 2020 OCO			FY 2020 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)
Subtotal: Hardware - (AH100) 45 CAL CARTRIDGES Cost	**-**	**-**	***0.102***	**-**	**-**	***0.000***	**-**	**-**	***0.000***	**-**	**-**	***0.000***	**-**	**-**	***0.000***	**-**	**-**	***0.000***
Hardware - (AH100) 9MM CARTRIDGES Cost																		
Recurring Cost																		
9.1.1) CTG, 9MM, BALL (A363)(†)	0.18	90,793,648	16.316	0.17	10,064,000	1.711	0.17	9,000,000	1.530	-	-	0.000	0.17	9,000,000	1.530	0.17	9,000,000	1.530
9.1.2) CTG, 9MM, FRANGIBLE (AA16)(†)	0.30	6,185,485	1.886	0.32	687,500	0.220	0.32	2,500,000	0.800	-	-	0.000	0.33	1,500,000	0.495	0.33	1,500,000	0.495
9.1.3) (AB13) CTG, 9MM, FX, MARKING, BLUE (AB13)(†)	0.56	1,740,000	0.966	-	-	0.000	0.63	250,000	0.158	-	-	0.000	0.64	170,000	0.109	0.64	170,000	0.109
9.1.4) (AB14) CTG, 9MM, FX, MARKING, RED (AB14)(†)	0.55	5,199,818	2.863	0.63	800,000	0.504	0.63	650,000	0.410	-	-	0.000	0.64	650,000	0.416	0.64	650,000	0.416
Subtotal: Recurring Cost	-	-	*22.031*	-	-	*2.435*	-	-	*2.898*	-	-	*0.000*	-	-	*2.550*	-	-	*2.550*
Subtotal: Hardware - (AH100) 9MM CARTRIDGES Cost	**-**	**-**	***22.031***	**-**	**-**	***2.435***	**-**	**-**	***2.898***	**-**	**-**	***0.000***	**-**	**-**	***2.550***	**-**	**-**	***2.550***
Hardware - (AH100) GRENADES Cost																		
Recurring Cost																		
10.1.1) FUZE, DELAY M228 (G878)(†)	5.89	27,486	0.162	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000
10.1.2) GRENADE, VEHICLE LAUNCHED IR/S (GG42)(†)	234.13	7,701	1.803	-	-	0.000	336.10	15,250	5.126	-	-	0.000	-	-	0.000	-	-	0.000
10.1.3) GRENADE, HND, SMK, GREEN (G940)(†)	34.01	25,048	0.852	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000
10.1.4) GRENADE, HND, SMK, VIOLET (G955)(†)	-	-	0.001	-	-	0.000	58.10	10,000	0.581	-	-	0.000	-	-	0.000	-	-	0.000
10.1.5) GRENADE, HND, SMK, YELLOW (G945)	34.36	19,646	0.675	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000
10.1.6) GRENADE, HND, SMK, WHITE (GG34)(†)	30.20	15,000	0.453	31.00	10,000	0.310	31.00	14,000	0.434	-	-	0.000	-	-	0.000	-	-	0.000

Exhibit P-5, Cost Analysis: PB 2020 Navy		Date: March 2019
Appropriation / Budget Activity / Budget Sub Activity: 1508N / 01 / 1	P-1 Line Item Number / Title: 0335 / Small Arms & Lndg Party Ammo	Item Number / Title [DODIC]: 1 / Integrated Warfare Systems
ID Code (A=Service Ready, B=Not Service Ready) :	MDAP/MAIS Code:	

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

Cost Elements	Prior Years			FY 2018			FY 2019			FY 2020 Base			FY 2020 OCO			FY 2020 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)
10.1.7) GRENADE, HND, SMK, RED (G950)(†)	52.16	10,352	0.540	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000
Subtotal: Recurring Cost	-	-	*4.486*	-	-	*0.310*	-	-	*6.141*	-	-	*0.000*	-	-	*0.000*	-	-	*0.000*
Subtotal: Hardware - (AH100) GRENADES Cost	**-**	**-**	***4.486***	**-**	**-**	***0.310***	**-**	**-**	***6.141***	**-**	**-**	***0.000***	**-**	**-**	***0.000***	**-**	**-**	***0.000***
Hardware - (AH100) MINES Cost																		
Recurring Cost																		
11.1.1) RIOT CNTRL, CS (K765)(†)	0.40	22,280	0.009	-	-	0.000	0.47	10,000	0.005	-	-	0.000	-	-	0.000	-	-	0.000
Subtotal: Recurring Cost	-	-	*0.009*	-	-	*0.000*	-	-	*0.005*	-	-	*0.000*	-	-	*0.000*	-	-	*0.000*
Subtotal: Hardware - (AH100) MINES Cost	**-**	**-**	***0.009***	**-**	**-**	***0.000***	**-**	**-**	***0.005***	**-**	**-**	***0.000***	**-**	**-**	***0.000***	**-**	**-**	***0.000***
Hardware - (AH100) SHOTGUN CARTRIDGES Cost																		
Recurring Cost																		
12.1.1) CTG, 12 GA NO. 00 (A011)(†)	0.54	2,934,680	1.583	0.52	738,240	0.384	0.54	750,000	0.405	-	-	0.000	0.55	750,000	0.413	0.55	750,000	0.413
12.1.2) CTG, 12 GA, FRANGIBLE (AA86)	0.89	2,243,170	2.006	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000
Subtotal: Recurring Cost	-	-	*3.589*	-	-	*0.384*	-	-	*0.405*	-	-	*0.000*	-	-	*0.413*	-	-	*0.413*
Subtotal: Hardware - (AH100) SHOTGUN CARTRIDGES Cost	**-**	**-**	***3.589***	**-**	**-**	***0.384***	**-**	**-**	***0.405***	**-**	**-**	***0.000***	**-**	**-**	***0.413***	**-**	**-**	***0.413***
Hardware - (AH350) MATCH AMMO Cost																		
Recurring Cost																		
13.1.1) CTG, .22 CAL, BALL, LR, MATCH (A091)	0.13	2,215,000	0.288	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000
13.1.2) CTG., 12 GA SHOTGUN (A002)	0.40	203,000	0.081	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000
13.1.3) CTG., 12 GAUGE SHOTGUN, TRAP/SKEET PAS (A003)	0.40	203,000	0.081	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000
13.1.4) CTG., 45 CAL, BALL, M1911, M (A483)	0.28	112,000	0.031	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000
Subtotal: Recurring Cost	-	-	*0.481*	-	-	*0.000*	-	-	*0.000*	-	-	*0.000*	-	-	*0.000*	-	-	*0.000*

Exhibit P-5, Cost Analysis: PB 2020 Navy		Date: March 2019
Appropriation / Budget Activity / Budget Sub Activity: 1508N / 01 / 1	P-1 Line Item Number / Title: 0335 / Small Arms & Lndg Party Ammo	Item Number / Title [DODIC]: 1 / Integrated Warfare Systems
ID Code (A=Service Ready, B=Not Service Ready) :	MDAP/MAIS Code:	

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

Cost Elements	Prior Years			FY 2018			FY 2019			FY 2020 Base			FY 2020 OCO			FY 2020 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)
Subtotal: Hardware - (AH350) MATCH AMMO Cost	**-**	**-**	***0.481***	**-**	**-**	***0.000***	**-**	**-**	***0.000***	**-**	**-**	***0.000***	**-**	**-**	***0.000***	**-**	**-**	***0.000***
Hardware - (AH850) PRODUCT IMPROVEMENT Cost																		
Recurring Cost																		
14.1.1) PRODUCT IMPROVEMENT	-	-	1.055	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000
Subtotal: Recurring Cost	-	-	*1.055*	-	-	*0.000*	-	-	*0.000*	-	-	*0.000*	-	-	*0.000*	-	-	*0.000*
Subtotal: Hardware - (AH850) PRODUCT IMPROVEMENT Cost	**-**	**-**	***1.055***	**-**	**-**	***0.000***	**-**	**-**	***0.000***	**-**	**-**	***0.000***	**-**	**-**	***0.000***	**-**	**-**	***0.000***
Hardware - (AH893) RENOVATION COMPONENTS Cost																		
Recurring Cost																		
15.1.1) RENOVATION COMPONENTS	-	-	2.364	-	-	0.459	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000
Subtotal: Recurring Cost	-	-	*2.364*	-	-	*0.459*	-	-	*0.000*	-	-	*0.000*	-	-	*0.000*	-	-	*0.000*
Subtotal: Hardware - (AH893) RENOVATION COMPONENTS Cost	**-**	**-**	***2.364***	**-**	**-**	***0.459***	**-**	**-**	***0.000***	**-**	**-**	***0.000***	**-**	**-**	***0.000***	**-**	**-**	***0.000***
Hardware - (AH894) GAUGE REQUIREMENTS Cost																		
Recurring Cost																		
16.1.1) GAUGE REQUIREMENTS	-	-	0.098	-	-	0.020	-	-	0.023	-	-	0.000	-	-	0.030	-	-	0.030
Subtotal: Recurring Cost	-	-	*0.098*	-	-	*0.020*	-	-	*0.023*	-	-	*0.000*	-	-	*0.030*	-	-	*0.030*
Subtotal: Hardware - (AH894) GAUGE REQUIREMENTS Cost	**-**	**-**	***0.098***	**-**	**-**	***0.020***	**-**	**-**	***0.023***	**-**	**-**	***0.000***	**-**	**-**	***0.030***	**-**	**-**	***0.030***
Hardware - (AH895) NON-STANDARD Cost																		
Recurring Cost																		
17.1.1) NON-STANDARD	-	-	1.207	-	-	0.000	-	-	0.630	-	-	0.000	-	-	0.640	-	-	0.640
Subtotal: Recurring Cost	-	-	*1.207*	-	-	*0.000*	-	-	*0.630*	-	-	*0.000*	-	-	*0.640*	-	-	*0.640*
Subtotal: Hardware - (AH895) NON-STANDARD Cost	**-**	**-**	***1.207***	**-**	**-**	***0.000***	**-**	**-**	***0.630***	**-**	**-**	***0.000***	**-**	**-**	***0.640***	**-**	**-**	***0.640***
Support - (AH830) PRODUCTION ENGINEERING Cost																		
18.1) PRODUCTION ENGINEERING	-	-	17.921	-	-	2.499	-	-	2.637	-	-	0.000	-	-	2.436	-	-	2.436

Exhibit P-5, Cost Analysis: PB 2020 Navy		Date: March 2019
Appropriation / Budget Activity / Budget Sub Activity: 1508N / 01 / 1	P-1 Line Item Number / Title: 0335 / Small Arms & Lndg Party Ammo	Item Number / Title [DODIC]: 1 / Integrated Warfare Systems
ID Code (A=Service Ready, B=Not Service Ready) :	MDAP/MAIS Code:	

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

Cost Elements	Prior Years			FY 2018			FY 2019			FY 2020 Base			FY 2020 OCO			FY 2020 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)
Subtotal: Support - (AH830) PRODUCTION ENGINEERING Cost	-	-	17.921	-	-	2.499	-	-	2.637	-	-	0.000	-	-	2.436	-	-	2.436
Support - Prior Year Funding Cost																		
19.1) Prior Year Funding	-	-	2.833	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000
Subtotal: Support - Prior Year Funding Cost	-	-	2.833	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000
Gross/Weapon System Cost	-	-	284.118	-	-	29.892	-	-	30.770	-	-	0.000	-	-	28.351	-	-	28.351

Remarks:

[Hardware] [P5 /(AH100)HARDWARE]: Provides for all types of components, load and assemble complete rounds and conduct acceptance tests. Provides for Transportation Account Code (TAC) first destination of delivery of production items and Single Manager Conventional Ammunition (SMCA) related costs.

[Hardware] [P5 / (AH850) PRODUCT IMPROVEMENT]:
Provides engineering services and related effort by the producing contractor or manufacturing installation to extend the useful military life of an item or to improve the item within the current performance envelope.

[Hardware] [P5 / (AH894) GAUGE REQUIREMENTS]:
Provides for procurement of gauges, auxiliary and test equipment and support costs necessary for ammunition metrology to check critical dimensions/parameters of ammunition items and their parts. This is to assure proper mating of parts and subassemblies, assure correct interfacing between the ammunition and guns, and proper ammunition performance.

[Hardware] [P5 / (AH895) NON-STANDARD ITEMS]:
Provides for non-standard items of ammunition. Includes training aids and initial procurements of required non type classified munition items including law enforcement ammunition for NCIS.

[Support Cost] AH830: SALP Production Engineering provides for production engineering services to support new acquisition and in production ammunition.

(†) indicates the presence of a P-5a

Exhibit P-5a, Procurement History and Planning: PB 2020 Navy		Date: March 2019
Appropriation / Budget Activity / Budget Sub Activity: 1508N / 01 / 1	P-1 Line Item Number / Title: 0335 / Small Arms & Lndg Party Ammo	Item Number / Title [DODIC]: 1 / Integrated Warfare Systems

Cost Elements	OCO	FY	Contractor and Location	Method/Type or Funding Vehicle	Location of PCO	Award Date	Date of First Delivery	Qty (Each)	Unit Cost ($)	Specs Avail Now?	Date Revision Available	RFP Issue Date
3.1.1) CARTRIDGE, MK 308 MOD 0, .40 (DWGW)		2019	TBD / TBD	C / FFP	NSWC CRANE	Mar 2019	Jun 2019	100,000	0.33	Y		Oct 2018
3.1.1) CARTRIDGE, MK 308 MOD 0, .40 (DWGW)	✓	2020	TBD / TBD	C / FFP	NSWC CRANE	Mar 2020	Jun 2020	250,000	0.34	Y		Oct 2018
3.1.2) CARTRIDGE .40 CALS&W (DWGX)		2019	TBD / TBD	C / FFP	NSWC CRANE	Mar 2019	Jun 2019	200,000	0.31	Y		Oct 2018
3.1.2) CARTRIDGE .40 CALS&W (DWGX)	✓	2020	TBD / TBD	C / FFP	NSWC CRANE	Mar 2020	Jun 2020	200,000	0.31	Y		Oct 2018
4.1.2) CTG, .50 LINKED (A576)		2015	NORTHROP GRUMMAN / LCAAP	C / FFP	JMC ROCK ISLAND	Jun 2015	Jan 2018	1,091,000	1.89	Y		Oct 2011
4.1.2) CTG, .50 LINKED (A576)		2018	NORTHROP GRUMMAN / LCAAP	C / FFP	JMC ROCK ISLAND	Aug 2018	Nov 2019	600,000	1.98	Y		Oct 2017
4.1.2) CTG, .50 LINKED (A576)		2019	NORTHROP GRUMMAN / LCAAP	C / FFP	JMC ROCK ISLAND	Mar 2019	Sep 2020	550,500	1.98	Y		Oct 2017
4.1.2) CTG, .50 LINKED (A576)	✓	2020	TBD / TBD	C / FFP	JMC ROCK ISLAND	Mar 2020	Sep 2021	350,000	2.04	Y		Sep 2018
4.1.4) CTG, 50 CAL, LKD, BALL (A555)		2017	NORTHRUP GRUMMAN / LCAAP	C / FFP	JMC ROCK ISLAND	Jul 2017	Aug 2018	1,305,400	1.71	Y		Oct 2015
4.1.4) CTG, 50 CAL, LKD, BALL (A555)		2018	NORTHRUP GRUMMAN / LCAAP	C / FFP	JMC ROCK ISLAND	Aug 2018	Nov 2019	1,477,586	1.74	Y		Oct 2017
4.1.4) CTG, 50 CAL, LKD, BALL (A555)		2019	NORTHRUP GRUMMAN / LCAAP	C / FFP	JMC ROCK ISLAND	Mar 2019	Sep 2020	805,000	1.77	Y		Oct 2017
4.1.4) CTG, 50 CAL, LKD, BALL (A555)	✓	2020	TBD / TBD	C / FFP	JMC ROCK ISLAND	Mar 2020	Sep 2021	1,384,600	1.82	Y		Sep 2018
4.1.5) CTG, 50 CAL, LKD & TRACER (A557)(†)		2017	NORTHRUP GRUMMAN / LCAAP	C / FFP	JMC ROCK ISLAND	Jul 2017	Apr 2019	4,096,000	1.75	Y		Oct 2015
4.1.5) CTG, 50 CAL, LKD & TRACER (A557)(†)		2018	NORTHRUP GRUMMAN / LCAAP	C / FFP	JMC ROCK ISLAND	Aug 2018	Nov 2019	5,197,200	1.79	Y		Oct 2017
4.1.5) CTG, 50 CAL, LKD & TRACER (A557)(†)		2019	NORTHRUP GRUMMAN / LCAAP	C / FFP	JMC ROCK ISLAND	Mar 2019	Sep 2020	2,836,500	1.83	Y		Oct 2017
4.1.5) CTG, 50 CAL, LKD & TRACER (A557)(†)	✓	2020	TBD / TBD	C / FFP	JMC ROCK ISLAND	Mar 2020	Sep 2021	4,871,200	1.88	Y		Sep 2018
5.1.2) CTG, 5.56MM M855 (A059)		2017	NORTHRUP GRUMMAN / LCAAP	C / FFP	JMC ROCK ISLAND	Jun 2017	Feb 2019	8,951,040	0.22	Y		Oct 2011
5.1.2) CTG, 5.56MM M855 (A059)		2018	NORTHRUP GRUMMAN / LCAAP	C / FFP	JMC ROCK ISLAND	Jun 2018	Apr 2019	8,969,520	0.23	Y		Oct 2017
5.1.2) CTG, 5.56MM M855 (A059)		2019	NORTHRUP GRUMMAN / LCAAP	C / FFP	JMC ROCK ISLAND	Mar 2019	Apr 2020	6,000,000	0.24	Y		Oct 2017
5.1.2) CTG, 5.56MM M855 (A059)	✓	2020	TBD / TBD	C / FFP	JMC ROCK ISLAND	Mar 2020	Sep 2021	4,944,000	0.25	Y		Sep 2018
5.1.5) CTG, 5.56MM, SRTR AMMO (AB67)		2018	GDOTS CANADA / CANADA	SS / FFP	JMC ROCK ISLAND	Jul 2018	May 2019	387,000	0.98	Y		Oct 2016
5.1.5) CTG, 5.56MM, SRTR AMMO (AB67)		2019	TBD / TBD	SS / FFP	JMC ROCK ISLAND	Mar 2019	Mar 2020	300,000	1.36	Y		Oct 2016

Exhibit P-5a, Procurement History and Planning: PB 2020 Navy		Date: March 2019
Appropriation / Budget Activity / Budget Sub Activity: 1508N / 01 / 1	P-1 Line Item Number / Title: 0335 / Small Arms & Lndg Party Ammo	Item Number / Title [DODIC]: 1 / Integrated Warfare Systems

Cost Elements	OCO	FY	Contractor and Location	Method/Type or Funding Vehicle	Location of PCO	Award Date	Date of First Delivery	Qty (Each)	Unit Cost ($)	Specs Avail Now?	Date Revision Available	RFP Issue Date
5.1.5) CTG, 5.56MM, SRTR AMMO (AB67)	✓	2020	TBD / TBD	SS / FFP	JMC ROCK ISLAND	Mar 2020	Mar 2021	360,000	1.39	Y		Oct 2016
6.1.1) CTG. 7.62MM (A257)		2018	NORTHRUP GRUMMAN / LCAAP	C / FFP	JMC ROCK ISLAND	Mar 2018	Mar 2019	315,000	0.49	Y		Oct 2017
6.1.1) CTG. 7.62MM (A257)		2019	NORTHRUP GRUMMAN / LCAAP	C / FFP	JMC ROCK ISLAND	Mar 2019	Oct 2019	350,000	0.48	Y		Oct 2017
6.1.1) CTG. 7.62MM (A257)	✓	2020	TBD / TBD	C / FFP	JMC ROCK ISLAND	Mar 2020	Oct 2021	350,000	0.49	Y		Oct 2018
6.1.3) CTG, 7.62MM, SRTA, BALL, LINKED M973 (AB60)		2018	GENERAL DYNAMICS OTS / CANADA	C / FFP	JMC ROCK ISLAND	Jul 2018	Dec 2019	187,200	1.83	Y		Oct 2016
6.1.3) CTG, 7.62MM, SRTA, BALL, LINKED M973 (AB60)		2019	TBD / TBD	C / FFP	JMC ROCK ISLAND	Mar 2019	Mar 2020	200,000	1.86	Y		Oct 2016
6.1.3) CTG, 7.62MM, SRTA, BALL, LINKED M973 (AB60)	✓	2020	TBD / TBD	C / FFP	JMC ROCK ISLAND	Mar 2020	Mar 2021	200,000	1.90	Y		Oct 2017
6.1.4) CTG, 7.62MM, LKD, BALL AND TR (A131)		2017	NORTHRUP GRUMMAN / LCAAP	C / FFP	JMC ROCK ISLAND	Jul 2017	Feb 2019	6,882,352	0.51	Y		Oct 2013
6.1.4) CTG, 7.62MM, LKD, BALL AND TR (A131)		2018	NORTHRUP GRUMMAN / LCAAP	C / FFP	JMC ROCK ISLAND	Mar 2018	Dec 2019	6,158,400	0.52	Y		Oct 2017
6.1.4) CTG, 7.62MM, LKD, BALL AND TR (A131)		2019	NORTHRUP GRUMMAN / LCAAP	C / FFP	JMC ROCK ISLAND	Mar 2019	Sep 2020	6,000,000	0.54	Y		Oct 2017
6.1.4) CTG, 7.62MM, LKD, BALL AND TR (A131)	✓	2020	TBD / TBD	C / FFP	JMC ROCK ISLAND	Mar 2020	Sep 2021	5,500,000	0.56	Y		Oct 2018
6.1.5) CTG, 7.62MM, BALL, M80, LKD (A143)		2018	NORTHRUP GRUMMAN / LCAAP	C / FFP	JMC ROCK ISLAND	Mar 2018	Oct 2019	876,800	0.50	Y		Oct 2017
6.1.5) CTG, 7.62MM, BALL, M80, LKD (A143)		2019	NORTHRUP GRUMMAN / LCAAP	C / FFP	JMC ROCK ISLAND	Mar 2019	Oct 2020	850,000	0.52	Y		Oct 2017
6.1.5) CTG, 7.62MM, BALL, M80, LKD (A143)	✓	2020	TBD / TBD	C / FFP	JMC ROCK ISLAND	Mar 2020	Oct 2021	900,000	0.54	Y		Oct 2018
6.1.6) CTG, 7.62MM, LKD (A165)		2016	NORTHRUP GRUMMAN / LCAAP	C / FFP	JMC ROCK ISLAND	Mar 2016	Oct 2018	3,468,000	0.46	Y		Oct 2011
6.1.6) CTG, 7.62MM, LKD (A165)	✓	2016	NORTHRUP GRUMMAN / LCAAP	C / FFP	JMC ROCK ISLAND	Mar 2016	Mar 2019	1,225,500	0.44	Y		Oct 2011
6.1.6) CTG, 7.62MM, LKD (A165)		2017	NORTHRUP GRUMMAN / LCAAP	C / FFP	JMC ROCK ISLAND	Jul 2017	Dec 2018	2,000,000	0.48	Y		Oct 2011
6.1.6) CTG, 7.62MM, LKD (A165)		2018	NORTHRUP GRUMMAN / LCAAP	C / FFP	JMC ROCK ISLAND	Jul 2018	Nov 2019	2,450,000	0.53	Y		Oct 2017
6.1.6) CTG, 7.62MM, LKD (A165)		2019	NORTHRUP GRUMMAN / LCAAP	C / FFP	JMC ROCK ISLAND	Mar 2019	Oct 2020	2,000,000	0.48	Y		Oct 2017
6.1.6) CTG, 7.62MM, LKD (A165)	✓	2020	TBD / TBD	C / FFP	JMC ROCK ISLAND	Mar 2020	Oct 2021	2,000,000	0.49	Y		Oct 2018
7.1.1) CTG, .38 BLANK (A403)		2019	TBD / TBD	C / FFP	JMC ROCK ISLAND	Mar 2019	Aug 2020	10,000	0.30	Y		Jun 2018
9.1.1) CTG, 9MM, BALL (A363)		2017	OLIN CORP / ILLINOIS	C / FFP	JMC ROCK ISLAND	Jul 2017	Jul 2019	9,000,000	0.16	Y		Oct 2015
9.1.1) CTG, 9MM, BALL (A363)		2018	OLIN CORPORATION / ILLINOIS	C / FFP	JMC ROCK ISLAND	Mar 2018	May 2020	10,064,000	0.17	Y		Oct 2015
9.1.1) CTG, 9MM, BALL (A363)		2019	TBD / TBD	C / FFP	JMC ROCK ISLAND	Mar 2019	Sep 2020	9,000,000	0.17	Y		Oct 2015
9.1.1) CTG, 9MM, BALL (A363)	✓	2020	TBD / TBD	C / FFP	JMC ROCK ISLAND	Mar 2020	May 2022	9,000,000	0.17	Y		Oct 2015

Exhibit P-5a, Procurement History and Planning: PB 2020 Navy		Date: March 2019
Appropriation / Budget Activity / Budget Sub Activity: 1508N / 01 / 1	P-1 Line Item Number / Title: 0335 / Small Arms & Lndg Party Ammo	Item Number / Title [DODIC]: 1 / Integrated Warfare Systems

Cost Elements	OCO	FY	Contractor and Location	Method/Type or Funding Vehicle	Location of PCO	Award Date	Date of First Delivery	Qty (Each)	Unit Cost ($)	Specs Avail Now?	Date Revision Available	RFP Issue Date
9.1.2) CTG, 9MM, FRANGIBLE (AA16)		2018	OLIN CORP / ILLINOIS	C / FFP	NSWC CRANE	Sep 2018	Oct 2019	687,500	0.32	Y		Oct 2015
9.1.2) CTG, 9MM, FRANGIBLE (AA16)		2019	OLIN CORP / ILLINOIS	C / FFP	NSWC CRANE	Mar 2019	Apr 2020	2,500,000	0.32	Y		Oct 2015
9.1.2) CTG, 9MM, FRANGIBLE (AA16)	✓	2020	OLIN CORP / ILLINOIS	C / FFP	NSWC CRANE	Mar 2020	Apr 2021	1,500,000	0.33	Y		Oct 2015
9.1.3) (AB13) CTG, 9MM, FX, MARKING, BLUE (AB13)		2019	ULTIMATE TRAINING MUNITIONS / CANADA	SS / FFP	ACC-PICATINNY, NJ	Mar 2019	Oct 2020	250,000	0.63	Y		Sep 2015
9.1.3) (AB13) CTG, 9MM, FX, MARKING, BLUE (AB13)	✓	2020	ULTIMATE TRAINING MUNITIONS / CANADA	C / TBD	** NO PCO **	Oct 2019	Oct 2020	170,000	0.64	N		
9.1.4) (AB14) CTG, 9MM, FX, MARKING, RED (AB14)		2017	ULTIMATE TRAINING MUNITIONS / CANADA	SS / FFP	ACC-PICATINNY, NJ	Jul 2017	Jul 2018	721,818	0.55	Y		Oct 2015
9.1.4) (AB14) CTG, 9MM, FX, MARKING, RED (AB14)		2018	ULTIMATE TRAINING MUNITIONS / CANADA	SS / FFP	ACC-PICATINNY, NJ	Sep 2018	Apr 2019	800,000	0.63	Y		Oct 2017
9.1.4) (AB14) CTG, 9MM, FX, MARKING, RED (AB14)		2019	ULTIMATE TRAINING MUNITIONS / CANADA	SS / FFP	ACC-PICATINNY, NJ	Mar 2019	Jun 2019	650,000	0.63	Y		Oct 2017
9.1.4) (AB14) CTG, 9MM, FX, MARKING, RED (AB14)	✓	2020	ULTIMATE TRAINING MUNITIONS / CANADA	SS / FFP	ACC-PICATINNY, NJ	Mar 2020	Sep 2020	650,000	0.64	Y		Oct 2017
10.1.1) FUZE, DELAY M228 (G878)		2015	MARTIN ELECTRONICS, INC. / PERRY,FL	C / FFP	JMC ROCK ISLAND	Oct 2015	Mar 2019	1,680	13.44	Y		Jun 2011
10.1.2) GRENADE, VEHICLE LAUNCHED IR/S (GG42)(†)		2019	RHEINMETALL / GERMANY	SS / FFP	NSWC CRANE	Mar 2019	Jul 2019	15,250	336.10	N	Apr 2018	Oct 2018
10.1.3) GRENADE, HND, SMK, GREEN (G940)		2016	RHEINMETALL / GERMANY	SS / FFP	MARINE CORP QUANTICO	Mar 2017	Feb 2019	5,000	32.00	Y		Oct 2013
10.1.4) GRENADE, HND, SMK, VIOLET (G955)		2019	PINE BLUFF ARSENAL / PINE BLUFF, AR	MIPR	NO PCO	Mar 2019	Sep 2020	10,000	58.10	Y		Oct 2018
10.1.6) GRENADE, HND, SMK, WHITE (GG34)		2018	PINE BLUFF ARSENAL / PINE BLUFF, AR	MIPR	NO PCO	Mar 2018	Mar 2019	10,000	31.00	Y		Oct 2017
10.1.6) GRENADE, HND, SMK, WHITE (GG34)		2019	PINE BLUFF ARSENAL / PINE BLUFF, AR	MIPR	NO PCO	Mar 2019	Mar 2020	14,000	31.00	Y		Oct 2017
10.1.7) GRENADE, HND, SMK, RED (G950)		2017	PINE BLUFF ARSENAL / PINE BLUFF, AR	MIPR	NO PCO	Mar 2018	Apr 2020	10,352	52.16	Y		Jul 2016
11.1.1) RIOT CNTRL, CS (K765)		2019	JMC ROCK ISLAND / ROCK ISLAND, IL	C / FFP	JMC ROCK ISLAND	Jan 2019	Sep 2020	10,000	0.47	Y		Oct 2014
12.1.1) CTG, 12 GA NO. 00 (A011)		2018	TBD / TBD	C / FFP	JMC ROCK ISLAND	Mar 2018	Sep 2019	738,240	0.52	Y		Oct 2017
12.1.1) CTG, 12 GA NO. 00 (A011)		2019	TBD / TBD	C / FFP	JMC ROCK ISLAND	Mar 2019	Sep 2020	750,000	0.54	Y		Oct 2017
12.1.1) CTG, 12 GA NO. 00 (A011)	✓	2020	TBD / TBD	C / FFP	JMX	Mar 2020	Sep 2021	750,000	0.55	Y		Oct 2017

(†) indicates the presence of a P-21

Exhibit P-5a, Procurement History and Planning: PB 2020 Navy		Date: March 2019
Appropriation / Budget Activity / Budget Sub Activity: 1508N / 01 / 1	P-1 Line Item Number / Title: 0335 / Small Arms & Lndg Party Ammo	Item Number / Title [DODIC]: 1 / Integrated Warfare Systems

Exhibit P-21, Production Schedule: PB 2020 Navy		Date: March 2019
Appropriation / Budget Activity / Budget Sub Activity: 1508N / 01 / 1	**P-1 Line Item Number / Title:** 0335 / Small Arms & Lndg Party Ammo	**Item Number / Title [DODIC]:** 1 / Integrated Warfare Systems

Cost Elements (Units in Millions, * = < 500)							Fiscal Year 2015												Fiscal Year 2016												BALANCE
										Calendar Year 2015												Calendar Year 2016									
OCO	MFR #	FY	SERVICE	PROC QTY	ACCEPT PRIOR TO 1 OCT 2014	BAL DUE AS OF 1 OCT	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	
4.1.5) CTG, 50 CAL, LKD & TRACER (A557)																															
Prior Years Deliveries: 29736690																															
	1	2017	NAVY	4.096	.000	4.096																									4.096
	1	2018	NAVY	5.197	.000	5.197																									5.197
	1	2019	NAVY	2.836	.000	2.836																									2.836
✓	2	2020	NAVY	4.871	.000	4.871																									4.871
10.1.2) GRENADE, VEHICLE LAUNCHED IR/S (GG42)																															
Prior Years Deliveries: 7701																															
	3	2019	NAVY	.015	.000	.015																									.015
							OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	

Exhibit P-21, Production Schedule: PB 2020 Navy		Date: March 2019
Appropriation / Budget Activity / Budget Sub Activity: 1508N / 01 / 1	**P-1 Line Item Number / Title:** 0335 / Small Arms & Lndg Party Ammo	**Item Number / Title [DODIC]:** 1 / Integrated Warfare Systems

Cost Elements (Units in Millions, * = < 500)							Fiscal Year 2017												Fiscal Year 2018												BALANCE
										Calendar Year 2017												Calendar Year 2018									
OCO	MFR #	FY	SERVICE	PROC QTY	ACCEPT PRIOR TO 1 OCT 2016	BAL DUE AS OF 1 OCT	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	
4.1.5) CTG, 50 CAL, LKD & TRACER (A557)																															
Prior Years Deliveries: 29736690																															
	1	2017	NAVY	4.096	.000	4.096										A -	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4.096
	1	2018	NAVY	5.197	.000	5.197																							A -	-	5.197
	1	2019	NAVY	2.836	.000	2.836																									2.836
✓	2	2020	NAVY	4.871	.000	4.871																									4.871
10.1.2) GRENADE, VEHICLE LAUNCHED IR/S (GG42)																															
Prior Years Deliveries: 7701																															
	3	2019	NAVY	.015	.000	.015																									.015
							OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	

Exhibit P-21, Production Schedule: PB 2020 Navy		Date: March 2019
Appropriation / Budget Activity / Budget Sub Activity: 1508N / 01 / 1	**P-1 Line Item Number / Title:** 0335 / Small Arms & Lndg Party Ammo	**Item Number / Title [DODIC]:** 1 / Integrated Warfare Systems

Cost Elements (Units in Millions, * = < 500)							Fiscal Year 2019												Fiscal Year 2020												BALANCE
							Calendar Year 2019												Calendar Year 2020												
OCO	MFR #	FY	SERVICE	PROC QTY	ACCEPT PRIOR TO 1 OCT 2018	BAL DUE AS OF 1 OCT	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	
4.1.5) CTG, 50 CAL, LKD & TRACER (A557)																															
Prior Years Deliveries: 29736690																															
	1	2017	NAVY	4.096	.000	4.096	-	-	-	-	-	-	1.000	1.000	1.000	1.096															.000
	1	2018	NAVY	5.197	.000	5.197	-	-	-	-	-	-	-	-	-	-	-	-	-	1.000	1.000	1.000	1.000	1.197							.000
	1	2019	NAVY	2.836	.000	2.836						A -	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1.000	1.836
✓	2	2020	NAVY	4.871	.000	4.871																		A -	-	-	-	-	-	-	4.871
10.1.2) GRENADE, VEHICLE LAUNCHED IR/S (GG42)																															
Prior Years Deliveries: 7701																															
	3	2019	NAVY	.015	.000	.015						A -	-	-	-	.005	.005	.004	.001												.000
							OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	

Exhibit P-21, Production Schedule: PB 2020 Navy		Date: March 2019
Appropriation / Budget Activity / Budget Sub Activity: 1508N / 01 / 1	**P-1 Line Item Number / Title:** 0335 / Small Arms & Lndg Party Ammo	**Item Number / Title [DODIC]:** 1 / Integrated Warfare Systems

Cost Elements (Units in Millions, * = < 500)							Fiscal Year 2021												Fiscal Year 2022												BALANCE
										Calendar Year 2021												Calendar Year 2022									
OCO	MFR #	FY	SERVICE	PROC QTY	ACCEPT PRIOR TO 1 OCT 2020	BAL DUE AS OF 1 OCT	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	
4.1.5) CTG, 50 CAL, LKD & TRACER (A557)																															
Prior Years Deliveries: 29736690																															
	1	2017	NAVY	4.096	4.096	.000																									.000
	1	2018	NAVY	5.197	5.197	.000																									.000
	1	2019	NAVY	2.836	1.000	1.836	1.000	.836																							.000
✓	2	2020	NAVY	4.871	.000	4.871	-	-	-	-	-	-	-	-	-	-	-	1.200	1.200	1.200	1.271										.000
10.1.2) GRENADE, VEHICLE LAUNCHED IR/S (GG42)																															
Prior Years Deliveries: 7701																															
	3	2019	NAVY	.015	.015	.000																									.000
							OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	

Exhibit P-21, Production Schedule: PB 2020 Navy		Date: March 2019
Appropriation / Budget Activity / Budget Sub Activity: 1508N / 01 / 1	**P-1 Line Item Number / Title:** 0335 / Small Arms & Lndg Party Ammo	**Item Number / Title [DODIC]:** 1 / Integrated Warfare Systems

MFR Ref #	Manufacturer Name - Location	Production Rates (Each / Year)			Procurement Leadtime (Months)							
					Initial				Reorder			
		MSR For 2020	1-8-5 For 2020	MAX For 2020	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	NORTHRUP GRUMMAN - LCAAP		6,000	10,000,000	6	6	12	18	6	6	9	15
2	TBD - TBD		6,000	10,000,000	4	4	12	16	4	4	18	22
3	RHEINMETALL - GERMANY	80	70,000	1,640,000	2	3	12	15	2	3	4	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).

Exhibit P-5, Cost Analysis: PB 2020 Navy		Date: March 2019
Appropriation / Budget Activity / Budget Sub Activity: 1508N / 01 / 1	**P-1 Line Item Number / Title:** 0335 / Small Arms & Lndg Party Ammo	**Item Number / Title [DODIC]:** 2 / Naval Special Warfare (NSW)
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	

Resource Summary	Prior Years	FY 2018	FY 2019	FY 2020 Base	FY 2020 OCO	FY 2020 Total
Procurement Quantity *(Units in Each)*	-	-	-	-	-	-
Gross/Weapon System Cost *($ in Millions)*	121.932	20.892	19.118	0.000	20.555	20.555
Less PY Advance Procurement *($ in Millions)*	-	-	-	-	-	-
Net Procurement (P-1) *($ in Millions)*	121.932	20.892	19.118	0.000	20.555	20.555
Plus CY Advance Procurement *($ in Millions)*	-	-	-	-	-	-
Total Obligation Authority *($ in Millions)*	**121.932**	**20.892**	**19.118**	**0.000**	**20.555**	**20.555**
(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 2018			FY 2019			FY 2020 Base			FY 2020 OCO			FY 2020 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 - (AHNSW) SMCA Cost																		
Recurring Cost																		
1.1.1) (AHNSW) SMCA	-	-	0.987	-	-	0.978	-	-	0.976	-	-	0.000	-	-	1.548	-	-	1.548
Subtotal: Recurring Cost	-	-	*0.987*	-	-	*0.978*	-	-	*0.976*	-	-	*0.000*	-	-	*1.548*	-	-	*1.548*
Subtotal: Hardware - (AHNSW) SMCA Cost	**-**	**-**	***0.987***	**-**	**-**	***0.978***	**-**	**-**	***0.976***	**-**	**-**	***0.000***	**-**	**-**	***1.548***	**-**	**-**	***1.548***
Hardware - (AHNSW) GRENADES Cost																		
Recurring Cost																		
2.1.1) GRENADE,HAND,SMOKE GREEN (G940)(†)	-	-	0.000	61.96	14,992	0.929	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000
2.1.2) GRENADE, 66MM SMOKE SCREENING (GG24)	235.00	2,000	0.470	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000
2.1.3) FUZE, DELAY M228, F/M 68 HAND GRND (G878)(†)	9.02	60,284	0.544	14.30	21,504	0.308	-	-	0.000	-	-	0.000	10.73	20,360	0.218	10.73	20,360	0.218
2.1.4) GRENADE, VEHICLE LAUNCHED IR/S (GG42)(†)	253.99	2,004	0.509	-	-	0.000	-	-	0.000	-	-	0.000	278.72	4,000	1.115	278.72	4,000	1.115
2.1.5) GRENADE, HAND, FRAG (G881)(†)	36.33	6,000	0.218	38.68	6,270	0.243	-	-	0.000	-	-	0.000	65.00	6,000	0.390	65.00	6,000	0.390

Exhibit P-5, Cost Analysis: PB 2020 Navy		Date: March 2019
Appropriation / Budget Activity / Budget Sub Activity: 1508N / 01 / 1	P-1 Line Item Number / Title: 0335 / Small Arms & Lndg Party Ammo	Item Number / Title [DODIC]: 2 / Naval Special Warfare (NSW)
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 2018			FY 2019			FY 2020 Base			FY 2020 OCO			FY 2020 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)
2.1.6) GRENADE, HAND, SMOKE, YELLOW (G945)(†)	50.47	10,700	0.540	-	-	0.000	53.64	14,992	0.804	-	-	0.000	-	-	0.000	-	-	0.000
2.1.7) GRENADE, HAND, SMOKE, RED (G950)	41.77	35,000	1.462	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000
Subtotal: Recurring Cost	-	-	*3.743*	-	-	*1.480*	-	-	*0.804*	-	-	*0.000*	-	-	*1.723*	-	-	*1.723*
Subtotal: Hardware - (AHNSW) GRENADES Cost	**-**	**-**	***3.743***	**-**	**-**	***1.480***	**-**	**-**	***0.804***	**-**	**-**	***0.000***	**-**	**-**	***1.723***	**-**	**-**	***1.723***
Hardware - (AHNSW) 9MM CARTRIDGES Cost																		
Recurring Cost																		
3.1.1) CTG, 9MM, MARKING, RED, M1041 (AB14)(†)	0.57	3,261,425	1.848	0.61	500,000	0.305	0.63	1,873,015	1.180	-	-	0.000	0.62	1,000,000	0.619	0.62	1,000,000	0.619
3.1.2) CTG, 9MM MARKING, BLUE, M1041 (AB13)(†)	0.57	3,205,285	1.836	0.59	500,000	0.296	0.63	1,873,015	1.180	-	-	0.000	0.61	1,000,000	0.613	0.61	1,000,000	0.613
3.1.3) CTG, 9MM BALL (A363)(†)	0.17	59,214,732	10.209	0.19	6,222,000	1.177	0.17	6,352,941	1.080	-	-	0.000	0.18	6,000,000	1.099	0.18	6,000,000	1.099
3.1.4) CTG, 9MM REDUCED RICOCHETTE, LOW PEN (AA16)(†)	0.47	500,000	0.235	-	-	0.000	0.51	500,000	0.255	-	-	0.000	0.52	500,000	0.260	0.52	500,000	0.260
Subtotal: Recurring Cost	-	-	*14.128*	-	-	*1.778*	-	-	*3.695*	-	-	*0.000*	-	-	*2.591*	-	-	*2.591*
Subtotal: Hardware - (AHNSW) 9MM CARTRIDGES Cost	**-**	**-**	***14.128***	**-**	**-**	***1.778***	**-**	**-**	***3.695***	**-**	**-**	***0.000***	**-**	**-**	***2.591***	**-**	**-**	***2.591***
Hardware - (AHNSW) 7.62MM CARTRIDGES Cost																		
Recurring Cost																		
4.1.1) CTG, 7.62MM SHORT RANGE TRAINING (AA37)(†)	1.16	8,765,642	10.134	2.22	1,502,400	3.335	2.24	1,200,200	2.688	-	-	0.000	2.29	1,800,000	4.122	2.29	1,800,000	4.122
4.1.2) CTG, 7.62MM, M993 AP, W/M62 Std Tracer (AA36)(†)	0.53	880,500	0.463	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000
4.1.3) CTG, 7.62MM BLANK, LINKED (A111)(†)	0.46	11,164,215	5.090	0.42	3,213,600	1.350	0.39	4,000,000	1.560	-	-	0.000	0.39	3,100,000	1.209	0.39	3,100,000	1.209

Exhibit P-5, Cost Analysis: PB 2020 Navy		Date: March 2019
Appropriation / Budget Activity / Budget Sub Activity: 1508N / 01 / 1	P-1 Line Item Number / Title: 0335 / Small Arms & Lndg Party Ammo	Item Number / Title [DODIC]: 2 / Naval Special Warfare (NSW)
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 2018			FY 2019			FY 2020 Base			FY 2020 OCO			FY 2020 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)
4.1.4) CTG, 7.62MM BALL LINKED (NO TRACER) (A143)(†)	0.50	343,200	0.172	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000
4.1.5) CTG, 7.62MM LINKED 9:1 DIM TRACER F/MK 44 (A257)(†)	0.51	10,317,868	5.301	-	-	0.000	0.51	2,001,000	1.021	-	-	0.000	-	-	0.000	-	-	0.000
4.1.6) CTG, 7.62MM BALL (SOST) (AB50)	-	-	0.001	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000
4.1.7) CTG, 7.62MM LNKD, BALL AND TRACER (A131)(†)	0.59	41,942,025	24.642	0.56	2,155,200	1.212	0.54	2,564,814	1.385	-	-	0.000	0.54	2,000,000	1.080	0.54	2,000,000	1.080
4.1.9) CTG 7.62MM SPECIAL BALL LONG RANGE (AB39)(†)	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000	0.98	460,000	0.450	0.98	460,000	0.450
Subtotal: Recurring Cost	-	-	*45.803*	-	-	*5.897*	-	-	*6.654*	-	-	*0.000*	-	-	*6.861*	-	-	*6.861*
Subtotal: Hardware - (AHNSW) 7.62MM CARTRIDGES Cost	**-**	**-**	***45.803***	**-**	**-**	***5.897***	**-**	**-**	***6.654***	**-**	**-**	***0.000***	**-**	**-**	***6.861***	**-**	**-**	***6.861***
Hardware - (AHNSW) 5.56MM CARTRIDGES Cost																		
Recurring Cost																		
5.1.2) CTG, 5.56MM JACKETED FRANGIBLE MK (AA40)(†)	0.38	1,569,631	0.599	-	-	0.000	0.68	400,160	0.272	-	-	0.000	0.50	317,520	0.159	0.50	317,520	0.159
5.1.3) CTG, 5.56MM BALL, CARBINE, BARRIER, MK (AB49)(†)	0.34	1,616,760	0.554	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000
5.1.4) CTG, 5.56MM CTG BALL B855 LKD F/SAW (A062)(†)	0.32	720,000	0.228	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000
5.1.5) CTG 5.56MM BALL (A071)(†)	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000	0.25	1,001,280	0.246	0.25	1,001,280	0.246
5.1.6) CTG, 5.56MM, LINKED (A075)(†)	0.38	4,800,800	1.810	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000
5.1.7) CTG, 5.56MM BLANK (TRAINING ITEM) (A080)(†)	0.21	6,944,890	1.488	0.14	1,069,320	0.150	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000
5.1.8) CTG, 5.56MM 77 GRAIN, MK 262	0.65	1,977,076	1.285	-	-	0.000	-	-	0.000	-	-	0.000	0.82	642,880	0.527	0.82	642,880	0.527

Exhibit P-5, Cost Analysis: PB 2020 Navy		Date: March 2019
Appropriation / Budget Activity / Budget Sub Activity: 1508N / 01 / 1	P-1 Line Item Number / Title: 0335 / Small Arms & Lndg Party Ammo	Item Number / Title [DODIC]: 2 / Naval Special Warfare (NSW)
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 2018			FY 2019			FY 2020 Base			FY 2020 OCO			FY 2020 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)
MOD 0/1, LONG (AA53)(†)																		
5.1.9) CTG, 5.56MM MARKING, RED (AA12)	-	-	0.001	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000
5.1.10) CTG, 9/5.56MM MARKING, BLUE (AA21)	-	-	0.001	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000
5.1.11) CTG, 5.56MM LINKED (A064)(†)	0.46	7,808,000	3.629	-	-	0.000	-	-	0.000	-	-	0.000	0.34	1,000,000	0.340	0.34	1,000,000	0.340
5.1.12) CTG, 5.56MM SHORT RANGE TRAINING (AB67)(†)	1.21	185,400	0.224	1.36	403,200	0.548	1.39	388,489	0.540	-	-	0.000	1.39	405,755	0.564	1.39	405,755	0.564
5.1.13) CTG 5.56MM BALL LFS M855A1 (AB57)(†)	-	-	0.000	0.28	80,640	0.023	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000
5.1.14) CTG 5.56MM SHORT RANGE TRAINING AMMO (AC10)(†)	-	-	0.000	1.38	216,000	0.297	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000
Subtotal: Recurring Cost	-	-	*9.819*	-	-	*1.018*	-	-	*0.812*	-	-	*0.000*	-	-	*1.836*	-	-	*1.836*
Subtotal: Hardware - (AHNSW) 5.56MM CARTRIDGES Cost	**-**	**-**	***9.819***	**-**	**-**	***1.018***	**-**	**-**	***0.812***	**-**	**-**	***0.000***	**-**	**-**	***1.836***	**-**	**-**	***1.836***
Hardware - (AHNSW) .50 CAL CARTRIDGES Cost																		
Recurring Cost																		
6.1.1) CTG, 50 CAL, LINKED, BALL MK 322/TRACER MK (AB64)(†)	4.12	1,600,000	6.594	-	-	0.000	5.20	400,000	2.080	-	-	0.000	5.30	358,800	1.902	5.30	358,800	1.902
6.1.2) CTG, CAL .50 LINKED BALL (NO TRACER) (A555)(†)	2.13	2,515,718	5.363	1.82	224,600	0.409	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000
6.1.3) CTG, CAL .50 LINKED, BALL/ TRACER (A557)(†)	1.75	2,118,894	3.706	2.09	1,495,000	3.128	1.83	220,765	0.404	-	-	0.000	-	-	0.000	-	-	0.000
6.1.4) CTG, CAL .50 APL MK 211 MIULTI PURPOSE (A606)(†)	14.55	50,160	0.730	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000

Exhibit P-5, Cost Analysis: PB 2020 Navy		Date: March 2019
Appropriation / Budget Activity / Budget Sub Activity: 1508N / 01 / 1	P-1 Line Item Number / Title: 0335 / Small Arms & Lndg Party Ammo	Item Number / Title [DODIC]: 2 / Naval Special Warfare (NSW)
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 2018			FY 2019			FY 2020 Base			FY 2020 OCO			FY 2020 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)
6.1.5) CTG, CAL .50 LINKED, M8 API/M20 API-T (A576)(†)	1.94	7,515,886	14.554	2.17	1,437,000	3.123	1.98	1,004,545	1.989	-	-	0.000	2.12	882,000	1.869	2.12	882,000	1.869
6.1.6) CTG, CAL .50 LINKED, BLANK, M1A1 (A598)(†)	1.22	7,140,550	8.745	1.54	1,200,000	1.848	1.34	600,000	0.804	-	-	0.000	1.34	800,000	1.072	1.34	800,000	1.072
Subtotal: Recurring Cost	-	-	*39.692*	-	-	*8.508*	-	-	*5.277*	-	-	*0.000*	-	-	*4.843*	-	-	*4.843*
Subtotal: Hardware - (AHNSW) .50 CAL CARTRIDGES Cost	**-**	**-**	***39.692***	**-**	**-**	***8.508***	**-**	**-**	***5.277***	**-**	**-**	***0.000***	**-**	**-**	***4.843***	**-**	**-**	***4.843***
Hardware - (AHNSW) SHOTGUN CARTRIDGES Cost																		
Recurring Cost																		
7.1.1) CTG, 12 GAUGE SHOTGUN 00 BUCK (A011)	-	-	0.001	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000
Subtotal: Recurring Cost	-	-	*0.001*	-	-	*0.000*	-	-	*0.000*	-	-	*0.000*	-	-	*0.000*	-	-	*0.000*
Subtotal: Hardware - (AHNSW) SHOTGUN CARTRIDGES Cost	**-**	**-**	***0.001***	**-**	**-**	***0.000***	**-**	**-**	***0.000***	**-**	**-**	***0.000***	**-**	**-**	***0.000***	**-**	**-**	***0.000***
Hardware - (AHNSW) MATCH AMMO Cost																		
Recurring Cost																		
8.1.1) CTG, CAL .300 MATCH (A191)(†)	1.22	864,363	1.054	-	-	0.000	-	-	0.000	-	-	0.000	1.37	100,800	0.138	1.37	100,800	0.138
8.1.2) CTG, CAL 45 MATCH (A483)(†)	-	-	0.000	0.34	200,000	0.068	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000
Subtotal: Recurring Cost	-	-	*1.054*	-	-	*0.068*	-	-	*0.000*	-	-	*0.000*	-	-	*0.138*	-	-	*0.138*
Subtotal: Hardware - (AHNSW) MATCH AMMO Cost	**-**	**-**	***1.054***	**-**	**-**	***0.068***	**-**	**-**	***0.000***	**-**	**-**	***0.000***	**-**	**-**	***0.138***	**-**	**-**	***0.138***
Hardware - (AHNSW) TRANSPORTATION ACCOUNT CODE (TAC) Cost																		
Recurring Cost																		
9.1.1) NSW TRANSPORTATION ACCOUNT CODE (TAC)	-	-	1.370	-	-	0.500	-	-	0.250	-	-	0.000	-	-	0.350	-	-	0.350
Subtotal: Recurring Cost	-	-	*1.370*	-	-	*0.500*	-	-	*0.250*	-	-	*0.000*	-	-	*0.350*	-	-	*0.350*
Subtotal: Hardware - (AHNSW) TRANSPORTATION ACCOUNT CODE (TAC) Cost	**-**	**-**	***1.370***	**-**	**-**	***0.500***	**-**	**-**	***0.250***	**-**	**-**	***0.000***	**-**	**-**	***0.350***	**-**	**-**	***0.350***

Exhibit P-5, Cost Analysis: PB 2020 Navy		Date: March 2019
Appropriation / Budget Activity / Budget Sub Activity: 1508N / 01 / 1	P-1 Line Item Number / Title: 0335 / Small Arms & Lndg Party Ammo	Item Number / Title [DODIC]: 2 / Naval Special Warfare (NSW)
ID Code (A=Service Ready, B=Not Service Ready) :	MDAP/MAIS Code:	

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Cost Elements	Prior Years			FY 2018			FY 2019			FY 2020 Base			FY 2020 OCO			FY 2020 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 - (NS830) PRODUCTION ENGINEERING Cost																		
10.1) Production Engineering	-	-	5.335	-	-	0.665	-	-	0.650	-	-	0.000	-	-	0.665	-	-	0.665
Subtotal: Support - (NS830) PRODUCTION ENGINEERING Cost	**-**	**-**	***5.335***	**-**	**-**	***0.665***	**-**	**-**	***0.650***	**-**	**-**	***0.000***	**-**	**-**	***0.665***	**-**	**-**	***0.665***
Gross/Weapon System Cost	**-**	**-**	**121.932**	**-**	**-**	**20.892**	**-**	**-**	**19.118**	**-**	**-**	**0.000**	**-**	**-**	**20.555**	**-**	**-**	**20.555**

(†) indicates the presence of a P-5a

Exhibit P-5a, Procurement History and Planning: PB 2020 Navy		Date: March 2019
Appropriation / Budget Activity / Budget Sub Activity: 1508N / 01 / 1	P-1 Line Item Number / Title: 0335 / Small Arms & Lndg Party Ammo	Item Number / Title [DODIC]: 2 / Naval Special Warfare (NSW)

Cost Elements	OCO	FY	Contractor and Location	Method/Type or Funding Vehicle	Location of PCO	Award Date	Date of First Delivery	Qty (Each)	Unit Cost ($)	Specs Avail Now?	Date Revision Available	RFP Issue Date
2.1.1) GRENADE,HAND,SMOKE GREEN (G940)		2018	PINE BLUFF ARSENAL / PINE BLUFF, AR	C / TBD	JMC ROCK ISLAND	Apr 2018	Apr 2020	14,992	61.96	Y		Dec 2017
2.1.3) FUZE, DELAY M228, F/M 68 HAND GRND (G878)		2015	DAY&ZIMMERMAN LONE STAR LLC, TEXARKANA, TX / TEXARKANA, TX	C / FFP	JMC ROCK ISLAND	Mar 2015	Sep 2016	11,660	12.78	Y		Jun 2011
2.1.3) FUZE, DELAY M228, F/M 68 HAND GRND (G878)		2017	DAY&ZIMMERMAN LONE STAR LLC, TEXARKANA, TX / TEXARKANA, TX	C / FFP	JMC ROCK ISLAND	Oct 2016	Apr 2018	36,624	8.84	N	Aug 2015	Jun 2011
2.1.3) FUZE, DELAY M228, F/M 68 HAND GRND (G878)		2018	TBD / TBD	C / TBD	JMC ROCK ISLAND	Feb 2018	Aug 2019	21,504	14.30	Y		Dec 2017
2.1.4) GRENADE, VEHICLE LAUNCHED IR/S (GG42)		2017	AMERICAN RHEINMETALL MUNITIONS / STAFFORD, VA	C / TBD	NSWC CRANE	Apr 2017	Apr 2018	2,004	253.80	N	Mar 2016	Apr 2016
2.1.5) GRENADE, HAND, FRAG (G881)		2013	DAY&ZIMMERMAN LONE STAR LLC, TEXARKANA, TX / TEXARKANA, TX	C / FFP	JMC ROCK ISLAND	Jun 2013	Dec 2014	6,000	36.41	Y		Oct 2012
2.1.5) GRENADE, HAND, FRAG (G881)		2018	DAY&ZIMMERMAN LONE STAR LLC, TEXARKANA, TX / TEXARKANA, TX	C / TBD	JMC ROCK ISLAND	Jun 2018	Dec 2019	6,270	38.68	Y		Dec 2017
2.1.5) GRENADE, HAND, FRAG (G881)	✓	2020	DAY&ZIMMERMAN LONE STAR LLC, TEXARKANA, TX / TEXARKANA, TX	C / TBD	** NO PCO **	Dec 2019	Jun 2021	6,000	65.00	Y		
2.1.6) GRENADE, HAND, SMOKE, YELLOW (G945)		2014	RHEINMETALL / GERMANY	SS / FFP	JMC ROCK ISLAND	Mar 2014	Sep 2015	10,700	50.47	Y		Oct 2012
3.1.1) CTG, 9MM, MARKING, RED, M1041 (AB14)		2015	GENERAL DYNAMICS / MONTREAL, CN	C / FFP	JMC ROCK ISLAND	Mar 2015	Mar 2016	1,089,285	0.56	Y		Oct 2012
3.1.1) CTG, 9MM, MARKING, RED, M1041 (AB14)		2016	GENERAL DYNAMICS / MONTREAL, CN	C / FFP	JMC ROCK ISLAND	Mar 2016	Mar 2017	1,056,140	0.57	N	Aug 2015	Oct 2015
3.1.1) CTG, 9MM, MARKING, RED, M1041 (AB14)		2017	GENERAL DYNAMICS / MONTREAL, CN	C / FFP	JMC ROCK ISLAND	Oct 2017	Oct 2018	1,116,000	0.57	Y		Oct 2016
3.1.1) CTG, 9MM, MARKING, RED, M1041 (AB14)		2018	GENERAL DYNAMICS / MONTREAL, CN	C / FFP	JMC ROCK ISLAND	Jan 2018	Jan 2019	500,000	0.61	Y		Dec 2017
3.1.1) CTG, 9MM, MARKING, RED, M1041 (AB14)		2019	GENERAL DYNAMICS / MONTREAL, CN	C / TBD	** NO PCO **	Oct 2018	Oct 2019	1,873,015	0.63	N	Aug 2018	
3.1.2) CTG, 9MM MARKING, BLUE, M1041 (AB13)		2015	GENERAL DYNAMICS / MONTREAL, CN	C / FFP	JMC ROCK ISLAND	Mar 2015	Mar 2016	1,089,285	0.56	Y		Oct 2012
3.1.2) CTG, 9MM MARKING, BLUE, M1041 (AB13)		2016	CANADIAN COMMERCIAL CORPORATION / OTTAWA, CANADA	C / FFP	JMC ROCK ISLAND	Mar 2016	Mar 2016	1,000,000	0.59	N	Aug 2015	Oct 2015
3.1.2) CTG, 9MM MARKING, BLUE, M1041 (AB13)		2017	GENERAL DYNAMICS / MONTREAL, CANADA	C / FFP	JMC ROCK ISLAND	Oct 2016	Oct 2016	1,116,000	0.57	N	Aug 2015	Oct 2016
3.1.2) CTG, 9MM MARKING, BLUE, M1041 (AB13)		2018	GENERAL DYNAMICS / MONTREAL, CN	C / FFP	JMC ROCK ISLAND	Jan 2018	Jan 2019	500,000	0.59	Y		Dec 2017
3.1.2) CTG, 9MM MARKING, BLUE, M1041 (AB13)		2019	GENERAL DYNAMICS / MONTREAL, CN	C / TBD	JMC ROCK ISLAND	Oct 2018	Oct 2019	1,873,015	0.63	N		
3.1.3) CTG, 9MM BALL (A363)		2014	OLIN CORPORATION / ILLINOIS	C / FFP	JMC ROCK ISLAND	Mar 2014	Sep 2014	7,875,000	0.17	Y		Oct 2013
3.1.3) CTG, 9MM BALL (A363)	✓	2014	OLIN CORPORATION / ILLINOIS	C / FFP	JMC ROCK ISLAND	Mar 2014	Sep 2014	14,094,118	0.17	Y		Oct 2013

Exhibit P-5a, Procurement History and Planning: PB 2020 Navy		Date: March 2019
Appropriation / Budget Activity / Budget Sub Activity: 1508N / 01 / 1	P-1 Line Item Number / Title: 0335 / Small Arms & Lndg Party Ammo	Item Number / Title [DODIC]: 2 / Naval Special Warfare (NSW)

Cost Elements	OCO	FY	Contractor and Location	Method/Type or Funding Vehicle	Location of PCO	Award Date	Date of First Delivery	Qty (Each)	Unit Cost ($)	Specs Avail Now?	Date Revision Available	RFP Issue Date
3.1.3) CTG, 9MM BALL (A363)		2015	OLIN CORPORATION / ILLINOIS	C / FFP	JMC ROCK ISLAND	Mar 2015	Sep 2015	9,600,000	0.15	Y		Oct 2013
3.1.3) CTG, 9MM BALL (A363)		2016	OLIN CORPORATION / ILLINOIS	C / FFP	JMC ROCK ISLAND	Mar 2016	Sep 2016	4,217,647	0.17	N	Aug 2015	Oct 2015
3.1.3) CTG, 9MM BALL (A363)	✓	2016	OLIN CORPORATION / ILLINOIS	C / FFP	JMC ROCK ISLAND	Mar 2016	Sep 2016	2,347,058	0.17	N	Aug 2015	Oct 2015
3.1.3) CTG, 9MM BALL (A363)		2017	OLIN CORPORATION / ILLINOIS	C / FFP	JMC ROCK ISLAND	Mar 2017	Sep 2017	7,990,000	0.18	Y		Oct 2016
3.1.3) CTG, 9MM BALL (A363)		2018	OLIN CORPORATION / ILLINOIS	C / FFP	JMC ROCK ISLAND	Mar 2018	Sep 2018	6,222,000	0.19	Y		Oct 2017
3.1.4) CTG, 9MM REDUCED RICOCHETTE, LOW PEN (AA16)		2015	OLIN CORP / ILLINOIS	C / FFP	JMC ROCK ISLAND	Mar 2015	Jul 2016	500,000	0.47	Y		Mar 2012
4.1.1) CTG, 7.62MM SHORT RANGE TRAINING (AA37)		2014	GDOTS CANADA / CANADA	C / FFP	JMC ROCK ISLAND	Jun 2014	Jun 2015	3,000,000	0.85	Y		Oct 2013
4.1.1) CTG, 7.62MM SHORT RANGE TRAINING (AA37)		2015	GDOTS CANADA / CANADA	C / FFP	JMC ROCK ISLAND	Mar 2015	Oct 2015	1,000,000	0.87	Y		Oct 2013
4.1.1) CTG, 7.62MM SHORT RANGE TRAINING (AA37)		2016	GDOTS CANADA / CANADA	C / FFP	JMC ROCK ISLAND	Mar 2016	Oct 2016	2,497,042	0.89	Y		Oct 2015
4.1.1) CTG, 7.62MM SHORT RANGE TRAINING (AA37)		2017	GDOTS CANADA / CANADA	C / FFP	JMC ROCK ISLAND	Mar 2017	Oct 2017	2,268,600	1.98	Y		Oct 2016
4.1.1) CTG, 7.62MM SHORT RANGE TRAINING (AA37)		2018	GDOTS CANADA / CANADA	C / FFP	JMC ROCK ISLAND	Mar 2018	Oct 2018	1,502,400	2.22	Y		Dec 2017
4.1.2) CTG, 7.62MM, M993 AP, W/ M62 Std Tracer (AA36)	✓	2014	ALLIANT TECH / ATK	C / FFP	JMC ROCK ISLAND	Mar 2014	Oct 2014	180,000	2.57	Y		Mar 2012
4.1.2) CTG, 7.62MM, M993 AP, W/ M62 Std Tracer (AA36)		2016	ALLIANT TECH / ATK	C / FFP	JMC ROCK ISLAND	Apr 2016	Nov 2016	700,500	0.00	Y		Mar 2013
4.1.3) CTG, 7.62MM BLANK, LINKED (A111)		2015	ALLIANT TECH DBA (LCAAP) / INDEPENDENCE, MO	SS / FFP	JMC ROCK ISLAND	Mar 2015	Oct 2015	1,600,000	0.39	Y		Mar 2013
4.1.3) CTG, 7.62MM BLANK, LINKED (A111)		2016	ALLIANT TECH DBA (LCAAP) / INDEPENDENCE, MO	SS / FFP	JMC ROCK ISLAND	Apr 2016	Nov 2016	3,116,215	0.39	Y		Mar 2013
4.1.3) CTG, 7.62MM BLANK, LINKED (A111)		2017	ALLIANT TECH DBA (LCAAP) / INDEPENDENCE, MO	SS / FFP	JMC ROCK ISLAND	Apr 2017	Nov 2017	3,248,000	0.39	Y		Mar 2017
4.1.3) CTG, 7.62MM BLANK, LINKED (A111)		2018	ALLIANT TECH DBA (LCAAP) / INDEPENDENCE, MO	SS / FFP	JMC ROCK ISLAND	Apr 2018	Nov 2018	3,213,600	0.42	Y		Mar 2018
4.1.4) CTG, 7.62MM BALL LINKED (NO TRACER) (A143)		2017	TBD / TBD	C / TBD	JMC ROCK ISLAND	Dec 2016	Dec 2017	343,200	0.50	N	Aug 2015	Apr 2016
4.1.5) CTG, 7.62MM LINKED 9:1 DIM TRACER F/MK 44 (A257)		2013	ALLIANT TECH DBA (LCAAP) / INDEPENDENCE, MO	C / FFP	JMC ROCK ISLAND	Jun 2013	Jan 2014	4,135,555	0.45	Y		Oct 2012
4.1.5) CTG, 7.62MM LINKED 9:1 DIM TRACER F/MK 44 (A257)	✓	2014	ALLIANT TECH DBA (LCAAP) / INDEPENDENCE, MO	C / FFP	JMC ROCK ISLAND	Mar 2014	Oct 2014	150,000	0.89	Y		Oct 2013
4.1.5) CTG, 7.62MM LINKED 9:1 DIM TRACER F/MK 44 (A257)		2015	ALLIANT TECH DBA (LCAAP) / INDEPENDENCE, MO	C / FFP	JMC ROCK ISLAND	Mar 2015	Oct 2015	3,326,086	0.46	Y		Oct 2013
4.1.5) CTG, 7.62MM LINKED 9:1 DIM TRACER F/MK 44 (A257)	✓	2016	ALLIANT TECH DBA (LCAAP) / INDEPENDENCE, MO	C / FFP	JMC ROCK ISLAND	Mar 2016	Sep 2017	522,727	0.44	Y		Oct 2013

Exhibit P-5a, Procurement History and Planning: PB 2020 Navy		Date: March 2019
Appropriation / Budget Activity / Budget Sub Activity: 1508N / 01 / 1	P-1 Line Item Number / Title: 0335 / Small Arms & Lndg Party Ammo	Item Number / Title [DODIC]: 2 / Naval Special Warfare (NSW)

Cost Elements	OCO	FY	Contractor and Location	Method/Type or Funding Vehicle	Location of PCO	Award Date	Date of First Delivery	Qty (Each)	Unit Cost ($)	Specs Avail Now?	Date Revision Available	RFP Issue Date
4.1.5) CTG, 7.62MM LINKED 9:1 DIM TRACER F/MK 44 (A257)		2017	ALLIANT TECH DBA (LCAAP) / INDEPENDENCE, MO	C / TBD	JMC ROCK ISLAND	Mar 2017	Oct 2017	1,078,500	0.50	N	Aug 2015	Oct 2013
4.1.7) CTG, 7.62MM LNKD, BALL AND TRACER (A131)		2014	ALLIANT TECH DBA (LCAAP) / INDEPENDENCE, MO	C / FFP	JMC ROCK ISLAND	Mar 2014	Oct 2014	5,094,000	0.51	Y		Oct 2013
4.1.7) CTG, 7.62MM LNKD, BALL AND TRACER (A131)	✓	2014	ALLIANT TECH DBA (LCAAP) / INDEPENDENCE, MO	C / FFP	JMC ROCK ISLAND	Jun 2014	Jan 2015	964,570	0.93	Y		Oct 2013
4.1.7) CTG, 7.62MM LNKD, BALL AND TRACER (A131)		2015	ALLIANT TECH DBA (LCAAP) / INDEPENDENCE, MO	C / FFP	JMC ROCK ISLAND	Mar 2015	Oct 2015	6,173,469	0.49	Y		Oct 2013
4.1.7) CTG, 7.62MM LNKD, BALL AND TRACER (A131)	✓	2015	ALLIANT TECH DBA (LCAAP) / INDEPENDENCE, MO	C / FFP	JMC ROCK ISLAND	Mar 2015	Oct 2015	1,020,408	0.49	Y		Oct 2013
4.1.7) CTG, 7.62MM LNKD, BALL AND TRACER (A131)		2016	ALLIANT TECH DBA (LCAAP) / INDEPENDENCE, MO	C / FFP	JMC ROCK ISLAND	Mar 2016	Oct 2016	6,095,744	0.47	Y		Oct 2013
4.1.7) CTG, 7.62MM LNKD, BALL AND TRACER (A131)	✓	2016	ALLIANT TECH DBA (LCAAP) / INDEPENDENCE, MO	C / FFP	JMC ROCK ISLAND	Oct 2015	May 2016	587,234	0.47	Y		Oct 2013
4.1.7) CTG, 7.62MM LNKD, BALL AND TRACER (A131)		2017	ALLIANT TECH DBA (LCAAP) / INDEPENDENCE, MO	C / FFP	JMC ROCK ISLAND	Oct 2016	May 2017	2,701,600	0.54	Y		Oct 2013
4.1.7) CTG, 7.62MM LNKD, BALL AND TRACER (A131)		2018	ALLIANT TECH DBA (LCAAP) / INDEPENDENCE, MO	C / FFP	JMC ROCK ISLAND	Mar 2018	Oct 2018	2,155,200	0.56	Y		Oct 2017
4.1.9) CTG 7.62MM SPECIAL BALL LONG RANGE (AB39)	✓	2020	JMC ROCK ISLAND / ROCK ISLAND, IL	C / TBD	** NO PCO **	Mar 2020	Mar 2020	460,000	0.98	N	Mar 2020	
5.1.2) CTG, 5.56MM JACKETED FRANGIBLE MK (AA40)		2014	FEDERAL CARTRIDGE / MINNESOTA	C / FFP	NSWC CRANE	Mar 2014	Feb 2015	1,108,000	0.37	Y		Mar 2011
5.1.2) CTG, 5.56MM JACKETED FRANGIBLE MK (AA40)		2015	FEDERAL CARTRIDGE / MINNESOTA	C / FFP	NSWC CRANE	Mar 2015	Feb 2016	461,631	0.41	Y		Mar 2011
5.1.3) CTG, 5.56MM BALL, CARBINE, BARRIER, MK (AB49)		2012	ATK LAKE CITY / LAKE CITY	C / FFP	NSWC CRANE	Jun 2013	Dec 2014	700,000	0.50	Y		Oct 2012
5.1.3) CTG, 5.56MM BALL, CARBINE, BARRIER, MK (AB49)		2014	ATK LAKE CITY / LAKE CITY	C / FFP	NSWC CRANE	Mar 2014	Sep 2015	246,000	0.83	Y		Oct 2012
5.1.3) CTG, 5.56MM BALL, CARBINE, BARRIER, MK (AB49)		2016	ATK LAKE CITY / LAKE CITY	C / FFP	NSWC CRANE	Mar 2016	Sep 2017	670,760	0.00	Y		Oct 2013
5.1.4) CTG, 5.56MM CTG BALL B855 LKD F/SAW (A062)		2014	ATK LAKE CITY / LAKE CITY	C / FFP	JMC ROCK ISLAND	Mar 2014	Aug 2014	320,000	0.35	Y		Oct 2013
5.1.4) CTG, 5.56MM CTG BALL B855 LKD F/SAW (A062)		2015	ATK LAKE CITY / LAKE CITY	C / FFP	JMC ROCK ISLAND	Mar 2015	Aug 2015	400,000	0.29	Y		Oct 2013
5.1.5) CTG 5.56MM BALL (A071)	✓	2020	JMC ROCK ISLAND / ROCK ISLAND, IL	MIPR	JMC ROCK ISLAND	Dec 2019	Dec 2019	1,001,280	0.25	N	Dec 2019	Dec 2019
5.1.6) CTG, 5.56MM, LINKED (A075)		2013	ATK Lake City Army Ammunition Plant / Lake City	C / FFP	JMC ROCK ISLAND	Jun 2013	Jan 2014	3,300,000	0.45	Y		Oct 2012
5.1.6) CTG, 5.56MM, LINKED (A075)		2016	ATK Lake City Army Ammunition Plant / Lake City	C / FFP	JMC ROCK ISLAND	Oct 2015	May 2016	1,500,800	0.22	Y		Oct 2013

Exhibit P-5a, Procurement History and Planning: PB 2020 Navy		Date: March 2019
Appropriation / Budget Activity / Budget Sub Activity: 1508N / 01 / 1	P-1 Line Item Number / Title: 0335 / Small Arms & Lndg Party Ammo	Item Number / Title [DODIC]: 2 / Naval Special Warfare (NSW)

Cost Elements	OCO	FY	Contractor and Location	Method/Type or Funding Vehicle	Location of PCO	Award Date	Date of First Delivery	Qty (Each)	Unit Cost ($)	Specs Avail Now?	Date Revision Available	RFP Issue Date
5.1.7) CTG, 5.56MM BLANK (TRAINING ITEM) (A080)		2016	ATK LAKE CITY / LAKE CITY	C / FFP	JMC ROCK ISLAND	Mar 2016	Oct 2016	3,762,000	0.15	Y		Dec 2013
5.1.7) CTG, 5.56MM BLANK (TRAINING ITEM) (A080)		2018	ATK LAKE CITY / LAKE CITY	C / FFP	JMC ROCK ISLAND	Mar 2018	Oct 2018	1,069,320	0.14	Y		Dec 2017
5.1.8) CTG, 5.56MM 77 GRAIN, MK 262 MOD 0/1, LONG (AA53)		2014	BLACK HILLS AMMUNITION / RAPID CITY, SD	SS / FFP	NSWC CRANE	Jul 2014	Aug 2015	1,403,076	0.65	Y		Oct 2012
5.1.8) CTG, 5.56MM 77 GRAIN, MK 262 MOD 0/1, LONG (AA53)	✓	2014	BLACK HILLS AMMUNITION / RAPID CITY, SD	SS / FFP	NSWC CRANE	Jul 2014	Aug 2015	574,000	0.65	Y		Oct 2012
5.1.11) CTG, 5.56MM LINKED (A064)(†)		2014	ALLIANT TECH DBA (LCAAP) / INDEPENDENCE, MO	C / FFP	JMC ROCK ISLAND	Mar 2014	Aug 2014	3,000,000	0.54	Y		Oct 2011
5.1.11) CTG, 5.56MM LINKED (A064)		2015	ALLIANT TECH DBA (LCAAP) / INDEPENDENCE, MO	C / FFP	JMC ROCK ISLAND	Mar 2015	Aug 2015	2,240,000	0.53	Y		Oct 2011
5.1.11) CTG, 5.56MM LINKED (A064)	✓	2016	ALLIANT TECH DBA (LCAAP) / INDEPENDENCE, MO	C / FFP	JMC ROCK ISLAND	Dec 2015	Jul 2016	208,000	0.32	Y		Oct 2011
5.1.11) CTG, 5.56MM LINKED (A064)		2017	ALLIANT TECH DBA (LCAAP) / INDEPENDENCE, MO	C / FFP	JMC ROCK ISLAND	Dec 2016	Jul 2017	2,360,000	0.32	Y		Oct 2011
5.1.12) CTG, 5.56MM SHORT RANGE TRAINING (AB67)		2017	TBD / tbd	C / TBD	** NO PCO **	Oct 2016	Apr 2018	185,400	1.21	N		
5.1.12) CTG, 5.56MM SHORT RANGE TRAINING (AB67)		2018	TBD / tbd	C / TBD	ACC-PICATINNY, NJ	Mar 2018	Sep 2019	403,200	1.36	Y		Dec 2017
5.1.13) CTG 5.56MM BALL LFS M855A1 (AB57)		2018	JMC ROCK ISLAND / ROCK ISLAND, IL	MIPR	JMC ROCK ISLAND	Feb 2018	Feb 2018	80,640	0.28	N	Feb 2018	Feb 2018
5.1.14) CTG 5.56MM SHORT RANGE TRAINING AMMO (AC10)		2018	JMC ROCK ISLAND / ROCK ISLAND, IL	MIPR	JMC ROCK ISLAND	Dec 2018	Dec 2018	216,000	1.38	N	Dec 2018	Dec 2018
6.1.1) CTG, 50 CAL, LINKED, BALL MK 322/TRACER MK (AB64)		2014	GENERAL DYNAMICS / MONTREAL, CN	C / FFP	NSWC CRANE	Mar 2014	Mar 2015	200,000	4.00	Y		Mar 2013
6.1.1) CTG, 50 CAL, LINKED, BALL MK 322/TRACER MK (AB64)		2015	GENERAL DYNAMICS / MONTREAL, CN	C / FFP	NSWC CRANE	Oct 2014	Oct 2015	600,000	4.08	Y		Mar 2013
6.1.1) CTG, 50 CAL, LINKED, BALL MK 322/TRACER MK (AB64)		2016	GENERAL DYNAMICS / MONTREAL, CN	C / FFP	NSWC CRANE	Mar 2016	Mar 2017	600,000	4.16	Y		Mar 2013
6.1.1) CTG, 50 CAL, LINKED, BALL MK 322/TRACER MK (AB64)		2017	GENERAL DYNAMICS / MONTREAL, CN	C / FFP	NSWC CRANE	Mar 2017	Mar 2018	200,000	4.25	Y		Mar 2013
6.1.2) CTG, CAL .50 LINKED BALL (NO TRACER) (A555)		2013	ALLIANT TECH DBA (LCAAP) / INDEPENDENCE, MO	C / FFP	JMC ROCK ISLAND	Jun 2013	Jan 2014	853,218	2.33	Y		Oct 2012
6.1.2) CTG, CAL .50 LINKED BALL (NO TRACER) (A555)		2016	ALLIANT TECH DBA (LCAAP) - FY2016 / INDEPENDENCE, MO	C / FFP	JMC ROCK ISLAND	Mar 2016	Oct 2016	1,012,500	1.60	Y		Oct 2013
6.1.2) CTG, CAL .50 LINKED BALL (NO TRACER) (A555)		2018	ALLIANT TECH DBA (LCAAP) - FY2016 / INDEPENDENCE, MO	C / FFP	JMC ROCK ISLAND	Mar 2018	Oct 2018	224,600	1.82	Y		Dec 2017
6.1.3) CTG, CAL .50 LINKED, BALL/TRACER (A557)		2014	ATK LAKE CITY / LAKE CITY	C / FFP	JMC ROCK ISLAND	Mar 2014	Mar 2015	1,215,846	1.83	Y		Oct 2011

Exhibit P-5a, Procurement History and Planning: PB 2020 Navy		Date: March 2019
Appropriation / Budget Activity / Budget Sub Activity: 1508N / 01 / 1	P-1 Line Item Number / Title: 0335 / Small Arms & Lndg Party Ammo	Item Number / Title [DODIC]: 2 / Naval Special Warfare (NSW)

Cost Elements	OCO	FY	Contractor and Location	Method/Type or Funding Vehicle	Location of PCO	Award Date	Date of First Delivery	Qty (Each)	Unit Cost ($)	Specs Avail Now?	Date Revision Available	RFP Issue Date
6.1.3) CTG, CAL .50 LINKED, BALL/TRACER (A557)		2016	ATK LAKE CITY / LAKE CITY	C / FFP	JMC ROCK ISLAND	Mar 2016	Mar 2017	903,048	1.64	Y		Oct 2013
6.1.4) CTG, CAL .50 APL MK 211 MIULTI PURPOSE (A606)		2015	ATK LAKE CITY / LAKE CITY	C / FFP	JMC ROCK ISLAND	Mar 2015	Mar 2016	50,160	14.55	Y		Oct 2013
6.1.5) CTG, CAL .50 LINKED, M8 API/M20 API-T (A576)		2013	ATK LAKE CITY / LAKE CITY	C / FFP	JMC ROCK ISLAND	Jun 2013	Jun 2014	1,462,564	1.95	Y		Oct 2011
6.1.5) CTG, CAL .50 LINKED, M8 API/M20 API-T (A576)		2014	ATK LAKE CITY / LAKE CITY	C / FFP	JMC ROCK ISLAND	Mar 2014	Mar 2015	2,810,660	1.97	Y		Oct 2011
6.1.5) CTG, CAL .50 LINKED, M8 API/M20 API-T (A576)	✓	2014	ATK LAKE CITY / LAKE CITY	C / FFP	JMC ROCK ISLAND	Mar 2014	Mar 2015	1,107,910	1.97	Y		Oct 2011
6.1.5) CTG, CAL .50 LINKED, M8 API/M20 API-T (A576)		2015	ATK LAKE CITY / LAKE CITY	C / FFP	JMC ROCK ISLAND	Mar 2015	Mar 2016	1,089,418	1.89	Y		Oct 2011
6.1.5) CTG, CAL .50 LINKED, M8 API/M20 API-T (A576)	✓	2015	ATK LAKE CITY / LAKE CITY	C / FFP	JMC ROCK ISLAND	Mar 2015	Mar 2016	264,550	1.89	Y		Oct 2011
6.1.5) CTG, CAL .50 LINKED, M8 API/M20 API-T (A576)		2016	ATK LAKE CITY / LAKE CITY	C / FFP	JMC ROCK ISLAND	Oct 2015	Oct 2016	214,606	1.78	Y		Oct 2011
6.1.5) CTG, CAL .50 LINKED, M8 API/M20 API-T (A576)	✓	2016	ATK LAKE CITY / LAKE CITY	C / FFP	JMC ROCK ISLAND	Mar 2016	Mar 2017	267,978	1.78	Y		Oct 2011
6.1.5) CTG, CAL .50 LINKED, M8 API/M20 API-T (A576)		2017	ATK LAKE CITY / LAKE CITY	C / FFP	JMC ROCK ISLAND	Oct 2016	Oct 2017	298,200	1.89	N	Aug 2015	Oct 2011
6.1.5) CTG, CAL .50 LINKED, M8 API/M20 API-T (A576)		2018	ATK LAKE CITY / LAKE CITY	C / FFP	JMC ROCK ISLAND	Mar 2018	Mar 2019	1,000,000	2.20	Y		Dec 2017
6.1.5) CTG, CAL .50 LINKED, M8 API/M20 API-T (A576)	✓	2018	ATK LAKE CITY / LAKE CITY	C / FFP	JMC ROCK ISLAND	Mar 2018	Mar 2019	437,000	2.12	Y		Dec 2017
6.1.6) CTG, CAL .50 LINKED, BLANK, M1A1 (A598)		2013	ATK LAKE CITY / LAKE CITY	C / FFP	JMC ROCK ISLAND	Jun 2013	Jan 2014	1,182,352	1.19	Y		Oct 2012
6.1.6) CTG, CAL .50 LINKED, BLANK, M1A1 (A598)		2014	ATK LAKE CITY / LAKE CITY	C / FFP	JMC ROCK ISLAND	Mar 2014	Oct 2014	1,378,000	1.15	Y		Oct 2012
6.1.6) CTG, CAL .50 LINKED, BLANK, M1A1 (A598)		2015	ATK LAKE CITY / LAKE CITY	C / FFP	JMC ROCK ISLAND	Mar 2015	Oct 2015	812,121	1.32	Y		Oct 2012
6.1.6) CTG, CAL .50 LINKED, BLANK, M1A1 (A598)		2016	ATK LAKE CITY / LAKE CITY	C / FFP	JMC ROCK ISLAND	Mar 2016	Oct 2016	1,109,277	1.20	Y		Oct 2012
6.1.6) CTG, CAL .50 LINKED, BLANK, M1A1 (A598)		2017	ATK LAKE CITY / LAKE CITY	C / FFP	JMC ROCK ISLAND	Oct 2016	May 2017	2,658,800	1.26	Y		Oct 2012
6.1.6) CTG, CAL .50 LINKED, BLANK, M1A1 (A598)		2018	ATK LAKE CITY / LAKE CITY	C / FFP	JMC ROCK ISLAND	Mar 2018	Oct 2018	1,200,000	1.54	Y		Oct 2017
8.1.1) CTG, CAL .300 MATCH (A191)		2014	OLIN CORP / ILLINOIS	C / FFP	JMC ROCK ISLAND	Mar 2014	Oct 2014	240,000	1.25	Y		Mar 2013
8.1.1) CTG, CAL .300 MATCH (A191)	✓	2014	OLIN CORP / ILLINOIS	C / FFP	JMC ROCK ISLAND	Mar 2014	Oct 2014	480,000	1.25	Y		Mar 2013

Exhibit P-5a, Procurement History and Planning: PB 2020 Navy		Date: March 2019
Appropriation / Budget Activity / Budget Sub Activity: 1508N / 01 / 1	P-1 Line Item Number / Title: 0335 / Small Arms & Lndg Party Ammo	Item Number / Title [DODIC]: 2 / Naval Special Warfare (NSW)

Cost Elements	OCO	FY	Contractor and Location	Method/Type or Funding Vehicle	Location of PCO	Award Date	Date of First Delivery	Qty (Each)	Unit Cost ($)	Specs Avail Now?	Date Revision Available	RFP Issue Date
8.1.1) CTG, CAL .300 MATCH (A191)		2016	OLIN CORP / ILLINOIS	C / FFP	JMC ROCK ISLAND	Dec 2015	Jul 2016	144,363	1.07	Y		Mar 2013
8.1.2) CTG, CAL 45 MATCH (A483)		2018	UNKNOWN / UNKNOWN	C / TBD	JMC ROCK ISLAND	Apr 2018	Oct 2019	200,000	0.34	Y		Oct 2017

(†) indicates the presence of a P-21

Exhibit P-21, Production Schedule: PB 2020 Navy		Date: March 2019
Appropriation / Budget Activity / Budget Sub Activity: 1508N / 01 / 1	**P-1 Line Item Number / Title:** 0335 / Small Arms & Lndg Party Ammo	**Item Number / Title [DODIC]:** 2 / Naval Special Warfare (NSW)

Cost Elements (Units in Millions, * = < 500)							Fiscal Year 2013												Fiscal Year 2014												BALANCE
										Calendar Year 2013												Calendar Year 2014									
OCO	MFR #	FY	SERVICE	PROC QTY	ACCEPT PRIOR TO 1 OCT 2012	BAL DUE AS OF 1 OCT	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	
5.1.11) CTG, 5.56MM LINKED (A064)																															
	1	2014	NAVY	3.000	.000	3.000																		A -	-	-	-	-	3.000		.000
							OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	

Exhibit P-21, Production Schedule: PB 2020 Navy		Date: March 2019
Appropriation / Budget Activity / Budget Sub Activity: 1508N / 01 / 1	**P-1 Line Item Number / Title:** 0335 / Small Arms & Lndg Party Ammo	**Item Number / Title [DODIC]:** 2 / Naval Special Warfare (NSW)

Cost Elements (Units in Millions, * = < 500)							Fiscal Year 2015												Fiscal Year 2016												BALANCE
										Calendar Year 2015												Calendar Year 2016									
OCO	MFR #	FY	SERVICE	PROC QTY	ACCEPT PRIOR TO 1 OCT 2014	BAL DUE AS OF 1 OCT	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	
5.1.11) CTG, 5.56MM LINKED (A064)																															
	1	2014	NAVY	3.000	3.000	.000																									.000
							OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	

Exhibit P-21, Production Schedule: PB 2020 Navy		Date: March 2019
Appropriation / Budget Activity / Budget Sub Activity: 1508N / 01 / 1	**P-1 Line Item Number / Title:** 0335 / Small Arms & Lndg Party Ammo	**Item Number / Title [DODIC]:** 2 / Naval Special Warfare (NSW)

Cost Elements (Units in Millions, * = < 500)							Fiscal Year 2017												Fiscal Year 2018												BALANCE
							Calendar Year 2017												Calendar Year 2018												
OCO	MFR #	FY	SERVICE	PROC QTY	ACCEPT PRIOR TO 1 OCT 2016	BAL DUE AS OF 1 OCT	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	
5.1.11) CTG, 5.56MM LINKED (A064)																															
	1	2014	NAVY	3.000	3.000	.000																									.000
							OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	

Exhibit P-21, Production Schedule: PB 2020 Navy		Date: March 2019
Appropriation / Budget Activity / Budget Sub Activity: 1508N / 01 / 1	**P-1 Line Item Number / Title:** 0335 / Small Arms & Lndg Party Ammo	**Item Number / Title [DODIC]:** 2 / Naval Special Warfare (NSW)

Cost Elements (Units in Millions, * = < 500)							Fiscal Year 2019												Fiscal Year 2020												BALANCE
							Calendar Year 2019												Calendar Year 2020												
OCO	MFR #	FY	SERVICE	PROC QTY	ACCEPT PRIOR TO 1 OCT 2018	BAL DUE AS OF 1 OCT	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	
5.1.11) CTG, 5.56MM LINKED (A064)																															
	1	2014	NAVY	3.000	3.000	.000																									.000
							OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	

Exhibit P-21, Production Schedule: PB 2020 Navy		Date: March 2019
Appropriation / Budget Activity / Budget Sub Activity: 1508N / 01 / 1	**P-1 Line Item Number / Title:** 0335 / Small Arms & Lndg Party Ammo	**Item Number / Title [DODIC]:** 2 / Naval Special Warfare (NSW)

MFR Ref #	Manufacturer Name - Location	Production Rates (Each / Year)			Procurement Leadtime (Months)							
					Initial				Reorder			
		MSR For 2020	1-8-5 For 2020	MAX For 2020	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	ALLIANT TECH DBA (LCAAP) - INDEPENDENCE, MO		11,500	39,300	6	6	5	11	6	6	7	13

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

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Exhibit P-40, Budget Line Item Justification: PB 2020 Navy	Date: March 2019
Appropriation / Budget Activity / Budget Sub Activity: 1508N: Procurement of Ammo, Navy & MC / BA 01: Proc Ammo, Navy / BSA 1: Navy Ammunition	**P-1 Line Item Number / Title:** 0340 / Pyrotechnic and Demolition

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

Line Item MDAP/MAIS Code: N/A

Resource Summary	Prior Years	FY 2018	FY 2019	FY 2020 Base	FY 2020 OCO	FY 2020 Total	FY 2021	FY 2022	FY 2023	FY 2024	To Complete	Total
Procurement Quantity *(Units in Each)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost *($ in Millions)*	96.681	10.260	12.738	0.000	11.158	11.158	11.430	11.162	11.373	11.598	-	176.400
Less PY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) *($ in Millions)*	96.681	10.260	12.738	0.000	11.158	11.158	11.430	11.162	11.373	11.598	-	176.400
Plus CY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority *($ in Millions)*	**96.681**	**10.260**	**12.738**	**0.000**	**11.158**	**11.158**	**11.430**	**11.162**	**11.373**	**11.598**	**-**	**176.400**
(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)*	-	-	-	-	-	-	-	-	-	-	-	-

Description:

FY 2020 funding totals include $0.0M for Base and $11.158M for Overseas Contingency Operations (OCO); of which $10.621M is realigned as part of the OCO for Base Requirements. FY 2020 OCO for Base Requirements is OCO funding for base budget requirements in support of the National Defense Strategy. The Budget requests these funds in OCO to comply with the base budget defense caps included in the Budget Control Act of 2011.

Pyrotechnics and demolition materials consists of smoke and flare signals for safety of life, simulators, remote and time delay firing devices, safe and arming devices, demolition charges, blasting caps, detonating cord, time fuze, cable cutters, Improvised Explosive Device (IED) disrupters, cartridge actuated devices, shape charges, and shock test charges. These materials are used by all Navy platforms and Navy Mobile Construction Battalions, mobile diving and salvage units, cargo handling and port groups, naval security groups, fleet composite operational readiness groups, and Explosive Ordnance Disposal (EOD) groups, mobile units, detachments, and teams.

Program procures pyrotechnics and demolition materials for all active naval vessels, construction battalions, mobile diving and salvage units, cargo handling and port groups, naval security groups, and explosive ordnance disposal groups/mobile units/detachments/teams. Pyrotechnics are used for training, combat exercises, submarine rescue and personnel search, and rescue operations. These items consist of illumination, signaling, identification, and location devices using flares or smoke as the primary signaling agent. Demolitions consist of explosive devices and accessories and are required for fleet units to perform training functions and operations/requirements. Fleet requirements are based upon CNO approved allowance lists or for special needs on a case by case basis and worldwide fleet expenditure. This program also provides materials to support the ship shock test program.

Naval Special Warfare pyrotechnics and demolition materials consists of smoke and flare signals for safety of life, combat effects simulators, remote and time delay firing devices, safe and arming devices, blasting machines, demolition charges, blasting caps, detonating cord, time fuse, cable cutters, cartridge actuated devices, shape charges, and shock tube type detonators. The demolition materials are used by the Naval Special Warfare Center for initial demolition training and qualification, by SEAL platoons for constructing breaching charges, for construction of obstacles or barriers, clearance of obstacles or barriers, cable cutting, coral and channel clearance, material and equipment destruction, diversions, combat effects simulation charges, improvised incendiary charges, and defensive anti-vehicle and anti-personnel charges. Pyrotechnics are used by Naval Special Warfare for emergency or distress signaling, combat effects simulation, target marking, de-confliction, escalation of force warning, and distraction.

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

Exhibit P-40, Budget Line Item Justification: PB 2020 Navy		Date: March 2019
Appropriation / Budget Activity / Budget Sub Activity: 1508N: Procurement of Ammo, Navy & MC / BA 01: Proc Ammo, Navy / BSA 1: Navy Ammunition	**P-1 Line Item Number / Title:** 0340 / Pyrotechnic and Demolition	
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		

Secondary Distribution		FY 2018	FY 2019	FY 2020 Base	FY 2020 OCO	FY 2020 Total	FY 2021	FY 2022	FY 2023	FY 2024
	Total Obligation Authority	10.170	12.645	0.000	11.075	11.075	11.342	11.071	11.281	11.504
NR	Quantity	-	-	-	-	-	-	-	-	-
	Total Obligation Authority	0.090	0.093	0.000	0.083	0.083	0.088	0.091	0.092	0.094
Total: Secondary Distribution	**Quantity**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**
	Total Obligation Authority	**10.260**	**12.738**	**0.000**	**11.158**	**11.158**	**11.430**	**11.162**	**11.373**	**11.598**

Exhibit P-40, Budget Line Item Justification: PB 2020 Navy		Date: March 2019
Appropriation / Budget Activity / Budget Sub Activity: 1508N: Procurement of Ammo, Navy & MC / BA 01: Proc Ammo, Navy / BSA 1: Navy Ammunition	**P-1 Line Item Number / Title:** 0340 / Pyrotechnic and Demolition	
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 2018	FY 2019	FY 2020 Base	FY 2020 OCO	FY 2020 Total
Exhibit Type	Title*	Subexhibits	ID CD	MDAP/ MAIS Code	Quantity / Total Cost *(Each) / ($ M)*	Quantity / Total Cost *(Each) / ($ M)*	Quantity / Total Cost *(Each) / ($ M)*	Quantity / Total Cost *(Each) / ($ M)*	Quantity / Total Cost *(Each) / ($ M)*	Quantity / Total Cost *(Each) / ($ M)*
P-5	1 / Integrated Warfare Systems	P-5a			- / 89.665	- / 8.637	- / 10.085	- / 0.000	- / 9.737	- / 9.737
P-5	2 / Naval Special Warfare	P-5a			- / 7.016	- / 1.623	- / 2.653	- / 0.000	- / 1.421	- / 1.421
P-40	**Total Gross/Weapon System Cost**				**- / 96.681**	**- / 10.260**	**- / 12.738**	**- / 0.000**	**- / 11.158**	**- / 11.158**

*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 2020 OCO for baseline funding procures pyrotechnics to support surface, air, ground, and underwater Navy requirements for training, combat exercises, submarine rescue, personnel search and rescue operations, and demolition consisting of explosive devices and accessories to support fleet units performing training and operational exercises.

Baseline funding also provides Product Improvement Programs to resolve obsolescence issues in demolition items, emergency signaling devices and submarine signals. Baseline program funds renovation of radio firing devices, remote timing device battery replacement, supply components for demolition items, and Production Engineering and Gauge requirements for pyrotechnics and demolition materials.

FY 2020 baseline funding (81AJ) procures pyrotechnics, demolition devices and accessories to support Naval Special Warfare (NSW) requirements for initial qualification, pre-deployment, and sustainment training, combat exercises, and testing by US Navy SEALs, Special Boat Teams, NSW Task Units/Groups and other NSW support groups. Baseline program funds are also necessary for production engineering as required by DoD and Navy safety and acquisition regulations. Due to funding constraint and contract minimums, FY 2020 procurement is planned for pyrotechnic type hand grenade simulators.

OCO:
FY 2020 Direct War OCO funds will be used to procure MK 164 40 FT NONEL Detonators with in-line initiators for explosive breaching applications.

Exhibit P-5, Cost Analysis: PB 2020 Navy		Date: March 2019
Appropriation / Budget Activity / Budget Sub Activity: 1508N / 01 / 1	P-1 Line Item Number / Title: 0340 / Pyrotechnic and Demolition	Item Number / Title [DODIC]: 1 / Integrated Warfare Systems
ID Code (A=Service Ready, B=Not Service Ready) :	MDAP/MAIS Code:	

Resource Summary	Prior Years	FY 2018	FY 2019	FY 2020 Base	FY 2020 OCO	FY 2020 Total
Procurement Quantity *(Units in Each)*	-	-	-	-	-	-
Gross/Weapon System Cost *($ in Millions)*	89.665	8.637	10.085	0.000	9.737	9.737
Less PY Advance Procurement *($ in Millions)*	-	-	-	-	-	-
Net Procurement (P-1) *($ in Millions)*	89.665	8.637	10.085	0.000	9.737	9.737
Plus CY Advance Procurement *($ in Millions)*	-	-	-	-	-	-
Total Obligation Authority *($ in Millions)*	**89.665**	**8.637**	**10.085**	**0.000**	**9.737**	**9.737**
(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 2018			FY 2019			FY 2020 Base			FY 2020 OCO			FY 2020 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 - AJ100 HARDWARE Cost																		
Recurring Cost																		
1.1.1) TRANSPORTATION ACCOUNT CODE (N97)	-	-	0.215	-	-	0.011	-	-	0.010	-	-	0.000	-	-	0.010	-	-	0.010
1.1.2) TRANSPORTATION ACCOUNT CODE (N96)	-	-	1.015	-	-	0.165	-	-	0.176	-	-	0.000	-	-	0.176	-	-	0.176
1.1.3) TRANSPORTATION ACCOUNT CODE (N95)	-	-	0.091	-	-	0.014	-	-	0.014	-	-	0.000	-	-	0.014	-	-	0.014
Subtotal: Recurring Cost	-	-	*1.321*	-	-	*0.190*	-	-	*0.200*	-	-	*0.000*	-	-	*0.200*	-	-	*0.200*
Subtotal: Hardware - AJ100 HARDWARE Cost	**-**	**-**	***1.321***	**-**	**-**	***0.190***	**-**	**-**	***0.200***	**-**	**-**	***0.000***	**-**	**-**	***0.200***	**-**	**-**	***0.200***
Hardware - AJ100 PE/QA SMCA Cost																		
Recurring Cost																		
2.1.1) PE/QA SMCA	-	-	3.704	-	-	0.047	-	-	0.363	-	-	0.000	-	-	0.371	-	-	0.371
Subtotal: Recurring Cost	-	-	*3.704*	-	-	*0.047*	-	-	*0.363*	-	-	*0.000*	-	-	*0.371*	-	-	*0.371*
Subtotal: Hardware - AJ100 PE/QA SMCA Cost	**-**	**-**	***3.704***	**-**	**-**	***0.047***	**-**	**-**	***0.363***	**-**	**-**	***0.000***	**-**	**-**	***0.371***	**-**	**-**	***0.371***
Hardware - AJ100 CUTTERS & CARTRIDGES Cost																		
Recurring Cost																		

Exhibit P-5, Cost Analysis: PB 2020 Navy		Date: March 2019
Appropriation / Budget Activity / Budget Sub Activity: 1508N / 01 / 1	P-1 Line Item Number / Title: 0340 / Pyrotechnic and Demolition	Item Number / Title [DODIC]: 1 / Integrated Warfare Systems
ID Code (A=Service Ready, B=Not Service Ready) :	MDAP/MAIS Code:	

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Cost Elements	Prior Years			FY 2018			FY 2019			FY 2020 Base			FY 2020 OCO			FY 2020 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)
3.1.6) CTG, 50 CAL BLANK, ELEC, MK20 (SS01)(†)	181.79	18,466	3.357	226.31	2,364	0.535	182.91	6,675	1.221	-	-	0.000	186.39	5,000	0.932	186.39	5,000	0.932
3.1.7) CUTTER, MK33, NON-ELECTRIC IN (SS43)	997.27	1,100	1.097	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000
3.1.8) CARTRIDGE, IMPULSE, MK 192 MOD 0 (MD54)(†)	-	-	0.000	118.80	4,470	0.531	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000
Subtotal: Recurring Cost	-	-	*4.454*	-	-	*1.066*	-	-	*1.221*	-	-	*0.000*	-	-	*0.932*	-	-	*0.932*
Subtotal: Hardware - AJ100 CUTTERS & CARTRIDGES Cost	**-**	**-**	***4.454***	**-**	**-**	***1.066***	**-**	**-**	***1.221***	**-**	**-**	***0.000***	**-**	**-**	***0.932***	**-**	**-**	***0.932***
Hardware - AJ100 DET CORDS, CAPS & FUZES Cost																		
Recurring Cost																		
4.1.1) CAP, BLASTING, ELEC, INERT (MP16)	24.78	27,120	0.672	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000
4.1.2) CAP, BLASTING, ELECTRIC MK 18 MOD 0 (DWHH)	41.03	112,950	4.634	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000
4.1.3) SQUIB, ELECTRIC, MK 20 MOD 2 (MP40)(†)	69.27	52,434	3.632	-	-	0.000	-	-	0.000	-	-	0.000	83.89	14,700	1.233	83.89	14,700	1.233
4.1.4) CAP, BLASTIN, NON-ELEC, INERT (M097)	25.43	48,400	1.231	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000
4.1.5) CORD, DETONATING, PRIMACORD (M456)(†)	0.68	2,855,000	1.942	0.83	952,000	0.790	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000
4.1.6) DETONATOR, DEL, 17MS, MK 158 (DWEL)	34.50	6,840	0.236	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000
4.1.8) DETONATOR, NON-ELEC, MK 121 (MP17)	254.31	8,002	2.035	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000
4.1.9) EOD REFILL KIT-LMNS (DWGJ)(†)	838.33	600	0.503	-	-	0.000	-	-	0.000	-	-	0.000	682.00	1,000	0.682	682.00	1,000	0.682

Exhibit P-5, Cost Analysis: PB 2020 Navy		Date: March 2019
Appropriation / Budget Activity / Budget Sub Activity: 1508N / 01 / 1	P-1 Line Item Number / Title: 0340 / Pyrotechnic and Demolition	Item Number / Title [DODIC]: 1 / Integrated Warfare Systems
ID Code (A=Service Ready, B=Not Service Ready) :	MDAP/MAIS Code:	

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Cost Elements	Prior Years			FY 2018			FY 2019			FY 2020 Base			FY 2020 OCO			FY 2020 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)
4.1.10) FUZE, BLASTING, TIME (M670)	0.49	1,356,000	0.665	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000
4.1.11) IGNITIER, TIME BLASTING FUZE (MN08)(†)	5.35	43,956	0.235	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000
Subtotal: Recurring Cost	-	-	*15.785*	-	-	*0.790*	-	-	*0.000*	-	-	*0.000*	-	-	*1.915*	-	-	*1.915*
Subtotal: Hardware - AJ100 DET CORDS, CAPS & FUZES Cost	**-**	**-**	***15.785***	**-**	**-**	***0.790***	**-**	**-**	***0.000***	**-**	**-**	***0.000***	**-**	**-**	***1.915***	**-**	**-**	***1.915***
Hardware - MINE CHARGES & CHARGE CUTTERS Cost																		
Recurring Cost																		
5.1.1) CHG KIT, DML, MK 75 (MW84)(†)	1,649.37	2,159	3.561	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000
5.1.2) CHG, DML, BLK, COMP C-4, 1.25 (M023)(†)	23.87	115,370	2.754	-	-	0.000	30.85	23,500	0.725	-	-	0.000	-	-	0.000	-	-	0.000
5.1.3) CHG, DML, XPL ROLL, 11FT (M985)(†)	69.95	10,894	0.762	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000
5.1.4) CHG, DML, XPL ROLL, 25 FT (M981)(†)	29.62	20,495	0.607	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000
5.1.5) CHG, DML, XPL ROLL, 38 FT, 14 (M980)(†)	14.25	13,680	0.195	15.71	10,032	0.158	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000
5.1.6) CUTTER, POWDER ACTUATED MK 23/1 (MN70)	333.33	1,842	0.614	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000
5.1.7) VALVE, EXPLOSIVE ELECTRIC, MK 2 MOD 1 (MW02)(†)	463.39	5,026	2.329	456.25	2,240	1.022	-	-	0.000	-	-	0.000	482.55	1,948	0.940	482.55	1,948	0.940
5.1.8) CUTTER, POWDER ACTUATED MK 24/1 (MN71)	992.00	1,250	1.240	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000
5.1.9) CHG, DEML, MK149 MOD0 LOW HAZ FLEX LIN SHP (MM54)(†)	75.43	11,030	0.832	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000

Exhibit P-5, Cost Analysis: PB 2020 Navy		Date: March 2019
Appropriation / Budget Activity / Budget Sub Activity: 1508N / 01 / 1	P-1 Line Item Number / Title: 0340 / Pyrotechnic and Demolition	Item Number / Title [DODIC]: 1 / Integrated Warfare Systems
ID Code (A=Service Ready, B=Not Service Ready) :	MDAP/MAIS Code:	

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Cost Elements	Prior Years			FY 2018			FY 2019			FY 2020 Base			FY 2020 OCO			FY 2020 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)
5.1.10) Chg, Demo, Mk 145 Low Hazard Flex (MM53)	63.50	20,440	1.298	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000
5.1.11) CHARGE, DEMO SHEET, FLEXIBLE, 0.043 THICK (M994)(†)	9.72	43,624	0.424	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000
5.1.13) MK147 BATTERY (CWBD)(†)	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000	271.54	140	0.038	271.54	140	0.038
5.1.14) CHG, DEML, MK144 MOD 0 LOW HAZ FLEX (MM52)	45.48	16,800	0.764	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000
Subtotal: Recurring Cost	-	-	*15.380*	-	-	*1.180*	-	-	*0.725*	-	-	*0.000*	-	-	*0.978*	-	-	*0.978*
Subtotal: Hardware - MINE CHARGES & CHARGE CUTTERS Cost	**-**	**-**	***15.380***	**-**	**-**	***1.180***	**-**	**-**	***0.725***	**-**	**-**	***0.000***	**-**	**-**	***0.978***	**-**	**-**	***0.978***
Hardware - AJ100 N97 UNDERSEA WARFARE Cost																		
Recurring Cost																		
6.1.1) SIG, SMK ILLUM, MAR, MK 141, GREEN (LA26)(†)	1,995.50	1,110	2.215	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000
6.1.2) SIG, SMK ILLUM, MAR, MK 144/118, YELLOW (LA27)(†)	5,162.95	718	3.707	-	-	0.000	2,672.00	252	0.673	-	-	0.000	-	-	0.000	-	-	0.000
6.1.3) MARKER, LOCATION, SUB, MK 140, RED (LA28)(†)	4,695.78	332	1.559	3,546.65	332	1.177	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000
6.1.4) CTG, IMPULSE, MK148 (M663)(†)	4,360.00	100	0.436	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000
6.1.5) EXPLOSIVE BOLT CARTRIDGE (MC91)(†)	3,320.00	150	0.498	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000
6.1.6) SWITCH, SQUIB ACTUATED, MK112 (M853)(†)	803.28	122	0.098	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000
Subtotal: Recurring Cost	-	-	*8.513*	-	-	*1.177*	-	-	*0.673*	-	-	*0.000*	-	-	*0.000*	-	-	*0.000*
Subtotal: Hardware - AJ100 N97 UNDERSEA WARFARE Cost	**-**	**-**	***8.513***	**-**	**-**	***1.177***	**-**	**-**	***0.673***	**-**	**-**	***0.000***	**-**	**-**	***0.000***	**-**	**-**	***0.000***
Hardware - AJ100 SHOCK TEST CHARGES Cost																		

Exhibit P-5, Cost Analysis: PB 2020 Navy		Date: March 2019
Appropriation / Budget Activity / Budget Sub Activity: 1508N / 01 / 1	P-1 Line Item Number / Title: 0340 / Pyrotechnic and Demolition	Item Number / Title [DODIC]: 1 / Integrated Warfare Systems
ID Code (A=Service Ready, B=Not Service Ready) :	MDAP/MAIS Code:	

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Cost Elements	Prior Years			FY 2018			FY 2019			FY 2020 Base			FY 2020 OCO			FY 2020 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)
Recurring Cost																		
7.1.1) CHARGE, SHOCK TEST, 60 LB (XW65)(†)	1,421.33	966	1.373	-	-	0.000	1,948.19	500	0.974	-	-	0.000	-	-	0.000	-	-	0.000
Subtotal: Recurring Cost	-	-	*1.373*	-	-	*0.000*	-	-	*0.974*	-	-	*0.000*	-	-	*0.000*	-	-	*0.000*
Subtotal: Hardware - AJ100 SHOCK TEST CHARGES Cost	**-**	**-**	***1.373***	**-**	**-**	***0.000***	**-**	**-**	***0.974***	**-**	**-**	***0.000***	**-**	**-**	***0.000***	**-**	**-**	***0.000***
Hardware - AJ100 SIGNALS Cost																		
Recurring Cost																		
8.1.1) SIGNAL ILLUMINATION, MK80/2 RED STAR (L258)(†)	16.63	51,600	0.858	8.28	37,909	0.314	11.73	31,906	0.374	-	-	0.000	11.96	22,680	0.271	11.96	22,680	0.271
8.1.2) SIG, SMK ILLUM, MAR, MK 124/1, DISTRESS (LA60)(†)	73.54	37,708	2.773	140.65	5,688	0.800	120.18	14,380	1.728	-	-	0.000	124.36	6,410	0.797	124.36	6,410	0.797
8.1.3) SIG KIT MK 189, MOD 0(†)	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000	313.00	1,000	0.313	313.00	1,000	0.313
Subtotal: Recurring Cost	-	-	*3.631*	-	-	*1.114*	-	-	*2.102*	-	-	*0.000*	-	-	*1.381*	-	-	*1.381*
Subtotal: Hardware - AJ100 SIGNALS Cost	**-**	**-**	***3.631***	**-**	**-**	***1.114***	**-**	**-**	***2.102***	**-**	**-**	***0.000***	**-**	**-**	***1.381***	**-**	**-**	***1.381***
Hardware - TRAINING DEVICES Cost																		
Recurring Cost																		
9.1.1) SIM, HAND GRENADE, M116 (L601)	15.53	46,350	0.720	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000
Subtotal: Recurring Cost	-	-	*0.720*	-	-	*0.000*	-	-	*0.000*	-	-	*0.000*	-	-	*0.000*	-	-	*0.000*
Subtotal: Hardware - TRAINING DEVICES Cost	**-**	**-**	***0.720***	**-**	**-**	***0.000***	**-**	**-**	***0.000***	**-**	**-**	***0.000***	**-**	**-**	***0.000***	**-**	**-**	***0.000***
Hardware - (AJ850) PRODUCT IMPROVEMENT Cost																		
Recurring Cost																		
10.1.1) PRODUCT IMPROVEMENT (N96) Surface Warfare	-	-	6.114	-	-	0.323	-	-	0.254	-	-	0.000	-	-	0.050	-	-	0.050
10.1.2) PRODUCT IMPROVEMENT (N97) Undersea Warfare (1)	-	-	1.519	-	-	0.000	-	-	0.533	-	-	0.000	-	-	1.242	-	-	1.242

Exhibit P-5, Cost Analysis: PB 2020 Navy		Date: March 2019
Appropriation / Budget Activity / Budget Sub Activity: 1508N / 01 / 1	P-1 Line Item Number / Title: 0340 / Pyrotechnic and Demolition	Item Number / Title [DODIC]: 1 / Integrated Warfare Systems
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Cost Elements	Prior Years			FY 2018			FY 2019			FY 2020 Base			FY 2020 OCO			FY 2020 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)
Subtotal: Recurring Cost	-	-	*7.633*	-	-	*0.323*	-	-	*0.787*	-	-	*0.000*	-	-	*1.292*	-	-	*1.292*
Subtotal: Hardware - (AJ850) PRODUCT IMPROVEMENT Cost	**-**	**-**	***7.633***	**-**	**-**	***0.323***	**-**	**-**	***0.787***	**-**	**-**	***0.000***	**-**	**-**	***1.292***	**-**	**-**	***1.292***
Hardware - (AJ893) RENOVATION COMPONENTS Cost																		
Recurring Cost																		
11.1.1) RENOVATION COMPONENTS	-	-	1.611	-	-	0.207	-	-	0.647	-	-	0.000	-	-	0.150	-	-	0.150
Subtotal: Recurring Cost	-	-	*1.611*	-	-	*0.207*	-	-	*0.647*	-	-	*0.000*	-	-	*0.150*	-	-	*0.150*
Subtotal: Hardware - (AJ893) RENOVATION COMPONENTS Cost	**-**	**-**	***1.611***	**-**	**-**	***0.207***	**-**	**-**	***0.647***	**-**	**-**	***0.000***	**-**	**-**	***0.150***	**-**	**-**	***0.150***
Hardware - (AJ894) GAUGE REQUIREMENTS Cost																		
Recurring Cost																		
12.1.1) GAUGE REQUIREMENTS	-	-	0.119	-	-	0.000	-	-	0.005	-	-	0.000	-	-	0.005	-	-	0.005
Subtotal: Recurring Cost	-	-	*0.119*	-	-	*0.000*	-	-	*0.005*	-	-	*0.000*	-	-	*0.005*	-	-	*0.005*
Subtotal: Hardware - (AJ894) GAUGE REQUIREMENTS Cost	**-**	**-**	***0.119***	**-**	**-**	***0.000***	**-**	**-**	***0.005***	**-**	**-**	***0.000***	**-**	**-**	***0.005***	**-**	**-**	***0.005***
Hardware - (AJ895) NON-STANDARD Cost																		
Recurring Cost																		
13.1.1) NON-STANDARD	-	-	0.853	-	-	0.147	-	-	0.204	-	-	0.000	-	-	0.205	-	-	0.205
Subtotal: Recurring Cost	-	-	*0.853*	-	-	*0.147*	-	-	*0.204*	-	-	*0.000*	-	-	*0.205*	-	-	*0.205*
Subtotal: Hardware - (AJ895) NON-STANDARD Cost	**-**	**-**	***0.853***	**-**	**-**	***0.147***	**-**	**-**	***0.204***	**-**	**-**	***0.000***	**-**	**-**	***0.205***	**-**	**-**	***0.205***
Support - (AJ830) PRODUCTION ENGINEERING Cost																		
14.1) PRODUCTION ENGINEERING (N95) Expeditionary Warfare	-	-	0.109	-	-	0.038	-	-	0.038	-	-	0.000	-	-	0.035	-	-	0.035
14.2) PRODUCTION ENGINEERING (N96) Surface Warfare	-	-	18.745	-	-	1.702	-	-	1.520	-	-	0.000	-	-	1.633	-	-	1.633
14.3) PRODUCTION ENGINEERING (N97) Undersea Warfare	-	-	5.714	-	-	0.656	-	-	0.626	-	-	0.000	-	-	0.640	-	-	0.640
Subtotal: Support - (AJ830) PRODUCTION ENGINEERING Cost	**-**	**-**	***24.568***	**-**	**-**	***2.396***	**-**	**-**	***2.184***	**-**	**-**	***0.000***	**-**	**-**	***2.308***	**-**	**-**	***2.308***

Exhibit P-5, Cost Analysis: PB 2020 Navy		Date: March 2019
Appropriation / Budget Activity / Budget Sub Activity: 1508N / 01 / 1	P-1 Line Item Number / Title: 0340 / Pyrotechnic and Demolition	Item Number / Title [DODIC]: 1 / Integrated Warfare Systems
ID Code (A=Service Ready, B=Not Service Ready) :	MDAP/MAIS Code:	

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

Cost Elements	Prior Years			FY 2018			FY 2019			FY 2020 Base			FY 2020 OCO			FY 2020 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	-	-	89.665	-	-	8.637	-	-	10.085	-	-	0.000	-	-	9.737	-	-	9.737

Remarks:

[Hardware] AJ100: HARDWARE - Procures all up rounds and conduct acceptance tests. Costs associated with Transportation Account Code (TAC) are for first destination of delivery of production items. Unit costs and quantities will be adjusted during the year of execution.

[Hardware] AJ850: PRODUCT IMPROVEMENT - Provides engineering services and related efforts by government activities, the producing contractor or manufacturing installation to extend the useful military life of an item or to improve the item within the current performance envelope.

FY 2020 will complete the product improvement for the MK 140, 141, and 144 submarine signals to address obsolescence and improve manufacturing of the fuzing and pyrotechnic assembly.

[Hardware] AJ893: RENOVATION COMPONENTS - The items purchased with funds identified for renovation components will be used to upgrade unserviceable rounds to ready-for-issue condition. The rounds to be renovated will be those with the lowest asset readiness positions.

[Hardware] AJ894: GAUGE REQUIREMENTS - Procure the gauges and test equipments necessary to check critical dimensions/parameters of ammunition items and their parts. This is to assure proper mating of parts and sub-assemblies, assure correct interfacing between the ammunition and guns, and proper ammunition performance.

[Hardware] AJ895: NON-STANDARD - The non-standard line is to support procurement of ammunition training aids and initial procurements of required non-type classified munition items.

[Support Cost] AJ830: PRODUCTION ENGINEERING - Provides for production engineering services to support new acquisition and in production ammunition.

(†) indicates the presence of a P-5a

Footnotes:

(1) FY2020 Product Improvement Program addresses submarine signal obsolescence and manufacturability.

Exhibit P-5a, Procurement History and Planning: PB 2020 Navy		Date: March 2019
Appropriation / Budget Activity / Budget Sub Activity: 1508N / 01 / 1	P-1 Line Item Number / Title: 0340 / Pyrotechnic and Demolition	Item Number / Title [DODIC]: 1 / Integrated Warfare Systems

Cost Elements	OCO	FY	Contractor and Location	Method/Type or Funding Vehicle	Location of PCO	Award Date	Date of First Delivery	Qty (Each)	Unit Cost ($)	Specs Avail Now?	Date Revision Available	RFP Issue Date
3.1.6) CTG, 50 CAL BLANK, ELEC, MK20 (SS01)		2014	CRANE ARMY AMMUNITION ACTIVITY / CRANE, IND	MIPR	NO PCO	Jan 2015	Sep 2018	4,380	184.91	Y		Aug 2014
3.1.6) CTG, 50 CAL BLANK, ELEC, MK20 (SS01)		2015	CRANE ARMY AMMUNITION ACTIVITY / CRANE, IND	MIPR	NO PCO	Jun 2015	Sep 2018	4,570	191.05	Y		Aug 2014
3.1.6) CTG, 50 CAL BLANK, ELEC, MK20 (SS01)		2016	CRANE ARMY AMMUNITION ACTIVITY / CRANE, IND	MIPR	NO PCO	Jun 2016	Sep 2019	1,295	176.06	Y		Oct 2015
3.1.6) CTG, 50 CAL BLANK, ELEC, MK20 (SS01)	✓	2016	CRANE ARMY AMMUNITION ACTIVITY / CRANE, IND	MIPR	NO PCO	Apr 2016	Sep 2019	3,145	176.47	Y		Oct 2015
3.1.6) CTG, 50 CAL BLANK, ELEC, MK20 (SS01)		2017	CRANE ARMY AMMUNITION ACTIVITY / CRANE, IND	MIPR	NO PCO	Jul 2017	Dec 2019	5,076	175.48	Y		Oct 2016
3.1.6) CTG, 50 CAL BLANK, ELEC, MK20 (SS01)		2018	CRANE ARMY AMMUNITION ACTIVITY / CRANE, IND	MIPR	NO PCO	Aug 2018	Jun 2020	2,364	226.31	Y		Oct 2017
3.1.6) CTG, 50 CAL BLANK, ELEC, MK20 (SS01)		2019	CRANE ARMY AMMUNITION ACTIVITY / CRANE, IND	MIPR	NO PCO	Mar 2019	Sep 2020	6,675	182.91	Y		Oct 2018
3.1.6) CTG, 50 CAL BLANK, ELEC, MK20 (SS01)	✓	2020	CRANE ARMY AMMUNITION ACTIVITY / CRANE, IND	MIPR	NO PCO	Mar 2020	Sep 2022	5,000	186.39	Y		Oct 2018
3.1.8) CARTRIDGE, IMPULSE, MK 192 MOD 0 (MD54)		2018	CARTRIDGE ACTUATED DEVICES INC. / FAIRFIELD, NJ.	C / FFP	NAVSUP	Oct 2018	Mar 2020	4,470	118.80	Y		Aug 2018
4.1.3) SQUIB, ELECTRIC, MK 20 MOD 2 (MP40)		2017	STRESAU LABS. / SPOONER. WI	C / FFP	NSWC CRANE	Apr 2017	Nov 2018	23,184	68.26	Y		May 2012
4.1.3) SQUIB, ELECTRIC, MK 20 MOD 2 (MP40)	✓	2020	TBD / TBD	C / FFP	NSWC CRANE	Mar 2020	Sep 2021	14,700	83.89	Y		Jun 2018
4.1.5) CORD, DETONATING, PRIMACORD (M456)		2018	ENSIGN BICKFORD / SIMSBURY, CT	C / FFP	JMC ROCK ISLAND	Jul 2018	Jan 2020	952,000	0.83	Y		Mar 2016
4.1.9) EOD REFILL KIT-LMNS (DWGJ)	✓	2020	TBD / TBD	C / FFP	NSWC CRANE	Mar 2020	Sep 2021	1,000	682.00	Y		Jul 2019
4.1.11) IGNITIER, TIME BLASTING FUZE (MN08)		2013	MAST TECHNOLOGY / INDEPENDENCE, MO	C / FFP	JMC ROCK ISLAND	Aug 2013	Dec 2018	43,956	5.35	Y		Dec 2012
5.1.1) CHG KIT, DML, MK 75 (MW84)		2015	ENSIGN BICKFORD / SIMSBURY, CT	C / FFP	JMC ROCK ISLAND	Jul 2017	Nov 2018	1,177	1,672.88	Y		Nov 2015
5.1.1) CHG KIT, DML, MK 75 (MW84)		2016	ENSIGN BICKFORD / SIMSBURY, CT	C / FFP	JMC ROCK ISLAND	Jul 2017	Dec 2018	982	1,621.43	Y		Nov 2015
5.1.2) CHG, DML, BLK, COMP C-4, 1.25 (M023)	✓	2017	AMERICAN ORDANCE / MIDDLETOWN, IA	SS / FFP	JMC ROCK ISLAND	Apr 2017	May 2019	20,580	27.30	Y		May 2014
5.1.2) CHG, DML, BLK, COMP C-4, 1.25 (M023)		2019	AMERICAN ORDANCE / MIDDLETOWN, IA	SS / FFP	JMC ROCK ISLAND	Mar 2019	Mar 2021	23,500	30.85	Y		May 2014
5.1.3) CHG, DML, XPL ROLL, 11FT (M985)		2016	ENSIGN BICKFORD / SIMSBURY, CT	C / FFP	JMC ROCK ISLAND	Jul 2017	Dec 2019	4,140	96.21	Y		Nov 2015
5.1.3) CHG, DML, XPL ROLL, 11FT (M985)		2017	ENSIGN BICKFORD / SIMSBURY, CT	C / FFP	JMC ROCK ISLAND	Jul 2017	Dec 2019	6,754	53.82	Y		Nov 2015

Exhibit P-5a, Procurement History and Planning: PB 2020 Navy		Date: March 2019
Appropriation / Budget Activity / Budget Sub Activity: 1508N / 01 / 1	P-1 Line Item Number / Title: 0340 / Pyrotechnic and Demolition	Item Number / Title [DODIC]: 1 / Integrated Warfare Systems

Cost Elements	OCO	FY	Contractor and Location	Method/Type or Funding Vehicle	Location of PCO	Award Date	Date of First Delivery	Qty (Each)	Unit Cost ($)	Specs Avail Now?	Date Revision Available	RFP Issue Date
5.1.4) CHG, DML, XPL ROLL, 25 FT (M981)		2016	ENSIGN BICKFORD / SIMSBURY, CT	C / FFP	JMC ROCK ISLAND	Jul 2017	Oct 2019	6,120	47.32	Y		Nov 2015
5.1.4) CHG, DML, XPL ROLL, 25 FT (M981)		2017	ENSIGN BICKFORD / SIMSBURY, CT	C / FFP	JMC ROCK ISLAND	Jul 2017	Nov 2019	7,675	22.02	Y		Nov 2015
5.1.4) CHG, DML, XPL ROLL, 25 FT (M981)	✓	2017	ENSIGN BICKFORD / SIMSBURY, CT	C / FFP	JMC ROCK ISLAND	Jul 2017	Jan 2020	6,700	22.02	Y		Nov 2015
5.1.5) CHG, DML, XPL ROLL, 38 FT, 14 (M980)	✓	2017	ENSIGN BICKFORD / SIMSBURY, CT	C / FFP	JMC ROCK ISLAND	Jul 2017	Dec 2020	13,680	14.27	Y		Nov 2015
5.1.5) CHG, DML, XPL ROLL, 38 FT, 14 (M980)		2018	ENSIGN BICKFORD / SIMSBURY, CT	C / FFP	JMC ROCK ISLAND	Mar 2018	Mar 2022	10,032	15.71	Y		Nov 2015
5.1.7) VALVE, EXPLOSIVE ELECTRIC, MK 2 MOD 1 (MW02)		2016	CARTRIDGE ACTUATED DEVICES INC / FAIRFIELD, NJ	C / FFP	NSWC CRANE	Jul 2017	Jul 2018	1,421	444.87	Y		Dec 2014
5.1.7) VALVE, EXPLOSIVE ELECTRIC, MK 2 MOD 1 (MW02)	✓	2016	CARTRIDGE ACTUATED DEVICES INC / FAIRFIELD, NJ	C / FFP	NSWC CRANE	Jul 2017	Nov 2018	1,579	444.76	Y		Dec 2014
5.1.7) VALVE, EXPLOSIVE ELECTRIC, MK 2 MOD 1 (MW02)		2018	CARTRIDGE ACTUATED DEVICES INC. / FAIRFIELD, NJ.	C / FFP	NSWC CRANE	Jul 2018	Dec 2019	2,240	456.25	Y		Dec 2014
5.1.7) VALVE, EXPLOSIVE ELECTRIC, MK 2 MOD 1 (MW02)	✓	2020	CARTRIDGE ACTUATED DEVICES INC / FAIRFIELD, NJ	C / FFP	NSWC CRANE	Mar 2020	Sep 2021	1,948	482.55	Y		Dec 2014
5.1.9) CHG, DEML, MK149 MOD0 LOW HAZ FLEX LIN SHP (MM54)		2017	DONOVAN INDUSTRIES / Graham, KY	C / FFP	NSWC CRANE	Nov 2017	Dec 2018	5,600	88.57	Y		May 2013
5.1.11) CHARGE, DEMO SHEET, FLEXIBLE, 0.043 THICK (M994)		2017	ENSIGN BICKFORD / SIMSBURY, CT	C / FFP	JMC ROCK ISLAND	Jul 2017	Jun 2020	26,600	8.43	Y		Nov 2015
5.1.11) CHARGE, DEMO SHEET, FLEXIBLE, 0.043 THICK (M994)	✓	2017	ENSIGN BICKFORD / SIMSBURY, CT	C / FFP	JMC ROCK ISLAND	Jul 2017	May 2020	11,856	8.43	Y		Nov 2015
5.1.13) MK147 BATTERY (CWBD)	✓	2020	TBD / TBD	C / FFP	NSWC CRANE	Mar 2020	Sep 2021	140	271.54	Y		Oct 2019
6.1.1) SIG, SMK ILLUM, MAR, MK 141, GREEN (LA26)		2011	CHEMRING ORDANCE INC / PERRY, FL	C / FFP	NSWC CRANE	Sep 2011	Sep 2018	181	2,574.59	Y		Mar 2011
6.1.1) SIG, SMK ILLUM, MAR, MK 141, GREEN (LA26)		2013	CHEMRING ORDANCE INC / PERRY, FL	C / FFP	NSWC CRANE	Sep 2013	Mar 2019	790	1,540.51	Y		Mar 2011
6.1.2) SIG, SMK ILLUM, MAR, MK 144/118, YELLOW (LA27)		2015	CRANE ARMY AMMUNITION ACTIVITY / CRANE, IND	MIPR	NO PCO	Jun 2015	Feb 2019	428	3,471.96	Y		Oct 2014
6.1.2) SIG, SMK ILLUM, MAR, MK 144/118, YELLOW (LA27)		2016	CRANE ARMY AMMUNITION ACTIVITY / CRANE, IND	MIPR	NO PCO	Jul 2016	Feb 2019	290	2,486.21	Y		Oct 2015
6.1.2) SIG, SMK ILLUM, MAR, MK 144/118, YELLOW (LA27)		2019	CRANE ARMY AMMUNITION ACTIVITY / CRANE, IND	MIPR	NO PCO	Mar 2019	Sep 2020	252	2,672.00	Y		Oct 2018
6.1.3) MARKER, LOCATION, SUB, MK 140, RED (LA28)		2017	CRANE ARMY AMMUNITION ACTIVITY / CRANE, IND	MIPR	NO PCO	Jul 2017	May 2019	165	2,626.26	Y		Oct 2016
6.1.3) MARKER, LOCATION, SUB, MK 140, RED (LA28)		2018	CRANE ARMY AMMUNITION ACTIVITY / CRANE, IND	MIPR	NO PCO	Aug 2018	Mar 2020	332	3,546.65	Y		Oct 2017

Exhibit P-5a, Procurement History and Planning: PB 2020 Navy		Date: March 2019
Appropriation / Budget Activity / Budget Sub Activity: 1508N / 01 / 1	P-1 Line Item Number / Title: 0340 / Pyrotechnic and Demolition	Item Number / Title [DODIC]: 1 / Integrated Warfare Systems

Cost Elements	OCO	FY	Contractor and Location	Method/Type or Funding Vehicle	Location of PCO	Award Date	Date of First Delivery	Qty (Each)	Unit Cost ($)	Specs Avail Now?	Date Revision Available	RFP Issue Date
6.1.4) CTG, IMPULSE, MK148 (M663)		2016	PACIFIC SCIENTIFIC / HOLLISTER, CA	SS / FFP	NAVSUP	Sep 2016	Dec 2018	100	4,360.00	Y		Feb 2016
6.1.5) EXPLOSIVE BOLT CARTRIDGE (MC91)		2017	CARTRIDGE ACTUATED DEVICES INC / FAIRFIELD, NJ	C / FFP	NAVSUP	Jul 2017	Dec 2018	150	3,317.05	Y		Dec 2016
6.1.6) SWITCH, SQUIB ACTUATED, MK112 (M853)		2015	NETWORK ELECTRONIC CO / CHATSWORTH, CA	SS / FFP	NSWC IHEODTD	Mar 2017	May 2018	122	803.28	Y		Aug 2016
7.1.1) CHARGE, SHOCK TEST, 60 LB (XW65)		2017	NSWC IHEODTD / INDIAN HEAD, MD	MIPR	NO PCO	Jun 2017	Dec 2018	406	1,783.25	Y		Sep 2016
7.1.1) CHARGE, SHOCK TEST, 60 LB (XW65)		2019	TBD / TBD	MIPR	NO PCO	Mar 2019	Sep 2020	500	1,948.19	Y		Oct 2018
8.1.1) SIGNAL ILLUMINATION, MK80/2 RED STAR (L258)		2017	SECURITY SIGNALS INC / CORDOVA, TN	C / FFP	NSWC CRANE	Feb 2017	Aug 2018	40,600	8.28	Y		Mar 2015
8.1.1) SIGNAL ILLUMINATION, MK80/2 RED STAR (L258)		2018	SECURITY SIGNALS INC / CORDOVA, TN	C / FFP	NSWC CRANE	Aug 2018	Nov 2019	37,909	8.28	Y		Mar 2015
8.1.1) SIGNAL ILLUMINATION, MK80/2 RED STAR (L258)		2019	SECURITY SIGNALS INC / CORDOVA, TN	C / FFP	NSWC CRANE	Mar 2019	Jun 2020	31,906	11.73	Y		Mar 2015
8.1.1) SIGNAL ILLUMINATION, MK80/2 RED STAR (L258)	✓	2020	SECURITY SIGNALS INC / CORDOVA, TN	C / FFP	NSWC CRANE	Mar 2020	Sep 2021	22,680	11.96	Y		Mar 2015
8.1.2) SIG, SMK ILLUM, MAR, MK 124/1, DISTRESS (LA60)		2016	CHEMRING ORDANCE INC / PERRY, FL	C / FFP	NSWC CRANE	Jun 2016	Dec 2018	25,612	73.11	Y		Mar 2011
8.1.2) SIG, SMK ILLUM, MAR, MK 124/1, DISTRESS (LA60)		2018	COMBINED SYSTEMS INC. / JAMESTOWN, NY	C / FFP	JMC ROCK ISLAND	Sep 2018	Mar 2020	5,688	140.65	Y		Mar 2018
8.1.2) SIG, SMK ILLUM, MAR, MK 124/1, DISTRESS (LA60)		2019	COMBINED SYSTEMS INC. / JAMESTOWN, NY	C / FFP	JMC ROCK ISLAND	Mar 2019	Sep 2020	14,380	120.18	Y		Mar 2018
8.1.2) SIG, SMK ILLUM, MAR, MK 124/1, DISTRESS (LA60)	✓	2020	COMBINED SYSTEMS INC. / JAMESTOWN, NY	C / FFP	JMC ROCK ISLAND	Mar 2020	Sep 2021	6,410	124.36	Y		Apr 2018
8.1.3) SIG KIT MK 189, MOD 0	✓	2020	TBD / TBD	C / FFP	NSWC CRANE	Mar 2020	Sep 2021	1,000	313.00	Y		Apr 2018

Exhibit P-5, Cost Analysis: PB 2020 Navy		Date: March 2019
Appropriation / Budget Activity / Budget Sub Activity: 1508N / 01 / 1	**P-1 Line Item Number / Title:** 0340 / Pyrotechnic and Demolition	**Item Number / Title [DODIC]:** 2 / Naval Special Warfare
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	

Resource Summary	Prior Years	FY 2018	FY 2019	FY 2020 Base	FY 2020 OCO	FY 2020 Total
Procurement Quantity *(Units in Each)*	-	-	-	-	-	-
Gross/Weapon System Cost *($ in Millions)*	7.016	1.623	2.653	0.000	1.421	1.421
Less PY Advance Procurement *($ in Millions)*	-	-	-	-	-	-
Net Procurement (P-1) *($ in Millions)*	7.016	1.623	2.653	0.000	1.421	1.421
Plus CY Advance Procurement *($ in Millions)*	-	-	-	-	-	-
Total Obligation Authority *($ in Millions)*	**7.016**	**1.623**	**2.653**	**0.000**	**1.421**	**1.421**
(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)						
Initial Spares *($ in Millions)*	-	-	-	-	-	-
Gross/Weapon System Unit Cost *($ in 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 2018			FY 2019			FY 2020 Base			FY 2020 OCO			FY 2020 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 - AJNSW PE/QA SMCA Cost																		
Recurring Cost																		
1.1.1) AJNSW PE/QA SMCA	-	-	0.141	-	-	0.079	-	-	0.040	-	-	0.000	-	-	0.077	-	-	0.077
Subtotal: Recurring Cost	-	-	*0.141*	-	-	*0.079*	-	-	*0.040*	-	-	*0.000*	-	-	*0.077*	-	-	*0.077*
Subtotal: Hardware - AJNSW PE/QA SMCA Cost	**-**	**-**	***0.141***	**-**	**-**	***0.079***	**-**	**-**	***0.040***	**-**	**-**	***0.000***	**-**	**-**	***0.077***	**-**	**-**	***0.077***
Hardware - AJNSW DET, CORDS, CAPS, FUZES Cost																		
Recurring Cost																		
2.1.1) DETONATOR, W IN-LINE INITIATOR 40FT (MP29)(†)	-	-	0.000	-	-	0.000	137.70	7,680	1.058	-	-	0.000	141.00	3,218	0.454	141.00	3,218	0.454
2.1.2) CAP, BLASTING, ELECTRIC MK 18 MOD 0 (DWHH)(†)	-	-	0.000	-	-	0.000	53.67	6,000	0.322	-	-	0.000	-	-	0.000	-	-	0.000
2.1.3) CHG, FLEX LINEAR, LOW - HAZARD (ECT) (MM24)(†) (2)	-	-	0.000	22.64	16,997	0.385	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000
2.1.4) CHG, BOOSTER, 20 GM, MK 140 (MM30)	3.70	30,000	0.111	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000
2.1.5) IGNITER, TIME BLASTING FUZE (MN08)(†)	5.62	306,760	1.724	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000

Exhibit P-5, Cost Analysis: PB 2020 Navy		Date: March 2019
Appropriation / Budget Activity / Budget Sub Activity: 1508N / 01 / 1	P-1 Line Item Number / Title: 0340 / Pyrotechnic and Demolition	Item Number / Title [DODIC]: 2 / Naval Special Warfare
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 2018			FY 2019			FY 2020 Base			FY 2020 OCO			FY 2020 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)
2.1.6) CONNECTOR DET CORD PLASTIC (MW49)(†)	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000	0.47	42,000	0.020	0.47	42,000	0.020
Subtotal: Recurring Cost	-	-	*1.835*	-	-	*0.385*	-	-	*1.380*	-	-	*0.000*	-	-	*0.474*	-	-	*0.474*
Subtotal: Hardware - AJNSW DET, CORDS, CAPS, FUZES Cost	**-**	**-**	***1.835***	**-**	**-**	***0.385***	**-**	**-**	***1.380***	**-**	**-**	***0.000***	**-**	**-**	***0.474***	**-**	**-**	***0.474***
Hardware - AJNSW MINE CHARGERS & CHARGE CUTTERS Cost																		
Recurring Cost																		
3.1.1) CHG, DEMO, EXPLOSIVE SHEET, .333 (M986)(†)	175.63	7,516	1.320	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000
3.1.2) CHG, DEMO, EXPLOSIVE SHEET, .083 (M980)(†) (3)	-	-	0.000	15.71	25,843	0.406	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000
3.1.3) CHG, DEMO, EXPLOSIVE SHEET, .125 (M981)(†) (4)	-	-	0.000	27.21	15,190	0.413	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000
3.1.4) CHG, DEMO, 40LB BLK Cratering (M039)(†)	-	-	0.000	-	-	0.000	1,989.43	200	0.398	-	-	0.000	-	-	0.000	-	-	0.000
3.1.5) CHG, DML, BLK, COMP C-4, 1.25 (M023)(†)	26.10	45,360	1.184	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000
Subtotal: Recurring Cost	-	-	*2.504*	-	-	*0.819*	-	-	*0.398*	-	-	*0.000*	-	-	*0.000*	-	-	*0.000*
Subtotal: Hardware - AJNSW MINE CHARGERS & CHARGE CUTTERS Cost	**-**	**-**	***2.504***	**-**	**-**	***0.819***	**-**	**-**	***0.398***	**-**	**-**	***0.000***	**-**	**-**	***0.000***	**-**	**-**	***0.000***
Hardware - AJNSW TRAINING DEVICES Cost																		
Recurring Cost																		
4.1.1) SIM, HAND GRENADE, M116 (L601)(†)	17.19	33,450	0.575	-	-	0.000	18.00	40,800	0.734	-	-	0.000	16.95	44,250	0.750	16.95	44,250	0.750
4.1.2) FLARE, SURFACE TRIP M49 (L495)	40.60	5,000	0.203	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000
Subtotal: Recurring Cost	-	-	*0.778*	-	-	*0.000*	-	-	*0.734*	-	-	*0.000*	-	-	*0.750*	-	-	*0.750*

Exhibit P-5, Cost Analysis: PB 2020 Navy		Date: March 2019
Appropriation / Budget Activity / Budget Sub Activity: 1508N / 01 / 1	P-1 Line Item Number / Title: 0340 / Pyrotechnic and Demolition	Item Number / Title [DODIC]: 2 / Naval Special Warfare
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 2018			FY 2019			FY 2020 Base			FY 2020 OCO			FY 2020 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)
Subtotal: Hardware - AJNSW TRAINING DEVICES Cost	-	-	***0.778***	-	-	***0.000***	-	-	***0.734***	-	-	***0.000***	-	-	***0.750***	-	-	***0.750***
Hardware - AJNSW SIGNALS Cost																		
Recurring Cost																		
5.1.1) SIGNAL DIVERS AUDIBLE RECALL (3W92)(†)	115.09	921	0.106	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000
5.1.2) SIM, PROJ, GROUND BURST M115A2 (L594)(†)	16.77	21,700	0.364	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000
Subtotal: Recurring Cost	-	-	*0.470*	-	-	*0.000*	-	-	*0.000*	-	-	*0.000*	-	-	*0.000*	-	-	*0.000*
Subtotal: Hardware - AJNSW SIGNALS Cost	-	-	***0.470***	-	-	***0.000***	-	-	***0.000***	-	-	***0.000***	-	-	***0.000***	-	-	***0.000***
Support - (NS830) PRODUCTION ENGINEERING Cost																		
6.1) PRODUCTION ENGINEERING	-	-	1.288	-	-	0.340	-	-	0.101	-	-	0.000	-	-	0.120	-	-	0.120
Subtotal: Support - (NS830) PRODUCTION ENGINEERING Cost	-	-	***1.288***	-	-	***0.340***	-	-	***0.101***	-	-	***0.000***	-	-	***0.120***	-	-	***0.120***
Gross/Weapon System Cost	-	-	**7.016**	-	-	**1.623**	-	-	**2.653**	-	-	**0.000**	-	-	**1.421**	-	-	**1.421**

Remarks:

[Hardware] AJNSW: NAVAL SPECIAL WARFARE - Procures components, load and assemble complete rounds and conduct acceptance tests. Costs associated with Transportation Account Code (TAC) are for first destination of delivery of production items for Naval Special Warfare service common items. Unit costs and quantities will be adjusted during the year of execution.

[Support Cost] NS830:PRODUCTION ENGINEERING - Provides for production engineering services.

(†) indicates the presence of a P-5a

Footnotes:

(2) Pricing is provided by the Army Single Manager for Conventional Ammunition (SMCA) and incorporates other service buys. The unit cost will fluctuate depending on the total procurement.

(3) Pricing is provided by the Army Single Manager for Conventional Ammunition (SMCA) and incorporates other service buys. The unit cost will fluctuate depending on the total procurement.

(4) Pricing is provided by the Army Single Manager for Conventional Ammunition (SMCA) and incorporates other service buys. The unit cost will fluctuate depending on the total procurement.

Exhibit P-5a, Procurement History and Planning: PB 2020 Navy		Date: March 2019
Appropriation / Budget Activity / Budget Sub Activity: 1508N / 01 / 1	P-1 Line Item Number / Title: 0340 / Pyrotechnic and Demolition	Item Number / Title [DODIC]: 2 / Naval Special Warfare

Cost Elements	OCO	FY	Contractor and Location	Method/Type or Funding Vehicle	Location of PCO	Award Date	Date of First Delivery	Qty (Each)	Unit Cost ($)	Specs Avail Now?	Date Revision Available	RFP Issue Date
2.1.1) DETONATOR, W IN-LINE INITIATOR 40FT (MP29)	✓	2019	New MFG - Name / New MFG - Loc	C / TBD	NSWC CRANE	Jan 2019	Jan 2019	7,680	137.70	Y		
2.1.2) CAP, BLASTING, ELECTRIC MK 18 MOD 0 (DWHH)	✓	2019	STRESAU LABS. / SPOONER. WI	C / TBD	NSWC CRANE	Jan 2019	Nov 2019	6,000	53.67	Y		
2.1.3) CHG, FLEX LINEAR, LOW - HAZARD (ECT) (MM24)		2018	TBD / TBD	C / TBD	JMC ROCK ISLAND	Oct 2017	Oct 2017	5,477	22.64	N		
2.1.3) CHG, FLEX LINEAR, LOW - HAZARD (ECT) (MM24)	✓	2018	TBD / TBD	C / TBD	JMC ROCK ISLAND	Oct 2017	Oct 2017	11,520	22.64	N		
2.1.5) IGNITER, TIME BLASTING FUZE (MN08)		2014	MAST TECHNOLOGY / INDEPENDENCE, MO	C / FFP	JMC ROCK ISLAND	Apr 2015	Feb 2016	106,405	5.62	Y		Oct 2013
2.1.5) IGNITER, TIME BLASTING FUZE (MN08)		2015	MAST TECHNOLOGY / INDEPENDENCE, MO	C / FFP	JMC ROCK ISLAND	Apr 2015	Feb 2016	200,355	5.62	Y		Oct 2014
2.1.6) CONNECTOR DET CORD PLASTIC (MW49)	✓	2020	TBD / TBD	C / TBD	** NO PCO **	Dec 2019	Dec 2019	42,000	0.47	N	Dec 2019	
3.1.1) CHG, DEMO, EXPLOSIVE SHEET, .333 (M986)	✓	2015	ENSIGN BICKFORD 2 / SIMSBURY, CT	C / FFP	JMC ROCK ISLAND	Jun 2015	Oct 2016	5,185	135.00	Y		Dec 2013
3.1.1) CHG, DEMO, EXPLOSIVE SHEET, .333 (M986)	✓	2016	ENSIGN BICKFORD 2 / SIMSBURY, CT	C / FFP	JMC ROCK ISLAND	Jun 2016	Oct 2017	2,331	265.98	Y		Dec 2013
3.1.2) CHG, DEMO, EXPLOSIVE SHEET, .083 (M980)		2018	TBD / TBD	C / TBD	JMC ROCK ISLAND	Oct 2017	Oct 2017	9,739	15.71	N		
3.1.2) CHG, DEMO, EXPLOSIVE SHEET, .083 (M980)	✓	2018	TBD / TBD	C / TBD	JMC ROCK ISLAND	Oct 2017	Oct 2017	16,104	15.71	N		
3.1.3) CHG, DEMO, EXPLOSIVE SHEET, .125 (M981)		2018	ENSIGN BICKFORD 2 / SIMSBURY, CT	C / FFP	JMC ROCK ISLAND	Mar 2018	Sep 2019	5,990	27.21	Y		Nov 2015
3.1.3) CHG, DEMO, EXPLOSIVE SHEET, .125 (M981)	✓	2018	ENSIGN BICKFORD 2 / SIMSBURY, CT	C / FFP	JMC ROCK ISLAND	Mar 2018	Sep 2019	9,200	27.21	Y		Nov 2015
3.1.4) CHG, DEMO, 40LB BLK Cratering (M039)	✓	2019	AMERICAN ORDANCE / MIDDLETOWN, IA	C / TBD	JMC ROCK ISLAND	Jun 2019	Jun 2021	200	1,989.43	N	Jun 2021	Mar 2019
3.1.5) CHG, DML, BLK, COMP C-4, 1.25 (M023)		2013	AMERICAN ORDANCE / MIDDLETOWN, IA	C / FFP	JMC ROCK ISLAND	Dec 2014	Dec 2016	24,552	21.22	Y		Oct 2009
3.1.5) CHG, DML, BLK, COMP C-4, 1.25 (M023)		2015	AMERICAN ORDANCE / MIDDLETOWN, IA	C / FFP	JMC ROCK ISLAND	Dec 2015	Dec 2016	9,738	39.84	Y		Dec 2013
4.1.1) SIM, HAND GRENADE, M116 (L601)		2017	PYROTECHNIQUE BY GRUCCI, INC / RADFORD, VA	C / FFP	JMC ROCK ISLAND	Oct 2016	Apr 2018	33,450	17.19	N		
4.1.1) SIM, HAND GRENADE, M116 (L601)		2019	UNKNOWN / UNKNOWN	C / TBD	** NO PCO **	Oct 2018	Apr 2020	40,800	18.00	N		
5.1.1) SIGNAL DIVERS AUDIBLE RECALL (3W92)		2016	TBD / TBD	C / TBD	NSWC CRANE	Jun 2017	Jun 2017	921	115.00	N		Jul 2016

Exhibit P-5a, Procurement History and Planning: PB 2020 Navy		Date: March 2019
Appropriation / Budget Activity / Budget Sub Activity: 1508N / 01 / 1	P-1 Line Item Number / Title: 0340 / Pyrotechnic and Demolition	Item Number / Title [DODIC]: 2 / Naval Special Warfare

Cost Elements	OCO	FY	Contractor and Location	Method/Type or Funding Vehicle	Location of PCO	Award Date	Date of First Delivery	Qty (Each)	Unit Cost ($)	Specs Avail Now?	Date Revision Available	RFP Issue Date
5.1.2) SIM, PROJ, GROUND BURST M115A2 (L594)		2016	PYROTECHNIQUE GRUCCI / RADFORD, VA	C / FFP	JMC ROCK ISLAND	Mar 2016	Jun 2017	21,700	16.77	Y		Dec 2015

Exhibit P-40, Budget Line Item Justification: PB 2020 Navy	Date: March 2019
Appropriation / Budget Activity / Budget Sub Activity: 1508N: Procurement of Ammo, Navy & MC / BA 01: Proc Ammo, Navy / BSA 1: Navy Ammunition	**P-1 Line Item Number / Title:** 0400 / Ammunition less than $5 million

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

Resource Summary	Prior Years	FY 2018	FY 2019	FY 2020 Base	FY 2020 OCO	FY 2020 Total	FY 2021	FY 2022	FY 2023	FY 2024	To Complete	Total
Procurement Quantity *(Units in Each)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost *($ in Millions)*	88.330	3.796	1.106	0.000	2.386	2.386	2.103	1.598	1.606	1.640	Continuing	Continuing
Less PY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) *($ in Millions)*	88.330	3.796	1.106	0.000	2.386	2.386	2.103	1.598	1.606	1.640	Continuing	Continuing
Plus CY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority *($ in Millions)*	**88.330**	**3.796**	**1.106**	**0.000**	**2.386**	**2.386**	**2.103**	**1.598**	**1.606**	**1.640**	**Continuing**	**Continuing**
(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)*	-	-	-	-	-	-	-	-	-	-	-	-

Description:

FY 2020 funding totals include $0.0M for Base and $2.386M for Overseas Contingency Operations (OCO); of which $2.386M is realigned as part of the OCO for Base Requirements. FY 2020 OCO for Base Requirements is OCO funding for base budget requirements in support of the National Defense Strategy. The Budget requests these funds in OCO to comply with the base budget defense caps included in the Budget Control Act of 2011.

This program provides funding for ammunition with value less than $5 million.

Marine Location Markers include both air-launched and hand-launched pyrotechnic devices. The Mk-25 and Mk-58 units are used in a variety of situations to include Search and Rescue operations, Man Overboard drills and Target Marking in support of Fleet Operations and Readiness.

The LUU-19 Aircraft Parachute Flares (APFs) are used for near infrared nighttime illumination of surface areas in Search and Combat Operations. For FY20-FY23, LUU-19 inventory levels are sufficient for current expenditures.

Exhibit P-40, Budget Line Item Justification: PB 2020 Navy		Date: March 2019
Appropriation / Budget Activity / Budget Sub Activity: 1508N: Procurement of Ammo, Navy & MC / BA 01: Proc Ammo, Navy / BSA 1: Navy Ammunition	**P-1 Line Item Number / Title:** 0400 / Ammunition less than $5 million	
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 2018	FY 2019	FY 2020 Base	FY 2020 OCO	FY 2020 Total
Exhibit Type	Title*	Subexhibits	ID CD	MDAP/ MAIS Code	Quantity / Total Cost *(Each) I ($ M)*	Quantity / Total Cost *(Each) I ($ M)*	Quantity / Total Cost *(Each) I ($ M)*	Quantity / Total Cost *(Each) I ($ M)*	Quantity / Total Cost *(Each) I ($ M)*	Quantity / Total Cost *(Each) I ($ M)*
P-40a	Ammunition less than $5 million	P-5a, P-21			- / 88.330	- / 3.796	- / 1.106	- / 0.000	- / 2.386	- / 2.386
P-40	**Total Gross/Weapon System Cost**				**- / 88.330**	**- / 3.796**	**- / 1.106**	**- / 0.000**	**- / 2.386**	**- / 2.386**

*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 2020 OCO for baseline funding is required to procure Mk-25 and Mk-58 Marine Location Markers (MLMs) to enable day and night Search and Rescue operations and target marking from aircraft and surface combatants. Mk-25 and Mk-58 quantity increases in FY20 and FY21 to restore inventory to required levels. LUU-19 procurement deferred through the FYDP as a result of current inventory levels being sufficient to support expenditure rates during Fleet Operations.

Funding is required to address production support to include product improvements needed for components designed as well as Production Engineering Support, Integrated Logistics Support, Reliability Life (i.e. Safety and Product Improvement Program, Quality Assurance and Acceptance Testing).

Exhibit P-40a, Budget Item Justification For Aggregated Items: PB 2020 Navy		Date: March 2019
Appropriation / Budget Activity / Budget Sub Activity: 1508N / 01 / 1	**P-1 Line Item Number / Title:** 0400 / Ammunition less than $5 million	**Aggregated Items Title:** Ammunition less than $5 million

Item Number / Title [DODIC]	ID CD	MDAP/ MAIS Code	Prior Years			FY 2018			FY 2019			FY 2020 Base			FY 2020 OCO			FY 2020 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) HARDWARE																				
1.1) (A5012) MK-25 MARINE LOCATION MARKERS(†)	A		-	-	-	340.36	5,600	1.906	274.00	1,670	0.458	-	-	0.000	279.00	2,219	0.619	279.00	2,219	0.619
1.2) (A5010) MK-58 MARINE LOCATION MARKERS (1)(†)	A		660.83	45,791	30.260	-	-	-	274.00	720	0.197	-	-	0.000	279.00	4,749	1.325	279.00	4,749	1.325
1.3) (A5011) LUU-19 PARAFLARES(†)	A		1,561.69	25,393	39.656	1,731.29	500	0.866	-	-	-	-	-	-	-	-	-	-	-	-
1.4) (A5894) Miscellaneous	A		-	-	0.476	-	-	0.058	-	-	0.050	-	-	0.000	-	-	0.063	-	-	0.063
Subtotal: 1) HARDWARE			**-**	**-**	***70.392***	**-**	**-**	***2.830***	**-**	**-**	***0.705***	**-**	**-**	***0.000***	**-**	**-**	***2.007***	**-**	**-**	***2.007***
2) PRODUCTION SUPPORT																				
2.1) (A5821) MARINE LOCATION MARKERS	A		-	-	17.435	-	-	0.966	-	-	0.401	-	-	0.000	-	-	0.379	-	-	0.379
2.2) (A5820) LUU-19 Paraflares Support	A		-	-	0.503	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Subtotal: 2) PRODUCTION SUPPORT			**-**	**-**	***17.938***	**-**	**-**	***0.966***	**-**	**-**	***0.401***	**-**	**-**	***0.000***	**-**	**-**	***0.379***	**-**	**-**	***0.379***
Total			**-**	**-**	**88.330**	**-**	**-**	**3.796**	**-**	**-**	**1.106**	**-**	**-**	**0.000**	**-**	**-**	**2.386**	**-**	**-**	**2.386**

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) (A5010) MK-58 MARINE LOCATION MARKERS: Unit Cost varies depending on total procurement quantity across services. MK-58 quantity increase in FY 2020 to restore inventory to required levels.

Exhibit P-5a, Procurement History and Planning: PB 2020 Navy		Date: March 2019
Appropriation / Budget Activity / Budget Sub Activity: 1508N / 01 / 1	P-1 Line Item Number / Title: 0400 / Ammunition less than $5 million	Aggregated Items: Ammunition less than $5 million

Item Number / Title [DODIC]	OCO	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) HARDWARE												
1.1) (A5012) MK-25 MARINE LOCATION MARKERS(†)		2018 (2)	TBD (3) / TBD	C / FFP	Crane, IN	Jan 2019	Mar 2020	5,600	340.36	Y		Aug 2018
1.1) (A5012) MK-25 MARINE LOCATION MARKERS(†)		2019 (4)	TBD (3) / TBD	C / FFP	Crane, IN	Jul 2019	Sep 2020	1,670	274.00	Y		Aug 2018
1.1) (A5012) MK-25 MARINE LOCATION MARKERS(†)	✓	2020	TBD (3) / TBD	C / FFP	Crane, IN	Jul 2020	Sep 2021	2,219	279.00	Y		Aug 2018
1.2) (A5010) MK-58 MARINE LOCATION MARKERS (1)(†)		2017 (5)	TBD (6) / TBD@TBD	C / FFP	Crane, IN	May 2019	Jul 2020	8,748	214.55	Y		Nov 2018
1.2) (A5010) MK-58 MARINE LOCATION MARKERS (1)(†)		2019 (7)	TBD (6) / TBD@TBD	C / FFP	Crane, IN	May 2019	Jul 2020	720	274.00	Y		Nov 2018
1.2) (A5010) MK-58 MARINE LOCATION MARKERS (1)(†)	✓	2020	TBD (6) / TBD@TBD	C / FFP	Crane, IN	Jul 2020	Jul 2021	4,749	279.00	Y		Nov 2018
1.3) (A5011) LUU-19 PARAFLARES(†)	✓	2018 (8)	ATK Launch Systems Inc. / Brigham, UTAH	SS / FFP	Rock Island, IL	Apr 2019	Apr 2020	500	1,731.29	Y		May 2014

(†) indicates the presence of a P-21

Footnotes:

(2) FY2018 / FY2019 MK-25 effort is a competitive award therefore the performing activity and location are currently TBD to support a competitive contracting strategy. Once awarded, the performing activity and location will be updated to reflect the selected contractor. Contract award changed from September 2018 to January 2019 due to delays in RFP and proposal evaluation.

(3) Annual Production Rates are currently estimated and will be updated once a contractor is awarded.

(4) FY2018 / FY2019 MK-25 effort is a competitive award therefore the performing activity and location are currently TBD to support a competitive contracting strategy. Once awarded, the performing activity and location will be updated to reflect the selected contractor.

(5) (A5010) MK-58 FY 2017 Contract award date changed to May 2019 due to additional time required for strategy change to competitive procurement. Once awarded, the performing activity and location will be updated to reflect the selected contractor .

(6) Annual Production Rates are currently estimated and will be updated once a contractor is awarded.

(7) (A5010) MK-58 FY 2019 Contract award date changed to May 2019 due to additional time required for strategy change to competitive procurement. Once awarded, the performing activity and location will be updated to reflect the selected contractor .

(8) (A5011) LUU-19 Paraflares: FY 2018 contract award date change from June 2018 to April 2019 due to update in Acquisition Strategy.

Exhibit P-21, Production Schedule: PB 2020 Navy | **Date:** March 2019

Appropriation / Budget Activity / Budget Sub Activity: 1508N / 01 / 1

P-1 Line Item Number / Title: 0400 / Ammunition less than $5 million

Aggregated Items: Ammunition less than $5 million

Items (Units in Each)							Fiscal Year 2019												Fiscal Year 2020												BALANCE
										Calendar Year 2019												Calendar Year 2020									
OCO	MFR #	FY	SERVICE	PROC QTY	ACCEPT PRIOR TO 1 OCT 2018	BAL DUE AS OF 1 OCT	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) HARDWARE																															
1.1) (A5012) MK-25 MARINE LOCATION MARKERS																															
	24	2018	NAVY	5,600 (9)	0	5,600				A -	-	-	-	-	-	-	-	-	-	-	-	-	-	399	400	399	400	399	400	399	2,804
	24	2019	NAVY	1,670 (10)	0	1,670										A -	-	-	-	-	-	-	-	-	-	-	-	-	-	140	1,530
✓	24	2020	NAVY	2,219	0	2,219																						A -	-	-	2,219
1.2) (A5010) MK-58 MARINE LOCATION MARKERS (1)																															
Prior Years Deliveries: 37043																															
	25	2017	NAVY	8,748	0	8,748								A -	-	-	-	-	-	-	-	-	-	-	-	-	729	729	729	6,561
	25	2019	NAVY	720	0	720								A -	-	-	-	-	-	-	-	-	-	-	-	-	60	60	60	540
✓	25	2020	NAVY	4,749	0	4,749																					A -	-	-	4,749
1.3) (A5011) LUU-19 PARAFLARES																															
Prior Years Deliveries: 25393																															
✓	26	2018	NAVY	500	0	500							A -	-	-	-	-	-	-	-	-	-	-	-	41	41	41	41	42	42	252
							OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	

Exhibit P-21, Production Schedule: PB 2020 Navy		Date: March 2019
Appropriation / Budget Activity / Budget Sub Activity: 1508N / 01 / 1	**P-1 Line Item Number / Title:** 0400 / Ammunition less than $5 million	**Aggregated Items:** Ammunition less than $5 million

Items (Units in Each)							Fiscal Year 2021												Fiscal Year 2022												BALANCE
							Calendar Year 2021															Calendar Year 2022									
OCO	MFR #	FY	SERVICE	PROC QTY	ACCEPT PRIOR TO 1 OCT 2020	BAL DUE AS OF 1 OCT	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) HARDWARE																															
1.1) (A5012) MK-25 MARINE LOCATION MARKERS																															
	24	2018	NAVY	5,600 (9)	2,796	2,804	400	399	400	399	400	400	406																		0
	24	2019	NAVY	1,670 (10)	140	1,530	140	139	139	139	139	139	139	139	139	139	139														0
✓	24	2020	NAVY	2,219	0	2,219	-	-	-	-	-	-	-	-	-	-	-	185	185	185	185	185	185	185	185	185	185	185	184		0
1.2) (A5010) MK-58 MARINE LOCATION MARKERS [1]																															
Prior Years Deliveries: 37043																															
	25	2017	NAVY	8,748	2,187	6,561	729	729	729	729	729	729	729	729	729																0
	25	2019	NAVY	720	180	540	60	60	60	60	60	60	60	60	60																0
✓	25	2020	NAVY	4,749	0	4,749	-	-	-	-	-	-	-	-	-	395	396	395	396	395	396	396	396	396	396	396	396				0
1.3) (A5011) LUU-19 PARAFLARES																															
Prior Years Deliveries: 25393																															
✓	26	2018	NAVY	500	248	252	42	42	42	42	42	42																			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	

Exhibit P-21, Production Schedule: PB 2020 Navy		Date: March 2019
Appropriation / Budget Activity / Budget Sub Activity: 1508N / 01 / 1	**P-1 Line Item Number / Title:** 0400 / Ammunition less than $5 million	**Aggregated Items:** Ammunition less than $5 million

MFR Ref #	Manufacturer Name - Location	Production Rates (Each / Year)			Procurement Leadtime (Months)							
					Initial				Reorder			
		MSR For 2020	1-8-5 For 2020	MAX For 2020	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 (3) - TBD	3,000	4,000	15,000	0	11	14	25	0	10	14	24
2	TBD (6) - TBD@TBD	3,000	4,000	15,000	0	0	0	0	0	10	12	22
3	ATK Launch Systems Inc. - Brigham, UTAH	750	3,000	15,000	0	0	0	0	0	7	12	19

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

Footnotes:
(3) Annual Production Rates are currently estimated and will be updated once a contractor is awarded.
(6) Annual Production Rates are currently estimated and will be updated once a contractor is awarded.
(9) Annual Production Rates are currently estimated and will be updated once a contractor is awarded. Manufacturer lead time adjusted to 14 months, deliveries estimated to be complete by April 2021.
(10) Annual Production Rates are currently estimated and will be updated once a contractor is awarded.

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Exhibit P-40, Budget Line Item Justification: PB 2020 Navy	Date: March 2019
Appropriation / Budget Activity / Budget Sub Activity: 1508N: Procurement of Ammo, Navy & MC / BA 02: Proc Ammo, MC / BSA 1: Marine Corps Ammunition	**P-1 Line Item Number / Title:** 1085 / Mortars

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

Line Item MDAP/MAIS Code: N/A

Resource Summary	Prior Years	FY 2018	FY 2019	FY 2020 Base	FY 2020 OCO	FY 2020 Total	FY 2021	FY 2022	FY 2023	FY 2024	To Complete	Total
Procurement Quantity *(Units in Each)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost *($ in Millions)*	0.000	49.618	20.534	0.000	57.473	57.473	48.759	44.119	33.136	33.799	Continuing	Continuing
Less PY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) *($ in Millions)*	0.000	49.618	20.534	0.000	57.473	57.473	48.759	44.119	33.136	33.799	Continuing	Continuing
Plus CY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority *($ in Millions)*	**0.000**	**49.618**	**20.534**	**0.000**	**57.473**	**57.473**	**48.759**	**44.119**	**33.136**	**33.799**	**Continuing**	**Continuing**
(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)*	-	-	-	-	-	-	-	-	-	-	-	-

Description:

FY 2020 funding totals include $0.0M for Base and $57.473M for Overseas Contingency Operations (OCO); of which $55.543M is realigned as part of the OCO for Base Requirements. FY 2020 OCO for Base Requirements is OCO funding for base budget requirements in support of the National Defense Strategy. The Budget requests these funds in OCO to comply with the base budget defense caps included in the Budget Control Act of 2011.

The family of mortar cartridges includes all 60mm mortar cartridges and 81mm mortar cartridges which consist of high explosive, smoke, illumination and full range training practice rounds. The 60mm mortar cartridges are fired from the M224 lightweight mortar system to provide close-in indirect fire support of group troops at ranges of approximately 70 to 3,500 meters. The 81mm mortar cartridges are fired from the M252 medium weight mortar system to provide long-range indirect fire support to infantry units at ranges of approximately 100 to 6,000 meters.

Exhibit P-40, Budget Line Item Justification: PB 2020 Navy		Date: March 2019
Appropriation / Budget Activity / Budget Sub Activity: 1508N: Procurement of Ammo, Navy & MC / BA 02: Proc Ammo, MC / BSA 1: Marine Corps Ammunition	**P-1 Line Item Number / Title:** 1085 / Mortars	
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 2018	FY 2019	FY 2020 Base	FY 2020 OCO	FY 2020 Total
Exhibit Type	Title*	Subexhibits	ID CD	MDAP/ MAIS Code	Quantity / Total Cost *(Each) I ($ M)*	Quantity / Total Cost *(Each) I ($ M)*	Quantity / Total Cost *(Each) I ($ M)*	Quantity / Total Cost *(Each) I ($ M)*	Quantity / Total Cost *(Each) I ($ M)*	Quantity / Total Cost *(Each) I ($ M)*
P-5	1 / 1085 Mortars	P-5a, P-21			- / 0.000	- / 49.618	- / 20.534	- / 0.000	- / 57.473	- / 57.473
P-40	**Total Gross/Weapon System Cost**				**- / 0.000**	**- / 49.618**	**- / 20.534**	**- / 0.000**	**- / 57.473**	**- / 57.473**

*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 2020 OCO for baseline funding will support procurement of 60mm Full Range Training Practice Cartridges 60mm (DODIC BA15), 81mm (DODIC C875) Full Range Practice Cartridges (FRPC) and the new 81MM High Explosive round (DODIC CA66) in support of baseline training munitions requirements for lightweight mortar systems.

The budget increase FY 2019 to FY 2020 is due to increased live fire training requirements for BA15 and CA66 ammunition.

OCO:
FY 2020 Direct War OCO funding request of $1.930M will support replenishment of 81MM High Explosive Mortars (CA66) expended in support of Operation Inherent Resolve (OIR).

Exhibit P-5, Cost Analysis: PB 2020 Navy		Date: March 2019
Appropriation / Budget Activity / Budget Sub Activity: 1508N / 02 / 1	P-1 Line Item Number / Title: 1085 / Mortars	Item Number / Title [DODIC]: 1 / 1085 Mortars
ID Code (A=Service Ready, B=Not Service Ready) :	MDAP/MAIS Code:	

Resource Summary	Prior Years	FY 2018	FY 2019	FY 2020 Base	FY 2020 OCO	FY 2020 Total
Procurement Quantity *(Units in Each)*	-	-	-	-	-	-
Gross/Weapon System Cost *($ in Millions)*	0.000	49.618	20.534	0.000	57.473	57.473
Less PY Advance Procurement *($ in Millions)*	-	-	-	-	-	-
Net Procurement (P-1) *($ in Millions)*	0.000	49.618	20.534	0.000	57.473	57.473
Plus CY Advance Procurement *($ in Millions)*	-	-	-	-	-	-
Total Obligation Authority *($ in Millions)*	**0.000**	**49.618**	**20.534**	**0.000**	**57.473**	**57.473**
(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 2018			FY 2019			FY 2020 Base			FY 2020 OCO			FY 2020 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 - BA15 CARTRIDGE, 60MM FULL RANGE PRACTICE Cost																		
Recurring Cost																		
1.1.1) BA15 LOAD, ASSEMBLE AND PACK (LAP)(†)	-	-	-	18.45	125,293	2.312	18.56	20,687	0.384	-	-	0.000	19.42	38,417	0.746	19.42	38,417	0.746
1.1.2) BA15 FUZE PRACTICE M775(†)	-	-	-	19.92	129,052	2.571	21.98	21,308	0.468	-	-	0.000	21.62	39,569	0.855	21.62	39,569	0.855
1.1.3) BA15 SHELL BODY 60MM FRPC(†)	-	-	-	36.59	129,052	4.722	37.19	21,308	0.792	-	-	0.000	37.93	39,569	1.501	37.93	39,569	1.501
1.1.4) BA15 M702 IGNITION CARTRIDGE(†)	-	-	-	14.25	129,052	1.839	17.77	21,308	0.379	-	-	0.000	18.12	39,569	0.717	18.12	39,569	0.717
1.1.5) BA15 PROPELLANT CHARGE M235(†)	-	-	-	12.42	516,207	6.411	13.17	85,230	1.122	-	-	0.000	13.51	158,278	2.138	13.51	158,278	2.138
1.1.6) BA15 FIN ASSEMBLY M27(†)	-	-	-	7.95	114,700	0.912	7.40	21,308	0.158	-	-	0.000	7.54	39,569	0.298	7.54	39,569	0.298
1.1.7) BA15 PRODUCTION ENGINEERING	-	-	-	-	-	0.845	-	-	0.382	-	-	0.000	-	-	0.568	-	-	0.568
1.1.8) BA15 QUALITY ASSURANCE	-	-	-	-	-	0.415	-	-	0.036	-	-	0.000	-	-	0.073	-	-	0.073
1.1.9) BA15 ACCEPTANCE TESTING	-	-	-	-	-	0.591	-	-	0.045	-	-	0.000	-	-	0.149	-	-	0.149

Exhibit P-5, Cost Analysis: PB 2020 Navy		Date: March 2019
Appropriation / Budget Activity / Budget Sub Activity: 1508N / 02 / 1	P-1 Line Item Number / Title: 1085 / Mortars	Item Number / Title [DODIC]: 1 / 1085 Mortars
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 2018			FY 2019			FY 2020 Base			FY 2020 OCO			FY 2020 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)
Subtotal: Recurring Cost	-	-	-	-	-	*20.618*	-	-	*3.766*	-	-	*0.000*	-	-	*7.045*	-	-	*7.045*
Subtotal: Hardware - BA15 CARTRIDGE, 60MM FULL RANGE PRACTICE Cost	**-**	**-**	**-**	**-**	**-**	***20.618***	**-**	**-**	***3.766***	**-**	**-**	***0.000***	**-**	**-**	***7.045***	**-**	**-**	***7.045***
Hardware - CA63 CTG MORTAR 81MM HE FRAG Cost																		
Recurring Cost																		
2.1.1) CA63 LOAD, ASSEMBLE AND PACK (LAP)(†)	-	-	-	-	-	-	258.16	13,300	3.434	-	-	-	-	-	-	-	-	-
2.1.2) CA63 FUZE PD, M935(†)	-	-	-	-	-	-	275.14	16,239	4.468	-	-	-	-	-	-	-	-	-
2.1.3) CA63 SHELL BODY, 81MM HE(†)	-	-	-	-	-	-	81.60	16,239	1.325	-	-	-	-	-	-	-	-	-
2.1.4) CA63 IGN CTG M299(†)	-	-	-	-	-	-	15.21	16,239	0.247	-	-	-	-	-	-	-	-	-
2.1.5) CA63 CHG PROP 81MM XM658(†)	-	-	-	-	-	-	13.26	64,956	0.861	-	-	-	-	-	-	-	-	-
2.1.6) CA63 FIN MORTAR CTG M24(†)	-	-	-	-	-	-	15.10	16,239	0.245	-	-	-	-	-	-	-	-	-
2.1.7) CA63 PBXW-14 BULK EXPLOSIVE(†)	-	-	-	-	-	-	69.36	1,891	0.131	-	-	-	-	-	-	-	-	-
2.1.8) CA63 EXPLOSIVE FILL IMX-104(†)	-	-	-	-	-	-	22.34	66,218	1.479	-	-	-	-	-	-	-	-	-
2.1.9) CA63 PRODUCTION ENGINEERING	-	-	-	-	-	-	-	-	0.430	-	-	-	-	-	-	-	-	-
2.1.10) CA63 ACCEPTANCE TESTING	-	-	-	-	-	-	-	-	0.130	-	-	-	-	-	-	-	-	-
Subtotal: Recurring Cost	-	-	-	-	-	-	-	-	*12.750*	-	-	-	-	-	-	-	-	-
Subtotal: Hardware - CA63 CTG MORTAR 81MM HE FRAG Cost	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	***12.750***	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**
Hardware - CA66 CTG MORTAR 81MM HE FRAG Cost																		
Recurring Cost																		
3.1.1) CA66 LOAD, ASSEMBLE AND PACK (LAP)(†)	-	-	-	-	-	-	-	-	-	-	-	0.000	332.10	52,475	17.427	332.10	52,475	17.427

Exhibit P-5, Cost Analysis: PB 2020 Navy		Date: March 2019
Appropriation / Budget Activity / Budget Sub Activity: 1508N / 02 / 1	P-1 Line Item Number / Title: 1085 / Mortars	Item Number / Title [DODIC]: 1 / 1085 Mortars
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 2018			FY 2019			FY 2020 Base			FY 2020 OCO			FY 2020 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)
3.1.2) CA66 FUZE MO, M734A1(†)	-	-	-	-	-	-	-	-	-	-	-	0.000	280.61	54,049	15.167	280.61	54,049	15.167
3.1.3) CA66 SHELL BODY, 81MM HE(†)	-	-	-	-	-	-	-	-	-	-	-	0.000	83.22	54,049	4.498	83.22	54,049	4.498
3.1.4) CA66 IGN CTG M299(†)	-	-	-	-	-	-	-	-	-	-	-	0.000	15.51	54,049	0.838	15.51	54,049	0.838
3.1.5) CA66 CHG PROP 81MM XM658(†)	-	-	-	-	-	-	-	-	-	-	-	0.000	13.51	216,196	2.921	13.51	216,196	2.921
3.1.6) CA66 FIN MORTAR CTG M24(†)	-	-	-	-	-	-	-	-	-	-	-	0.000	15.39	54,049	0.832	15.39	54,049	0.832
3.1.7) CA66 BULK EXPLOSIVE(†)	-	-	-	-	-	-	-	-	-	-	-	0.000	70.74	6,296	0.445	70.74	6,296	0.445
3.1.8) CA66 EXPLOSIVE FILL IMX-104(†)	-	-	-	-	-	-	-	-	-	-	-	0.000	22.78	220,394	5.020	22.78	220,394	5.020
3.1.9) CA66 PRODUCTION ENGINEERING	-	-	-	-	-	-	-	-	-	-	-	0.000	-	-	0.782	-	-	0.782
3.1.10) CA66 ACCEPTANCE TESTING	-	-	-	-	-	-	-	-	-	-	-	0.000	-	-	0.500	-	-	0.500
Subtotal: Recurring Cost	-	-	-	-	-	-	-	-	-	-	-	*0.000*	-	-	*48.430*	-	-	*48.430*
Subtotal: Hardware - CA66 CTG MORTAR 81MM HE FRAG Cost	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	***0.000***	**-**	**-**	***48.430***	**-**	**-**	***48.430***
Hardware - C875 CTG MORTAR 81MM FRPC Cost																		
Recurring Cost																		
4.1.1) C875 LOAD, ASSEMBLE AND PACK(†)	-	-	-	41.61	149,416	6.217	39.45	19,920	0.785	-	-	0.000	43.87	8,872	0.389	43.87	8,872	0.389
4.1.2) C875 FUZE PRACTICE, M751(†)	-	-	-	19.92	153,898	3.066	20.32	20,518	0.416	-	-	0.000	20.72	9,138	0.189	20.72	9,138	0.189
4.1.3) C875 SHELL BODY, 81MM FRPC(†)	-	-	-	43.99	153,898	6.770	44.59	20,518	0.915	-	-	0.000	45.76	9,138	0.418	45.76	9,138	0.418
4.1.4) C875 IGN CTG M299(†)	-	-	-	14.91	153,898	2.295	15.21	20,518	0.312	-	-	0.000	15.51	9,138	0.142	15.51	9,138	0.142
4.1.5) C875 CHG PROP 81MM M220(†)	-	-	-	13.00	615,594	8.003	13.26	82,070	1.089	-	-	0.000	13.51	36,553	0.494	13.51	36,553	0.494

Exhibit P-5, Cost Analysis: PB 2020 Navy		Date: March 2019
Appropriation / Budget Activity / Budget Sub Activity: 1508N / 02 / 1	P-1 Line Item Number / Title: 1085 / Mortars	Item Number / Title [DODIC]: 1 / 1085 Mortars
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 2018			FY 2019			FY 2020 Base			FY 2020 OCO			FY 2020 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)
4.1.6) C875 FIN MORTAR CTG M24(†)	-	-	-	14.80	153,898	2.278	15.10	20,518	0.310	-	-	0.000	15.39	9,138	0.141	15.39	9,138	0.141
4.1.7) C875 PRODUCTION ENGINEERING	-	-	-	-	-	0.151	-	-	0.089	-	-	0.000	-	-	0.177	-	-	0.177
4.1.8) C875 ACCEPTANCE TESTING	-	-	-	-	-	0.220	-	-	0.102	-	-	0.000	-	-	0.050	-	-	0.050
Subtotal: Recurring Cost	-	-	-	-	-	*29.000*	-	-	*4.018*	-	-	*0.000*	-	-	*2.000*	-	-	*2.000*
Subtotal: Hardware - C875 CTG MORTAR 81MM FRPC Cost	**-**	**-**	**-**	**-**	**-**	***29.000***	**-**	**-**	***4.018***	**-**	**-**	***0.000***	**-**	**-**	***2.000***	**-**	**-**	***2.000***
Gross/Weapon System Cost	**-**	**-**	**0.000**	**-**	**-**	**49.618**	**-**	**-**	**20.534**	**-**	**-**	**0.000**	**-**	**-**	**57.473**	**-**	**-**	**57.473**

Remarks:

[Hardware] The 81MM High Explosive round with the more reliable Multi-Option Fuze(DODIC CA63) replaces the 81MM High Explosive (HE)Point Detonation (DODIC CA62).

[Hardware] All C875 contract awards in January and February of FY18 were awarded with Army funding. The USMC funding was sent in May 2018 after the CRA was lifted.

(†) indicates the presence of a P-5a

Exhibit P-5a, Procurement History and Planning: PB 2020 Navy		Date: March 2019
Appropriation / Budget Activity / Budget Sub Activity: 1508N / 02 / 1	P-1 Line Item Number / Title: 1085 / Mortars	Item Number / Title [DODIC]: 1 / 1085 Mortars

Cost Elements	OCO	FY	Contractor and Location	Method/Type or Funding Vehicle	Location of PCO	Award Date	Date of First Delivery	Qty (Each)	Unit Cost ($)	Specs Avail Now?	Date Revision Available	RFP Issue Date
1.1.1) BA15 LOAD, ASSEMBLE AND PACK (LAP)		2018	DAY &ZIMMERMANN, INC. / PARSONS, KS	C / IDIQ	ROCK ISLAND ARSENAL, IL	Jan 2018	Jan 2020	125,293	18.45	Y		
1.1.1) BA15 LOAD, ASSEMBLE AND PACK (LAP)		2019	TO BE SELECTED / UNKNOWN	C / IDIQ	ROCK ISLAND ARSENAL, IL	May 2019	May 2021	20,687	18.56	Y		
1.1.1) BA15 LOAD, ASSEMBLE AND PACK (LAP)	✓	2020	TO BE SELECTED / UNKNOWN	C / IDIQ	ROCK ISLAND ARSENAL, IL	May 2020	May 2022	38,417	19.42	Y		
1.1.2) BA15 FUZE PRACTICE M775		2018	NAMMO POCAL INDUSTRIES 1 / SCRANTON, PA	C / IDIQ	PICATINNY ARSENAL, NJ	Jan 2018	Jul 2019	129,052	19.92	Y		
1.1.2) BA15 FUZE PRACTICE M775		2019	NAMMO POCAL INDUSTRIES 1 / SCRANTON, PA	C / IDIQ	PICATINNY ARSENAL	Jan 2019	Jul 2020	21,308	21.98	Y		
1.1.2) BA15 FUZE PRACTICE M775	✓	2020	NAMMO POCAL INDUSTRIES 1 / SCRANTON, PA	C / IDIQ	PICATINNY ARSENAL	Feb 2020	Aug 2021	39,569	21.62	Y		
1.1.3) BA15 SHELL BODY 60MM FRPC		2018	MEDICO INDUSTRIES / WILKES-BARRE, PA	C / IDIQ	PICATINNY ARSENAL, NJ	Feb 2018	Aug 2019	129,052	36.59	Y		
1.1.3) BA15 SHELL BODY 60MM FRPC		2019	MEDICO INDUSTRIES / WILKES-BARRE, PA	C / IDIQ	PICATINNY ARSENAL, NJ	Feb 2019	Aug 2020	21,308	37.19	Y		
1.1.3) BA15 SHELL BODY 60MM FRPC	✓	2020	MEDICO INDUSTRIES / WILKES-BARRE, PA	C / IDIQ	PICATINNY ARSENAL, NJ	Feb 2020	Aug 2021	39,569	37.93	Y		
1.1.4) BA15 M702 IGNITION CARTRIDGE		2018	NAMMO POCAL INDUSTRIES 1 / SCRANTON, PA	C / IDIQ	ROCK ISLAND ARSENAL, IL	Apr 2018	Oct 2019	129,052	14.25	Y		
1.1.4) BA15 M702 IGNITION CARTRIDGE		2019	TO BE SELECTED / UNKNOWN	C / IDIQ	ROCK ISLAND ARSENAL, IL	Jan 2019	Jul 2020	21,308	17.77	Y		
1.1.4) BA15 M702 IGNITION CARTRIDGE	✓	2020	TO BE SELECTED / UNKNOWN	C / IDIQ	ROCK ISLAND ARSENAL, IL	Feb 2020	Aug 2021	39,569	18.12	Y		
1.1.5) BA15 PROPELLANT CHARGE M235		2018	GENERAL DYNAMICS OTS / MARION, IL	C / IDIQ	ROCK ISLAND ARSENAL, IL	Jun 2018	Dec 2019	516,207	12.42	Y		
1.1.5) BA15 PROPELLANT CHARGE M235		2019	TO BE SELECTED / UNKNOWN	C / IDIQ	ROCK ISLAND ARSENAL, IL	Jan 2019	Jul 2020	85,230	13.17	Y		
1.1.5) BA15 PROPELLANT CHARGE M235	✓	2020	TO BE SELECTED / UNKNOWN	C / IDIQ	ROCK ISLAND ARSENAL, IL	Feb 2020	Aug 2021	158,278	13.51	Y		
1.1.6) BA15 FIN ASSEMBLY M27		2018	Flexible Concepts / Elkhart, IN	C / IDIQ	ROCK ISLAND ARSENAL, IL	May 2018	Nov 2019	114,700	7.95	Y		
1.1.6) BA15 FIN ASSEMBLY M27		2019	TO BE SELECTED / UNKNOWN	C / IDIQ	ROCK ISLAND, ARSENAL IL	Jan 2019	Jul 2020	21,308	7.40	Y		
1.1.6) BA15 FIN ASSEMBLY M27	✓	2020	TO BE SELECTED / UNKNOWN	C / IDIQ	ROCK ISLAND ARSENAL, IL	Feb 2020	Aug 2021	39,569	7.54	Y		
2.1.1) CA63 LOAD, ASSEMBLE AND PACK (LAP)		2019	TO BE SELECTED / UNKNOWN	C / IDIQ	ROCK ISLAND ARSENAL, IL	May 2019	May 2022	13,300	258.16	Y		
2.1.2) CA63 FUZE PD, M935		2019	TO BE SELECTED / UNKNOWN	C / FFP	PICATINNY ARSENAL, NJ	Jun 2019	Dec 2021	16,239	275.14	Y		

Exhibit P-5a, Procurement History and Planning: PB 2020 Navy		Date: March 2019
Appropriation / Budget Activity / Budget Sub Activity: 1508N / 02 / 1	P-1 Line Item Number / Title: 1085 / Mortars	Item Number / Title [DODIC]: 1 / 1085 Mortars

Cost Elements	OCO	FY	Contractor and Location	Method/Type or Funding Vehicle	Location of PCO	Award Date	Date of First Delivery	Qty (Each)	Unit Cost ($)	Specs Avail Now?	Date Revision Available	RFP Issue Date
2.1.3) CA63 SHELL BODY, 81MM HE		2019	MEDICO INDUSTRIES / WILKES-BARRE, PA	C / IDIQ	PICATINNY ARSENAL, NJ	Dec 2018	Jun 2020	16,239	81.60	Y		
2.1.4) CA63 IGN CTG M299		2019	NAMMO POCAL INDUSTRIES 1 / SCRANTON, PA	C / IDIQ	ROCK ISLAND ARSENAL, IL	Dec 2018	Jun 2020	16,239	15.21	Y		
2.1.5) CA63 CHG PROP 81MM XM658		2019	TO BE SELECTED / UNKNOWN	C / IDIQ	ROCK ISLAND ARSENAL, IL	Feb 2019	Aug 2020	64,956	13.26	Y		
2.1.6) CA63 FIN MORTAR CTG M24		2019	TO BE SELECTED / UNKNOWN	C / IDIQ	ROCK ISLAND ARSENAL, IL	Mar 2019	Sep 2020	16,239	15.10	Y		
2.1.7) CA63 PBXW-14 BULK EXPLOSIVE		2019	BAE ORDNANCE SYSTEMS / KINGSPORT, TN	C / IDIQ	ROCK ISLAND ARSENAL, IL	Mar 2019	Sep 2020	1,891	69.36	Y		
2.1.8) CA63 EXPLOSIVE FILL IMX-104		2019	BAE ORDNANCE SYSTEMS / KINGSPORT, TN	C / IDIQ	ROCK ISLAND ARSENAL, IL	Mar 2019	Sep 2021	66,218	22.34	Y		
3.1.1) CA66 LOAD, ASSEMBLE AND PACK (LAP)(†)	✓	2020	TO BE SELECTED / UNKNOWN	C / IDIQ	ROCK ISLAND ARSENAL, IL	May 2020	May 2023	52,475	332.10	Y		
3.1.2) CA66 FUZE MO, M734A1(†)	✓	2020	TO BE SELECTED / UNKNOWN	C / FFP	PICATINNY ARSENAL, NJ	Feb 2020	Aug 2022	54,049	280.61	Y		
3.1.3) CA66 SHELL BODY, 81MM HE	✓	2020	MEDICO INDUSTRIES / WILKES-BARRE, PA	C / IDIQ	PICATINNY ARSENAL, NJ	Feb 2020	Aug 2021	54,049	83.22	Y		
3.1.4) CA66 IGN CTG M299	✓	2020	NAMMO POCAL INDUSTRIES 1 / SCRANTON, PA	C / IDIQ	ROCK ISLAND ARSENAL, IL	Feb 2020	Aug 2021	54,049	15.51	Y		
3.1.5) CA66 CHG PROP 81MM XM658	✓	2020	TO BE SELECTED / UNKNOWN	C / IDIQ	ROCK ISLAND ARSENAL, IL	Feb 2020	Aug 2021	216,196	13.51	Y		
3.1.6) CA66 FIN MORTAR CTG M24	✓	2020	TO BE SELECTED / UNKNOWN	C / IDIQ	ROCK ISLAND ARSENAL, IL	Feb 2020	Aug 2021	54,049	15.39	Y		
3.1.7) CA66 BULK EXPLOSIVE	✓	2020	BAE ORDNANCE SYSTEMS / KINDSPORT, TN	C / IDIQ	ROCK ISLAND ARSENAL, IL	Feb 2020	Aug 2021	6,296	70.74	Y		
3.1.8) CA66 EXPLOSIVE FILL IMX-104(†)	✓	2020	BAE ORDNANCE SYSTEMS / KINDSPORT, TN	C / IDIQ	ROCK ISLAND ARSENAL, IL	Feb 2020	Aug 2022	220,394	22.78	Y		
4.1.1) C875 LOAD, ASSEMBLE AND PACK		2018	DAY &ZIMMERMANN, INC. / PARSONS, KS	C / IDIQ	ROCK ISLAND ARSENAL, IL	Jun 2018	Jun 2020	149,416	41.61	Y		
4.1.1) C875 LOAD, ASSEMBLE AND PACK		2019	DAY &ZIMMERMANN, INC. / PARSONS, KS	C / IDIQ	ROCK ISLAND ARSENAL, IL	Feb 2019	Feb 2021	9,769	39.45	Y		
4.1.1) C875 LOAD, ASSEMBLE AND PACK	✓	2019	DAY &ZIMMERMANN, INC. / PARSONS, KS	C / IDIQ	ROCK ISLAND ARSENAL, IL	Feb 2019	Feb 2021	10,151	39.45	Y		
4.1.1) C875 LOAD, ASSEMBLE AND PACK	✓	2020	DAY &ZIMMERMANN, INC. / PARSONS, KS	C / IDIQ	ROCK ISLAND ARSENAL, IL	May 2020	May 2022	8,872	43.87	Y		
4.1.2) C875 FUZE PRACTICE, M751		2018	NAMMO POCAL INDUSTRIES 1 / SCRANTON, PA	C / IDIQ	PICATINNY ARSENAL, NJ	Aug 2018	Feb 2020	153,898	19.92	Y		

Exhibit P-5a, Procurement History and Planning: PB 2020 Navy		Date: March 2019
Appropriation / Budget Activity / Budget Sub Activity: 1508N / 02 / 1	P-1 Line Item Number / Title: 1085 / Mortars	Item Number / Title [DODIC]: 1 / 1085 Mortars

Cost Elements	OCO	FY	Contractor and Location	Method/Type or Funding Vehicle	Location of PCO	Award Date	Date of First Delivery	Qty (Each)	Unit Cost ($)	Specs Avail Now?	Date Revision Available	RFP Issue Date
4.1.2) C875 FUZE PRACTICE, M751		2019	NAMMO POCAL INDUSTRIES 1 / SCRANTON, PA	C / IDIQ	PICATINNY ARSENAL, NJ	Dec 2018	Jun 2020	10,062	20.32	Y		
4.1.2) C875 FUZE PRACTICE, M751	✓	2019	NAMMO POCAL INDUSTRIES 1 / SCRANTON, PA	C / IDIQ	PICATINNY ARSENAL, NJ	Dec 2018	Jun 2020	10,456	20.32	Y		
4.1.2) C875 FUZE PRACTICE, M751	✓	2020	NAMMO POCAL INDUSTRIES 1 / SCRANTON, PA	C / IDIQ	PICATINNY ARSENAL, NJ	Feb 2020	Aug 2021	9,138	20.72	Y		
4.1.3) C875 SHELL BODY, 81MM FRPC		2018	MEDICO INDUSTRIES / WILKES-BARRE, PA	C / IDIQ	PICATINNY ARSENAL, NJ	Jun 2018	Jan 2020	153,898	43.99	Y		
4.1.3) C875 SHELL BODY, 81MM FRPC		2019	MEDICO INDUSTRIES / WILKES-BARRE, PA	C / IDIQ	PICATINNY ARSENAL, NJ	Dec 2018	Jun 2020	10,062	44.59	Y		
4.1.3) C875 SHELL BODY, 81MM FRPC	✓	2019	MEDICO INDUSTRIES / WILKES-BARRE, PA	C / IDIQ	PICATINNY ARSENAL, NJ	Dec 2018	Jun 2020	10,456	44.59	Y		
4.1.3) C875 SHELL BODY, 81MM FRPC	✓	2020	MEDICO INDUSTRIES / WILKES-BARRE, PA	C / IDIQ	PICATINNY ARSENAL, NJ	Feb 2020	Aug 2021	9,138	45.76	Y		
4.1.4) C875 IGN CTG M299		2018	NAMMO POCAL INDUSTRIES 1 / SCRANTON, PA	C / IDIQ	ROCK ISLAND ARSENAL, IL	Jun 2018	Dec 2019	153,898	14.91	Y		
4.1.4) C875 IGN CTG M299		2019	NAMMO POCAL INDUSTRIES 1 / SCRANTON, PA	C / IDIQ	ROCK ISLAND ARSENAL, IL	Dec 2018	Jun 2020	10,062	15.21	Y		
4.1.4) C875 IGN CTG M299	✓	2019	NAMMO POCAL INDUSTRIES 1 / SCRANTON, PA	C / IDIQ	ROCK ISLAND ARSENAL, IL	Dec 2018	Jun 2020	10,456	15.21	Y		
4.1.4) C875 IGN CTG M299	✓	2020	NAMMO POCAL INDUSTRIES 1 / SCRANTON, PA	C / IDIQ	ROCK ISLAND ARSENAL, IL	Feb 2020	Sep 2021	9,138	15.51	Y		
4.1.5) C875 CHG PROP 81MM M220		2018	AMERICAN ORDNANCE LLC (IAAP) / MIDDLETOWN, IA	C / IDIQ	ROCK ISLAND ARSENAL, IL	Sep 2018	Mar 2020	615,594	13.00	Y		
4.1.5) C875 CHG PROP 81MM M220		2019	NAMMO POCAL INDUSTRIES 1 / SCRANTON, PA	C / IDIQ	ROCK ISLAND ARSENAL, IL	Jan 2019	Jul 2020	40,248	13.26	Y		
4.1.5) C875 CHG PROP 81MM M220	✓	2019	NAMMO POCAL INDUSTRIES 1 / SCRANTON, PA	C / IDIQ	ROCK ISLAND ARSENAL, IL	Jan 2019	Jul 2020	41,822	13.26	Y		
4.1.5) C875 CHG PROP 81MM M220	✓	2020	NAMMO POCAL INDUSTRIES 1 / SCRANTON, PA	C / IDIQ	ROCK ISLAND ARSENAL, IL	Feb 2020	Aug 2021	36,553	13.51	Y		
4.1.6) C875 FIN MORTAR CTG M24		2018	GAYSTON CORP / SPRINGBORO, OH	C / IDIQ	PICATINNY ARSENAL, NJ	May 2018	Nov 2019	153,898	14.80	Y		
4.1.6) C875 FIN MORTAR CTG M24		2019	GAYSTON CORP / SPRINGBORO, OH	C / IDIQ	PICATINNY ARSENAL, NJ	Dec 2018	Jun 2020	10,062	15.10	Y		
4.1.6) C875 FIN MORTAR CTG M24	✓	2019	GAYSTON CORP / SPRINGBORO, OH	C / IDIQ	PICATINNY ARSENAL, NJ	Dec 2018	Jun 2020	10,456	15.10	Y		
4.1.6) C875 FIN MORTAR CTG M24	✓	2020	TBD / TBD	C / IDIQ	PICATINNY ARSENAL, NJ	Feb 2020	Aug 2021	9,138	15.39	Y		

(†) indicates the presence of a P-21

Exhibit P-5a, Procurement History and Planning: PB 2020 Navy		Date: March 2019
Appropriation / Budget Activity / Budget Sub Activity: 1508N / 02 / 1	P-1 Line Item Number / Title: 1085 / Mortars	Item Number / Title [DODIC]: 1 / 1085 Mortars

Exhibit P-21, Production Schedule: PB 2020 Navy		Date: March 2019
Appropriation / Budget Activity / Budget Sub Activity: 1508N / 02 / 1	**P-1 Line Item Number / Title:** 1085 / Mortars	**Item Number / Title [DODIC]:** 1 / 1085 Mortars

Cost Elements (Units in Thousands)							Fiscal Year 2018												Fiscal Year 2019												BALANCE
										Calendar Year 2018												Calendar Year 2019									
OCO	MFR #	FY	SERVICE	PROC QTY	ACCEPT PRIOR TO 1 OCT 2017	BAL DUE AS OF 1 OCT	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	
3.1.1) CA66 LOAD, ASSEMBLE AND PACK (LAP)																															
✓	1	2020	NAVY	52.475	.000	52.475																									52.475
3.1.2) CA66 FUZE MO, M734A1																															
✓	2	2020	NAVY	54.049	.000	54.049																									54.049
3.1.8) CA66 EXPLOSIVE FILL IMX-104																															
✓	3	2020	NAVY	220.394	.000	220.394																									220.394
							OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	

Exhibit P-21, Production Schedule: PB 2020 Navy		Date: March 2019
Appropriation / Budget Activity / Budget Sub Activity: 1508N / 02 / 1	**P-1 Line Item Number / Title:** 1085 / Mortars	**Item Number / Title [DODIC]:** 1 / 1085 Mortars

Cost Elements (Units in Thousands)							Fiscal Year 2020												Fiscal Year 2021												BALANCE
							Calendar Year 2020												Calendar Year 2021												
OCO	MFR #	FY	SERVICE	PROC QTY	ACCEPT PRIOR TO 1 OCT 2019	BAL DUE AS OF 1 OCT	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	
3.1.1) CA66 LOAD, ASSEMBLE AND PACK (LAP)																															
✓	1	2020	NAVY	52.475	.000	52.475								A -	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	52.475
3.1.2) CA66 FUZE MO, M734A1																															
✓	2	2020	NAVY	54.049	.000	54.049					A -	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	54.049
3.1.8) CA66 EXPLOSIVE FILL IMX-104																															
✓	3	2020	NAVY	220.394	.000	220.394					A -	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	220.394
							OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	

Exhibit P-21, Production Schedule: PB 2020 Navy		Date: March 2019
Appropriation / Budget Activity / Budget Sub Activity: 1508N / 02 / 1	**P-1 Line Item Number / Title:** 1085 / Mortars	**Item Number / Title [DODIC]:** 1 / 1085 Mortars

Cost Elements (Units in Thousands)							Fiscal Year 2022												Fiscal Year 2023												BALANCE
							Calendar Year 2022															Calendar Year 2023									
OCO	MFR #	FY	SERVICE	PROC QTY	ACCEPT PRIOR TO 1 OCT 2021	BAL DUE AS OF 1 OCT	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	
3.1.1) CA66 LOAD, ASSEMBLE AND PACK (LAP)																															
✓	1	2020	NAVY	52.475	.000	52.475	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	7.802	5.665	5.665	5.665	5.665	22.013
3.1.2) CA66 FUZE MO, M734A1																															
✓	2	2020	NAVY	54.049	.000	54.049	-	-	-	-	-	-	-	-	-	-	7.501	5.300	5.300	5.300	4.974	4.300	4.300	4.300	4.300	4.300	4.105	.069			.000
3.1.8) CA66 EXPLOSIVE FILL IMX-104																															
✓	3	2020	NAVY	220.394	.000	220.394	-	-	-	-	-	-	-	-	-	-	20.730	11.755	11.755	11.755	11.755	11.755	11.755	11.755	11.755	11.755	11.755	82.114			.000
							OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	

Exhibit P-21, Production Schedule: PB 2020 Navy		Date: March 2019
Appropriation / Budget Activity / Budget Sub Activity: 1508N / 02 / 1	**P-1 Line Item Number / Title:** 1085 / Mortars	**Item Number / Title [DODIC]:** 1 / 1085 Mortars

Cost Elements (Units in Thousands)							Fiscal Year 2024												Fiscal Year 2025												BALANCE
							Calendar Year 2024												Calendar Year 2025												
OCO	MFR #	FY	SERVICE	PROC QTY	ACCEPT PRIOR TO 1 OCT 2023	BAL DUE AS OF 1 OCT	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	
3.1.1) CA66 LOAD, ASSEMBLE AND PACK (LAP)																															
✓	1	2020	NAVY	52.475	30.462	22.013	4.718	4.665	4.665	4.665	2.364	-	.936																		.000
3.1.2) CA66 FUZE MO, M734A1																															
✓	2	2020	NAVY	54.049	54.049	.000																									.000
3.1.8) CA66 EXPLOSIVE FILL IMX-104																															
✓	3	2020	NAVY	220.394	220.394	.000																									.000
							OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	

Exhibit P-21, Production Schedule: PB 2020 Navy		Date: March 2019
Appropriation / Budget Activity / Budget Sub Activity: 1508N / 02 / 1	**P-1 Line Item Number / Title:** 1085 / Mortars	**Item Number / Title [DODIC]:** 1 / 1085 Mortars

MFR Ref #	Manufacturer Name - Location	Production Rates (Each / Year)			Procurement Leadtime (Months)							
					Initial				Reorder			
		MSR For 2020	1-8-5 For 2020	MAX For 2020	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	TO BE SELECTED - UNKNOWN	48,000	144,000	360,000	8	8	36	44	8	8	36	44
2	TO BE SELECTED - UNKNOWN	4,000	12,000	100,000	8	8	30	38	8	8	30	38
3	BAE ORDNANCE SYSTEMS - KINDSPORT, TN	48,000	144,000	360,000	8	8	30	38	8	8	30	38

"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 2020 Navy	Date: March 2019
Appropriation / Budget Activity / Budget Sub Activity: 1508N: Procurement of Ammo, Navy & MC / BA 02: Proc Ammo, MC / BSA 1: Marine Corps Ammunition	**P-1 Line Item Number / Title:** 1125 / Direct Support Munitions

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

Line Item MDAP/MAIS Code: N/A

Resource Summary	Prior Years	FY 2018	FY 2019	FY 2020 Base	FY 2020 OCO	FY 2020 Total	FY 2021	FY 2022	FY 2023	FY 2024	To Complete	Total
Procurement Quantity *(Units in Each)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost *($ in Millions)*	0.000	40.500	62.631	0.000	132.937	132.937	126.793	133.469	129.078	138.554	Continuing	Continuing
Less PY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) *($ in Millions)*	0.000	40.500	62.631	0.000	132.937	132.937	126.793	133.469	129.078	138.554	Continuing	Continuing
Plus CY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority *($ in Millions)*	**0.000**	**40.500**	**62.631**	**0.000**	**132.937**	**132.937**	**126.793**	**133.469**	**129.078**	**138.554**	**Continuing**	**Continuing**
(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)*	-	-	-	-	-	-	-	-	-	-	-	-

Description:

FY 2020 funding totals include $0.0M for Base and $132.937M for Overseas Contingency Operations (OCO); of which $131.765M is realigned as part of the OCO for Base Requirements. FY 2020 OCO for Base Requirements is OCO funding for base budget requirements in support of the National Defense Strategy. The Budget requests these funds in OCO to comply with the base budget defense caps included in the Budget Control Act of 2011.

Beginning in FY18 this budget represents a consolidation of ammunition line items by functional capability.

The shoulder launched rocket and 120mm munitions family are included in this budget request. The 120mm tank ammunition is fired from a M1A1 (Abrams) tank with a 120mm main armament smoothbore M256 Cannon. It consists of a suite of Kinetic Energy (KE), multi-purpose high explosive (MPHE), canister and high explosive anti-tank (HEAT) rounds. The 120mm tank ammunition also includes target practice rounds for use with the 120MM smooth bore M256 Cannon.

The family also includes 120mm smoothbore mortar ammunition to support pre-deployment training for the deploying Marine Expeditionary Units (MEUs). The 120mm smoothbore mortar ammunition suite consists of high explosive, illumination and white phosphorous rounds fired out of the M298 mortar cannon. Previously, the 120mm mortar ammunition procurements were to support the rifled Expeditionary Fire Support System (EFSS), however the EFSS program was cancelled effective 28 Nov 17.

The Shoulder-Launched Multipurpose Assault Weapon (SMAW), the AT4 Confined Space (AT4 CS) and Lightweight Assault Weapon (LAW) shoulder fired family of rockets provides lightweight weapons mainly employed against and optimized to defeat light armored vehicles and other hard targets at close combat ranges. They can be employed from an enclosure or the open battlefield as assault weapons against bunkers, field fortifications, structures and other hard-point positions. Additionally, training launchers and sub-caliber practice rockets that fully simulate firing are also included.

The highly versatile Carl-Gustaf system is a true multi-role, man-portable shoulder-fired weapon. The system offers various types of ammunition, ranging from armor penetration and anti-personnel, to ammunition for built-up areas as well as special features like smoke and illumination.

Exhibit P-40, Budget Line Item Justification: PB 2020 Navy		Date: March 2019
Appropriation / Budget Activity / Budget Sub Activity: 1508N: Procurement of Ammo, Navy & MC / BA 02: Proc Ammo, MC / BSA 1: Marine Corps Ammunition	**P-1 Line Item Number / Title:** 1125 / Direct Support Munitions	
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 2018	FY 2019	FY 2020 Base	FY 2020 OCO	FY 2020 Total
Exhibit Type	Title*	Subexhibits	ID CD	MDAP/ MAIS Code	Quantity / Total Cost (Each) / ($ M)	Quantity / Total Cost (Each) / ($ M)	Quantity / Total Cost (Each) / ($ M)	Quantity / Total Cost (Each) / ($ M)	Quantity / Total Cost (Each) / ($ M)	Quantity / Total Cost (Each) / ($ M)
P-5	1 / 120 MM, All Types	P-5a, P-21			- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 31.053	- / 31.053
P-5	2 / Rockets, All Types	P-5a, P-21			- / 0.000	- / 40.500	- / 62.631	- / 0.000	- / 101.884	- / 101.884
P-40	**Total Gross/Weapon System Cost**				**- / 0.000**	**- / 40.500**	**- / 62.631**	**- / 0.000**	**- / 132.937**	**- / 132.937**

*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 2020 OCO for baseline funding supports the procurement of several direct support munitions to include: 120mm smoothbore mortar ammunition to support the pre-deployment training for the deploying Marine Expeditionary Units (MEUs), the 120mm Advanced Multi-purpose (AMP) tank round (DODIC CZ11), the Shoulder Launched Multipurpose Assault Weapon (SMAW) rocket, 83mm Common Practice round (CP)(DODIC HX07), 66MM High Explosive Anti-Armor Rocket (DODIC HB26), 84mm HE Rocket (AT4)(DODIC C995) and the 84mm Carl-Gustaf family of ammunition. The 7.62mm TR Cartridge (DODIC A254) will also be procured.

The budget increase from FY 2019 to FY 2020 is due to added requirements for 120mm Advanced Multi-purpose (AMP) tank round (DODIC CZ11) with a new capability to support tactical tank round requirements; 66mm Anti-Structure, LAW Fire From Enclosure (FFE)(Rocket (DODIC HB25), 66MM High Explosive Anti-Armor Rocket(DODIC HB26); and procurement of the 84mm highly versatile Carl-Gustaf family of rounds.

OCO:
FY 2020 Direct War OCO funding request supports procurement of reset ammunition for CA27, 84mm, High Explosive (HE) Carl-Gustaf in support of Operation Inherent Resolve (OIR).

Exhibit P-5, Cost Analysis: PB 2020 Navy		Date: March 2019
Appropriation / Budget Activity / Budget Sub Activity: 1508N / 02 / 1	P-1 Line Item Number / Title: 1125 / Direct Support Munitions	Item Number / Title [DODIC]: 1 / 120 MM, All Types
ID Code (A=Service Ready, B=Not Service Ready) :	MDAP/MAIS Code:	

Resource Summary	Prior Years	FY 2018	FY 2019	FY 2020 Base	FY 2020 OCO	FY 2020 Total
Procurement Quantity *(Units in Each)*	-	-	-	-	-	-
Gross/Weapon System Cost *($ in Millions)*	0.000	0.000	0.000	0.000	31.053	31.053
Less PY Advance Procurement *($ in Millions)*	-	-	-	-	-	-
Net Procurement (P-1) *($ in Millions)*	0.000	0.000	0.000	0.000	31.053	31.053
Plus CY Advance Procurement *($ in Millions)*	-	-	-	-	-	-
Total Obligation Authority *($ in Millions)*	**0.000**	**0.000**	**0.000**	**0.000**	**31.053**	**31.053**
(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 2018			FY 2019			FY 2020 Base			FY 2020 OCO			FY 2020 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 - CZ11 CTG, 120MM Advanced Multipurpose Round Cost																		
Recurring Cost																		
1.1.1) CZ11 120mm Advanced Multi-Purpose, High Explosive(†) (1)	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000	9,500.00	3,057	29.042	9,500.00	3,057	29.042
1.1.2) CZ11 Production Support	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000	-	-	1.011	-	-	1.011
Subtotal: Recurring Cost	-	-	*0.000*	-	-	*0.000*	-	-	*0.000*	-	-	*0.000*	-	-	*30.053*	-	-	*30.053*
Subtotal: Hardware - CZ11 CTG, 120MM Advanced Multipurpose Round Cost	**-**	**-**	***0.000***	**-**	**-**	***0.000***	**-**	**-**	***0.000***	**-**	**-**	***0.000***	**-**	**-**	***30.053***	**-**	**-**	***30.053***
Hardware - CA04 Ctg Mortar 120mm HE M934 Cost																		
Recurring Cost																		
3.1.1) CA04 Load, Assemble, Pack (LAP)(†)	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000	146.75	1,071	0.157	146.75	1,071	0.157
3.1.2) CA04 Shell Body 120mm HE(†)	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000	142.78	1,103	0.157	142.78	1,103	0.157
3.1.3) CA04 Ignition Cartridge M1020(†)	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000	24.14	1,103	0.027	24.14	1,103	0.027
3.1.4) COMP B Type I Grade A(†)	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000	13.52	9,639	0.130	13.52	9,639	0.130
3.1.5) CA04 Propellant Charge M234A1(†)	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000	21.25	4,413	0.094	21.25	4,413	0.094

Exhibit P-5, Cost Analysis: PB 2020 Navy		Date: March 2019
Appropriation / Budget Activity / Budget Sub Activity: 1508N / 02 / 1	P-1 Line Item Number / Title: 1125 / Direct Support Munitions	Item Number / Title [DODIC]: 1 / 120 MM, All Types
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 2018			FY 2019			FY 2020 Base			FY 2020 OCO			FY 2020 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)
3.1.6) CA04 Fin Assembly M31(†)	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000	45.14	1,103	0.050	45.14	1,103	0.050
3.1.7) CA04 Fuze MOFM M734A1(†)	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000	280.61	1,103	0.310	280.61	1,103	0.310
3.1.8) CA04 Production Engineering	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.063	-	-	0.063
3.1.9) CA04 Acceptance Testing	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.012	-	-	0.012
Subtotal: Recurring Cost	-	-	*0.000*	-	-	*0.000*	-	-	*0.000*	-	-	*0.000*	-	-	*1.000*	-	-	*1.000*
Subtotal: Hardware - CA04 Ctg Mortar 120mm HE M934 Cost	**-**	**-**	***0.000***	**-**	**-**	***0.000***	**-**	**-**	***0.000***	**-**	**-**	***0.000***	**-**	**-**	***1.000***	**-**	**-**	***1.000***
Gross/Weapon System Cost	**-**	**-**	**0.000**	**-**	**-**	**0.000**	**-**	**-**	**0.000**	**-**	**-**	**0.000**	**-**	**-**	**31.053**	**-**	**-**	**31.053**

(†) indicates the presence of a P-5a

Footnotes:

(1) The CZ11 (120mm Advanced Multi-Purpose, High Explosive with Tracer cartridges), is replacing the CA57 (120mm Multi-Purpose High Explosive) round. A unit cost of $9,500 for FY20 was provided by PM Maneuvers Ammunition Systems and is based on the Independent Government Cost Estimate (IGCE).

Exhibit P-5a, Procurement History and Planning: PB 2020 Navy		Date: March 2019
Appropriation / Budget Activity / Budget Sub Activity: 1508N / 02 / 1	P-1 Line Item Number / Title: 1125 / Direct Support Munitions	Item Number / Title [DODIC]: 1 / 120 MM, All Types

Cost Elements	OCO	FY	Contractor and Location	Method/Type or Funding Vehicle	Location of PCO	Award Date	Date of First Delivery	Qty (Each)	Unit Cost ($)	Specs Avail Now?	Date Revision Available	RFP Issue Date
1.1.1) CZ11 120mm Advanced Multi-Purpose, High Explosive(†)	✓	2020 (2)	ALLIANT TECH SYS INC / PLYMOUTH, MN	C / FFP	PICATINNY ARSENAL, NJ	Mar 2020	Mar 2022	3,057	9,500.00	N	Mar 2020	
3.1.1) CA04 Load, Assemble, Pack (LAP)	✓	2020 (3)	GENERAL DYNAMICS CANADA / CANADA	C / FFP	PICATINNY ARSENAL, NJ	May 2020	May 2023	1,071	146.75	Y	Mar 2020	
3.1.2) CA04 Shell Body 120mm HE	✓	2020	TBD / TBD	C / IDIQ	PICATINNY ARSENAL, NJ	Feb 2020	Aug 2021	1,103	142.78	Y	Mar 2020	
3.1.3) CA04 Ignition Cartridge M1020	✓	2020	NAMMO POCAL INDUSTRIES 1 / SCRANTON, PA	C / IDIQ	ROCK ISLAND ARSENAL, IL	Feb 2020	Aug 2021	1,103	24.14	Y	Mar 2020	
3.1.4) COMP B Type I Grade A	✓	2020	BAE ORDNANCE SYSTEMS / KINDSPORT, TN	C / IDIQ	ROCK ISLAND ARSENAL, IL	Feb 2020	Feb 2021	9,639	13.52	Y	Mar 2020	
3.1.5) CA04 Propellant Charge M234A1	✓	2020	TBD / TBD	C / IDIQ	ROCK ISLAND ARSENAL, IL	Feb 2020	Aug 2021	4,413	21.25	Y	Mar 2020	
3.1.6) CA04 Fin Assembly M31	✓	2020	TBD / TBD	C / IDIQ	PICATINNY ARSENAL, NJ	Feb 2020	Aug 2021	1,103	45.14	Y	Mar 2020	
3.1.7) CA04 Fuze MOFM M734A1	✓	2020	TBD / TBD	C / FFP	PICATINNY ARSENAL, NJ	Feb 2020	Aug 2022	1,103	280.61	Y	Mar 2020	

(†) indicates the presence of a P-21

Footnotes:

(2) Base contract awarded in Jan 17. USMC procurement will be Option 3.

(3) FY20 LAP is an option on existing contract

Exhibit P-21, Production Schedule: PB 2020 Navy		**Date:** March 2019
Appropriation / Budget Activity / Budget Sub Activity: 1508N / 02 / 1	**P-1 Line Item Number / Title:** 1125 / Direct Support Munitions	**Item Number / Title [DODIC]:** 1 / 120 MM, All Types

Cost Elements (Units in Each)							Fiscal Year 2020												Fiscal Year 2021												BALANCE
										Calendar Year 2020												Calendar Year 2021									
OCO	MFR #	FY	SERVICE	PROC QTY	ACCEPT PRIOR TO 1 OCT 2019	BAL DUE AS OF 1 OCT	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	
1.1.1) CZ11 120mm Advanced Multi-Purpose, High Explosive [1]																															
✓	1	2020	NAVY	3,057	0	3,057						A -	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3,057
							OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	

Exhibit P-21, Production Schedule: PB 2020 Navy		**Date:** March 2019
Appropriation / Budget Activity / Budget Sub Activity: 1508N / 02 / 1	**P-1 Line Item Number / Title:** 1125 / Direct Support Munitions	**Item Number / Title [DODIC]:** 1 / 120 MM, All Types

Cost Elements (Units in Each)							Fiscal Year 2022												Fiscal Year 2023												BALANCE
							Calendar Year 2022												Calendar Year 2023												
OCO	MFR #	FY	SERVICE	PROC QTY	ACCEPT PRIOR TO 1 OCT 2021	BAL DUE AS OF 1 OCT	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	
1.1.1) CZ11 120mm Advanced Multi-Purpose, High Explosive [1]																															
✓	1	2020	NAVY	3,057	0	3,057	-	-	-	-	-	1,000	1,000	1,000	57																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	

Exhibit P-21, Production Schedule: PB 2020 Navy		**Date:** March 2019
Appropriation / Budget Activity / Budget Sub Activity: 1508N / 02 / 1	**P-1 Line Item Number / Title:** 1125 / Direct Support Munitions	**Item Number / Title [DODIC]:** 1 / 120 MM, All Types

MFR Ref #	Manufacturer Name - Location	Production Rates (Each / Year)			Procurement Leadtime (Months)							
					Initial				Reorder			
		MSR For 2020	1-8-5 For 2020	MAX For 2020	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	ALLIANT TECH SYS INC - PLYMOUTH, MN			TBD	24	0	24	24	24	0	24	24

"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).

Exhibit P-5, Cost Analysis: PB 2020 Navy		Date: March 2019
Appropriation / Budget Activity / Budget Sub Activity: 1508N / 02 / 1	P-1 Line Item Number / Title: 1125 / Direct Support Munitions	Item Number / Title [DODIC]: 2 / Rockets, All Types
ID Code (A=Service Ready, B=Not Service Ready) :	MDAP/MAIS Code:	

Resource Summary	Prior Years	FY 2018	FY 2019	FY 2020 Base	FY 2020 OCO	FY 2020 Total
Procurement Quantity *(Units in Each)*	-	-	-	-	-	-
Gross/Weapon System Cost *($ in Millions)*	0.000	40.500	62.631	0.000	101.884	101.884
Less PY Advance Procurement *($ in Millions)*	-	-	-	-	-	-
Net Procurement (P-1) *($ in Millions)*	0.000	40.500	62.631	0.000	101.884	101.884
Plus CY Advance Procurement *($ in Millions)*	-	-	-	-	-	-
Total Obligation Authority *($ in Millions)*	**0.000**	**40.500**	**62.631**	**0.000**	**101.884**	**101.884**
(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 2018			FY 2019			FY 2020 Base			FY 2020 OCO			FY 2020 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 - HB25 ROCKET 66M ANTI-STRUCTURE LAW FFE Cost																		
Recurring Cost																		
1.1.1) HB25 COMPLETE ROUND(†)	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000	9,097.63	2,967	26.993	9,097.63	2,967	26.993
1.1.2) HB25 PRODUCTION ENGINEERING	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.007	-	-	0.007
Subtotal: Recurring Cost	-	-	*0.000*	-	-	*0.000*	-	-	*0.000*	-	-	*0.000*	-	-	*27.000*	-	-	*27.000*
Subtotal: Hardware - HB25 ROCKET 66M ANTI-STRUCTURE LAW FFE Cost	**-**	**-**	***0.000***	**-**	**-**	***0.000***	**-**	**-**	***0.000***	**-**	**-**	***0.000***	**-**	**-**	***27.000***	**-**	**-**	***27.000***
Hardware - HB26 ROCKET 66MM HE ANTI ARMOR Cost																		
Recurring Cost																		
2.1.1) HB26 COMPLETE ROUND(†)	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000	8,832.65	1,358	11.995	8,832.65	1,358	11.995
2.1.2) PRODUCTION ENGINEERING	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.005	-	-	0.005
Subtotal: Recurring Cost	-	-	*0.000*	-	-	*0.000*	-	-	*0.000*	-	-	*0.000*	-	-	*12.000*	-	-	*12.000*
Subtotal: Hardware - HB26 ROCKET 66MM HE ANTI ARMOR Cost	**-**	**-**	***0.000***	**-**	**-**	***0.000***	**-**	**-**	***0.000***	**-**	**-**	***0.000***	**-**	**-**	***12.000***	**-**	**-**	***12.000***
Hardware - HX07 ROCKET, 83MM HEAA PRACTICE Cost																		
Recurring Cost																		

Exhibit P-5, Cost Analysis: PB 2020 Navy		Date: March 2019
Appropriation / Budget Activity / Budget Sub Activity: 1508N / 02 / 1	P-1 Line Item Number / Title: 1125 / Direct Support Munitions	Item Number / Title [DODIC]: 2 / Rockets, All Types
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 2018			FY 2019			FY 2020 Base			FY 2020 OCO			FY 2020 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)
3.1.1) HX07 COMPLETE ROUND(†)	-	-	0.000	3,543.93	10,604	37.580	3,939.14	4,600	18.120	-	-	0.000	4,077.01	2,075	8.460	4,077.01	2,075	8.460
3.1.2) PRODUCTION ENGINEERING	-	-	0.000	-	-	0.320	-	-	0.216	-	-	0.000	-	-	0.318	-	-	0.318
Subtotal: Recurring Cost	-	-	*0.000*	-	-	*37.900*	-	-	*18.336*	-	-	*0.000*	-	-	*8.778*	-	-	*8.778*
Subtotal: Hardware - HX07 ROCKET, 83MM HEAA PRACTICE Cost	**-**	**-**	***0.000***	**-**	**-**	***37.900***	**-**	**-**	***18.336***	**-**	**-**	***0.000***	**-**	**-**	***8.778***	**-**	**-**	***8.778***
Hardware - CA30 ROCKET 84MM CONFINED SPACE (AT4) Cost																		
Recurring Cost																		
4.1.1) CA30 COMPLETE ROUND(†)	-	-	0.000	-	-	0.000	4,428.83	3,917	17.348	-	-	0.000	4,507.80	3,513	15.836	4,507.80	3,513	15.836
4.1.2) PRODUCTION ENGINEERING	-	-	0.000	-	-	0.000	-	-	0.216	-	-	0.000	-	-	0.164	-	-	0.164
Subtotal: Recurring Cost	-	-	*0.000*	-	-	*0.000*	-	-	*17.564*	-	-	*0.000*	-	-	*16.000*	-	-	*16.000*
Subtotal: Hardware - CA30 ROCKET 84MM CONFINED SPACE (AT4) Cost	**-**	**-**	***0.000***	**-**	**-**	***0.000***	**-**	**-**	***17.564***	**-**	**-**	***0.000***	**-**	**-**	***16.000***	**-**	**-**	***16.000***
Hardware - A254 CTG 7.62MM TR ADAPTR CARL GUSTAF Cost																		
Recurring Cost																		
5.1.1) A254 COMPLETE ROUND(†)	-	-	0.000	-	-	0.000	2.63	113,800	0.299	-	-	0.000	2.68	155,450	0.417	2.68	155,450	0.417
Subtotal: Recurring Cost	-	-	*0.000*	-	-	*0.000*	-	-	*0.299*	-	-	*0.000*	-	-	*0.417*	-	-	*0.417*
Subtotal: Hardware - A254 CTG 7.62MM TR ADAPTR CARL GUSTAF Cost	**-**	**-**	***0.000***	**-**	**-**	***0.000***	**-**	**-**	***0.299***	**-**	**-**	***0.000***	**-**	**-**	***0.417***	**-**	**-**	***0.417***
Hardware - C385 CTG, 84MM, SMOKE Cost																		
Recurring Cost																		
6.1.1) C385 COMPLETE ROUND(†) (4)	-	-	0.000	-	-	0.000	4,108.56	724	2.975	-	-	0.000	4,190.73	981	4.111	4,190.73	981	4.111
6.1.2) PRODUCTION ENGINEERING	-	-	0.000	-	-	0.000	-	-	0.003	-	-	0.000	-	-	0.003	-	-	0.003
Subtotal: Recurring Cost	-	-	*0.000*	-	-	*0.000*	-	-	*2.978*	-	-	*0.000*	-	-	*4.114*	-	-	*4.114*
Subtotal: Hardware - C385 CTG, 84MM, SMOKE Cost	**-**	**-**	***0.000***	**-**	**-**	***0.000***	**-**	**-**	***2.978***	**-**	**-**	***0.000***	**-**	**-**	***4.114***	**-**	**-**	***4.114***
Hardware - CA10 CTG 84MM TPT ROUND Cost																		

Exhibit P-5, Cost Analysis: PB 2020 Navy		Date: March 2019
Appropriation / Budget Activity / Budget Sub Activity: 1508N / 02 / 1	P-1 Line Item Number / Title: 1125 / Direct Support Munitions	Item Number / Title [DODIC]: 2 / Rockets, All Types
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 2018			FY 2019			FY 2020 Base			FY 2020 OCO			FY 2020 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)
Recurring Cost																		
7.1.1) CA10 COMPLETE ROUND(†)	-	-	0.000	-	-	0.000	1,434.12	2,961	4.246	-	-	0.000	1,461.87	4,110	6.008	1,461.87	4,110	6.008
7.1.2) PRODUCTION ENGINEERING	-	-	0.000	-	-	0.000	-	-	0.304	-	-	0.000	-	-	0.278	-	-	0.278
Subtotal: Recurring Cost	-	-	*0.000*	-	-	*0.000*	-	-	*4.550*	-	-	*0.000*	-	-	*6.286*	-	-	*6.286*
Subtotal: Hardware - CA10 CTG 84MM TPT ROUND Cost	**-**	**-**	***0.000***	**-**	**-**	***0.000***	**-**	**-**	***4.550***	**-**	**-**	***0.000***	**-**	**-**	***6.286***	**-**	**-**	***6.286***
Hardware - CA20 CTG 84MM HE AT (HEAT) Cost																		
Recurring Cost																		
8.1.1) CA20 COMPLETE ROUND(†)	-	-	0.000	-	-	0.000	4,108.56	655	2.691	-	-	0.000	4,190.73	887	3.717	4,190.73	887	3.717
8.1.2) PRODUCTION ENGINEERING	-	-	0.000	-	-	0.000	-	-	0.002	-	-	0.000	-	-	0.003	-	-	0.003
Subtotal: Recurring Cost	-	-	*0.000*	-	-	*0.000*	-	-	*2.693*	-	-	*0.000*	-	-	*3.720*	-	-	*3.720*
Subtotal: Hardware - CA20 CTG 84MM HE AT (HEAT) Cost	**-**	**-**	***0.000***	**-**	**-**	***0.000***	**-**	**-**	***2.693***	**-**	**-**	***0.000***	**-**	**-**	***3.720***	**-**	**-**	***3.720***
Hardware - CA21 CTG 84MM HEDP Cost																		
Recurring Cost																		
9.1.1) CA21 COMPLETE ROUND(†)	-	-	0.000	4,088.36	317	1.296	4,171.80	539	2.249	-	-	0.000	4,255.22	782	3.328	4,255.22	782	3.328
9.1.2) PRODUCTION ENGINEERING	-	-	0.000	-	-	0.004	-	-	0.162	-	-	0.000	-	-	0.003	-	-	0.003
Subtotal: Recurring Cost	-	-	*0.000*	-	-	*1.300*	-	-	*2.411*	-	-	*0.000*	-	-	*3.331*	-	-	*3.331*
Subtotal: Hardware - CA21 CTG 84MM HEDP Cost	**-**	**-**	***0.000***	**-**	**-**	***1.300***	**-**	**-**	***2.411***	**-**	**-**	***0.000***	**-**	**-**	***3.331***	**-**	**-**	***3.331***
Hardware - CA27 CTG 84MM M3 HE FFV Cost																		
Recurring Cost																		
10.1.1) CA27 COMPLETE ROUND(†)	-	-	0.000	4,026.78	322	1.297	4,108.56	570	2.342	-	-	0.000	4,188.06	1,106	4.632	4,188.06	1,106	4.632
10.1.2) PRODUCTION ENGINEERING	-	-	0.000	-	-	0.003	-	-	0.168	-	-	0.000	-	-	0.008	-	-	0.008
Subtotal: Recurring Cost	-	-	*0.000*	-	-	*1.300*	-	-	*2.510*	-	-	*0.000*	-	-	*4.640*	-	-	*4.640*

Exhibit P-5, Cost Analysis: PB 2020 Navy		Date: March 2019
Appropriation / Budget Activity / Budget Sub Activity: 1508N / 02 / 1	P-1 Line Item Number / Title: 1125 / Direct Support Munitions	Item Number / Title [DODIC]: 2 / Rockets, All Types
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 2018			FY 2019			FY 2020 Base			FY 2020 OCO			FY 2020 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)
Subtotal: Hardware - CA27 CTG 84MM M3 HE FFV Cost	**-**	**-**	***0.000***	**-**	**-**	***1.300***	**-**	**-**	***2.510***	**-**	**-**	***0.000***	**-**	**-**	***4.640***	**-**	**-**	***4.640***
Hardware - CA36 CTG 84MM GUSTAF ILLUM Cost																		
Recurring Cost																		
11.1.1) CA36 COMPLETE ROUND(†)	-	-	0.000	-	-	0.000	4,108.56	1,278	5.251	-	-	0.000	4,190.73	1,731	7.254	4,190.73	1,731	7.254
11.1.2) PRODUCTION ENGINEERING	-	-	0.000	-	-	0.000	-	-	0.001	-	-	0.000	-	-	0.002	-	-	0.002
Subtotal: Recurring Cost	-	-	*0.000*	-	-	*0.000*	-	-	*5.252*	-	-	*0.000*	-	-	*7.256*	-	-	*7.256*
Subtotal: Hardware - CA36 CTG 84MM GUSTAF ILLUM Cost	**-**	**-**	***0.000***	**-**	**-**	***0.000***	**-**	**-**	***5.252***	**-**	**-**	***0.000***	**-**	**-**	***7.256***	**-**	**-**	***7.256***
Hardware - CA41 CTG 84MM ANTI-STRUCTURE MUNITION Cost																		
Recurring Cost																		
12.1.1) CA41 COMPLETE ROUND(†)	-	-	0.000	-	-	0.000	4,108.56	1,095	4.499	-	-	0.000	4,190.73	1,483	6.215	4,190.73	1,483	6.215
12.1.2) PRODUCTION ENGINEERING	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.001	-	-	0.001
Subtotal: Recurring Cost	-	-	*0.000*	-	-	*0.000*	-	-	*4.499*	-	-	*0.000*	-	-	*6.216*	-	-	*6.216*
Subtotal: Hardware - CA41 CTG 84MM ANTI-STRUCTURE MUNITION Cost	**-**	**-**	***0.000***	**-**	**-**	***0.000***	**-**	**-**	***4.499***	**-**	**-**	***0.000***	**-**	**-**	***6.216***	**-**	**-**	***6.216***
Hardware - CA51 CTG 84MM CARL GUSTAF MULTI-TARGET Cost																		
Recurring Cost																		
13.1.1) CA51 COMPLETE ROUND(†)	-	-	0.000	-	-	0.000	4,108.56	374	1.537	-	-	0.000	4,190.73	507	2.125	4,190.73	507	2.125
13.1.2) PRODUCTION ENGINEERING	-	-	0.000	-	-	0.000	-	-	0.002	-	-	0.000	-	-	0.001	-	-	0.001
Subtotal: Recurring Cost	-	-	*0.000*	-	-	*0.000*	-	-	*1.539*	-	-	*0.000*	-	-	*2.126*	-	-	*2.126*
Subtotal: Hardware - CA51 CTG 84MM CARL GUSTAF MULTI-TARGET Cost	**-**	**-**	***0.000***	**-**	**-**	***0.000***	**-**	**-**	***1.539***	**-**	**-**	***0.000***	**-**	**-**	***2.126***	**-**	**-**	***2.126***
Gross/Weapon System Cost	**-**	**-**	**0.000**	**-**	**-**	**40.500**	**-**	**-**	**62.631**	**-**	**-**	**0.000**	**-**	**-**	**101.884**	**-**	**-**	**101.884**

Exhibit P-5, Cost Analysis: PB 2020 Navy		Date: March 2019
Appropriation / Budget Activity / Budget Sub Activity: 1508N / 02 / 1	**P-1 Line Item Number / Title:** 1125 / Direct Support Munitions	**Item Number / Title [DODIC]:** 2 / Rockets, All Types
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	

(†) indicates the presence of a P-5a

Footnotes:

(4) C384 was previously mis-identified for procurement and has now been corrected to C385, 84MM Smoke round.

Exhibit P-5a, Procurement History and Planning: PB 2020 Navy		Date: March 2019
Appropriation / Budget Activity / Budget Sub Activity: 1508N / 02 / 1	P-1 Line Item Number / Title: 1125 / Direct Support Munitions	Item Number / Title [DODIC]: 2 / Rockets, All Types

Cost Elements	OCO	FY	Contractor and Location	Method/Type or Funding Vehicle	Location of PCO	Award Date	Date of First Delivery	Qty (Each)	Unit Cost ($)	Specs Avail Now?	Date Revision Available	RFP Issue Date
1.1.1) HB25 COMPLETE ROUND(†)	✓	2020	TBD / TBD	C / TBD	PICATINNY ARSENAL, NJ	Mar 2020	Mar 2021	2,967	9,097.63	Y		
2.1.1) HB26 COMPLETE ROUND(†)	✓	2020	TBD / TBD	C / TBD	PICATINNY ARSENAL, NJ	Mar 2020	Mar 2021	1,358	8,832.65	Y		
3.1.1) HX07 COMPLETE ROUND(†)		2018	NAMMO Talley Defense Systems / Mesa, AZ	C / FFP	Picatinny Arsenal, NJ	Mar 2018	Jul 2020	10,222	3,543.93	Y		
3.1.1) HX07 COMPLETE ROUND(†)	✓	2018	NAMMO Talley Defense Systems / Mesa, AZ	C / FFP	Picatinny Arsenal, NJ	Mar 2018	Jul 2020	382	3,543.93	Y		
3.1.1) HX07 COMPLETE ROUND(†)		2019	NAMMO Talley Defense Systems / Mesa, AZ	C / FFP	Picatinny Arsenal, NJ	Mar 2019	Jul 2021	4,600	3,939.14	Y		
3.1.1) HX07 COMPLETE ROUND(†)	✓	2020	NAMMO Talley Defense Systems / Mesa, AZ	C / FFP	Picatinny Arsenal, NJ	Mar 2020	Jul 2022	2,075	4,077.01	Y		
4.1.1) CA30 COMPLETE ROUND(†)		2019	TO BE SELECTED / TBD	C / FFP	PICATINNY ARSENAL, NJ	Mar 2019	Sep 2020	3,775	4,428.83	Y		
4.1.1) CA30 COMPLETE ROUND(†)	✓	2019	TO BE SELECTED / TBD	C / FFP	PICATINNY ARSENAL, NJ	Mar 2019	Sep 2020	142	4,428.83	Y		
4.1.1) CA30 COMPLETE ROUND(†)	✓	2020	TO BE SELECTED / TBD	C / FFP	PICATINNY ARSENAL, NJ	Mar 2020	Sep 2021	3,513	4,507.80	Y		
5.1.1) A254 COMPLETE ROUND		2019	SAAB DYNAMAMICS AB@KARLSKOGA, SWEDEN / Kalskga, Sweeden	C / FFP	PICATINNY ARSENAL, NJ	Mar 2019	Jun 2020	113,800	2.63	Y		
5.1.1) A254 COMPLETE ROUND	✓	2020	SAAB DYNAMAMICS AB@KARLSKOGA, SWEDEN / Kalskga, Sweeden	C / FFP	PICATINNY ARSENAL, NJ	Mar 2020	Mar 2021	155,450	2.68	Y		
6.1.1) C385 COMPLETE ROUND		2019	SAAB DYNAMAMICS AB / KARLSKOGA, SWEDEN	C / FFP	PICATINNY ARSENAL, NJ	May 2019	Aug 2020	724	4,108.56	Y		
6.1.1) C385 COMPLETE ROUND	✓	2020	SAAB DYNAMAMICS AB / KARLSKOGA, SWEDEN	C / FFP	PICATINNY ARSENAL, NJ	May 2020	May 2021	981	4,190.73	Y		
7.1.1) CA10 COMPLETE ROUND(†)		2019	SAAB DYNAMAMICS AB / KARLSKOGA, SWEDEN	C / FFP	PICATINNY ARSENAL, NJ	Mar 2019	Mar 2020	2,961	1,434.12	Y		
7.1.1) CA10 COMPLETE ROUND(†)	✓	2020	SAAB DYNAMAMICS AB / KARLSKOGA, SWEDEN	C / FFP	PICATINNY ARSENAL, NJ	Mar 2020	Mar 2021	4,110	1,461.87	Y		
8.1.1) CA20 COMPLETE ROUND		2019	SAAB DYNAMAMICS AB / KARLSKOGA, SWEDEN	C / FFP	PICATINNY ARSENAL, NJ	May 2019	Aug 2020	655	4,108.56	Y		
8.1.1) CA20 COMPLETE ROUND	✓	2020	SAAB DYNAMAMICS AB / KARLSKOGA, SWEDEN	C / FFP	PICATINNY ARSENAL, NJ	May 2020	May 2021	887	4,190.73	Y		

Exhibit P-5a, Procurement History and Planning: PB 2020 Navy		Date: March 2019
Appropriation / Budget Activity / Budget Sub Activity: 1508N / 02 / 1	P-1 Line Item Number / Title: 1125 / Direct Support Munitions	Item Number / Title [DODIC]: 2 / Rockets, All Types

Cost Elements	OCO	FY	Contractor and Location	Method/Type or Funding Vehicle	Location of PCO	Award Date	Date of First Delivery	Qty (Each)	Unit Cost ($)	Specs Avail Now?	Date Revision Available	RFP Issue Date
9.1.1) CA21 COMPLETE ROUND		2018	SAAB DYNAMAMICS AB / KARLSKOGA, SWEDEN	C / FFP	PICATINNY ARSENAL, NJ	Jun 2018	Sep 2019	317	4,088.36	Y		
9.1.1) CA21 COMPLETE ROUND		2019	SAAB DYNAMAMICS AB / KARLSKOGA, SWEDEN	C / FFP	PICATINNY ARSENAL, NJ	Mar 2019	Mar 2020	539	4,171.80	Y		
9.1.1) CA21 COMPLETE ROUND	✓	2020	SAAB DYNAMAMICS AB / KARLSKOGA, SWEDEN	C / FFP	PICATINNY ARSENAL, NJ	Mar 2020	Mar 2021	782	4,255.22	Y		
10.1.1) CA27 COMPLETE ROUND(†)		2018	SAAB DYNAMAMICS AB / KARLSKOGA, SWEDEN	C / FFP	PICATINNY ARSENAL, NJ	Jun 2018	Sep 2019	322	4,026.78	Y		
10.1.1) CA27 COMPLETE ROUND(†)		2019	SAAB DYNAMAMICS AB / KARLSKOGA, SWEDEN	C / FFP	PICATINNY ARSENAL, NJ	May 2019	Aug 2020	570	4,108.56	Y		
10.1.1) CA27 COMPLETE ROUND(†)	✓	2020	SAAB DYNAMAMICS AB / KARLSKOGA, SWEDEN	C / FFP	PICATINNY ARSENAL, NJ	May 2020	May 2021	1,106	4,188.06	Y		
11.1.1) CA36 COMPLETE ROUND(†)		2019	SAAB DYNAMAMICS AB / KARLSKOGA, SWEDEN	C / FFP	PICATINNY ARSENAL, NJ	May 2019	Aug 2020	1,278	4,108.56	Y		
11.1.1) CA36 COMPLETE ROUND(†)	✓	2020	SAAB DYNAMAMICS AB / KARLSKOGA, SWEDEN	C / FFP	PICATINNY ARSENAL, NJ	May 2020	May 2021	1,731	4,190.73	Y		
12.1.1) CA41 COMPLETE ROUND(†)		2019	SAAB DYNAMAMICS AB / KARLSKOGA, SWEDEN	C / FFP	PICATINNY ARSENAL, NJ	May 2019	Aug 2020	1,095	4,108.56	Y		
12.1.1) CA41 COMPLETE ROUND(†)	✓	2020	SAAB DYNAMAMICS AB / KARLSKOGA, SWEDEN	C / FFP	PICATINNY ARSENAL, NJ	May 2020	May 2021	1,483	4,190.73	Y		
13.1.1) CA51 COMPLETE ROUND		2019	SAAB DYNAMAMICS AB / KARLSKOGA, SWEDEN	C / FFP	PICATINNY ARSENAL, NJ	May 2019	Aug 2020	374	4,108.56	Y		
13.1.1) CA51 COMPLETE ROUND	✓	2020	SAAB DYNAMAMICS AB / KARLSKOGA, SWEDEN	C / FFP	PICATINNY ARSENAL, NJ	May 2020	May 2021	507	4,190.73	Y		

(†) indicates the presence of a P-21

Exhibit P-21, Production Schedule: PB 2020 Navy | **Date:** March 2019

Appropriation / Budget Activity / Budget Sub Activity: 1508N / 02 / 1 | **P-1 Line Item Number / Title:** 1125 / Direct Support Munitions | **Item Number / Title [DODIC]:** 2 / Rockets, All Types

Cost Elements (Units in Thousands)							Fiscal Year 2018												Fiscal Year 2019												BALANCE
										Calendar Year 2018												Calendar Year 2019									
OCO	MFR #	FY	SERVICE	PROC QTY	ACCEPT PRIOR TO 1 OCT 2017	BAL DUE AS OF 1 OCT	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	
1.1.1) HB25 COMPLETE ROUND																															
✓	1	2020	NAVY	2.967	.000	2.967																									2.967
2.1.1) HB26 COMPLETE ROUND																															
✓	2	2020	NAVY	1.358	.000	1.358																									1.358
3.1.1) HX07 COMPLETE ROUND																															
	3	2018	NAVY	10.222	.000	10.222						A -	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	10.222
✓	3	2018	NAVY	.382	.000	.382						A -	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	.382
	3	2019	NAVY	4.600	.000	4.600																		A -	-	-	-	-	-	-	4.600
✓	3	2020	NAVY	2.075	.000	2.075																									2.075
4.1.1) CA30 COMPLETE ROUND																															
	4	2019	NAVY	3.775	.000	3.775																		A -	-	-	-	-	-	-	3.775
✓	4	2019	NAVY	.142	.000	.142																		A -	-	-	-	-	-	-	.142
✓	4	2020	NAVY	3.513	.000	3.513																									3.513
7.1.1) CA10 COMPLETE ROUND																															
	5	2019	NAVY	2.961	.000	2.961																		A -	-	-	-	-	-	-	2.961
✓	5	2020	NAVY	4.110	.000	4.110																									4.110
10.1.1) CA27 COMPLETE ROUND																															
	6	2018	NAVY	.322	.000	.322									A -	-	-	-	-	-	-	-	-	-	-	-	-	-	-	.322	.000
	6	2019	NAVY	.570	.000	.570																				A -	-	-	-	-	.570
✓	6	2020	NAVY	1.106	.000	1.106																									1.106
11.1.1) CA36 COMPLETE ROUND																															
	7	2019	NAVY	1.278	.000	1.278																				A -	-	-	-	-	1.278
✓	7	2020	NAVY	1.731	.000	1.731																									1.731
12.1.1) CA41 COMPLETE ROUND																															
	8	2019	NAVY	1.095	.000	1.095																				A -	-	-	-	-	1.095
✓	8	2020	NAVY	1.483	.000	1.483																									1.483
							OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	

Exhibit P-21, Production Schedule: PB 2020 Navy | **Date:** March 2019

Appropriation / Budget Activity / Budget Sub Activity: 1508N / 02 / 1 | **P-1 Line Item Number / Title:** 1125 / Direct Support Munitions | **Item Number / Title [DODIC]:** 2 / Rockets, All Types

Cost Elements (Units in Thousands)							Fiscal Year 2020												Fiscal Year 2021												BALANCE
							Calendar Year 2020												Calendar Year 2021												
OCO	MFR #	FY	SERVICE	PROC QTY	ACCEPT PRIOR TO 1 OCT 2019	BAL DUE AS OF 1 OCT	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	
1.1.1) HB25 COMPLETE ROUND																															
✓	1	2020	NAVY	2.967	.000	2.967						A -	-	-	-	-	-	-	-	-	-	-	-	.300	.300	.300	.300	.300	.300	.300	.867
2.1.1) HB26 COMPLETE ROUND																															
✓	2	2020	NAVY	1.358	.000	1.358						A -	-	-	-	-	-	-	-	-	-	-	-	.300	.300	.300	.300	.158			.000
3.1.1) HX07 COMPLETE ROUND																															
	3	2018	NAVY	10.222	.000	10.222	-	-	-	-	-	-	-	-	-	1.047	1.046	1.046	1.046	1.046	1.046	1.046	1.046	.788	-	1.028	.037				.000
✓	3	2018	NAVY	.382	.000	.382	-	-	-	-	-	-	-	-	-	.225	.157														.000
	3	2019	NAVY	4.600	.000	4.600	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1.010	1.010	1.010	1.570
✓	3	2020	NAVY	2.075	.000	2.075						A -	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2.075
4.1.1) CA30 COMPLETE ROUND																															
	4	2019	NAVY	3.775	.000	3.775	-	-	-	-	-	-	-	-	-	-	-	3.775													.000
✓	4	2019	NAVY	.142	.000	.142	-	-	-	-	-	-	-	-	-	-	-	.142													.000
✓	4	2020	NAVY	3.513	.000	3.513						A -	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	.300	3.213
7.1.1) CA10 COMPLETE ROUND																															
	5	2019	NAVY	2.961	.000	2.961	-	-	-	-	-	2.961																			.000
✓	5	2020	NAVY	4.110	.000	4.110						A -	-	-	-	-	-	-	-	-	-	-	-	3.000	1.110						.000
10.1.1) CA27 COMPLETE ROUND																															
	6	2018	NAVY	.322	.322	.000																									.000
	6	2019	NAVY	.570	.000	.570	-	-	-	-	-	-	-	-	-	-	.285	.285													.000
✓	6	2020	NAVY	1.106	.000	1.106								A -	-	-	-	-	-	-	-	-	-	-	-	.562	.254	.290			.000
11.1.1) CA36 COMPLETE ROUND																															
	7	2019	NAVY	1.278	.000	1.278	-	-	-	-	-	-	-	-	-	-	.300	.300	.300	.300	.078										.000
✓	7	2020	NAVY	1.731	.000	1.731								A -	-	-	-	-	-	-	-	-	-	-	-	.300	.300	.300	.300	.300	.231
12.1.1) CA41 COMPLETE ROUND																															
	8	2019	NAVY	1.095	.000	1.095	-	-	-	-	-	-	-	-	-	-	1.095														.000
✓	8	2020	NAVY	1.483	.000	1.483								A -	-	-	-	-	-	-	-	-	-	-	-	1.483					.000
							OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	

Exhibit P-21, Production Schedule: PB 2020 Navy | **Date:** March 2019

Appropriation / Budget Activity / Budget Sub Activity: 1508N / 02 / 1 | **P-1 Line Item Number / Title:** 1125 / Direct Support Munitions | **Item Number / Title [DODIC]:** 2 / Rockets, All Types

Cost Elements (Units in Thousands)							Fiscal Year 2022												Fiscal Year 2023												BALANCE
							Calendar Year 2022												Calendar Year 2023												
OCO	MFR #	FY	SERVICE	PROC QTY	ACCEPT PRIOR TO 1 OCT 2021	BAL DUE AS OF 1 OCT	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	
1.1.1) HB25 COMPLETE ROUND																															
✓	1	2020	NAVY	2.967	2.100	.867	.300	.300	.267																						.000
2.1.1) HB26 COMPLETE ROUND																															
✓	2	2020	NAVY	1.358	1.358	.000																									.000
3.1.1) HX07 COMPLETE ROUND																															
	3	2018	NAVY	10.222	10.222	.000																									.000
✓	3	2018	NAVY	.382	.382	.000																									.000
	3	2019	NAVY	4.600	3.030	1.570	1.010	.560																							.000
✓	3	2020	NAVY	2.075	.000	2.075	-	-	-	-	-	-	-	-	-	1.000	1.010	.065													.000
4.1.1) CA30 COMPLETE ROUND																															
	4	2019	NAVY	3.775	3.775	.000																									.000
✓	4	2019	NAVY	.142	.142	.000																									.000
✓	4	2020	NAVY	3.513	.300	3.213	.300	.300	.300	.300	.300	.300	.300	.300	.300	.300	.213														.000
7.1.1) CA10 COMPLETE ROUND																															
	5	2019	NAVY	2.961	2.961	.000																									.000
✓	5	2020	NAVY	4.110	4.110	.000																									.000
10.1.1) CA27 COMPLETE ROUND																															
	6	2018	NAVY	.322	.322	.000																									.000
	6	2019	NAVY	.570	.570	.000																									.000
✓	6	2020	NAVY	1.106	1.106	.000																									.000
11.1.1) CA36 COMPLETE ROUND																															
	7	2019	NAVY	1.278	1.278	.000																									.000
✓	7	2020	NAVY	1.731	1.500	.231	.231																								.000
12.1.1) CA41 COMPLETE ROUND																															
	8	2019	NAVY	1.095	1.095	.000																									.000
✓	8	2020	NAVY	1.483	1.483	.000																									.000
							OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	

Exhibit P-21, Production Schedule: PB 2020 Navy		Date: March 2019
Appropriation / Budget Activity / Budget Sub Activity: 1508N / 02 / 1	**P-1 Line Item Number / Title:** 1125 / Direct Support Munitions	**Item Number / Title [DODIC]:** 2 / Rockets, All Types

MFR Ref #	Manufacturer Name - Location	Production Rates (Each / Year)			Procurement Leadtime (Months)							
					Initial				Reorder			
		MSR For 2020	1-8-5 For 2020	MAX For 2020	ALT Prior to Oct 1	ALT After Oct 1	Manufacturing PLT	Total After Oct 1	ALT Prior to Oct 1	ALT After Oct 1	Manufacturing PLT	Total After Oct 1
1	TBD - TBD	3,000	6,000	12,000	8	8	12	20	8	8	12	20
2	TBD - TBD	3,000	6,000	12,000	8	8	12	20	8	8	12	20
3	NAMMO Talley Defense Systems - Mesa, AZ	1,000	2,500	12,000	8	8	31	39	6	6	28	34
4	TO BE SELECTED - TBD	500	5,000	7,000	8	8	24	32	6	6	18	24
5	SAAB DYNAMAMICS AB - KARLSKOGA, SWEDEN	10,000	30,000	50,000	8	8	15	23	6	6	12	18
6	SAAB DYNAMAMICS AB - KARLSKOGA, SWEDEN	10,000	30,000	50,000	8	8	15	23	6	6	12	18
7	SAAB DYNAMAMICS AB - KARLSKOGA, SWEDEN	10,000	30,000	50,000	8	8	15	23	6	6	12	18
8	SAAB DYNAMAMICS AB - KARLSKOGA, SWEDEN	10,000	30,000	50,000	8	8	15	23	6	6	12	18

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

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

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Exhibit P-40, Budget Line Item Justification: PB 2020 Navy	Date: March 2019
Appropriation / Budget Activity / Budget Sub Activity: 1508N: Procurement of Ammo, Navy & MC / BA 02: Proc Ammo, MC / BSA 1: Marine Corps Ammunition	**P-1 Line Item Number / Title:** 1350 / Infantry Weapons Ammunition

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

Line Item MDAP/MAIS Code: N/A

Resource Summary	Prior Years	FY 2018	FY 2019	FY 2020 Base	FY 2020 OCO	FY 2020 Total	FY 2021	FY 2022	FY 2023	FY 2024	To Complete	Total
Procurement Quantity *(Units in Each)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost *($ in Millions)*	0.000	89.196	55.474	0.000	80.214	80.214	115.164	157.858	101.929	104.033	Continuing	Continuing
Less PY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) *($ in Millions)*	0.000	89.196	55.474	0.000	80.214	80.214	115.164	157.858	101.929	104.033	Continuing	Continuing
Plus CY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority *($ in Millions)*	**0.000**	**89.196**	**55.474**	**0.000**	**80.214**	**80.214**	**115.164**	**157.858**	**101.929**	**104.033**	**Continuing**	**Continuing**
(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)*	-	-	-	-	-	-	-	-	-	-	-	-

Description:

FY 2020 funding totals include $0.0M for Base and $80.214M for Overseas Contingency Operations (OCO); of which $78.056M is realigned as part of the OCO for Base Requirements. FY 2020 OCO for Base Requirements is OCO funding for base budget requirements in support of the National Defense Strategy. The Budget requests these funds in OCO to comply with the base budget defense caps included in the Budget Control Act of 2011.

Beginning in FY 2018 this budget request represents a consolidation of ammunition line items by functional capability.

This line includes small arms ammunition and medium caliber ammunition.

Small arms ammunition is a cartridge or a family of cartridges intended to be used in various types of crew-served/mounted weapons, hand-held pistols, or shoulder fired rifles; ranging from .22 caliber to .50 caliber weapons. A small arms cartridge is an assembly consisting of a cartridge case, a primer, a quantity of propellant, and a bullet. Small arms ammunition consists primarily of 9mm ammunition, 5.56mm ammunition, 7.62mm ammunition, 12 gauge shotgun ammunition, .45 caliber ammunition, and .50 caliber ammunition.

Medium caliber ammunition is a cartridge or family of cartridges larger than .50cal, but smaller than 60mm and supports a variety of crew-served/mounted weapons, hand-held 40mm grenade launchers, and Light Armored Vehicle weapon systems. Medium caliber ammunition consists primarily of 25mm, 30mm, and 40mm cartridges.

The funds prior to FY 2018 are contained in line items 1000, 1050, and 1388.

Exhibit P-40, Budget Line Item Justification: PB 2020 Navy	Date: March 2019
Appropriation / Budget Activity / Budget Sub Activity: 1508N: Procurement of Ammo, Navy & MC / BA 02: Proc Ammo, MC / BSA 1: Marine Corps Ammunition	**P-1 Line Item Number / Title:** 1350 / Infantry Weapons Ammunition

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 2018	FY 2019	FY 2020 Base	FY 2020 OCO	FY 2020 Total
Exhibit Type	Title*	Subexhibits	ID CD	MDAP/ MAIS Code	Quantity / Total Cost (Each) / ($ M)	Quantity / Total Cost (Each) / ($ M)	Quantity / Total Cost (Each) / ($ M)	Quantity / Total Cost (Each) / ($ M)	Quantity / Total Cost (Each) / ($ M)	Quantity / Total Cost (Each) / ($ M)
P-5	1 / CTG, 40 MM, All Types	P-5a, P-21			- / 0.000	- / 14.282	- / 3.675	- / 0.000	- / 29.212	- / 29.212
P-5	2 / CTG, 25 MM, All Types	P-5a			- / 0.000	- / 3.285	- / 0.000	- / 0.000	- / 0.800	- / 0.800
P-5	3 / Small Arms Ammunition	P-5a, P-21			- / 0.000	- / 71.629	- / 51.799	- / 0.000	- / 49.702	- / 49.702
P-5	4 / CTG, 30 MM, All Types	P-5a			- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 0.500	- / 0.500
P-40	**Total Gross/Weapon System Cost**				**- / 0.000**	**- / 89.196**	**- / 55.474**	**- / 0.000**	**- / 80.214**	**- / 80.214**

*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 2020 OCO for baseline funding is required to replenish munitions to be expended by Marine Forces during training, preparation and rehearsals for combat engagements. The .50 caliber reduced range ammunition will be procured to address operational requirements in an urban environment and the ability to train on ranges where 7.62mm ammunition can be live-fired. Funding will also support the procurement of 5.56mm marking rounds for simulated training in an urban environment, 9mm simulated training ammunition, 9mm blank single rounds. Additionally, funding is required for 30mm Cartridges, as well as 40mm Target Practice, Day/Night Markers rounds.

The FY 2020 request also includes funding for 25mm Target Practice rounds in support of Marine Forces training. Funding will procure additional units in support of increased requirements, totaling $800k. Additionally, funding was added for 30mm HEDP and Target practice rounds to procure units in support of emerging requirements, totaling $500k.

From FY 2019 to FY 2020 the budget increases to replenish the inventory to support training requirements for 40mm Target Practice Rounds and Small Arms Ammunition.

The FY 2020 funding request was reduced by $11.529 million to account for the availability of prior year execution balances.

OCO:
FY 2020 Direct War OCO funding request will support the procurement of AC14, .50 Cal Ball MK322 Linked in support of Operation Inherent Resolve (OIR).

Exhibit P-5, Cost Analysis: PB 2020 Navy		Date: March 2019
Appropriation / Budget Activity / Budget Sub Activity: 1508N / 02 / 1	**P-1 Line Item Number / Title:** 1350 / Infantry Weapons Ammunition	**Item Number / Title [DODIC]:** 1 / CTG, 40 MM, All Types
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	

Resource Summary	Prior Years	FY 2018	FY 2019	FY 2020 Base	FY 2020 OCO	FY 2020 Total
Procurement Quantity *(Units in Each)*	-	-	-	-	-	-
Gross/Weapon System Cost *($ in Millions)*	0.000	14.282	3.675	0.000	29.212	29.212
Less PY Advance Procurement *($ in Millions)*	-	-	-	-	-	-
Net Procurement (P-1) *($ in Millions)*	0.000	14.282	3.675	0.000	29.212	29.212
Plus CY Advance Procurement *($ in Millions)*	-	-	-	-	-	-
Total Obligation Authority *($ in Millions)*	**0.000**	**14.282**	**3.675**	**0.000**	**29.212**	**29.212**
(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 2018			FY 2019			FY 2020 Base			FY 2020 OCO			FY 2020 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 - BA21, CTG, 40MM PRACTICE DAY/ NIGHT MK281 MOD3 Cost																		
Recurring Cost																		
1.1.1) BA21, 40MM PRACTICE DAY/ NIGHT MK281 MOD3 - LOAD, ASSEMBLE, AND PACK(†)	-	-	0.000	35.90	395,043	14.182	36.90	97,000	3.579	-	-	0.000	37.25	682,953	25.440	37.25	682,953	25.440
1.1.2) BA21, 40MM PRACTICE DAY/ NIGHT MK281 MOD3 - PRODUCTION ENGINEERING	-	-	0.000	-	-	0.090	-	-	0.079	-	-	0.000	-	-	0.210	-	-	0.210
1.1.3) BA21, 40MM PRACTICE DAY/ NIGHT MK281 MOD3 - QUALITY ASSURANCE	-	-	0.000	-	-	0.010	-	-	0.017	-	-	0.000	-	-	0.062	-	-	0.062
Subtotal: Recurring Cost	-	-	*0.000*	-	-	*14.282*	-	-	*3.675*	-	-	*0.000*	-	-	*25.712*	-	-	*25.712*
Subtotal: Hardware - BA21, CTG, 40MM PRACTICE DAY/ NIGHT MK281 MOD3 Cost	**-**	**-**	***0.000***	**-**	**-**	***14.282***	**-**	**-**	***3.675***	**-**	**-**	***0.000***	**-**	**-**	***25.712***	**-**	**-**	***25.712***
Hardware - BA54, CTG, 40MM PRACTICE DAY/ NIGHT/ THERMAL M781E1 Cost																		
Recurring Cost																		
2.1.1) BA54, 40MM PRACTICE DAY/ NIGHT M781E1 -	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000	12.48	195,000	2.434	12.48	195,000	2.434

Exhibit P-5, Cost Analysis: PB 2020 Navy		Date: March 2019
Appropriation / Budget Activity / Budget Sub Activity: 1508N / 02 / 1	P-1 Line Item Number / Title: 1350 / Infantry Weapons Ammunition	Item Number / Title [DODIC]: 1 / CTG, 40 MM, All Types
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 2018			FY 2019			FY 2020 Base			FY 2020 OCO			FY 2020 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)
LOAD, ASSEMBLE, AND PACK(†)																		
2.1.2) BA54, 40MM PRACTICE DAY/ NIGHT M781E1 - PRODUCTION ENGINEERING	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.495	-	-	0.495
2.1.3) BA54, 40MM PRACTICE DAY/ NIGHT M781E1 - QUALITY ASSURANCE	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.003	-	-	0.003
2.1.4) BA54, 40MM PRACTICE DAY/ NIGHT M781E1 - NONRECURRING - FAAT	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.068	-	-	0.068
Subtotal: Recurring Cost	-	-	*0.000*	-	-	*0.000*	-	-	*0.000*	-	-	*0.000*	-	-	*3.000*	-	-	*3.000*
Subtotal: Hardware - BA54, CTG, 40MM PRACTICE DAY/ NIGHT/ THERMAL M781E1 Cost	**-**	**-**	***0.000***	**-**	**-**	***0.000***	**-**	**-**	***0.000***	**-**	**-**	***0.000***	**-**	**-**	***3.000***	**-**	**-**	***3.000***
Hardware - B550, CTG, 40MM Saluting Cost																		
Recurring Cost																		
4.1.1) B550, 40MM SALUTING - LOAD, ASSEMBLE, AND PACK	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.500	-	-	0.500
Subtotal: Recurring Cost	-	-	*0.000*	-	-	*0.000*	-	-	*0.000*	-	-	*0.000*	-	-	*0.500*	-	-	*0.500*
Subtotal: Hardware - B550, CTG, 40MM Saluting Cost	**-**	**-**	***0.000***	**-**	**-**	***0.000***	**-**	**-**	***0.000***	**-**	**-**	***0.000***	**-**	**-**	***0.500***	**-**	**-**	***0.500***
Gross/Weapon System Cost	**-**	**-**	**0.000**	**-**	**-**	**14.282**	**-**	**-**	**3.675**	**-**	**-**	**0.000**	**-**	**-**	**29.212**	**-**	**-**	**29.212**

(†) indicates the presence of a P-5a

Exhibit P-5a, Procurement History and Planning: PB 2020 Navy		Date: March 2019
Appropriation / Budget Activity / Budget Sub Activity: 1508N / 02 / 1	P-1 Line Item Number / Title: 1350 / Infantry Weapons Ammunition	Item Number / Title [DODIC]: 1 / CTG, 40 MM, All Types

Cost Elements	OCO	FY	Contractor and Location	Method/Type or Funding Vehicle	Location of PCO	Award Date	Date of First Delivery	Qty (Each)	Unit Cost ($)	Specs Avail Now?	Date Revision Available	RFP Issue Date
1.1.1) BA21, 40MM PRACTICE DAY/ NIGHT MK281 MOD3 - LOAD, ASSEMBLE, AND PACK(†)		2018	AMERICAN RHEINMETALL MUNITIONS / CAMDEN, AR	SS / IDIQ	MCSC, QUANTICO, VA	Sep 2018	Sep 2019	372,870	35.90	Y		May 2018
1.1.1) BA21, 40MM PRACTICE DAY/ NIGHT MK281 MOD3 - LOAD, ASSEMBLE, AND PACK(†)	✓	2018	AMERICAN RHEINMETALL MUNITIONS / CAMDEN, AR	SS / IDIQ	MCSC, QUANTICO, VA	Sep 2018	Sep 2019	22,173	35.90	Y		May 2018
1.1.1) BA21, 40MM PRACTICE DAY/ NIGHT MK281 MOD3 - LOAD, ASSEMBLE, AND PACK(†)		2019	AMERICAN RHEINMETALL MUNITIONS / CAMDEN, AR	SS / IDIQ	MCSC, QUANTICO, VA	Apr 2019	Apr 2020	97,000	36.90	Y		Jan 2019
1.1.1) BA21, 40MM PRACTICE DAY/ NIGHT MK281 MOD3 - LOAD, ASSEMBLE, AND PACK(†)	✓	2020	AMERICAN RHEINMETALL MUNITIONS / CAMDEN, AR	SS / IDIQ	MCSC, QUANTICO, VA	Apr 2020	Apr 2021	682,953	37.25	Y		Jan 2020
2.1.1) BA54, 40MM PRACTICE DAY/ NIGHT M781E1 - LOAD, ASSEMBLE, AND PACK(†)	✓	2020	GENERAL DYNAMICS OTS / MARION, IL	C / FFP	PICATINNY ARSENAL, NJ	Mar 2020	Jul 2021	195,000	12.48	Y		Jan 2020

(†) indicates the presence of a P-21

Exhibit P-21, Production Schedule: PB 2020 Navy		Date: March 2019
Appropriation / Budget Activity / Budget Sub Activity: 1508N / 02 / 1	**P-1 Line Item Number / Title:** 1350 / Infantry Weapons Ammunition	**Item Number / Title [DODIC]:** 1 / CTG, 40 MM, All Types

Cost Elements (Units in Thousands)							Fiscal Year 2018												Fiscal Year 2019												BALANCE
										Calendar Year 2018												Calendar Year 2019									
OCO	MFR #	FY	SERVICE	PROC QTY	ACCEPT PRIOR TO 1 OCT 2017	BAL DUE AS OF 1 OCT	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	
1.1.1) BA21, 40MM PRACTICE DAY/ NIGHT MK281 MOD3 - LOAD, ASSEMBLE, AND PACK																															
	1	2018	NAVY	372.870	.000	372.870												A -	-	-	-	-	-	-	-	-	-	-	-	31.000	341.870
✓	1	2018	NAVY	22.173	.000	22.173												A -	-	-	-	-	-	-	-	-	-	-	-	2.000	20.173
	1	2019	NAVY	97.000	.000	97.000																			A -	-	-	-	-	-	97.000
✓	1	2020	NAVY	682.953	.000	682.953																									682.953
2.1.1) BA54, 40MM PRACTICE DAY/ NIGHT M781E1 - LOAD, ASSEMBLE, AND PACK																															
✓	2	2020	NAVY	195.000	.000	195.000																									195.000
							OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	

Exhibit P-21, Production Schedule: PB 2020 Navy		Date: March 2019
Appropriation / Budget Activity / Budget Sub Activity: 1508N / 02 / 1	**P-1 Line Item Number / Title:** 1350 / Infantry Weapons Ammunition	**Item Number / Title [DODIC]:** 1 / CTG, 40 MM, All Types

Cost Elements (Units in Thousands)							Fiscal Year 2020												Fiscal Year 2021												BALANCE
							Calendar Year 2020												Calendar Year 2021												
OCO	MFR #	FY	SERVICE	PROC QTY	ACCEPT PRIOR TO 1 OCT 2019	BAL DUE AS OF 1 OCT	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	
1.1.1) BA21, 40MM PRACTICE DAY/ NIGHT MK281 MOD3 - LOAD, ASSEMBLE, AND PACK																															
	1	2018	NAVY	372.870	31.000	341.870	31.000	31.000	31.000	30.000	31.000	31.000	31.000	31.000	31.000	32.000	31.870														.000
✓	1	2018	NAVY	22.173	2.000	20.173	2.000	2.000	2.000	2.000	2.000	2.000	2.000	2.000	2.000	2.173															.000
	1	2019	NAVY	97.000	.000	97.000	-	-	-	-	-	-	2.000	2.000	2.000	2.000	10.000	10.000	12.000	12.000	10.000	12.000	12.000	11.000							.000
✓	1	2020	NAVY	682.953	.000	682.953							A -	-	-	-	-	-	-	-	-	-	-	-	60.000	60.000	60.000	60.000	60.000	60.000	322.953
2.1.1) BA54, 40MM PRACTICE DAY/ NIGHT M781E1 - LOAD, ASSEMBLE, AND PACK																															
✓	2	2020	NAVY	195.000	.000	195.000						A -	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	16.250	16.250	16.250	146.250
							OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	

Exhibit P-21, Production Schedule: PB 2020 Navy | **Date:** March 2019

Appropriation / Budget Activity / Budget Sub Activity: 1508N / 02 / 1

P-1 Line Item Number / Title: 1350 / Infantry Weapons Ammunition

Item Number / Title [DODIC]: 1 / CTG, 40 MM, All Types

Cost Elements (Units in Thousands)							Fiscal Year 2022												Fiscal Year 2023												BALANCE
							Calendar Year 2022												Calendar Year 2023												
OCO	MFR #	FY	SERVICE	PROC QTY	ACCEPT PRIOR TO 1 OCT 2021	BAL DUE AS OF 1 OCT	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	
1.1.1) BA21, 40MM PRACTICE DAY/ NIGHT MK281 MOD3 - LOAD, ASSEMBLE, AND PACK																															
	1	2018	NAVY	372.870	372.870	.000																									.000
✓	1	2018	NAVY	22.173	22.173	.000																									.000
	1	2019	NAVY	97.000	97.000	.000																									.000
✓	1	2020	NAVY	682.953	360.000	322.953	60.000	60.000	50.000	50.000	55.000	47.953																			.000
2.1.1) BA54, 40MM PRACTICE DAY/ NIGHT M781E1 - LOAD, ASSEMBLE, AND PACK																															
✓	2	2020	NAVY	195.000	48.750	146.250	16.250	16.250	16.250	16.250	16.250	16.250	16.250	16.250	16.250																.000
							OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	

Exhibit P-21, Production Schedule: PB 2020 Navy		Date: March 2019
Appropriation / Budget Activity / Budget Sub Activity: 1508N / 02 / 1	**P-1 Line Item Number / Title:** 1350 / Infantry Weapons Ammunition	**Item Number / Title [DODIC]:** 1 / CTG, 40 MM, All Types

MFR Ref #	Manufacturer Name - Location	Production Rates (Each / Year)			Procurement Leadtime (Months)							
					Initial				Reorder			
		MSR For 2020	1-8-5 For 2020	MAX For 2020	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	AMERICAN RHEINMETALL MUNITIONS - CAMDEN, AR	10,000	70,000	700,000	6	6	12	18	6	6	12	18
2	GENERAL DYNAMICS OTS - MARION, IL	100,000	125,000	375,000	6	6	16	22	6	6	16	22

"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).

Exhibit P-5, Cost Analysis: PB 2020 Navy		Date: March 2019
Appropriation / Budget Activity / Budget Sub Activity: 1508N / 02 / 1	**P-1 Line Item Number / Title:** 1350 / Infantry Weapons Ammunition	**Item Number / Title [DODIC]:** 2 / CTG, 25 MM, All Types
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	

Resource Summary	Prior Years	FY 2018	FY 2019	FY 2020 Base	FY 2020 OCO	FY 2020 Total
Procurement Quantity *(Units in Each)*	-	-	-	-	-	-
Gross/Weapon System Cost *($ in Millions)*	0.000	3.285	0.000	0.000	0.800	0.800
Less PY Advance Procurement *($ in Millions)*	-	-	-	-	-	-
Net Procurement (P-1) *($ in Millions)*	0.000	3.285	0.000	0.000	0.800	0.800
Plus CY Advance Procurement *($ in Millions)*	-	-	-	-	-	-
Total Obligation Authority *($ in Millions)*	**0.000**	**3.285**	**0.000**	**0.000**	**0.800**	**0.800**
(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)						
Initial Spares *($ in Millions)*	-	-	-	-	-	-
Gross/Weapon System Unit Cost *($ in 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 2018			FY 2019			FY 2020 Base			FY 2020 OCO			FY 2020 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 - A940, CTG, 25MM TARGET PRACTICE DISCARDING SABOT - T (TPDS-T) LINKED M910 Cost																		
Recurring Cost																		
1.1.1) A940 - CTG, 25MM TPDS-T LINKED M910 - LOAD, ASSEMBLE, AND PACK(†) (1)	-	-	0.000	51.43	60,567	3.115	-	-	0.000	-	-	0.000	51.22	12,102	0.620	51.22	12,102	0.620
1.1.2) A940 - CTG, 25MM TPDS-T LINKED M910 - CONTAINER PA125(†)	-	-	0.000	81.19	2,047	0.166	-	-	0.000	-	-	0.000	93.51	409	0.038	93.51	409	0.038
1.1.3) A940 - CTG, 25MM TPDS-T LINKED M910 - PRODUCTION ENGINEERING	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.038	-	-	0.038
1.1.4) A940 - CTG, 25MM TPDS-T LINKED M910 - QUALITY ASSURANCE	-	-	0.000	-	-	0.004	-	-	0.000	-	-	0.000	-	-	0.004	-	-	0.004
1.1.5) A940 - CTG, 25MM TPDS-T LINKED M910 - NONRECURRING - FAAT	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.100	-	-	0.100
Subtotal: Recurring Cost	-	-	*0.000*	-	-	*3.285*	-	-	*0.000*	-	-	*0.000*	-	-	*0.800*	-	-	*0.800*

Exhibit P-5, Cost Analysis: PB 2020 Navy		Date: March 2019
Appropriation / Budget Activity / Budget Sub Activity: 1508N / 02 / 1	P-1 Line Item Number / Title: 1350 / Infantry Weapons Ammunition	Item Number / Title [DODIC]: 2 / CTG, 25 MM, All Types
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 2018			FY 2019			FY 2020 Base			FY 2020 OCO			FY 2020 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)
Subtotal: Hardware - A940, CTG, 25MM TARGET PRACTICE DISCARDING SABOT - T (TPDS-T) LINKED M910 Cost	-	-	*0.000*	-	-	*3.285*	-	-	*0.000*	-	-	*0.000*	-	-	*0.800*	-	-	*0.800*
Gross/Weapon System Cost	-	-	0.000	-	-	3.285	-	-	0.000	-	-	0.000	-	-	0.800	-	-	0.800

(†) indicates the presence of a P-5a

Footnotes:

(1) FY20 funding were added to procure additional units ISO increased requirements, totaling $800k.

Exhibit P-5a, Procurement History and Planning: PB 2020 Navy		Date: March 2019
Appropriation / Budget Activity / Budget Sub Activity: 1508N / 02 / 1	P-1 Line Item Number / Title: 1350 / Infantry Weapons Ammunition	Item Number / Title [DODIC]: 2 / CTG, 25 MM, All Types

Cost Elements	OCO	FY	Contractor and Location	Method/Type or Funding Vehicle	Location of PCO	Award Date	Date of First Delivery	Qty (Each)	Unit Cost ($)	Specs Avail Now?	Date Revision Available	RFP Issue Date
1.1.1) A940 - CTG, 25MM TPDS-T LINKED M910 - LOAD, ASSEMBLE, AND PACK		2018 (2)	GOVERNMENT FURNISHED MATERIAL / ARMY STOCK	MIPR	Rock Island Arsenal, IL	Feb 2018	Feb 2019	60,567	51.43	Y		
1.1.1) A940 - CTG, 25MM TPDS-T LINKED M910 - LOAD, ASSEMBLE, AND PACK	✓	2020	TBD / TBD	C / FFP	Rock Island Arsenal, IL	Mar 2020	Mar 2021	12,102	51.22	Y		Jan 2020
1.1.2) A940 - CTG, 25MM TPDS-T LINKED M910 - CONTAINER PA125		2018 (3)	GOVERNMENT FURNISHED MATERIAL / ARMY STOCK	MIPR	Rock Island Arsenal, IL	Feb 2018	Oct 2018	2,047	81.19	Y		
1.1.2) A940 - CTG, 25MM TPDS-T LINKED M910 - CONTAINER PA125	✓	2020	CONCO, INC -2 / LOUISVILLE, KY	C / FFP	Rock Island Arsenal, IL	Mar 2020	Nov 2020	409	93.51	Y		Jan 2020

Footnotes:

(2) The A940, Cartridge, 25mm Target Practice M910, Linked was purchased from existing Army stockpile.

(3) The A940, Cartridge, 25mm Target Practice, Linked Container were purchased from existing Army stockpile.

Exhibit P-5, Cost Analysis: PB 2020 Navy		Date: March 2019
Appropriation / Budget Activity / Budget Sub Activity: 1508N / 02 / 1	P-1 Line Item Number / Title: 1350 / Infantry Weapons Ammunition	Item Number / Title [DODIC]: 3 / Small Arms Ammunition
ID Code (A=Service Ready, B=Not Service Ready) :	MDAP/MAIS Code:	

Resource Summary	Prior Years	FY 2018	FY 2019	FY 2020 Base	FY 2020 OCO	FY 2020 Total
Procurement Quantity *(Units in Each)*	-	-	-	-	-	-
Gross/Weapon System Cost *($ in Millions)*	0.000	71.629	51.799	0.000	49.702	49.702
Less PY Advance Procurement *($ in Millions)*	-	-	-	-	-	-
Net Procurement (P-1) *($ in Millions)*	0.000	71.629	51.799	0.000	49.702	49.702
Plus CY Advance Procurement *($ in Millions)*	-	-	-	-	-	-
Total Obligation Authority *($ in Millions)*	**0.000**	**71.629**	**51.799**	**0.000**	**49.702**	**49.702**
(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.

Cost Elements	Prior Years			FY 2018			FY 2019			FY 2020 Base			FY 2020 OCO			FY 2020 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 - A014, CTG, 12 GAUGE #7 1/2 SHOT COMMERCIAL Cost																		
Recurring Cost																		
1.1.1) A014, 12 GAUGE #7, COMPLETE ROUND(†)	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000	0.29	661,648	0.192	0.29	661,648	0.192
1.1.2) A014, PRODUCTION ENGINEERING	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.058	-	-	0.058
Subtotal: Recurring Cost	-	-	*0.000*	-	-	*0.000*	-	-	*0.000*	-	-	*0.000*	-	-	*0.250*	-	-	*0.250*
Subtotal: Hardware - A014, CTG, 12 GAUGE #7 1/2 SHOT COMMERCIAL Cost	**-**	**-**	***0.000***	**-**	**-**	***0.000***	**-**	**-**	***0.000***	**-**	**-**	***0.000***	**-**	**-**	***0.250***	**-**	**-**	***0.250***
Hardware - A023, CTG, 12 GAUGE 1OZ SLUG COMMERCIAL Cost																		
Recurring Cost																		
3.1.1) A023, 12 GAUGE 1OZ SLUG, COMPLETE ROUND(†)	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000	0.81	308,642	0.250	0.81	308,642	0.250
Subtotal: Recurring Cost	-	-	*0.000*	-	-	*0.000*	-	-	*0.000*	-	-	*0.000*	-	-	*0.250*	-	-	*0.250*
Subtotal: Hardware - A023, CTG, 12 GAUGE 1OZ SLUG COMMERCIAL Cost	**-**	**-**	***0.000***	**-**	**-**	***0.000***	**-**	**-**	***0.000***	**-**	**-**	***0.000***	**-**	**-**	***0.250***	**-**	**-**	***0.250***
Hardware - A059, CTG, 5.56MM BALL Cost																		
Recurring Cost																		

Exhibit P-5, Cost Analysis: PB 2020 Navy		Date: March 2019
Appropriation / Budget Activity / Budget Sub Activity: 1508N / 02 / 1	P-1 Line Item Number / Title: 1350 / Infantry Weapons Ammunition	Item Number / Title [DODIC]: 3 / Small Arms Ammunition
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 2018			FY 2019			FY 2020 Base			FY 2020 OCO			FY 2020 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)
4.1.1) A059, 5.56MM BALL, LOAD, ASSEMBLE AND PACK (LAP) (1)(†)	-	-	0.000	0.21	167,762K	35.230	0.25	83,152,814	20.788	-	-	0.000	0.27	24,160,401	6.523	0.27	24,160,401	6.523
4.1.2) A059, 5.56MM BALL, BOX METAL M2A2 (EA) (2)(†)	-	-	0.000	13.67	199,636	2.729	14.07	98,952	1.392	-	-	0.000	14.34	28,750	0.412	14.34	28,750	0.412
4.1.3) A059, 5.56MM BALL, PRODUCTION ENGINEERING	-	-	0.000	-	-	1.722	-	-	0.887	-	-	0.000	-	-	0.434	-	-	0.434
4.1.4) A059, 5.56MM BALL, QUALITY ASSURANCE	-	-	0.000	-	-	0.014	-	-	0.012	-	-	0.000	-	-	0.013	-	-	0.013
4.1.5) A059, 5.56MM BALL, ACCEPTANCE TESTING	-	-	0.000	-	-	0.067	-	-	0.037	-	-	0.000	-	-	0.039	-	-	0.039
Subtotal: Recurring Cost	-	-	*0.000*	-	-	*39.762*	-	-	*23.116*	-	-	*0.000*	-	-	*7.421*	-	-	*7.421*
Subtotal: Hardware - A059, CTG, 5.56MM BALL Cost	**-**	**-**	***0.000***	**-**	**-**	***39.762***	**-**	**-**	***23.116***	**-**	**-**	***0.000***	**-**	**-**	***7.421***	**-**	**-**	***7.421***
Hardware - A260, CTG, 9MM JACKET HOLLOW POINT Cost																		
Recurring Cost																		
6.1.1) A260, CTG, 9MM JACKETED HOLLOW POINT, COMPLETE ROUND(†)	-	-	0.000	-	-	0.000	0.24	1,015,599	0.244	-	-	0.000	-	-	0.000	-	-	0.000
6.1.2) A260, QUALITY ASSURANCE	-	-	0.000	-	-	0.000	-	-	0.006	-	-	0.000	-	-	0.000	-	-	0.000
Subtotal: Recurring Cost	-	-	*0.000*	-	-	*0.000*	-	-	*0.250*	-	-	*0.000*	-	-	*0.000*	-	-	*0.000*
Subtotal: Hardware - A260, CTG, 9MM JACKET HOLLOW POINT Cost	**-**	**-**	***0.000***	**-**	**-**	***0.000***	**-**	**-**	***0.250***	**-**	**-**	***0.000***	**-**	**-**	***0.000***	**-**	**-**	***0.000***
Hardware - A363, CTG, 9MM BALL Cost																		
Recurring Cost																		
7.1.1) A363, 9MM BALL, LOAD, ASSEMBLE AND PACK (LAP)(†)	-	-	0.000	0.18	520,176	0.094	0.19	1,473,158	0.280	-	-	0.000	0.18	1,484,123	0.267	0.18	1,484,123	0.267
7.1.2) A363, 9MM BALL, PRODUCTION ENGINEERING	-	-	0.000	-	-	0.194	-	-	0.010	-	-	0.000	-	-	0.029	-	-	0.029

Exhibit P-5, Cost Analysis: PB 2020 Navy		Date: March 2019
Appropriation / Budget Activity / Budget Sub Activity: 1508N / 02 / 1	P-1 Line Item Number / Title: 1350 / Infantry Weapons Ammunition	Item Number / Title [DODIC]: 3 / Small Arms Ammunition
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 2018			FY 2019			FY 2020 Base			FY 2020 OCO			FY 2020 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)
7.1.3) A363, 9MM BALL, QUALITY ASSURANCE	-	-	0.000	-	-	0.001	-	-	0.001	-	-	0.000	-	-	0.001	-	-	0.001
Subtotal: Recurring Cost	-	-	*0.000*	-	-	*0.289*	-	-	*0.291*	-	-	*0.000*	-	-	*0.297*	-	-	*0.297*
Subtotal: Hardware - A363, CTG, 9MM BALL Cost	**-**	**-**	***0.000***	**-**	**-**	***0.289***	**-**	**-**	***0.291***	**-**	**-**	***0.000***	**-**	**-**	***0.297***	**-**	**-**	***0.297***
Hardware - A555, CAL .50 BALL M33 LINKED Cost																		
Recurring Cost																		
8.1.1) A555, CAL .50 BALL M33 LINKED, LOAD, ASSEMBLE, PACK (LAP)(†) (4)	-	-	0.000	-	-	0.000	1.86	1,356,068	2.522	-	-	0.000	2.34	1,372,022	3.211	2.34	1,372,022	3.211
8.1.2) A555, CAL .50 BALL M33 LINKED, BOX METAL M2A2(†)	-	-	0.000	-	-	0.000	14.07	13,561	0.191	-	-	0.000	14.34	13,789	0.198	14.34	13,789	0.198
8.1.3) A555, CAL .50 BALL M33 LINKED, PRODUCTION ENGINEERING	-	-	0.000	-	-	0.000	-	-	0.137	-	-	0.000	-	-	0.116	-	-	0.116
8.1.4) A555, CAL .50 BALL M33 LINKED, QUALITY ASSURANCE	-	-	0.000	-	-	0.000	-	-	0.001	-	-	0.000	-	-	0.004	-	-	0.004
8.1.5) A555, CAL .50 BALL M33 LINKED, ACCEPTANCE TESTING	-	-	0.000	-	-	0.000	-	-	0.002	-	-	0.000	-	-	0.004	-	-	0.004
Subtotal: Recurring Cost	-	-	*0.000*	-	-	*0.000*	-	-	*2.853*	-	-	*0.000*	-	-	*3.533*	-	-	*3.533*
Subtotal: Hardware - A555, CAL .50 BALL M33 LINKED Cost	**-**	**-**	***0.000***	**-**	**-**	***0.000***	**-**	**-**	***2.853***	**-**	**-**	***0.000***	**-**	**-**	***3.533***	**-**	**-**	***3.533***
Hardware - A576, CTG, CAL .50 4 & 1 LINKED Cost																		
Recurring Cost																		
9.1.1) A576, CAL. 50 4 & 1 LINKED, LOAD, ASSEMBLE, AND PACK (LAP)(†)	-	-	0.000	1.83	148,087	0.271	1.98	131,250	0.260	-	-	0.000	2.45	111,628	0.273	2.45	111,628	0.273
9.1.2) A576, CAL. 50 4 & 1 LINKED, BOX METAL M2A2(†)	-	-	0.000	13.67	1,374	0.019	14.07	1,393	0.020	-	-	0.000	14.34	1,116	0.016	14.34	1,116	0.016
9.1.3) A576, CAL. 50 4 & 1 LINKED,	-	-	0.000	-	-	0.010	-	-	0.018	-	-	0.000	-	-	0.009	-	-	0.009

Exhibit P-5, Cost Analysis: PB 2020 Navy		Date: March 2019
Appropriation / Budget Activity / Budget Sub Activity: 1508N / 02 / 1	P-1 Line Item Number / Title: 1350 / Infantry Weapons Ammunition	Item Number / Title [DODIC]: 3 / Small Arms Ammunition
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 2018			FY 2019			FY 2020 Base			FY 2020 OCO			FY 2020 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)
PRODUCTION ENGINEERING																		
9.1.4) A576, CAL. 50 4 & 1 LINKED, QUALITY ASSURANCE	-	-	0.000	-	-	0.000	-	-	0.002	-	-	0.000	-	-	0.002	-	-	0.002
Subtotal: Recurring Cost	-	-	*0.000*	-	-	*0.300*	-	-	*0.300*	-	-	*0.000*	-	-	*0.300*	-	-	*0.300*
Subtotal: Hardware - A576, CTG, CAL .50 4 & 1 LINKED Cost	**-**	**-**	***0.000***	**-**	**-**	***0.300***	**-**	**-**	***0.300***	**-**	**-**	***0.000***	**-**	**-**	***0.300***	**-**	**-**	***0.300***
Hardware - AA40, CTG, 5.56MM FRANGIBLE SNGL RD Cost																		
Recurring Cost																		
10.1.1) AA40, 5.56MM FRANGIBLE, COMPLETE ROUND(†)	-	-	0.000	-	-	0.000	0.37	2,671,248	0.988	-	-	0.000	0.38	1,299,038	0.494	0.38	1,299,038	0.494
10.1.2) AA40, 5.56MM FRANGIBLE, PRODUCTION ENGINEERING	-	-	0.000	-	-	0.000	-	-	0.008	-	-	0.000	-	-	0.004	-	-	0.004
10.1.3) AA40, 5.56MM FRANGIBLE, QUALITY ASSURANCE	-	-	0.000	-	-	0.000	-	-	0.004	-	-	0.000	-	-	0.002	-	-	0.002
Subtotal: Recurring Cost	-	-	*0.000*	-	-	*0.000*	-	-	*1.000*	-	-	*0.000*	-	-	*0.500*	-	-	*0.500*
Subtotal: Hardware - AA40, CTG, 5.56MM FRANGIBLE SNGL RD Cost	**-**	**-**	***0.000***	**-**	**-**	***0.000***	**-**	**-**	***1.000***	**-**	**-**	***0.000***	**-**	**-**	***0.500***	**-**	**-**	***0.500***
Hardware - AA54, CTG, 12-GAUGE DOOR BREACHING M1030 Cost																		
Recurring Cost																		
11.1.1) AA54, CTG, 12-GAUGE DOOR BREACHING COMPLETE ROUNDS(†)	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000	2.58	373,681	0.964	2.58	373,681	0.964
11.1.2) AA54, PRODUCTION ENGINEERING	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.036	-	-	0.036
Subtotal: Recurring Cost	-	-	*0.000*	-	-	*0.000*	-	-	*0.000*	-	-	*0.000*	-	-	*1.000*	-	-	*1.000*
Subtotal: Hardware - AA54, CTG, 12-GAUGE DOOR BREACHING M1030 Cost	**-**	**-**	***0.000***	**-**	**-**	***0.000***	**-**	**-**	***0.000***	**-**	**-**	***0.000***	**-**	**-**	***1.000***	**-**	**-**	***1.000***
Hardware - AA68, CTG, 5.56MM SHORT RANGE TRAINING M862 Cost																		

Exhibit P-5, Cost Analysis: PB 2020 Navy		Date: March 2019
Appropriation / Budget Activity / Budget Sub Activity: 1508N / 02 / 1	P-1 Line Item Number / Title: 1350 / Infantry Weapons Ammunition	Item Number / Title [DODIC]: 3 / Small Arms Ammunition
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 2018			FY 2019			FY 2020 Base			FY 2020 OCO			FY 2020 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)
Recurring Cost																		
12.1.1) AA68, CTG, 5.56MM COMPLETE ROUNDS(†)	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000	0.52	1,117,911	0.581	0.52	1,117,911	0.581
12.1.2) AA68, PRODUCTION ENGINEERING	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.019	-	-	0.019
Subtotal: Recurring Cost	-	-	*0.000*	-	-	*0.000*	-	-	*0.000*	-	-	*0.000*	-	-	*0.600*	-	-	*0.600*
Subtotal: Hardware - AA68, CTG, 5.56MM SHORT RANGE TRAINING M862 Cost	**-**	**-**	***0.000***	**-**	**-**	***0.000***	**-**	**-**	***0.000***	**-**	**-**	***0.000***	**-**	**-**	***0.600***	**-**	**-**	***0.600***
Hardware - AB05, CTG, 5.56MM SESAMS SINGLE RND (BLUE) Cost																		
Recurring Cost																		
13.1.1) AB05, 5.56MM SESAMS SINGLE RND (BLUE), COMPLETE ROUND(†)	-	-	0.000	0.65	5,896,922	3.828	0.68	5,682,090	3.873	-	-	0.000	0.69	5,072,460	3.500	0.69	5,072,460	3.500
Subtotal: Recurring Cost	-	-	*0.000*	-	-	*3.828*	-	-	*3.873*	-	-	*0.000*	-	-	*3.500*	-	-	*3.500*
Subtotal: Hardware - AB05, CTG, 5.56MM SESAMS SINGLE RND (BLUE) Cost	**-**	**-**	***0.000***	**-**	**-**	***3.828***	**-**	**-**	***3.873***	**-**	**-**	***0.000***	**-**	**-**	***3.500***	**-**	**-**	***3.500***
Hardware - AB06, CTG, 5.56MM SESAMS SINGLE RND (RED) Cost																		
Recurring Cost																		
14.1.1) AB06, 5.56MM SESAMS SINGLE RND (RED), COMPLETE ROUND(†)	-	-	0.000	0.67	4,025,373	2.706	0.68	3,995,714	2.734	-	-	0.000	0.69	3,389,860	2.339	0.69	3,389,860	2.339
Subtotal: Recurring Cost	-	-	*0.000*	-	-	*2.706*	-	-	*2.734*	-	-	*0.000*	-	-	*2.339*	-	-	*2.339*
Subtotal: Hardware - AB06, CTG, 5.56MM SESAMS SINGLE RND (RED) Cost	**-**	**-**	***0.000***	**-**	**-**	***2.706***	**-**	**-**	***2.734***	**-**	**-**	***0.000***	**-**	**-**	***2.339***	**-**	**-**	***2.339***
Hardware - AB43, CTG, CAL .300 WINCHESTER MAGNUM (WIN MAG) MATCH Cost																		
Recurring Cost																		
16.1.1) AB43, CAL .300 WIN MAG MATCH, COMPLETE ROUND(†)	-	-	0.000	-	-	0.000	1.28	608,594	0.779	-	-	0.000	1.33	187,970	0.250	1.33	187,970	0.250
Subtotal: Recurring Cost	-	-	*0.000*	-	-	*0.000*	-	-	*0.779*	-	-	*0.000*	-	-	*0.250*	-	-	*0.250*

Exhibit P-5, Cost Analysis: PB 2020 Navy		Date: March 2019
Appropriation / Budget Activity / Budget Sub Activity: 1508N / 02 / 1	P-1 Line Item Number / Title: 1350 / Infantry Weapons Ammunition	Item Number / Title [DODIC]: 3 / Small Arms Ammunition
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 2018			FY 2019			FY 2020 Base			FY 2020 OCO			FY 2020 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)
Subtotal: Hardware - AB43, CTG, CAL .300 WINCHESTER MAGNUM (WIN MAG) MATCH Cost	**-**	**-**	***0.000***	**-**	**-**	***0.000***	**-**	**-**	***0.779***	**-**	**-**	***0.000***	**-**	**-**	***0.250***	**-**	**-**	***0.250***
Hardware - AB57, CTG, 5.56MM BALL M855A1 EPR Cost																		
Recurring Cost																		
17.1.1) AB57, CTG, 5.56MM BALL M855A1 EPR, LOAD, ASSEMBLE, AND PACK(†)	-	-	0.000	-	-	0.000	0.34	13,724,858	4.666	-	-	0.000	0.32	12,339,083	3.949	0.32	12,339,083	3.949
17.1.2) AB57, CTG 5.56 MM BALL EPR, METAL BOX M2A2(†)	-	-	0.000	-	-	0.000	14.07	16,333	0.230	-	-	0.000	14.34	14,683	0.211	14.34	14,683	0.211
17.1.3) AB57, CTG 5.56 MM BALL EPR, PRODUCTION ENGINEERING	-	-	0.000	-	-	0.000	-	-	0.102	-	-	0.000	-	-	0.200	-	-	0.200
17.1.4) AB57, CTG 5.56 MM BALL EPR, QUALITY ASSURANCE	-	-	0.000	-	-	0.000	-	-	0.002	-	-	0.000	-	-	0.008	-	-	0.008
Subtotal: Recurring Cost	-	-	*0.000*	-	-	*0.000*	-	-	*5.000*	-	-	*0.000*	-	-	*4.368*	-	-	*4.368*
Subtotal: Hardware - AB57, CTG, 5.56MM BALL M855A1 EPR Cost	**-**	**-**	***0.000***	**-**	**-**	***0.000***	**-**	**-**	***5.000***	**-**	**-**	***0.000***	**-**	**-**	***4.368***	**-**	**-**	***4.368***
Hardware - AC15, CTG, CAL .50 4 & 1 REDUCED RANGE LINKED Cost																		
Recurring Cost																		
18.1.1) AC15, CAL .50 4 & 1 REDUCED RANGE LINKED, COMPLETE ROUND(†)	-	-	0.000	-	-	0.000	4.80	1,957,500	9.396	-	-	0.000	4.94	3,952,630	19.526	4.94	3,952,630	19.526
Subtotal: Recurring Cost	-	-	*0.000*	-	-	*0.000*	-	-	*9.396*	-	-	*0.000*	-	-	*19.526*	-	-	*19.526*
Subtotal: Hardware - AC15, CTG, CAL .50 4 & 1 REDUCED RANGE LINKED Cost	**-**	**-**	***0.000***	**-**	**-**	***0.000***	**-**	**-**	***9.396***	**-**	**-**	***0.000***	**-**	**-**	***19.526***	**-**	**-**	***19.526***
Hardware - AC14, CTG, CAL .50 BALL REDUCED RANGE LINKED Cost																		
Recurring Cost																		
19.1.1) AC14, CAL .50 BALL REDUCED RANGE	-	-	0.000	-	-	0.000	4.40	475,227	2.091	-	-	0.000	4.53	982,400	4.450	4.53	982,400	4.450

Exhibit P-5, Cost Analysis: PB 2020 Navy		Date: March 2019
Appropriation / Budget Activity / Budget Sub Activity: 1508N / 02 / 1	P-1 Line Item Number / Title: 1350 / Infantry Weapons Ammunition	Item Number / Title [DODIC]: 3 / Small Arms Ammunition
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 2018			FY 2019			FY 2020 Base			FY 2020 OCO			FY 2020 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)
LINKED, COMPLETE ROUND(†)																		
Subtotal: Recurring Cost	-	-	*0.000*	-	-	*0.000*	-	-	*2.091*	-	-	*0.000*	-	-	*4.450*	-	-	*4.450*
Subtotal: Hardware - AC14, CTG, CAL .50 BALL REDUCED RANGE LINKED Cost	**-**	**-**	***0.000***	**-**	**-**	***0.000***	**-**	**-**	***2.091***	**-**	**-**	***0.000***	**-**	**-**	***4.450***	**-**	**-**	***4.450***
Hardware - ANS1, CTG, 7.62x39MM BALL F/AK-47 (NON-STANDARD) Cost																		
Recurring Cost																		
20.1.1) ANS1, 7.62x39MM BALL F/ AK-47, COMPLETE ROUND	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000	0.69	1,449,065	1.000	0.69	1,449,065	1.000
Subtotal: Recurring Cost	-	-	*0.000*	-	-	*0.000*	-	-	*0.000*	-	-	*0.000*	-	-	*1.000*	-	-	*1.000*
Subtotal: Hardware - ANS1, CTG, 7.62x39MM BALL F/ AK-47 (NON-STANDARD) Cost	**-**	**-**	***0.000***	**-**	**-**	***0.000***	**-**	**-**	***0.000***	**-**	**-**	***0.000***	**-**	**-**	***1.000***	**-**	**-**	***1.000***
Hardware - AC07 (formerly AXX3), CTG, 9MM BLANK SINGLE ROUND Cost																		
Recurring Cost																		
21.1.1) AC07 (formerly AXX3), 9MM BLANK, COMPLETE ROUND(†)	-	-	0.000	2.78	27,712	0.077	2.84	40,851	0.116	-	-	0.000	2.89	40,862	0.118	2.89	40,862	0.118
Subtotal: Recurring Cost	-	-	*0.000*	-	-	*0.077*	-	-	*0.116*	-	-	*0.000*	-	-	*0.118*	-	-	*0.118*
Subtotal: Hardware - AC07 (formerly AXX3), CTG, 9MM BLANK SINGLE ROUND Cost	**-**	**-**	***0.000***	**-**	**-**	***0.077***	**-**	**-**	***0.116***	**-**	**-**	***0.000***	**-**	**-**	***0.118***	**-**	**-**	***0.118***
Hardware - AB64, CTG, CAL .50 4 & 1 REDUCED RANGE LINKED Cost																		
Recurring Cost																		
22.1.1) AB64, CTG, CAL .50 4 & 1 REDUCED RANGE LINKED(†)	-	-	0.000	4.66	3,507,511	16.345	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000
Subtotal: Recurring Cost	-	-	*0.000*	-	-	*16.345*	-	-	*0.000*	-	-	*0.000*	-	-	*0.000*	-	-	*0.000*
Subtotal: Hardware - AB64, CTG, CAL .50 4 & 1 REDUCED RANGE LINKED Cost	**-**	**-**	***0.000***	**-**	**-**	***16.345***	**-**	**-**	***0.000***	**-**	**-**	***0.000***	**-**	**-**	***0.000***	**-**	**-**	***0.000***
Hardware - AB65, CTG, CAL .50 BALL REDUCED RANGE LINKED Cost																		

Exhibit P-5, Cost Analysis: PB 2020 Navy		Date: March 2019
Appropriation / Budget Activity / Budget Sub Activity: 1508N / 02 / 1	P-1 Line Item Number / Title: 1350 / Infantry Weapons Ammunition	Item Number / Title [DODIC]: 3 / Small Arms Ammunition
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 2018			FY 2019			FY 2020 Base			FY 2020 OCO			FY 2020 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)
Recurring Cost																		
23.1.1) AB65, CTG, CAL .50 BALL REDUCED RANGE LINKED(†)	-	-	0.000	4.27	1,948,947	8.322	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000
Subtotal: Recurring Cost	-	-	*0.000*	-	-	*8.322*	-	-	*0.000*	-	-	*0.000*	-	-	*0.000*	-	-	*0.000*
Subtotal: Hardware - AB65, CTG, CAL .50 BALL REDUCED RANGE LINKED Cost	**-**	**-**	***0.000***	**-**	**-**	***8.322***	**-**	**-**	***0.000***	**-**	**-**	***0.000***	**-**	**-**	***0.000***	**-**	**-**	***0.000***
Gross/Weapon System Cost	**-**	**-**	**0.000**	**-**	**-**	**71.629**	**-**	**-**	**51.799**	**-**	**-**	**0.000**	**-**	**-**	**49.702**	**-**	**-**	**49.702**

(†) indicates the presence of a P-5a

Footnotes:

(4) The Army's current contract expires in FY 2019 and a new FFP contract will be awarded in FY 2020. It's projected that the new contract will reflect an increased unit price from the vendor. Also, the unit price the Marine Corps receives is a result of the overall quantity being procured by other services.

Exhibit P-5a, Procurement History and Planning: PB 2020 Navy		Date: March 2019
Appropriation / Budget Activity / Budget Sub Activity: 1508N / 02 / 1	P-1 Line Item Number / Title: 1350 / Infantry Weapons Ammunition	Item Number / Title [DODIC]: 3 / Small Arms Ammunition

Cost Elements	OCO	FY	Contractor and Location	Method/Type or Funding Vehicle	Location of PCO	Award Date	Date of First Delivery	Qty (Each)	Unit Cost ($)	Specs Avail Now?	Date Revision Available	RFP Issue Date
1.1.1) A014, 12 GAUGE #7, COMPLETE ROUND	✓	2020	OLIN CORPS WINCHESTER / EAST ALTON, IL	C / FFP	Rock Island Arsenal, IL	Mar 2020	Aug 2020	661,648	0.29	Y		
3.1.1) A023, 12 GAUGE 1OZ SLUG, COMPLETE ROUND	✓	2020	TO BE SELECTED / TBD	C / IDIQ	Rock Island Arsenal, IL	Apr 2021	Apr 2021	308,642	0.81	Y		
4.1.1) A059, 5.56MM BALL, LOAD, ASSEMBLE AND PACK (LAP) (1)(†)		2018	NORTHROP GRUMMAN (LCAAP) / INDEPENDENCE, MO	C / FFP	ROCK ISLAND ARSENAL	Mar 2018	Oct 2018	163,094K	0.21	Y		
4.1.1) A059, 5.56MM BALL, LOAD, ASSEMBLE AND PACK (LAP) (1)(†)	✓	2018	NORTHROP GRUMMAN (LCAAP) / INDEPENDENCE, MO	C / FFP	ROCK ISLAND ARSENAL	Mar 2018	Oct 2018	4,667,609	0.21	Y		
4.1.1) A059, 5.56MM BALL, LOAD, ASSEMBLE AND PACK (LAP) (1)(†)		2019 (5)	NORTHROP GRUMMAN (LCAAP) / INDEPENDENCE, MO	C / FFP	ROCK ISLAND ARSENAL	Mar 2019	Sep 2019	83,152,814	0.25	Y		
4.1.1) A059, 5.56MM BALL, LOAD, ASSEMBLE AND PACK (LAP) (1)(†)	✓	2020	OLIN CORPS WINCHESTER / EAST ALTON, IL	C / FFP	ROCK ISLAND ARSENAL	Mar 2020	Mar 2021	24,160,401	0.27	Y		
4.1.2) A059, 5.56MM BALL, BOX METAL M2A2 (EA) (2)		2018	BWAY CORPORATION / ATLANTA, GA	C / FFP	Rock Island Arsenal, IL	May 2018	Jul 2018	194,082	13.67	Y		
4.1.2) A059, 5.56MM BALL, BOX METAL M2A2 (EA) (2)	✓	2018	BWAY CORPORATION / ATLANTA, GA	C / FFP	Rock Island Arsenal, IL	May 2018	Jul 2018	5,554	13.67	Y		
6.1.1) A260, CTG, 9MM JACKETED HOLLOW POINT, COMPLETE ROUND		2019	OLIN WINCHESTER / EAST ALTON, IL	C / FFP	Rock Island Arsenal, IL	Mar 2019	Sep 2020	1,015,599	0.24	Y		
7.1.1) A363, 9MM BALL, LOAD, ASSEMBLE AND PACK (LAP)		2018 (6)	OLIN CORPORATION / ILLINOIS	C / FFP	Rock Island Arsenal, IL	Mar 2018	Oct 2018	520,176	0.18	Y		
7.1.1) A363, 9MM BALL, LOAD, ASSEMBLE AND PACK (LAP)		2019	OLIN CORPORATION / ILLINOIS	C / FFP	Rock Island Arsenal, IL	Mar 2019	Oct 2019	1,473,158	0.19	Y		
7.1.1) A363, 9MM BALL, LOAD, ASSEMBLE AND PACK (LAP)	✓	2020	OLIN CORPORATION / ILLINOIS	C / FFP	Rock Island Arsenal, IL	Mar 2020	Oct 2020	1,484,123	0.18	Y		
8.1.1) A555, CAL .50 BALL M33 LINKED, LOAD, ASSEMBLE, PACK (LAP)		2019	OLIN WINCHESTER / EAST ALTON, IL	C / FFP	Rock Island Arsenal, IL	Mar 2019	Mar 2021	1,356,068	1.86	Y		
8.1.1) A555, CAL .50 BALL M33 LINKED, LOAD, ASSEMBLE, PACK (LAP)	✓	2020	OLIN WINCHESTER / EAST ALTON, IL	C / FFP	Rock Island Arsenal, IL	Jan 2020	Jan 2021	1,372,022	2.34	Y		
8.1.2) A555, CAL .50 BALL M33 LINKED, BOX METAL M2A2		2019	TO BE SELECTED / TBD	TBD	Rock Island Arsenal, IL	Apr 2019	Apr 2019	13,561	14.07	Y		
8.1.2) A555, CAL .50 BALL M33 LINKED, BOX METAL M2A2	✓	2020	TO BE SELECTED / TBD	C / TBD	Rock Island Arsenal, IL	Oct 2019	Oct 2019	13,789	14.34	Y		

Exhibit P-5a, Procurement History and Planning: PB 2020 Navy		Date: March 2019
Appropriation / Budget Activity / Budget Sub Activity: 1508N / 02 / 1	P-1 Line Item Number / Title: 1350 / Infantry Weapons Ammunition	Item Number / Title [DODIC]: 3 / Small Arms Ammunition

Cost Elements	OCO	FY	Contractor and Location	Method/Type or Funding Vehicle	Location of PCO	Award Date	Date of First Delivery	Qty (Each)	Unit Cost ($)	Specs Avail Now?	Date Revision Available	RFP Issue Date
9.1.1) A576, CAL. 50 4 & 1 LINKED, LOAD, ASSEMBLE, AND PACK (LAP)		2018	NORTHROP GRUMMAN (LCAAP) / INDEPENDENCE, MO	C / FFP	Rock Island Arsenal, IL	Mar 2018	Mar 2019	148,087	1.83	Y		
9.1.1) A576, CAL. 50 4 & 1 LINKED, LOAD, ASSEMBLE, AND PACK (LAP)		2019	NORTHROP GRUMMAN (LCAAP) / INDEPENDENCE, MO	C / FFP	Rock Island Arsenal, IL	May 2019	Dec 2019	131,250	1.98	Y		
9.1.1) A576, CAL. 50 4 & 1 LINKED, LOAD, ASSEMBLE, AND PACK (LAP)	✓	2020	TBD / TBD	C / FFP	Rock Island Arsenal, IL	Mar 2020	Mar 2020	111,628	2.45	Y		
9.1.2) A576, CAL. 50 4 & 1 LINKED, BOX METAL M2A2		2018	BWAY CORPORATION / ATLANTA, GA	C / FFP	Rock Island Arsenal, IL	Jul 2018	Sep 2018	1,374	13.67	Y		
9.1.2) A576, CAL. 50 4 & 1 LINKED, BOX METAL M2A2		2019	BWAY CORPORATION / ATLANTA, GA	C / TBD	Rock Island Arsenal, IL	May 2019	May 2019	1,393	14.07	Y		
9.1.2) A576, CAL. 50 4 & 1 LINKED, BOX METAL M2A2	✓	2020	BWAY CORPORATION / ATLANTA, GA	C / TBD	Rock Island Arsenal, IL	May 2020	May 2020	1,116	14.34	Y		
10.1.1) AA40, 5.56MM FRANGIBLE, COMPLETE ROUND		2019	VISTA OUTDOOR SALES / ANOKA, MN	C / FFP	PICATINNY ARSENAL, NJ	Mar 2019	Mar 2020	2,671,248	0.37	Y		
11.1.1) AA54, CTG, 12-GAUGE DOOR BREACHING COMPLETE ROUNDS	✓	2020	TO BE SELECTED / TBD	C / FFP	PICATINNY ARSENAL, NJ	Apr 2020	Apr 2020	373,681	2.58	Y		
12.1.1) AA68, CTG, 5.56MM COMPLETE ROUNDS	✓	2020	TBD / TBD	C / TBD	Rock Island Arsenal, IL	Aug 2020	Aug 2020	1,117,911	0.52	Y		
13.1.1) AB05, 5.56MM SESAMS SINGLE RND (BLUE), COMPLETE ROUND		2018	GENERAL DYNAMICS / CANADA	SS / FFP	MCSC, QUANTICO, VA	Sep 2018	Dec 2018	5,896,922	0.65	Y		
13.1.1) AB05, 5.56MM SESAMS SINGLE RND (BLUE), COMPLETE ROUND		2019	GENERAL DYNAMICS / CANADA	SS / FFP	MCSC, QUANTICO, VA	Apr 2019	Jul 2019	5,682,090	0.68	Y		
13.1.1) AB05, 5.56MM SESAMS SINGLE RND (BLUE), COMPLETE ROUND	✓	2020	GENERAL DYNAMICS / CANADA	SS / FFP	MCSC, QUANTICO, VA	Apr 2020	Jul 2020	5,072,460	0.69	Y		
14.1.1) AB06, 5.56MM SESAMS SINGLE RND (RED), COMPLETE ROUND		2018	GENERAL DYNAMICS / CANADA	SS / FFP	MCSC, QUANTICO, VA	Sep 2018	Dec 2018	4,025,373	0.67	Y		Feb 2018
14.1.1) AB06, 5.56MM SESAMS SINGLE RND (RED), COMPLETE ROUND		2019	GENERAL DYNAMICS / CANADA	SS / FFP	MCSC, QUANTICO, VA	Apr 2019	Jul 2019	3,995,714	0.68	Y		Feb 2019
14.1.1) AB06, 5.56MM SESAMS SINGLE RND (RED), COMPLETE ROUND	✓	2020	GENERAL DYNAMICS / CANADA	C / FFP	MCSC, QUANTICO, VA	Apr 2020	Jul 2020	3,389,860	0.69	Y		Feb 2019
16.1.1) AB43, CAL .300 WIN MAG MATCH, COMPLETE ROUND	✓	2019	VISTA OUTDOOR SALES / ANOKA, MN	C / IDIQ	Rock Island Arsenal, IL	Apr 2019	Oct 2020	608,594	1.28	Y		

Exhibit P-5a, Procurement History and Planning: PB 2020 Navy		Date: March 2019
Appropriation / Budget Activity / Budget Sub Activity: 1508N / 02 / 1	P-1 Line Item Number / Title: 1350 / Infantry Weapons Ammunition	Item Number / Title [DODIC]: 3 / Small Arms Ammunition

Cost Elements	OCO	FY	Contractor and Location	Method/Type or Funding Vehicle	Location of PCO	Award Date	Date of First Delivery	Qty (Each)	Unit Cost ($)	Specs Avail Now?	Date Revision Available	RFP Issue Date
16.1.1) AB43, CAL .300 WIN MAG MATCH, COMPLETE ROUND	✓	2020	VISTA OUTDOOR SALES / ANOKA, MN	C / IDIQ	Rock Island Arsenal, IL	Apr 2020	Oct 2020	187,970	1.33	Y		
17.1.1) AB57, CTG, 5.56MM BALL M855A1 EPR, LOAD, ASSEMBLE, AND PACK		2019	NORTHROP GRUMMAN (LCAAP) / INDEPENDENCE, MO	C / FFP	ROCK ISLAND ARSENAL	Mar 2019	Oct 2019	13,724,858	0.34	Y		Jan 2019
17.1.1) AB57, CTG, 5.56MM BALL M855A1 EPR, LOAD, ASSEMBLE, AND PACK	✓	2020	OLIN CORPS WINCHESTER / EAST ALTON, IL	C / FFP	ROCK ISLAND ARSENAL	Apr 2020	Nov 2020	12,339,083	0.32	Y		
17.1.2) AB57, CTG 5.56 MM BALL EPR, METAL BOX M2A2		2019	TO BE SELECTED@ / UNKNOWN	C / FFP	ROCK ISLAND ARSENAL	May 2019	Jul 2019	16,333	14.07	Y		Feb 2019
18.1.1) AC15, CAL .50 4 & 1 REDUCED RANGE LINKED, COMPLETE ROUND(†)		2019	OCR Global / Fairfax, VA	C / IDIQ	NSWC CD, CRANE, IN	Oct 2018	Jan 2019	1,957,500	4.80	Y		
18.1.1) AC15, CAL .50 4 & 1 REDUCED RANGE LINKED, COMPLETE ROUND	✓	2020	OCR Global / Fairfax, VA	C / IDIQ	NSWC CD, CRANE, IN	Apr 2020	Jul 2020	3,952,630	4.94	Y		
19.1.1) AC14, CAL .50 BALL REDUCED RANGE LINKED, COMPLETE ROUND		2019	OCR Global / Fairfax, VA	C / IDIQ	NSWC CD, CRANE, IN	Apr 2019	Jul 2019	475,227	4.40	Y		
19.1.1) AC14, CAL .50 BALL REDUCED RANGE LINKED, COMPLETE ROUND	✓	2020	OCR Global / Fairfax, VA	C / IDIQ	NSWC CD, CRANE, IN	Oct 2019	Jan 2020	982,400	4.53	Y		
21.1.1) AC07 (formerly AXX3), 9MM BLANK, COMPLETE ROUND		2018	GDOTS CANADA / CANADA	SS / FFP	MCSC, QUANTICO, VA	Aug 2018	Feb 2019	27,712	2.78	Y		Feb 2018
21.1.1) AC07 (formerly AXX3), 9MM BLANK, COMPLETE ROUND		2019	GDOTS CANADA / CANADA	SS / FFP	MCSC, QUANTICO, VA	Apr 2019	Oct 2019	40,851	2.84	Y		Feb 2019
21.1.1) AC07 (formerly AXX3), 9MM BLANK, COMPLETE ROUND	✓	2020	GDOTS CANADA / CANADA	SS / FFP	MCSC, QUANTICO, VA	Oct 2019	Apr 2020	40,862	2.89	Y		
22.1.1) AB64, CTG, CAL .50 4 & 1 REDUCED RANGE LINKED		2018	OCR Global / Fairfax, VA	C / IDIQ	NSWC CD, CRANE, IN	Jul 2018	Oct 2018	3,507,511	4.66	Y		Feb 2018
23.1.1) AB65, CTG, CAL .50 BALL REDUCED RANGE LINKED		2018	OCR Global / Fairfax, VA	C / IDIQ	NSWC CD, CRANE, IN	Apr 2018	Jul 2018	1,948,947	4.27	Y		Feb 2018

(†) indicates the presence of a P-21

Footnotes:

(5) CONTRACT WILL BE SPLIT FOR PRODUCTION WITH OLIN CORPS WINCHESTER DIV, EAST ALTON, IL

(6) The FY18 Complete Round is a delivery order to the FY16 Contract.

Exhibit P-21, Production Schedule: PB 2020 Navy		Date: March 2019
Appropriation / Budget Activity / Budget Sub Activity: 1508N / 02 / 1	**P-1 Line Item Number / Title:** 1350 / Infantry Weapons Ammunition	**Item Number / Title [DODIC]:** 3 / Small Arms Ammunition

Cost Elements (Units in Millions, * = < 500)							Fiscal Year 2018												Fiscal Year 2019												BALANCE
							Calendar Year 2018												Calendar Year 2019												
OCO	MFR #	FY	SERVICE	PROC QTY	ACCEPT PRIOR TO 1 OCT 2017	BAL DUE AS OF 1 OCT	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	
4.1.1) A059, 5.56MM BALL, LOAD, ASSEMBLE AND PACK (LAP) (1)																															
	1	2018	NAVY	163.094	.000	163.094						A -	-	-	-	-	-	-	13.591	13.591	13.591	13.591	13.591	13.591	13.591	13.591	13.591	13.591	13.591	13.591	.000
✓	1	2018	NAVY	4.668	.000	4.668						A -	-	-	-	-	-	-	.352	.352	.617	.617	.352	.352	.352	.352	.352	.352	.352	.266	.000
	1	2019	NAVY	83.153	.000	83.153																		A -	-	-	-	-	-	6.929	76.223
✓	2	2020	NAVY	24.160	.000	24.160																									24.160
18.1.1) AC15, CAL .50 4 & 1 REDUCED RANGE LINKED, COMPLETE ROUND																															
	3	2019	NAVY	1.958	.000	1.958													A -	-	-	.500	.500	.500	.458						.000
							OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	

Exhibit P-21, Production Schedule: PB 2020 Navy | **Date:** March 2019

Appropriation / Budget Activity / Budget Sub Activity: 1508N / 02 / 1

P-1 Line Item Number / Title: 1350 / Infantry Weapons Ammunition

Item Number / Title [DODIC]: 3 / Small Arms Ammunition

Cost Elements (Units in Millions, * = < 500)							Fiscal Year 2020												Fiscal Year 2021												BALANCE
										Calendar Year 2020												Calendar Year 2021									
OCO	MFR #	FY	SERVICE	PROC QTY	ACCEPT PRIOR TO 1 OCT 2019	BAL DUE AS OF 1 OCT	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	
4.1.1) A059, 5.56MM BALL, LOAD, ASSEMBLE AND PACK (LAP) (1)																															
	1	2018	NAVY	163.094	163.094	.000																									.000
✓	1	2018	NAVY	4.668	4.668	.000																									.000
	1	2019	NAVY	83.153	6.929	76.223	6.929	6.929	6.929	6.929	6.929	6.929	6.929	6.929	6.929	6.929	6.929														.000
✓	2	2020	NAVY	24.160	.000	24.160						A -	-	-	-	-	-	-	-	-	-	-	-	2.013	2.013	2.013	2.013	2.013	2.013	2.013	10.067
18.1.1) AC15, CAL .50 4 & 1 REDUCED RANGE LINKED, COMPLETE ROUND																															
	3	2019	NAVY	1.958	1.958	.000																									.000
							OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	

Exhibit P-21, Production Schedule: PB 2020 Navy		Date: March 2019
Appropriation / Budget Activity / Budget Sub Activity: 1508N / 02 / 1	**P-1 Line Item Number / Title:** 1350 / Infantry Weapons Ammunition	**Item Number / Title [DODIC]:** 3 / Small Arms Ammunition

Cost Elements (Units in Millions, * = < 500)							Fiscal Year 2022												Fiscal Year 2023												BALANCE
							Calendar Year 2022												Calendar Year 2023												
OCO	MFR #	FY	SERVICE	PROC QTY	ACCEPT PRIOR TO 1 OCT 2021	BAL DUE AS OF 1 OCT	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	
4.1.1) A059, 5.56MM BALL, LOAD, ASSEMBLE AND PACK (LAP) (1)																															
	1	2018	NAVY	163.094	163.094	.000																									.000
✓	1	2018	NAVY	4.668	4.668	.000																									.000
	1	2019	NAVY	83.153	83.153	.000																									.000
✓	2	2020	NAVY	24.160	14.094	10.067	2.013	2.013	2.013	2.013	2.013																				.000
18.1.1) AC15, CAL .50 4 & 1 REDUCED RANGE LINKED, COMPLETE ROUND																															
	3	2019	NAVY	1.958	1.958	.000																									.000
							OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	

Exhibit P-21, Production Schedule: PB 2020 Navy		Date: March 2019
Appropriation / Budget Activity / Budget Sub Activity: 1508N / 02 / 1	**P-1 Line Item Number / Title:** 1350 / Infantry Weapons Ammunition	**Item Number / Title [DODIC]:** 3 / Small Arms Ammunition

MFR Ref #	Manufacturer Name - Location	Production Rates (Each / Year)			Procurement Leadtime (Months)							
					Initial				Reorder			
		MSR For 2020	1-8-5 For 2020	MAX For 2020	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 (LCAAP) - INDEPENDENCE, MO	3,360,000	38,800,000	350,000,000	6	6	12	18	6	6	6	12
2	OLIN CORPS WINCHESTER - EAST ALTON, IL	1,000,000	10,000,000	100,000,000	6	6	12	18	6	6	9	15
3	OCR Global - Fairfax, VA			TBD	6	6	6	12	6	6	3	9

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

Exhibit P-5, Cost Analysis: PB 2020 Navy		Date: March 2019
Appropriation / Budget Activity / Budget Sub Activity: 1508N / 02 / 1	**P-1 Line Item Number / Title:** 1350 / Infantry Weapons Ammunition	**Item Number / Title [DODIC]:** 4 / CTG, 30 MM, All Types
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	

Resource Summary	Prior Years	FY 2018	FY 2019	FY 2020 Base	FY 2020 OCO	FY 2020 Total
Procurement Quantity *(Units in Each)*	-	-	-	-	-	-
Gross/Weapon System Cost *($ in Millions)*	0.000	0.000	0.000	0.000	0.500	0.500
Less PY Advance Procurement *($ in Millions)*	-	-	-	-	-	-
Net Procurement (P-1) *($ in Millions)*	0.000	0.000	0.000	0.000	0.500	0.500
Plus CY Advance Procurement *($ in Millions)*	-	-	-	-	-	-
Total Obligation Authority *($ in Millions)*	**0.000**	**0.000**	**0.000**	**0.000**	**0.500**	**0.500**
(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)						
Initial Spares *($ in Millions)*	-	-	-	-	-	-
Gross/Weapon System Unit Cost *($ in 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 2018			FY 2019			FY 2020 Base			FY 2020 OCO			FY 2020 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 - B30T, CTG, 30MM TARGET PRACTICE (TP) M788 Cost																		
Recurring Cost																		
1.1.1) B30T - CTG, 30MM TP M788 - LOAD, ASSEMBLE, AND PACK(†) (7)	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000	25.85	9,186	0.237	25.85	9,186	0.237
1.1.2) B30T - CTG, 30MM TP M788 - PRODUCTION ENGINEERING	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.012	-	-	0.012
1.1.3) B30T - CTG, 30MM TP M788 - QUALITY ASSURANCE	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.001	-	-	0.001
Subtotal: Recurring Cost	-	-	*0.000*	-	-	*0.000*	-	-	*0.000*	-	-	*0.000*	-	-	*0.250*	-	-	*0.250*
Subtotal: Hardware - B30T, CTG, 30MM TARGET PRACTICE (TP) M788 Cost	**-**	**-**	***0.000***	**-**	**-**	***0.000***	**-**	**-**	***0.000***	**-**	**-**	***0.000***	**-**	**-**	***0.250***	**-**	**-**	***0.250***
Hardware - B30W, CTG, 30MM HIGH EXPLOSIVE DUAL PURPOSE (HEDP) M789 Cost																		
Recurring Cost																		
2.1.1) B30W - CTG, 30MM HEDP M789 - LOAD, ASSEMBLE, AND PACK(†) (8)	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000	127.40	1,940	0.247	127.40	1,940	0.247
2.1.2) B30W - CTG, 30MM HEDP M789	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.002	-	-	0.002

Exhibit P-5, Cost Analysis: PB 2020 Navy		Date: March 2019
Appropriation / Budget Activity / Budget Sub Activity: 1508N / 02 / 1	P-1 Line Item Number / Title: 1350 / Infantry Weapons Ammunition	Item Number / Title [DODIC]: 4 / CTG, 30 MM, All Types
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 2018			FY 2019			FY 2020 Base			FY 2020 OCO			FY 2020 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)
- PRODUCTION ENGINERRING																		
2.1.3) B30T - CTG, 30MM HEDP M789 - QUALITY ASSURANCE	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.001	-	-	0.001
Subtotal: Recurring Cost	-	-	*0.000*	-	-	*0.000*	-	-	*0.000*	-	-	*0.000*	-	-	*0.250*	-	-	*0.250*
Subtotal: Hardware - B30W, CTG, 30MM HIGH EXPLOSIVE DUAL PURPOSE (HEDP) M789 Cost	**-**	**-**	***0.000***	**-**	**-**	***0.000***	**-**	**-**	***0.000***	**-**	**-**	***0.000***	**-**	**-**	***0.250***	**-**	**-**	***0.250***
Gross/Weapon System Cost	**-**	**-**	**0.000**	**-**	**-**	**0.000**	**-**	**-**	**0.000**	**-**	**-**	**0.000**	**-**	**-**	**0.500**	**-**	**-**	**0.500**

(†) indicates the presence of a P-5a

Footnotes:

(7) FY20 funding were added to procure units ISO emerging requirements, totaling $250k.

(8) FY20 funding were added to procure units ISO emerging requirements, totaling $250k.

Exhibit P-5a, Procurement History and Planning: PB 2020 Navy		Date: March 2019
Appropriation / Budget Activity / Budget Sub Activity: 1508N / 02 / 1	P-1 Line Item Number / Title: 1350 / Infantry Weapons Ammunition	Item Number / Title [DODIC]: 4 / CTG, 30 MM, All Types

Cost Elements	OCO	FY	Contractor and Location	Method/Type or Funding Vehicle	Location of PCO	Award Date	Date of First Delivery	Qty (Each)	Unit Cost ($)	Specs Avail Now?	Date Revision Available	RFP Issue Date
1.1.1) B30T - CTG, 30MM TP M788 - LOAD, ASSEMBLE, AND PACK	✓	2020 (9)	TBD - Manufacturer 3 (10) / TBD	C / FFP	Rock Island Arsenal, IL	Mar 2020	Mar 2021	9,186	25.85	Y		Jan 2020
2.1.1) B30W - CTG, 30MM HEDP M789 - LOAD, ASSEMBLE, AND PACK	✓	2020 (11)	TBD - Manufacturer 3 (12) / TBD	C / FFP	Rock Island Arsenal, IL	Mar 2020	Mar 2021	1,940	127.40	Y		Jan 2020

Footnotes:

(9) Army Contracting Command, Rock Island, IL plans to split total quanity evenly with two (2) contractors.

(10) Army Contracting Command, Rock Island, IL plans to split total quanity evenly with two (2) contractors.

(11) Army Contracting Command, Rock Island, IL plans to split total quanity evenly with two (2) contractors.

(12) Army Contracting Command, Rock Island, IL plans to split total quanity evenly with two (2) contractors.

Exhibit P-40, Budget Line Item Justification: PB 2020 Navy	Date: March 2019
Appropriation / Budget Activity / Budget Sub Activity: 1508N: Procurement of Ammo, Navy & MC / BA 02: Proc Ammo, MC / BSA 1: Marine Corps Ammunition	**P-1 Line Item Number / Title:** 1550 / Combat Support Munitions

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

Line Item MDAP/MAIS Code: N/A

Resource Summary	Prior Years	FY 2018	FY 2019	FY 2020 Base	FY 2020 OCO	FY 2020 Total	FY 2021	FY 2022	FY 2023	FY 2024	To Complete	Total
Procurement Quantity *(Units in Each)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost *($ in Millions)*	0.000	14.146	31.741	0.000	41.013	41.013	43.647	34.493	30.037	30.638	Continuing	Continuing
Less PY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) *($ in Millions)*	0.000	14.146	31.741	0.000	41.013	41.013	43.647	34.493	30.037	30.638	Continuing	Continuing
Plus CY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority *($ in Millions)*	**0.000**	**14.146**	**31.741**	**0.000**	**41.013**	**41.013**	**43.647**	**34.493**	**30.037**	**30.638**	**Continuing**	**Continuing**
(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)*	-	-	-	-	-	-	-	-	-	-	-	-

Description:

FY 2020 funding totals include $0.0M for Base and $41.013M for Overseas Contingency Operations (OCO); of which $40.048M is realigned as part of the OCO for Base Requirements. FY 2020 OCO for Base Requirements is OCO funding for base budget requirements in support of the National Defense Strategy. The Budget requests these funds in OCO to comply with the base budget defense caps included in the Budget Control Act of 2011.

Beginning in FY18 this budget represents a consolidation of ammunition line items by functional capability.

This budget includes demolition items, hand held grenades, vehicle launched grenades, pyrotechnic devices, land mines, and non-lethal items.

Demolition items provide high explosives for the purpose of destroying or altering man-made or natural objects or obstacles. Demolition munitions charges include block charges, shaped charges, flexible-linear charges, explosive sheet, cable, canine explosive scent items, chain cutters, and military dynamite. They are used for general demolition, cutting, breaching, cratering, and destruction of abandoned equipment/ ammunition.

Also included are all hand held/vehicle launched grenades, pyrotechnics devices, and land mines used by ground forces of the Marine Corps. This includes colored smoke grenades, obscuration smoke grenades, various pyrotechnics used in training to simulate battlefield effects, and the claymore mines.

Additionally, this family also has non-lethal munition variants such as; 12 gauge, 40mm grenades, diversionary grenades, and 81mm non-lethal mortars. These munitions are intended to incapacitate, warn or drive off targeted personnel and/or materiel; while minimizing permanent injury to personnel, and damage to property in the target area or environment.

The funds prior to FY18 are contained in line items 1030, 1468, 1500 and 1628.

Exhibit P-40, Budget Line Item Justification: PB 2020 Navy		Date: March 2019
Appropriation / Budget Activity / Budget Sub Activity: 1508N: Procurement of Ammo, Navy & MC / BA 02: Proc Ammo, MC / BSA 1: Marine Corps Ammunition	**P-1 Line Item Number / Title:** 1550 / Combat Support Munitions	
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 2018	FY 2019	FY 2020 Base	FY 2020 OCO	FY 2020 Total
Exhibit Type	Title*	Subexhibits	ID CD	MDAP/ MAIS Code	Quantity / Total Cost (Each) / ($ M)	Quantity / Total Cost (Each) / ($ M)	Quantity / Total Cost (Each) / ($ M)	Quantity / Total Cost (Each) / ($ M)	Quantity / Total Cost (Each) / ($ M)	Quantity / Total Cost (Each) / ($ M)
P-5	1 / Linear Charges, All Types	P-5a, P-21			- / 0.000	- / 10.000	- / 23.758	- / 0.000	- / 32.719	- / 32.719
P-5	2 / Grenades, All Types	P-5a, P-21			- / 0.000	- / 4.146	- / 7.500	- / 0.000	- / 3.500	- / 3.500
P-5	3 / Demolition Munitions, All Types	P-5a			- / 0.000	- / 0.000	- / 0.483	- / 0.000	- / 1.794	- / 1.794
P-5	4 / Non-Lethal Indirect Fire Munition	P-5a			- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 3.000	- / 3.000
P-40	**Total Gross/Weapon System Cost**				**- / 0.000**	**- / 14.146**	**- / 31.741**	**- / 0.000**	**- / 41.013**	**- / 41.013**

*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 2020 OCO for baseline funding is required for procurement of Hand Grenades (DODIC G881), linear charges (DODIC M913), Arrester Cable Release Mechanism (ACRM) (DODIC MLAC), Anti-Personnel Obstacle Breaching Systems (APOBS) (DODIC MN79), Military Dog Scent Kit (MDSK) items, M6 Electric Blasting Caps (DODIC M130), Demolition Flex Linear Charges (DODICs MM46 and MM47), and Lightweight Disposable Disruptors (LIDD) (DODIC DWDN). All procured items will support required annual and pre-deployment training.

FY 2020 funding is also required for Engineering Support In Production (ESIP). ESIP costs support engineering functions on produced units which includes configuration management, lot acceptance testing, and support for items currently in production. Additionally, this funding addresses any changes to the design, assuring that the ammunition is of the highest quality, and deals with any manufacturing concerns during these processes.

The increase from FY 2019 to FY 2020 reflects an increase of the munitions requirement for APOBS (MN79), Charge, Demo Linear H3 (M913), Grenade, Hand Fragmentation M67 (G881), Cap, Blasting Electric (M130), and Charge, Demolition FLSC (MM46) and (MM47). In the case of GG20 and MDSK, increase in funding is due to shelf life-related attrition of stocks to support current inventory.

OCO:
The FY 2020 Direct War OCO funding request of $0.965M is required to reset APOBS (DODIC MN79) munitions expended in support of Operation Inherent Resolve (OIR). Funding will procure additional APOBS (DODIC MN79) to support required training, this includes annual training requirements as well as any pre-deployment training.

Exhibit P-5, Cost Analysis: PB 2020 Navy		Date: March 2019
Appropriation / Budget Activity / Budget Sub Activity: 1508N / 02 / 1	**P-1 Line Item Number / Title:** 1550 / Combat Support Munitions	**Item Number / Title [DODIC]:** 1 / Linear Charges, All Types
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	

Resource Summary	Prior Years	FY 2018	FY 2019	FY 2020 Base	FY 2020 OCO	FY 2020 Total
Procurement Quantity *(Units in Each)*	-	-	-	-	-	-
Gross/Weapon System Cost *($ in Millions)*	0.000	10.000	23.758	0.000	32.719	32.719
Less PY Advance Procurement *($ in Millions)*	-	-	-	-	-	-
Net Procurement (P-1) *($ in Millions)*	0.000	10.000	23.758	0.000	32.719	32.719
Plus CY Advance Procurement *($ in Millions)*	-	-	-	-	-	-
Total Obligation Authority *($ in Millions)*	**0.000**	**10.000**	**23.758**	**0.000**	**32.719**	**32.719**
(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 2018			FY 2019			FY 2020 Base			FY 2020 OCO			FY 2020 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 - A4 SERIES LINEAR DEMOLITION CHARGE M58 Cost																		
Recurring Cost																		
1.1.1) M913 LOAD, ASSEMBLE, PACK (LAP)(†) (1)	-	-	0.000	23,801.00	218	5.189	26,264.75	222	5.831	-	-	0.000	26,027.21	369	9.604	26,027.21	369	9.604
1.1.2) M913 COMP C-4(†)	-	-	0.000	14.83	322,223	4.779	19.84	411,113	8.156	-	-	0.000	20.23	542,594	10.979	20.23	542,594	10.979
1.1.3) M913 FUZE ELECTRIC M113A4 GFM(†)	-	-	0.000	-	-	0.000	3,154.77	222	0.700	-	-	0.000	3,217.63	293	0.943	3,217.63	293	0.943
1.1.4) M913 PRODUCTION SUPPORT	-	-	0.000	-	-	0.032	-	-	0.022	-	-	0.000	-	-	0.057	-	-	0.057
1.1.5) FIRST ARTICLE TEST	-	-	0.000	-	-	0.000	-	-	0.080	-	-	0.000	-	-	0.080	-	-	0.080
Subtotal: Recurring Cost	-	-	*0.000*	-	-	*10.000*	-	-	*14.789*	-	-	*0.000*	-	-	*21.663*	-	-	*21.663*
Subtotal: Hardware - A4 SERIES LINEAR DEMOLITION CHARGE M58 Cost	**-**	**-**	***0.000***	**-**	**-**	***10.000***	**-**	**-**	***14.789***	**-**	**-**	***0.000***	**-**	**-**	***21.663***	**-**	**-**	***21.663***
Hardware - MN79 ANTI-PERS OBSTACLE BREACHING SYSTEM Cost																		
Recurring Cost																		
2.1.1) MN79 COMPLETE ROUND(†) (2)	-	-	0.000	-	-	0.000	13,377.78	383	5.124	-	-	0.000	13,928.06	756	10.530	13,928.06	756	10.530

Exhibit P-5, Cost Analysis: PB 2020 Navy		Date: March 2019
Appropriation / Budget Activity / Budget Sub Activity: 1508N / 02 / 1	P-1 Line Item Number / Title: 1550 / Combat Support Munitions	Item Number / Title [DODIC]: 1 / Linear Charges, All Types
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 2018			FY 2019			FY 2020 Base			FY 2020 OCO			FY 2020 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)
2.1.2) MN79 PRODUCTION SUPPORT	-	-	0.000	-	-	0.000	-	-	0.013	-	-	0.000	-	-	0.026	-	-	0.026
2.1.3) Non-Recurring First Article Test (FAT)	-	-	0.000	-	-	0.000	-	-	0.332	-	-	0.000	-	-	0.000	-	-	0.000
Subtotal: Recurring Cost	-	-	*0.000*	-	-	*0.000*	-	-	*5.469*	-	-	*0.000*	-	-	*10.556*	-	-	*10.556*
Subtotal: Hardware - MN79 ANTI-PERS OBSTACLE BREACHING SYSTEM Cost	**-**	**-**	***0.000***	**-**	**-**	***0.000***	**-**	**-**	***5.469***	**-**	**-**	***0.000***	**-**	**-**	***10.556***	**-**	**-**	***10.556***
Hardware - MLAC MICLIC Arresting Cable Cost																		
Recurring Cost																		
3.1.1) MLAC Complete Round(†)	-	-	0.000	-	-	0.000	7,000.00	470	3.290	-	-	0.000	7,075.00	60	0.425	7,075.00	60	0.425
3.1.2) MLAC Product Support	-	-	0.000	-	-	0.000	-	-	0.210	-	-	0.000	-	-	0.075	-	-	0.075
Subtotal: Recurring Cost	-	-	*0.000*	-	-	*0.000*	-	-	*3.500*	-	-	*0.000*	-	-	*0.500*	-	-	*0.500*
Subtotal: Hardware - MLAC MICLIC Arresting Cable Cost	**-**	**-**	***0.000***	**-**	**-**	***0.000***	**-**	**-**	***3.500***	**-**	**-**	***0.000***	**-**	**-**	***0.500***	**-**	**-**	***0.500***
Gross/Weapon System Cost	**-**	**-**	**0.000**	**-**	**-**	**10.000**	**-**	**-**	**23.758**	**-**	**-**	**0.000**	**-**	**-**	**32.719**	**-**	**-**	**32.719**

(†) indicates the presence of a P-5a

Footnotes:

(1) M913: Budget Year (2020) unit costs have been adjusted to reflect the latest estimates obtained from the OSD summer pricing review, this cost is used for all services procuring the same configuration.

(2) The increase in unit cost is due to an overall lower quantity being procured on the Army's contract in FY 2020 as compared to FY 2019. The Marine Corps is procuring a larger quantity in FY20. However, when combined with the Army's smaller quantity in FY 2020 the overall quantity drops significantly. As a result, increasing the unit cost.

Exhibit P-5a, Procurement History and Planning: PB 2020 Navy		Date: March 2019
Appropriation / Budget Activity / Budget Sub Activity: 1508N / 02 / 1	P-1 Line Item Number / Title: 1550 / Combat Support Munitions	Item Number / Title [DODIC]: 1 / Linear Charges, All Types

Cost Elements	OCO	FY	Contractor and Location	Method/Type or Funding Vehicle	Location of PCO	Award Date	Date of First Delivery	Qty (Each)	Unit Cost ($)	Specs Avail Now?	Date Revision Available	RFP Issue Date
1.1.1) M913 LOAD, ASSEMBLE, PACK (LAP)(†)		2018	AMERICAN ORDNANCE LLC (IAAP) / MIDDLETOWN, IA	C / FFP	ROCK ISLAND ARSENAL, IL	Sep 2018	Mar 2020	218	23,801.00	Y		
1.1.1) M913 LOAD, ASSEMBLE, PACK (LAP)(†)		2019	TO BE SELECTED / UNKNOWN	C / FFP	ROCK ISLAND ARSENAL, IL	Mar 2019	Mar 2021	222	26,264.75	Y		
1.1.1) M913 LOAD, ASSEMBLE, PACK (LAP)(†)	✓	2020	TO BE SELECTED / UNKNOWN	C / FFP	ROCK ISLAND ARSENAL, IL	Mar 2020	Sep 2021	369	26,027.21	Y		
1.1.2) M913 COMP C-4(†)		2018	BAE ORDNANCE SYSTEMS / KINGSPORT, TN	C / FFP	ROCK ISLAND ARSENAL, IL	Mar 2018	Jun 2018	322,223	14.83	Y		
1.1.2) M913 COMP C-4(†)		2019	TO BE SELECTED / UNKNOWN	C / FFP	ROCK ISLAND ARSENAL, IL	Mar 2019	Jun 2019	411,113	19.84	Y		
1.1.2) M913 COMP C-4(†)	✓	2020	TO BE SELECTED / UNKNOWN	C / FFP	ROCK ISLAND ARSENAL, IL	Mar 2020	Jun 2020	542,594	20.23	Y		
1.1.3) M913 FUZE ELECTRIC M113A4 GFM		2019	TO BE SELECTED / UNKNOWN	C / FFP	ROCK ISLAND ARSENAL, IL	Mar 2019	Mar 2020	222	3,154.77	Y		
1.1.3) M913 FUZE ELECTRIC M113A4 GFM	✓	2020	TO BE SELECTED / UNKNOWN	C / FFP	ROCK ISLAND ARSENAL, IL	Mar 2020	Mar 2021	293	3,217.63	Y		
2.1.1) MN79 COMPLETE ROUND(†)		2019	TO BE SELECTED / UNKNOWN	C / FFP	ROCK ISLAND ARSENAL, IL	Jun 2019	Mar 2021	371	13,377.78	Y		
2.1.1) MN79 COMPLETE ROUND(†)	✓	2019	TO BE SELECTED / UNKNOWN	C / FFP	ROCK ISLAND ARSENAL, IL	Jun 2019	Mar 2021	12	13,377.78	Y		
2.1.1) MN79 COMPLETE ROUND(†)	✓	2020	TO BE SELECTED / UNKNOWN	C / FFP	ROCK ISLAND ARSENAL, IL	Mar 2020	Sep 2021	756	13,928.06	Y		
3.1.1) MLAC Complete Round		2019	NSWC INDIAND HEAD / INDIAN HEAD, MD	TBD	NSWC Indian Head, MD	Jun 2019	Dec 2019	470	7,000.00	Y		
3.1.1) MLAC Complete Round	✓	2020	NSWC INDIAND HEAD / INDIAN HEAD, MD	TBD	NSWC Indian Head, MD	Oct 2019	Apr 2020	60	7,075.00	Y		

(†) indicates the presence of a P-21

Exhibit P-21, Production Schedule: PB 2020 Navy		Date: March 2019
Appropriation / Budget Activity / Budget Sub Activity: 1508N / 02 / 1	**P-1 Line Item Number / Title:** 1550 / Combat Support Munitions	**Item Number / Title [DODIC]:** 1 / Linear Charges, All Types

Cost Elements (Units in Thousands)							Fiscal Year 2018												Fiscal Year 2019												BALANCE
										Calendar Year 2018												Calendar Year 2019									
OCO	MFR #	FY	SERVICE	PROC QTY	ACCEPT PRIOR TO 1 OCT 2017	BAL DUE AS OF 1 OCT	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	
1.1.1) M913 LOAD, ASSEMBLE, PACK (LAP) (1)																															
	2	2018	NAVY	.218	.000	.218												A -	-	-	-	-	-	-	-	-	-	-	-	-	.218
	1	2019	NAVY	.222	.000	.222																		A -	-	-	-	-	-	-	.222
✓	1	2020	NAVY	.369	.000	.369																									.369
1.1.2) M913 COMP C-4																															
	3	2018	NAVY	322.223	.000	322.223						A -	-	-	26.852	26.852	26.852	26.852	26.852	26.852	26.852	26.852	26.852	26.852	26.852	26.851					.000
	4	2019	NAVY	411.113	.000	411.113																		A -	-	-	34.259	34.259	34.259	34.259	274.077
✓	4	2020	NAVY	542.594	.000	542.594																									542.594
2.1.1) MN79 COMPLETE ROUND (2)																															
	5	2019	NAVY	.371	.000	.371																					A -	-	-	-	.371
✓	5	2019	NAVY	.012	.000	.012																					A -	-	-	-	.012
✓	5	2020	NAVY	.756	.000	.756																									.756
							OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	

Exhibit P-21, Production Schedule: PB 2020 Navy		**Date:** March 2019
Appropriation / Budget Activity / Budget Sub Activity: 1508N / 02 / 1	**P-1 Line Item Number / Title:** 1550 / Combat Support Munitions	**Item Number / Title [DODIC]:** 1 / Linear Charges, All Types

Cost Elements (Units in Thousands)							Fiscal Year 2020												Fiscal Year 2021												BALANCE
							Calendar Year 2020															Calendar Year 2021									
OCO	MFR #	FY	SERVICE	PROC QTY	ACCEPT PRIOR TO 1 OCT 2019	BAL DUE AS OF 1 OCT	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	
1.1.1) M913 LOAD, ASSEMBLE, PACK (LAP) (1)																															
	2	2018	NAVY	.218	.000	.218	-	-	-	-	-	.017	.018	.018	.018	.018	.018	.018	.018	.018	.019	.019	.019								.000
	1	2019	NAVY	.222	.000	.222	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	.018	.018	.018	.018	.018	.018	.019	.095
✓	1	2020	NAVY	.369	.000	.369						A -	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	.030	.339
1.1.2) M913 COMP C-4																															
	3	2018	NAVY	322.223	322.223	.000																									.000
	4	2019	NAVY	411.113	137.036	274.077	34.260	34.260	34.259	34.259	34.259	34.260	34.260	34.260																	.000
✓	4	2020	NAVY	542.594	.000	542.594						A -	-	-	45.216	45.216	45.216	45.216	45.216	45.216	45.217	45.216	45.216	45.216	45.216	45.217					.000
2.1.1) MN79 COMPLETE ROUND (2)																															
	5	2019	NAVY	.371	.000	.371	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	.030	.031	.031	.031	.031	.031	.031	.155
✓	5	2019	NAVY	.012	.000	.012	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	.001	.001	.001	.001	.001	.001	.001	.005
✓	5	2020	NAVY	.756	.000	.756						A -	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	.061	.695
							OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	

Exhibit P-21, Production Schedule: PB 2020 Navy | **Date:** March 2019

Appropriation / Budget Activity / Budget Sub Activity: 1508N / 02 / 1 | **P-1 Line Item Number / Title:** 1550 / Combat Support Munitions | **Item Number / Title [DODIC]:** 1 / Linear Charges, All Types

Cost Elements (Units in Thousands)							Fiscal Year 2022												Fiscal Year 2023												BALANCE
										Calendar Year 2022												Calendar Year 2023									
OCO	MFR #	FY	SERVICE	PROC QTY	ACCEPT PRIOR TO 1 OCT 2021	BAL DUE AS OF 1 OCT	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	
1.1.1) M913 LOAD, ASSEMBLE, PACK (LAP) (1)																															
	2	2018	NAVY	.218	.218	.000																									.000
	1	2019	NAVY	.222	.127	.095	.019	.019	.019	.019	.019																				.000
✓	1	2020	NAVY	.369	.030	.339	.030	.030	.030	.030	.030	.031	.031	.031	.032	.032	.032														.000
1.1.2) M913 COMP C-4																															
	3	2018	NAVY	322.223	322.223	.000																									.000
	4	2019	NAVY	411.113	411.113	.000																									.000
✓	4	2020	NAVY	542.594	542.594	.000																									.000
2.1.1) MN79 COMPLETE ROUND (2)																															
	5	2019	NAVY	.371	.216	.155	.031	.031	.031	.031	.031																				.000
✓	5	2019	NAVY	.012	.007	.005	.001	.001	.001	.001	.001																				.000
✓	5	2020	NAVY	.756	.061	.695	.062	.062	.063	.063	.063	.063	.064	.064	.064	.064	.063														.000
							OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	

Exhibit P-21, Production Schedule: PB 2020 Navy		Date: March 2019
Appropriation / Budget Activity / Budget Sub Activity: 1508N / 02 / 1	**P-1 Line Item Number / Title:** 1550 / Combat Support Munitions	**Item Number / Title [DODIC]:** 1 / Linear Charges, All Types

MFR Ref #	Manufacturer Name - Location	Production Rates (Each / Year)			Procurement Leadtime (Months)							
					Initial				Reorder			
		MSR For 2020	1-8-5 For 2020	MAX For 2020	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	TO BE SELECTED - UNKNOWN	25	75	375	8	8	24	32	6	6	18	24
2	AMERICAN ORDNANCE LLC (IAAP) - MIDDLETOWN, IA	25	75	375	8	8	18	26	6	6	16	22
3	BAE ORDNANCE SYSTEMS - KINGSPORT, TN	200,000	400,000	600,000	0	0	3	3	0	0	3	3
4	TO BE SELECTED - UNKNOWN	200,000	400,000	600,000	0	0	3	3	0	0	3	3
5	TO BE SELECTED - UNKNOWN	50	130	775	8	8	21	29	6	6	18	24

"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).

Exhibit P-5, Cost Analysis: PB 2020 Navy		Date: March 2019
Appropriation / Budget Activity / Budget Sub Activity: 1508N / 02 / 1	P-1 Line Item Number / Title: 1550 / Combat Support Munitions	Item Number / Title [DODIC]: 2 / Grenades, All Types
ID Code (A=Service Ready, B=Not Service Ready) :	MDAP/MAIS Code:	

Resource Summary	Prior Years	FY 2018	FY 2019	FY 2020 Base	FY 2020 OCO	FY 2020 Total
Procurement Quantity *(Units in Each)*	-	-	-	-	-	-
Gross/Weapon System Cost *($ in Millions)*	0.000	4.146	7.500	0.000	3.500	3.500
Less PY Advance Procurement *($ in Millions)*	-	-	-	-	-	-
Net Procurement (P-1) *($ in Millions)*	0.000	4.146	7.500	0.000	3.500	3.500
Plus CY Advance Procurement *($ in Millions)*	-	-	-	-	-	-
Total Obligation Authority *($ in Millions)*	**0.000**	**4.146**	**7.500**	**0.000**	**3.500**	**3.500**
(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)						
Initial Spares *($ in Millions)*	-	-	-	-	-	-
Gross/Weapon System Unit Cost *($ in 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 2018			FY 2019			FY 2020 Base			FY 2020 OCO			FY 2020 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 - G881, GREN HAND, FRAG M67 W/ CONF CLIP Cost																		
Recurring Cost																		
1.1.1) G881 - GREN HAND, FRAG M67 W/ CONF CLIP - LOAD, ASSEMBLE, AND PACK(†)	-	-	0.000	-	-	0.000	43.16	44,023	1.900	-	-	0.000	42.51	64,580	2.745	42.51	64,580	2.745
1.1.2) G881 - GREN HAND, FRAG M67 W/ CONF CLIP - PRODUCTION ENGINEERING	-	-	0.000	-	-	0.000	-	-	0.100	-	-	0.000	-	-	0.751	-	-	0.751
1.1.3) G881 - GREN HAND, FRAG M67 W/ CONF CLIP - QUALITY ASSURANCE	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.004	-	-	0.004
Subtotal: Recurring Cost	-	-	*0.000*	-	-	*0.000*	-	-	*2.000*	-	-	*0.000*	-	-	*3.500*	-	-	*3.500*
Subtotal: Hardware - G881, GREN HAND, FRAG M67 W/ CONF CLIP Cost	**-**	**-**	***0.000***	**-**	**-**	***0.000***	**-**	**-**	***2.000***	**-**	**-**	***0.000***	**-**	**-**	***3.500***	**-**	**-**	***3.500***
Hardware - GG24, GREN 66MM, SMOKE SCREENING VEL. LAUNCHED, (SSVL) MK1 MOD0 Cost																		
Recurring Cost																		
5.1.1) GG24 - GREN 66MM, SSVL MK1 MOD0 - LOAD,	-	-	0.000	185.49	21,413	3.972	179.62	30,620	5.500	-	-	0.000	-	-	0.000	-	-	0.000

Exhibit P-5, Cost Analysis: PB 2020 Navy		Date: March 2019
Appropriation / Budget Activity / Budget Sub Activity: 1508N / 02 / 1	P-1 Line Item Number / Title: 1550 / Combat Support Munitions	Item Number / Title [DODIC]: 2 / Grenades, All Types
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 2018			FY 2019			FY 2020 Base			FY 2020 OCO			FY 2020 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)
ASSEMBLE, AND PACK(†) (3)																		
5.1.2) GG24 - GREN 66MM, SSVL MK1 MOD0 - PRODUCTION ENGINEERING	-	-	0.000	-	-	0.013	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000
5.1.3) GG24 - GREN 66MM, SSVL MK1 MOD0 - QUALITY ASSURANCE	-	-	0.000	-	-	0.002	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000
5.1.4) GG24, GREN 66MM, SSVL MK1 MOD0 - NONRECURRING - FAAT	-	-	0.000	-	-	0.159	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000
Subtotal: Recurring Cost	-	-	*0.000*	-	-	*4.146*	-	-	*5.500*	-	-	*0.000*	-	-	*0.000*	-	-	*0.000*
Subtotal: Hardware - GG24, GREN 66MM, SMOKE SCREENING VEL. LAUNCHED, (SSVL) MK1 MOD0 Cost	**-**	**-**	***0.000***	**-**	**-**	***4.146***	**-**	**-**	***5.500***	**-**	**-**	***0.000***	**-**	**-**	***0.000***	**-**	**-**	***0.000***
Gross/Weapon System Cost	**-**	**-**	**0.000**	**-**	**-**	**4.146**	**-**	**-**	**7.500**	**-**	**-**	**0.000**	**-**	**-**	**3.500**	**-**	**-**	**3.500**

(†) indicates the presence of a P-5a

Footnotes:

(3) FY19 Unit Cost is based on actual established contract, Option Year five (5), stepladder pricing.

Exhibit P-5a, Procurement History and Planning: PB 2020 Navy		Date: March 2019
Appropriation / Budget Activity / Budget Sub Activity: 1508N / 02 / 1	P-1 Line Item Number / Title: 1550 / Combat Support Munitions	Item Number / Title [DODIC]: 2 / Grenades, All Types

Cost Elements	OCO	FY	Contractor and Location	Method/Type or Funding Vehicle	Location of PCO	Award Date	Date of First Delivery	Qty (Each)	Unit Cost ($)	Specs Avail Now?	Date Revision Available	RFP Issue Date
1.1.1) G881 - GREN HAND, FRAG M67 W/ CONF CLIP - LOAD, ASSEMBLE, AND PACK(†)		2019	DAY&ZIMMERMAN LONE STAR LLC, TEXARKANA, TX / TEXARKANA, TX	C / FFP	ROCK ISLAND ARSENAL, IL	Mar 2019	Mar 2021	44,023	43.16	Y		Jan 2019
1.1.1) G881 - GREN HAND, FRAG M67 W/ CONF CLIP - LOAD, ASSEMBLE, AND PACK(†)	✓	2020	TBD / TBD	C / FFP	ROCK ISLAND ARSENAL, IL	Mar 2020	Mar 2022	64,580	42.51	Y		Jan 2020
5.1.1) GG24 - GREN 66MM, SSVL MK1 MOD0 - LOAD, ASSEMBLE, AND PACK(†)		2018	AMERICAN RHEINMETALL MUNITIONS@STAFFORD, VA / NEUEMBURG, GERMANY	SS / FFP	ROCK ISLAND, IL	Aug 2018	Mar 2020	21,413	185.49	Y		May 2018
5.1.1) GG24 - GREN 66MM, SSVL MK1 MOD0 - LOAD, ASSEMBLE, AND PACK(†)		2019 (4)	AMERICAN RHEINMETALL MUNITIONS@STAFFORD, VA / NEUEMBURG, GERMANY	C / FFP	ROCK ISLAND, IL	Mar 2019	Jun 2020	30,620	179.62	Y		Jan 2019

(†) indicates the presence of a P-21

Footnotes:

(4) FY18/19 production delayed by several months as this item was last produced in Aug. 2015. Vendor requires several months to reconstitute production line and obtain piece parts to produce units.

Exhibit P-21, Production Schedule: PB 2020 Navy		Date: March 2019
Appropriation / Budget Activity / Budget Sub Activity: 1508N / 02 / 1	**P-1 Line Item Number / Title:** 1550 / Combat Support Munitions	**Item Number / Title [DODIC]:** 2 / Grenades, All Types

Cost Elements (Units in Thousands)							Fiscal Year 2018													Fiscal Year 2019												BALANCE
							Calendar Year 2018													Calendar Year 2019												
OCO	MFR #	FY	SERVICE	PROC QTY	ACCEPT PRIOR TO 1 OCT 2017	BAL DUE AS OF 1 OCT	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	
1.1.1) G881 - GREN HAND, FRAG M67 W/ CONF CLIP - LOAD, ASSEMBLE, AND PACK																																
	1	2019	NAVY	44.023	.000	44.023																		A -	-	-	-	-	-	-	44.023
✓	2	2020	NAVY	64.580	.000	64.580																									64.580
5.1.1) GG24 - GREN 66MM, SSVL MK1 MOD0 - LOAD, ASSEMBLE, AND PACK (3)																																
	3	2018	NAVY	21.413	.000	21.413											A -	-	-	-	-	-	-	-	-	-	-	-	-	-	21.413
	3	2019	NAVY	30.620	.000	30.620																		A -	-	-	-	-	-	-	30.620
							OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	

Exhibit P-21, Production Schedule: PB 2020 Navy		Date: March 2019
Appropriation / Budget Activity / Budget Sub Activity: 1508N / 02 / 1	**P-1 Line Item Number / Title:** 1550 / Combat Support Munitions	**Item Number / Title [DODIC]:** 2 / Grenades, All Types

Cost Elements (Units in Thousands)							Fiscal Year 2020												Fiscal Year 2021												BALANCE
							Calendar Year 2020												Calendar Year 2021												
OCO	MFR #	FY	SERVICE	PROC QTY	ACCEPT PRIOR TO 1 OCT 2019	BAL DUE AS OF 1 OCT	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	
1.1.1) G881 - GREN HAND, FRAG M67 W/ CONF CLIP - LOAD, ASSEMBLE, AND PACK																															
	1	2019	NAVY	44.023	.000	44.023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	7.333	7.340	7.340	7.340	7.330	7.340		.000
✓	2	2020	NAVY	64.580	.000	64.580						A -	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	64.580
5.1.1) GG24 - GREN 66MM, SSVL MK1 MOD0 - LOAD, ASSEMBLE, AND PACK (3)																															
	3	2018	NAVY	21.413	.000	21.413	-	-	-	-	-	7.168	7.168	7.077																	.000
	3	2019	NAVY	30.620	.000	30.620	-	-	-	-	-	-	-	-	7.168	7.168	7.906	8.378													.000
							OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	

Exhibit P-21, Production Schedule: PB 2020 Navy		Date: March 2019
Appropriation / Budget Activity / Budget Sub Activity: 1508N / 02 / 1	**P-1 Line Item Number / Title:** 1550 / Combat Support Munitions	**Item Number / Title [DODIC]:** 2 / Grenades, All Types

Cost Elements (Units in Thousands)							Fiscal Year 2022												Fiscal Year 2023												BALANCE
							Calendar Year 2022												Calendar Year 2023												
OCO	MFR #	FY	SERVICE	PROC QTY	ACCEPT PRIOR TO 1 OCT 2021	BAL DUE AS OF 1 OCT	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	
1.1.1) G881 - GREN HAND, FRAG M67 W/ CONF CLIP - LOAD, ASSEMBLE, AND PACK																															
	1	2019	NAVY	44.023	44.023	.000																									.000
✓	2	2020	NAVY	64.580	.000	64.580	-	-	-	-	-	21.310	21.640	18.040	3.590																.000
5.1.1) GG24 - GREN 66MM, SSVL MK1 MOD0 - LOAD, ASSEMBLE, AND PACK (3)																															
	3	2018	NAVY	21.413	21.413	.000																									.000
	3	2019	NAVY	30.620	30.620	.000																									.000
							OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	

Exhibit P-21, Production Schedule: PB 2020 Navy		Date: March 2019
Appropriation / Budget Activity / Budget Sub Activity: 1508N / 02 / 1	**P-1 Line Item Number / Title:** 1550 / Combat Support Munitions	**Item Number / Title [DODIC]:** 2 / Grenades, All Types

MFR Ref #	Manufacturer Name - Location	Production Rates (Each / Year)			Procurement Leadtime (Months)							
					Initial				Reorder			
		MSR For 2020	1-8-5 For 2020	MAX For 2020	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	DAY&ZIMMERMAN LONE STAR LLC, TEXARKANA, TX - TEXARKANA, TX	30,000	50,000	100,000	8	8	24	32	6	6	18	24
2	TBD - TBD	30,000	50,000	100,000	8	8	24	32	6	6	18	24
3	AMERICAN RHEINMETALL MUNITIONS@STAFFORD, VA - NEUEMBURG, GERMANY	200	10,000	31,000	8	8	18	26	6	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).

Exhibit P-5, Cost Analysis: PB 2020 Navy		Date: March 2019
Appropriation / Budget Activity / Budget Sub Activity: 1508N / 02 / 1	**P-1 Line Item Number / Title:** 1550 / Combat Support Munitions	**Item Number / Title [DODIC]:** 3 / Demolition Munitions, All Types
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	

Resource Summary	Prior Years	FY 2018	FY 2019	FY 2020 Base	FY 2020 OCO	FY 2020 Total
Procurement Quantity *(Units in Each)*	-	-	-	-	-	-
Gross/Weapon System Cost *($ in Millions)*	0.000	0.000	0.483	0.000	1.794	1.794
Less PY Advance Procurement *($ in Millions)*	-	-	-	-	-	-
Net Procurement (P-1) *($ in Millions)*	0.000	0.000	0.483	0.000	1.794	1.794
Plus CY Advance Procurement *($ in Millions)*	-	-	-	-	-	-
Total Obligation Authority *($ in Millions)*	**0.000**	**0.000**	**0.483**	**0.000**	**1.794**	**1.794**
(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 2018			FY 2019			FY 2020 Base			FY 2020 OCO			FY 2020 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 - DWDN Light Weight Disposable Disrupter Cost																		
Recurring Cost																		
1.1.1) DWDN Complete round(†)	-	-	0.000	-	-	0.000	200.29	2,396	0.480	-	-	0.000	204.30	2,403	0.491	204.30	2,403	0.491
Subtotal: Recurring Cost	-	-	*0.000*	-	-	*0.000*	-	-	*0.480*	-	-	*0.000*	-	-	*0.491*	-	-	*0.491*
Subtotal: Hardware - DWDN Light Weight Disposable Disrupter Cost	**-**	**-**	***0.000***	**-**	**-**	***0.000***	**-**	**-**	***0.480***	**-**	**-**	***0.000***	**-**	**-**	***0.491***	**-**	**-**	***0.491***
Hardware - AX14 Primer Cost																		
Recurring Cost																		
2.1.1) AX14 Complete Round	-	-	0.000	-	-	0.000	-	-	0.003	-	-	0.000	-	-	0.000	-	-	0.000
Subtotal: Recurring Cost	-	-	*0.000*	-	-	*0.000*	-	-	*0.003*	-	-	*0.000*	-	-	*0.000*	-	-	*0.000*
Subtotal: Hardware - AX14 Primer Cost	**-**	**-**	***0.000***	**-**	**-**	***0.000***	**-**	**-**	***0.003***	**-**	**-**	***0.000***	**-**	**-**	***0.000***	**-**	**-**	***0.000***
Hardware - M130 - Cap, Blasting Electric M6 Cost																		
Recurring Cost																		
3.1.1) M130 Complete Round(†)	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000	32.27	11,096	0.358	32.27	11,096	0.358
3.1.2) M130 PRODUCTION SUPPORT	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.042	-	-	0.042
Subtotal: Recurring Cost	-	-	*0.000*	-	-	*0.000*	-	-	*0.000*	-	-	*0.000*	-	-	*0.400*	-	-	*0.400*

Exhibit P-5, Cost Analysis: PB 2020 Navy		Date: March 2019
Appropriation / Budget Activity / Budget Sub Activity: 1508N / 02 / 1	P-1 Line Item Number / Title: 1550 / Combat Support Munitions	Item Number / Title [DODIC]: 3 / Demolition Munitions, All Types
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 2018			FY 2019			FY 2020 Base			FY 2020 OCO			FY 2020 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)
Subtotal: Hardware - M130 - Cap, Blasting Electric M6 Cost	-	-	***0.000***	-	-	***0.000***	-	-	***0.000***	-	-	***0.000***	-	-	***0.400***	-	-	***0.400***
Hardware - MM46 CHARGE DEMOLITION FLSC 225 GR/FT Cost																		
Recurring Cost																		
4.1.1) MM46 Complete Round(†) (5)	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000	55.71	3,590	0.200	55.71	3,590	0.200
Subtotal: Recurring Cost	-	-	*0.000*	-	-	*0.000*	-	-	*0.000*	-	-	*0.000*	-	-	*0.200*	-	-	*0.200*
Subtotal: Hardware - MM46 CHARGE DEMOLITION FLSC 225 GR/FT Cost	-	-	***0.000***	-	-	***0.000***	-	-	***0.000***	-	-	***0.000***	-	-	***0.200***	-	-	***0.200***
Hardware - MM47 CHARGE DEMOLITION FLSC 400 GR/FT Cost																		
Recurring Cost																		
5.1.1) MM47 Complete Round(†) (6)	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000	77.02	7,790	0.600	77.02	7,790	0.600
Subtotal: Recurring Cost	-	-	*0.000*	-	-	*0.000*	-	-	*0.000*	-	-	*0.000*	-	-	*0.600*	-	-	*0.600*
Subtotal: Hardware - MM47 CHARGE DEMOLITION FLSC 400 GR/FT Cost	-	-	***0.000***	-	-	***0.000***	-	-	***0.000***	-	-	***0.000***	-	-	***0.600***	-	-	***0.600***
Hardware - Military Dog Scent Kit Items Cost																		
Recurring Cost																		
6.1.1) Dog Scent Kits	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.103	-	-	0.103
Subtotal: Recurring Cost	-	-	*0.000*	-	-	*0.000*	-	-	*0.000*	-	-	*0.000*	-	-	*0.103*	-	-	*0.103*
Subtotal: Hardware - Military Dog Scent Kit Items Cost	-	-	***0.000***	-	-	***0.000***	-	-	***0.000***	-	-	***0.000***	-	-	***0.103***	-	-	***0.103***
Gross/Weapon System Cost	-	-	**0.000**	-	-	**0.000**	-	-	**0.483**	-	-	**0.000**	-	-	**1.794**	-	-	**1.794**

(†) indicates the presence of a P-5a

Footnotes:

(5) Due to item's price non-availability as it is a non-Army (SMCA) procured item, unit cost is based on Total Munitions Requirement Program Objective Memorandum 19 pricing data for FY20.

(6) Due to item's price non-availability as it is a non-Army (SMCA) procured item, unit cost is based on Total Munitions Requirement Program Objective Memorandum 19 pricing data for FY20.

Exhibit P-5a, Procurement History and Planning: PB 2020 Navy		Date: March 2019
Appropriation / Budget Activity / Budget Sub Activity: 1508N / 02 / 1	P-1 Line Item Number / Title: 1550 / Combat Support Munitions	Item Number / Title [DODIC]: 3 / Demolition Munitions, All Types

Cost Elements	OCO	FY	Contractor and Location	Method/Type or Funding Vehicle	Location of PCO	Award Date	Date of First Delivery	Qty (Each)	Unit Cost ($)	Specs Avail Now?	Date Revision Available	RFP Issue Date
1.1.1) DWDN Complete round		2019	CRANE ARMY AMMUNITION ACTIVITY1 / NSWC CRANE, IND	C / FFP	NSWC CRANE, IN	May 2019	Aug 2020	2,396	200.29	Y		
1.1.1) DWDN Complete round	✓	2020	CRANE ARMY AMMUNITION ACTIVITY1 / NSWC CRANE, IND	C / FFP	NSWC CRANE, IN	Oct 2019	Apr 2020	2,403	204.30	Y		
3.1.1) M130 Complete Round	✓	2020	R. STRESAU LABORATORY INC. / SPOONER, WI	C / FFP	ROCK ISLAND ARSENAL, IL	Mar 2020	Mar 2021	11,096	32.27	Y		
4.1.1) MM46 Complete Round	✓	2020	CRANE ARMY AMMUNITION ACTIVITY1 / NSWC CRANE, IND	MIPR	NSWC CRANE, IN	Oct 2019	Jan 2020	3,590	55.71	Y		
5.1.1) MM47 Complete Round	✓	2020	CRANE ARMY AMMUNITION ACTIVITY1 / NSWC CRANE, IND	C / TBD	** NO PCO **	Oct 2019	Jan 2020	7,790	77.02	N		

Exhibit P-5, Cost Analysis: PB 2020 Navy		Date: March 2019
Appropriation / Budget Activity / Budget Sub Activity: 1508N / 02 / 1	**P-1 Line Item Number / Title:** 1550 / Combat Support Munitions	**Item Number / Title [DODIC]:** 4 / Non-Lethal Indirect Fire Munition
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	

Resource Summary	Prior Years	FY 2018	FY 2019	FY 2020 Base	FY 2020 OCO	FY 2020 Total
Procurement Quantity *(Units in Each)*	-	-	-	-	-	-
Gross/Weapon System Cost *($ in Millions)*	0.000	0.000	0.000	0.000	3.000	3.000
Less PY Advance Procurement *($ in Millions)*	-	-	-	-	-	-
Net Procurement (P-1) *($ in Millions)*	0.000	0.000	0.000	0.000	3.000	3.000
Plus CY Advance Procurement *($ in Millions)*	-	-	-	-	-	-
Total Obligation Authority *($ in Millions)*	**0.000**	**0.000**	**0.000**	**0.000**	**3.000**	**3.000**
(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)						
Initial Spares *($ in Millions)*	-	-	-	-	-	-
Gross/Weapon System Unit Cost *($ in 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 2018			FY 2019			FY 2020 Base			FY 2020 OCO			FY 2020 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 - GG20, GRENADE, HAND DIVERSIONARY, BTV-1 EL, MK13 MOD0 Cost																		
Recurring Cost																		
2.1.1) GG20, GRENADE, HAND DIVERSIONARY, MK13 MOD0, LOAD, ASSEMBLE, AND PACK(†)	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000	65.59	45,738	3.000	65.59	45,738	3.000
Subtotal: Recurring Cost	-	-	*0.000*	-	-	*0.000*	-	-	*0.000*	-	-	*0.000*	-	-	*3.000*	-	-	*3.000*
Subtotal: Hardware - GG20, GRENADE, HAND DIVERSIONARY, BTV-1 EL, MK13 MOD0 Cost	**-**	**-**	***0.000***	**-**	**-**	***0.000***	**-**	**-**	***0.000***	**-**	**-**	***0.000***	**-**	**-**	***3.000***	**-**	**-**	***3.000***
Gross/Weapon System Cost	**-**	**-**	**0.000**	**-**	**-**	**0.000**	**-**	**-**	**0.000**	**-**	**-**	**0.000**	**-**	**-**	**3.000**	**-**	**-**	**3.000**

(†) indicates the presence of a P-5a

Exhibit P-5a, Procurement History and Planning: PB 2020 Navy		Date: March 2019
Appropriation / Budget Activity / Budget Sub Activity: 1508N / 02 / 1	P-1 Line Item Number / Title: 1550 / Combat Support Munitions	Item Number / Title [DODIC]: 4 / Non-Lethal Indirect Fire Munition

Cost Elements	OCO	FY	Contractor and Location	Method/Type or Funding Vehicle	Location of PCO	Award Date	Date of First Delivery	Qty (Each)	Unit Cost ($)	Specs Avail Now?	Date Revision Available	RFP Issue Date
2.1.1) GG20, GRENADE, HAND DIVERSIONARY, MK13 MOD0, LOAD, ASSEMBLE, AND PACK	✓	2020	TO BE SELECTED / TBD	C / TBD	NSWC CD,CRANE,IN	May 2020	May 2020	45,738	65.59	Y		

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Exhibit P-40, Budget Line Item Justification: PB 2020 Navy	Date: March 2019
Appropriation / Budget Activity / Budget Sub Activity: 1508N: Procurement of Ammo, Navy & MC / BA 02: Proc Ammo, MC / BSA 1: Marine Corps Ammunition	**P-1 Line Item Number / Title:** 1630 / Ammo Modernization

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

Line Item MDAP/MAIS Code: N/A

Resource Summary	Prior Years	FY 2018	FY 2019	FY 2020 Base	FY 2020 OCO	FY 2020 Total	FY 2021	FY 2022	FY 2023	FY 2024	To Complete	Total
Procurement Quantity *(Units in Each)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost *($ in Millions)*	79.486	15.262	15.001	0.000	14.325	14.325	14.832	15.195	15.528	15.830	Continuing	Continuing
Less PY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) *($ in Millions)*	79.486	15.262	15.001	0.000	14.325	14.325	14.832	15.195	15.528	15.830	Continuing	Continuing
Plus CY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority *($ in Millions)*	**79.486**	**15.262**	**15.001**	**0.000**	**14.325**	**14.325**	**14.832**	**15.195**	**15.528**	**15.830**	**Continuing**	**Continuing**
(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)*	-	-	-	-	-	-	-	-	-	-	-	-

Description:

FY 2020 funding totals include $0.0M for Base and $14.325M for Overseas Contingency Operations (OCO); of which $14.325M is realigned as part of the OCO for Base Requirements. FY 2020 OCO for Base Requirements is OCO funding for base budget requirements in support of the National Defense Strategy. The Budget requests these funds in OCO to comply with the base budget defense caps included in the Budget Control Act of 2011.

Ammunition Modernization consists of the procurement of components, end item modernization, repacking of modernized material and upgrading ammunition stocks suspended from use, and/or declared unsafe or unserviceable for ammunition, rockets, line charges, components, missiles, and quality evaluation. This line supports the technical efforts that the Naval Surface Warfare Centers (NSWC) Corona, Crane, Indian Head, and Dahlgren Divisions execute in support of Marine Corps ground delivered class V(W) ammunition systems assessment, test and evaluation, and engineering support.

This funding supports these life cycle management functions to maintain the USMC ammunition inventory through quality assurance programs which are vital to predicting service life trends and keeping the warfighter safe during training and operational scenarios.

Exhibit P-40, Budget Line Item Justification: PB 2020 Navy		Date: March 2019
Appropriation / Budget Activity / Budget Sub Activity: 1508N: Procurement of Ammo, Navy & MC / BA 02: Proc Ammo, MC / BSA 1: Marine Corps Ammunition	**P-1 Line Item Number / Title:** 1630 / Ammo Modernization	
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 2018	FY 2019	FY 2020 Base	FY 2020 OCO	FY 2020 Total
Exhibit Type	Title*	Subexhibits	ID CD	MDAP/ MAIS Code	Quantity / Total Cost *(Each) I ($ M)*	Quantity / Total Cost *(Each) I ($ M)*	Quantity / Total Cost *(Each) I ($ M)*	Quantity / Total Cost *(Each) I ($ M)*	Quantity / Total Cost *(Each) I ($ M)*	Quantity / Total Cost *(Each) I ($ M)*
P-40a	Ammo Modernization				- / 79.486	- / 15.262	- / 15.001	- / 0.000	- / 14.325	- / 14.325
P-40	**Total Gross/Weapon System Cost**				**- / 79.486**	**- / 15.262**	**- / 15.001**	**- / 0.000**	**- / 14.325**	**- / 14.325**

*Title represents 1) the Number / Title for Items; 2) the Number / Title [DODIC] for Ammunition; and/or 3) the Number / Title (Modification Type) for Modifications. 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 2020 OCO for baseline funding will support the modernization of ammunition including rockets, line charges, components, missiles, and quality evaluation. Funding will support the efforts associated with service life accelerated age testing, malfunctions, and quality assurance. The quality assurance program ascertains the safety, reliability, performance, and combat readiness of ammunition assets. Ammo modernization addresses life cycle management of ammunition through cyclic tests, surveillance, and destructive testing (degradation and trends).

From FY 2019 to FY 2020 the budget request was reduced by $0.676M. There are no significant impacts to the modernization and sustainment of the USMC ammunition inventory.

Exhibit P-40a, Budget Item Justification For Aggregated Items: PB 2020 Navy		Date: March 2019
Appropriation / Budget Activity / Budget Sub Activity: 1508N / 02 / 1	**P-1 Line Item Number / Title:** 1630 / Ammo Modernization	**Aggregated Items Title:** Ammo Modernization

Item Number / Title [DODIC]	ID CD	MDAP/ MAIS Code	Prior Years			FY 2018			FY 2019			FY 2020 Base			FY 2020 OCO			FY 2020 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) Ammo Modernization																				
1.1) AM01, 40MM AMMO MOD	A		-	-	8.881	-	-	-	-	-	-	-	-	0.000	-	-	0.439	-	-	0.439
1.2) AM02, ROCKETS AMMO MOD	A		-	-	16.927	-	-	4.292	-	-	-	-	-	0.000	-	-	2.784	-	-	2.784
1.3) AM03, LINE CHARGE AMMO MOD	A		-	-	8.243	-	-	0.493	-	-	-	-	-	0.000	-	-	2.541	-	-	2.541
1.4) AM04, COMPONENTS AMMO MOD	A		-	-	10.366	-	-	-	-	-	-	-	-	0.000	-	-	2.866	-	-	2.866
1.5) AM05, MISSILE COMP AMMO MOD	A		-	-	15.462	-	-	6.122	-	-	1.637	-	-	0.000	-	-	2.882	-	-	2.882
1.6) AM06, QUAL EVAL AMMO MOD	A		-	-	19.531	-	-	4.355	-	-	13.364	-	-	0.000	-	-	2.813	-	-	2.813
1.7) AMMO, AMMO MOD	A		-	-	0.076	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Subtotal: 1) Ammo Modernization			**-**	**-**	***79.486***	**-**	**-**	***15.262***	**-**	**-**	***15.001***	**-**	**-**	***0.000***	**-**	**-**	***14.325***	**-**	**-**	***14.325***
Total			**-**	**-**	**79.486**	**-**	**-**	**15.262**	**-**	**-**	**15.001**	**-**	**-**	**0.000**	**-**	**-**	**14.325**	**-**	**-**	**14.325**

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 2020 Navy	Date: March 2019
Appropriation / Budget Activity / Budget Sub Activity: 1508N: Procurement of Ammo, Navy & MC / BA 02: Proc Ammo, MC / BSA 1: Marine Corps Ammunition	**P-1 Line Item Number / Title:** 1650 / Artillery Munitions

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

Line Item MDAP/MAIS Code: N/A

Resource Summary	Prior Years	FY 2018	FY 2019	FY 2020 Base	FY 2020 OCO	FY 2020 Total	FY 2021	FY 2022	FY 2023	FY 2024	To Complete	Total
Procurement Quantity *(Units in Each)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost *($ in Millions)*	0.000	105.741	113.582	0.000	220.923	220.923	200.830	202.451	177.828	194.562	Continuing	Continuing
Less PY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) *($ in Millions)*	0.000	105.741	113.582	0.000	220.923	220.923	200.830	202.451	177.828	194.562	Continuing	Continuing
Plus CY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority *($ in Millions)*	**0.000**	**105.741**	**113.582**	**0.000**	**220.923**	**220.923**	**200.830**	**202.451**	**177.828**	**194.562**	**Continuing**	**Continuing**
(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)*	-	-	-	-	-	-	-	-	-	-	-	-

Description:

FY 2020 funding totals include $0.0M for Base and $220.923M for Overseas Contingency Operations (OCO); of which $188.876M is realigned as part of the OCO for Base Requirements. FY 2020 OCO for Base Requirements is OCO funding for base budget requirements in support of the National Defense Strategy. The Budget requests these funds in OCO to comply with the base budget defense caps included in the Budget Control Act of 2011.

Beginning in FY18 this budget represents a consolidation of ammunition line items by functional capability.

The family of artillery munitions includes all 155mm artillery ammunition components. The 155mm artillery components are fired from M777 howitzers, and include: primer, propellant, projectile, and fuze. High explosive artillery ammunition is used against personnel, trucks, electronic surveillance and target acquisition devices, supply points, command and control and communications installations, and mechanized and armored forces. Precision-guided artillery provides accurate, first round fire-for-effect capability, and can achieve reduced collateral damage. Illumination cartridges are used to illuminate the battlefield with light either in visual or near Infrared Spectrum. Smoke cartridges are used to provide obscuration on the battlefield and to mark locations. Included are artillery fuzes such as; point detonating, multi-option, electronic time and precision guided.

Funds prior to FY18 are contained in line items 1473 and 1625.

Exhibit P-40, Budget Line Item Justification: PB 2020 Navy	**Date:** March 2019
Appropriation / Budget Activity / Budget Sub Activity: 1508N: Procurement of Ammo, Navy & MC / BA 02: Proc Ammo, MC / BSA 1: Marine Corps Ammunition	**P-1 Line Item Number / Title:** 1650 / Artillery Munitions

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 2018	FY 2019	FY 2020 Base	FY 2020 OCO	FY 2020 Total
Exhibit Type	Title*	Subexhibits	ID CD	MDAP/ MAIS Code	Quantity / Total Cost *(Each) I ($ M)*	Quantity / Total Cost *(Each) I ($ M)*	Quantity / Total Cost *(Each) I ($ M)*	Quantity / Total Cost *(Each) I ($ M)*	Quantity / Total Cost *(Each) I ($ M)*	Quantity / Total Cost *(Each) I ($ M)*
P-40a	Artillery, All Types	P-5a, P-21			- / 0.000	- / 86.373	- / 99.986	- / 0.000	- / 144.342	- / 144.342
P-5	1 / Fuze, All Types	P-5a, P-21			- / 0.000	- / 19.368	- / 13.595	- / 0.000	- / 76.581	- / 76.581
P-40	**Total Gross/Weapon System Cost**				**- / 0.000**	**- / 105.741**	**- / 113.582**	**- / 0.000**	**- / 220.923**	**- / 220.923**

*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 2020 OCO for baseline funding will support the procurement of 155mm High Explosive (HE) M795 with IMX-101 (DODIC DA54). The DA54 is the prime round for the Light Weight 155mm Cannon/Howitzer/ Gun/Artillery piece. The funding will also support the procurement of the prime 155mm HE Training Projectile M1122E1 (DA68), 155mm White Phosphorus (WP) Smoke Projectile M825 (D528) and 155mm Propelling Charge (MACS) M232A2 (DODIC DA67).

FY 2020 funds are also required to support the procurement of artillery fuzes including the Point Detonation (PD) M739A1 (DODIC N340) and the Precision Guidance Kit (PGK) (DODIC NA29). The NA29 technology provides a first-of-its-kind "near-precision" capability. PGK contains a Global Positioning System (GPS) guidance kit with fuzing functions and an integrated GPS receiver to correct the inherent errors associated with ballistic firing solutions. The PGK capability is essential to providing commanders the ability to engage assigned targets while minimizing collateral damage and reducing the number of artillery projectiles required to attack targets.

The FY 2019 to FY 2020 budget increase is attributed to increased product buys to meet user demands, increased price of items procured as we transition to insensitive munitions such as DA54, and the procurement of like in kind artillery munitions.

OCO:
FY 2020 Direct War OCO funding request of $32.047M supports procurement of reset munitions 155mm propellant charge M232A2 (DA67), 155mm point detonating fuze M739A1 (N340), and 155mm Precision Guided Kit Fuze (NA29) expended in theater in support of Operation Inherent Resolve (OIR).

Exhibit P-40a, Budget Item Justification For Aggregated Items: PB 2020 Navy		Date: March 2019
Appropriation / Budget Activity / Budget Sub Activity: 1508N / 02 / 1	P-1 Line Item Number / Title: 1650 / Artillery Munitions	Aggregated Items Title: Artillery, All Types (1)

Item Number / Title [DODIC]	ID CD	MDAP/ MAIS Code	Prior Years			FY 2018			FY 2019			FY 2020 Base			FY 2020 OCO			FY 2020 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) D528 Projectile, 155mm Smoke White Phosphorus M825																				
1.1) D528 Hardware(†)	A		-	-	-	-	-	-	-	-	-	-	-	0.000	1,976.76	4,739	9.368	1,976.76	4,739	9.368
1.2) D528 Production Engineering	A		-	-	-	-	-	-	-	-	-	-	-	0.000	-	-	0.522	-	-	0.522
1.3) D528 Acceptance Testing	A		-	-	-	-	-	-	-	-	-	-	-	0.000	-	-	0.110	-	-	0.110
Subtotal: 1) D528 Projectile, 155mm Smoke White Phosphorus M825			**-**	**-**	***0.000***	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	***0.000***	**-**	**-**	***10.000***	**-**	**-**	***10.000***
2) D528 M825 WP SMK																				
2.1) D528 M825 Projectile Recap(†)	A		-	-	-	-	-	-	357.85	5,589	2.000	-	-	-	-	-	-	-	-	-
Subtotal: 2) D528 M825 WP SMK			**-**	**-**	***0.000***	**-**	**-**	**-**	**-**	**-**	***2.000***	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**
3) D529 155mm HE M795 w/TNT																				
3.1) D529 M795 LAP(†)	A		-	-	-	148.39	71,669	10.635	-	-	-	-	-	-	-	-	-	-	-	-
3.2) D529 M795 Metal Parts(†)	A		-	-	-	380.69	73,102	27.829	-	-	-	-	-	-	-	-	-	-	-	-
3.3) D529 TNT Supplemental Charge(†)	A		-	-	-	12.36	73,102	0.903	-	-	-	-	-	-	-	-	-	-	-	-
3.4) D529 TNT TYPE I FLAKE (TRINITROTOLUENE)(†)	A		-	-	-	4.77	1,935,063	9.230	-	-	-	-	-	-	-	-	-	-	-	-
3.5) D529 Wooden Pallets(†)	A		-	-	-	95.77	9,317	0.892	-	-	-	-	-	-	-	-	-	-	-	-
3.6) D529 Production Engineering	A		-	-	-	-	-	1.409	-	-	-	-	-	-	-	-	-	-	-	-
3.7) D529 Acceptance Testing	A		-	-	-	-	-	0.625	-	-	-	-	-	-	-	-	-	-	-	-
Subtotal: 3) D529 155mm HE M795 w/ TNT			**-**	**-**	***0.000***	**-**	**-**	***51.523***	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**
4) DA51 155mm HE Training Projectile M1122																				
4.1) DA51 Load, Assemble & Pack (LAP)(†)	A		-	-	-	322.85	79,637	25.711	323.80	29,035	9.402	-	-	-	-	-	-	-	-	-
4.2) DA51 Wooden Pallet(†)	A		-	-	-	115.85	10,353	1.199	120.00	3,775	0.453	-	-	-	-	-	-	-	-	-
4.3) DA51 Supplemental Charge, PBXN9(†)	A		-	-	-	18.62	81,230	1.513	18.99	29,616	0.562	-	-	-	-	-	-	-	-	-

Exhibit P-40a, Budget Item Justification For Aggregated Items: PB 2020 Navy		Date: March 2019
Appropriation / Budget Activity / Budget Sub Activity: 1508N / 02 / 1	P-1 Line Item Number / Title: 1650 / Artillery Munitions	Aggregated Items Title: Artillery, All Types (1)

Item Number / Title [DODIC]	ID CD	MDAP/ MAIS Code	Prior Years			FY 2018			FY 2019			FY 2020 Base			FY 2020 OCO			FY 2020 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)
4.4) DA51 TNT Type I Flake(†)	A		-	-	-	4.77	238,911	1.140	4.87	87,105	0.424	-	-	-	-	-	-	-	-	-
4.5) DA51 Plug, Lifting, Meltable for IM(†)	A		-	-	-	7.90	81,230	0.642	8.06	29,616	0.239	-	-	-	-	-	-	-	-	-
4.6) DA51 Production Engineering	A		-	-	-	-	-	0.281	-	-	0.450	-	-	-	-	-	-	-	-	-
4.7) DA51 ACCEPTANCE TESTING	A		-	-	-	-	-	0.550	-	-	0.350	-	-	-	-	-	-	-	-	-
4.8) DA51 Government Furnished Material	A		-	-	-	-	-	-1.139	-	-	-	-	-	-	-	-	-	-	-	-
Subtotal: 4) DA51 155mm HE Training Projectile M1122			**-**	**-**	***0.000***	**-**	**-**	***29.897***	**-**	**-**	***11.880***	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**
5) DA54 155mm HE M795 W/IMX																				
5.1) DA54 Load, Assemble, Pack (LAP)(†)	A		-	-	-	-	-	-	231.11	68,003	15.716	-	-	0.000	235.73	86,986	20.505	235.73	86,986	20.505
5.2) DA54 MELTABLE FUZE PLUG(†)	A		-	-	-	-	-	-	8.06	69,363	0.559	-	-	0.000	10.40	88,725	0.923	10.40	88,725	0.923
5.3) DA54 Explosive Fill IMX 104(†)	A		-	-	-	-	-	-	22.34	68,003	1.519	-	-	0.000	22.78	86,986	1.982	22.78	86,986	1.982
5.4) DA54 Supplementary Charge, PBXN9(†)	A		-	-	-	-	-	-	18.99	69,363	1.318	-	-	0.000	19.37	88,725	1.719	19.37	88,725	1.719
5.5) DA54 Wooden Pallets(†)	A		-	-	-	-	-	-	120.00	8,839	1.060	-	-	0.000	122.39	11,307	1.384	122.39	11,307	1.384
5.6) DA54 Explosive Fill IMX-101(†)	A		-	-	-	-	-	-	14.99	2,244,124	33.639	-	-	0.000	16.48	2,870,538	47.306	16.48	2,870,538	47.306
5.7) DA54 M795 IM Metal Part(†)	A		-	-	-	-	-	-	436.92	69,363	30.306	-	-	0.000	437.85	88,725	38.848	437.85	88,725	38.848
5.8) DA54 Production Engineering			-	-	-	-	-	-	-	-	1.676	-	-	0.000	-	-	2.122	-	-	2.122
5.9) DA54 Acceptance Testing			-	-	-	-	-	-	-	-	0.313	-	-	0.000	-	-	0.459	-	-	0.459
Subtotal: 5) DA54 155mm HE M795 W/IMX			**-**	**-**	***0.000***	**-**	**-**	**-**	**-**	**-**	***86.106***	**-**	**-**	***0.000***	**-**	**-**	***115.248***	**-**	**-**	***115.248***
6) DA58 155mm Extended Range, M982 Excalibur 1B																				
6.1) DA58 Complete Round(†)	A		-	-	-	65,678.32	69	4.532	-	-	-	-	-	-	-	-	-	-	-	-

Exhibit P-40a, Budget Item Justification For Aggregated Items: PB 2020 Navy		Date: March 2019
Appropriation / Budget Activity / Budget Sub Activity: 1508N / 02 / 1	P-1 Line Item Number / Title: 1650 / Artillery Munitions	Aggregated Items Title: Artillery, All Types (1)

Item Number / Title [DODIC]	ID CD	MDAP/ MAIS Code	Prior Years			FY 2018			FY 2019			FY 2020 Base			FY 2020 OCO			FY 2020 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)
6.2) DA58 Container Excalibur(†)	A		-	-	-	2,100.00	69	0.145	-	-	-	-	-	-	-	-	-	-	-	-
6.3) DA58 Production Engineering	A		-	-	-	-	-	0.276	-	-	-	-	-	-	-	-	-	-	-	-
Subtotal: 6) DA58 155mm Extended Range, M982 Excalibur 1B			**-**	**-**	***0.000***	**-**	**-**	***4.953***	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**
8) DA68, 155mm HE IM Training M1122A1																				
8.1) DA68 Load, Assemble, Pack (LAP)(†)	A		-	-	-	-	-	-	-	-	-	-	-	0.000	150.00	20,162	3.024	150.00	20,162	3.024
8.2) DA68 Metal Parts - M1122A1(†)	A		-	-	-	-	-	-	-	-	-	-	-	0.000	338.13	20,565	6.954	338.13	20,565	6.954
8.3) DA68 Supplemental Charge, PBXN9(†)	A		-	-	-	-	-	-	-	-	-	-	-	0.000	19.37	20,565	0.398	19.37	20,565	0.398
8.4) DA68 Plug, Lifting, Meltable For IM(†)	A		-	-	-	-	-	-	-	-	-	-	-	0.000	10.40	20,565	0.214	10.40	20,565	0.214
8.5) DA68 Explosive Fill IMX-104(†)	A		-	-	-	-	-	-	-	-	-	-	-	0.000	22.78	80,648	1.837	22.78	80,648	1.837
8.6) DA68 Wooden Pallet, IMX(†)	A		-	-	-	-	-	-	-	-	-	-	-	0.000	122.39	2,621	0.321	122.39	2,621	0.321
8.7) DA68 Production Engineering	A		-	-	-	-	-	-	-	-	-	-	-	0.000	-	-	0.261	-	-	0.261
8.8) DA68 Acceptance Testing	A		-	-	-	-	-	-	-	-	-	-	-	0.000	-	-	0.053	-	-	0.053
Subtotal: 8) DA68, 155mm HE IM Training M1122A1			**-**	**-**	***0.000***	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	***0.000***	**-**	**-**	***13.062***	**-**	**-**	***13.062***
9) DA67, Chg Prop 155mm (MACS) M232A2																				
9.1) DA67 Load, Assemble, Pack (LAP)(†)	A		-	-	-	-	-	-	-	-	-	-	-	0.000	53.25	28,114	1.497	53.25	28,114	1.497
9.2) DA67, Propellant, M31A2(†)	A		-	-	-	-	-	-	-	-	-	-	-	0.000	20.31	135,509	2.752	20.31	135,509	2.752
9.3) DA67 Container, M232A1(†)	A		-	-	-	-	-	-	-	-	-	-	-	0.000	62.15	5,903	0.367	62.15	5,903	0.367
9.4) DA67 Combustable Cases M232A1(†)	A		-	-	-	-	-	-	-	-	-	-	-	0.000	44.67	28,957	1.293	44.67	28,957	1.293
9.5) DA67 Ignition Propellant, MACS(†)	A		-	-	-	-	-	-	-	-	-	-	-	0.000	11.30	1,828	0.021	11.30	1,828	0.021

Exhibit P-40a, Budget Item Justification For Aggregated Items: PB 2020 Navy		Date: March 2019
Appropriation / Budget Activity / Budget Sub Activity: 1508N / 02 / 1	**P-1 Line Item Number / Title:** 1650 / Artillery Munitions	**Aggregated Items Title:** Artillery, All Types (1)

Item Number / Title [DODIC]	ID CD	MDAP/ MAIS Code	Prior Years			FY 2018			FY 2019			FY 2020 Base			FY 2020 OCO			FY 2020 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)
9.6) DA67 Production Engineering	A		-	-	-	-	-	-	-	-	-	-	-	0.000	-	-	0.060	-	-	0.060
9.7) DA67 Acceptance Testing	A		-	-	-	-	-	-	-	-	-	-	-	0.000	-	-	0.042	-	-	0.042
Subtotal: 9) DA67, Chg Prop 155mm (MACS) M232A2			**-**	**-**	***0.000***	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	***0.000***	**-**	**-**	***6.032***	**-**	**-**	***6.032***
Total			**-**	**-**	**0.000**	**-**	**-**	**86.373**	**-**	**-**	**99.986**	**-**	**-**	**0.000**	**-**	**-**	**144.342**	**-**	**-**	**144.342**

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) Pricing is provided by the Army Single Manager for Conventional Ammunition (SMCA) and incorporates other service buys.

Exhibit P-5a, Procurement History and Planning: PB 2020 Navy		Date: March 2019
Appropriation / Budget Activity / Budget Sub Activity: 1508N / 02 / 1	P-1 Line Item Number / Title: 1650 / Artillery Munitions	Aggregated Items: Artillery, All Types (1)

Item Number / Title [DODIC]	OCO	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) D528 Projectile, 155mm Smoke White Phosphorus M825												
1.1) D528 Hardware(†)	✓	2020	PINE BLUFF ARSENAL / PINE BLUFF, AR	PO	PICATINNY ARSENAL, NJ	Jan 2020	Jul 2022	4,739	1,976.76	N	Jan 2020	
2) D528 M825 WP SMK												
2.1) D528 M825 Projectile Recap		2019	PINE BLUFF ARSENAL / PINE BLUFF, AR	PO	ROCK ISLAND ARSENAL, IL	Oct 2018	Oct 2020	5,589	357.85	Y		
3) D529 155mm HE M795 w/TNT												
3.1) D529 M795 LAP(†)		2018	AMERICAN ORDANCE / MIDDLETOWN, IA	C / FFP	ROCK ISLAND ARSENAL, IL	May 2018	May 2020	65,467	148.39	Y		
3.1) D529 M795 LAP(†)	✓	2018	AMERICAN ORDANCE / MIDDLETOWN, IA	C / FFP	ROCK ISLAND ARSENAL, IL	May 2018	May 2020	6,202	148.39	Y		
3.2) D529 M795 Metal Parts(†)		2018	MEDICO INDUSTRIES / WILKES-BARRE, PA	C / IDDQ	PICATINNY ARSENAL, NJ	Aug 2018	Feb 2020	66,776	380.69	Y		
3.2) D529 M795 Metal Parts(†)	✓	2018	MEDICO INDUSTRIES / WILKES-BARRE, PA	C / IDDQ	PICATINNY ARSENAL, NJ	Aug 2018	Feb 2020	6,326	380.69	Y		
3.3) D529 TNT Supplemental Charge		2018	CHEMRING ORDNANCE, INC. / PERRY,FL	C / FFP	ROCK ISLAND ARSENAL, IL	Jan 2018	Jul 2019	66,776	12.36	Y		
3.3) D529 TNT Supplemental Charge	✓	2018	CHEMRING ORDNANCE, INC. / PERRY,FL	C / FFP	ROCK ISLAND ARSENAL, IL	Jan 2018	Jul 2019	6,326	12.36	Y		
3.4) D529 TNT TYPE I FLAKE (TRINITROTOLUENE)		2018	AMERICAN ORDANCE / MIDDLETOWN, IA	C / FFP	ROCK ISLAND ARSENAL, IL	Sep 2018	Sep 2019	1,767,609	4.77	Y		
3.4) D529 TNT TYPE I FLAKE (TRINITROTOLUENE)	✓	2018	AMERICAN ORDANCE / MIDDLETOWN, IA	C / FFP	ROCK ISLAND ARSENAL, IL	Sep 2018	Sep 2019	167,454	4.77	Y		
3.5) D529 Wooden Pallets		2018	KNOX CNTY ASSOC RETARDED CITIZENS / VINCENNES, IN	C / FFP	ROCK ISLAND ARSENAL, IL	Oct 2018	Apr 2020	8,511	95.77	Y		
3.5) D529 Wooden Pallets	✓	2018	KNOX CNTY ASSOC RETARDED CITIZENS / VINCENNES, IN	C / FFP	ROCK ISLAND ARSENAL, IL	Oct 2018	Apr 2020	806	95.77	Y		
4) DA51 155mm HE Training Projectile M1122												
4.1) DA51 Load, Assemble & Pack (LAP)(†)		2018	CRANE ARMY AMMUNITION ACTIVITY / CRANE, IN	PO	PICATINNY ARSENAL, NJ	Jan 2018	Aug 2020	79,637	322.85	Y		
4.1) DA51 Load, Assemble & Pack (LAP)(†)		2019	CRANE ARMY AMMUNITION ACTIVITY / CRANE, IN	PO	PICATINNY ARSENAL, NJ	Jan 2019	Jan 2021	29,035	323.80	Y		
4.2) DA51 Wooden Pallet		2018	KNOX CNTY ASSOC RETARDED CITIZENS / VINCENNES, IN	C / FFP	ROCK ISLAND ARSENAL, IL	Jun 2018	Jun 2019	10,353	115.85	Y		
4.2) DA51 Wooden Pallet		2019	KNOX CNTY ASSOC RETARDED CITIZENS / VINCENNES, IN	C / FFP	ROCK ISLAND ARSENAL, IL	Jan 2019	Jan 2020	3,775	120.00	Y		
4.3) DA51 Supplemental Charge, PBXN9		2018	CHEMRING ORDNANCE, INC. / PERRY,FL	C / IDIQ	ROCK ISLAND ARSENAL, IL	Jan 2018	Jan 2019	81,230	18.62	Y		

Exhibit P-5a, Procurement History and Planning: PB 2020 Navy		Date: March 2019
Appropriation / Budget Activity / Budget Sub Activity: 1508N / 02 / 1	P-1 Line Item Number / Title: 1650 / Artillery Munitions	Aggregated Items: Artillery, All Types (1)

Item Number / Title [DODIC]	OCO	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
4.3) DA51 Supplemental Charge, PBXN9		2019	TO BE SELECTED / UNKNOWN	C / IDIQ	ROCK ISLAND ARSENAL, IL	Mar 2019	Sep 2020	29,616	18.99	Y		
4.4) DA51 TNT Type I Flake		2018	GOVERNMENT FURNISHED MATERIAL / TBD	C / FFP	ROCK ISLAND ARSENAL, IL	Mar 2018	Mar 2018	238,911	4.77	Y		
4.4) DA51 TNT Type I Flake		2019	TO BE SELECTED / UNKNOWN	C / FFP	ROCK ISLAND ARSENAL, IL	Mar 2019	Sep 2020	87,105	4.87	Y		
4.5) DA51 Plug, Lifting, Meltable for IM		2018	POLYMER TECHNOLOGIES, INC / CLIFTON,NJ	C / FFP	PICATINNY ARSENAL, NJ	Oct 2018	Nov 2019	81,230	7.90	Y		
4.5) DA51 Plug, Lifting, Meltable for IM		2019	RTI TECHNOLOGIES / COLUMBIA, CT.	C / FFP	PICATINNY ARSENAL, NJ	Aug 2019	Feb 2020	29,616	8.06	Y		
5) DA54 155mm HE M795 W/IMX												
5.1) DA54 Load, Assemble, Pack (LAP)(†)		2019	AMERICAN ORDNANCE / MIDDLETOWN, IA	C / FFP	ROCK ISLAND ARSENAL, IL	Mar 2019	Mar 2022	43,039	231.11	Y		
5.1) DA54 Load, Assemble, Pack (LAP)(†)	✓	2019	AMERICAN ORDNANCE / MIDDLETOWN, IA	C / FFP	ROCK ISLAND ARSENAL, IL	Mar 2019	Mar 2022	24,964	231.11	Y		
5.1) DA54 Load, Assemble, Pack (LAP)(†)	✓	2020	AMERICAN ORDNANCE / MIDDLETOWN, IA	C / FFP	ROCK ISLAND ARSENAL, IL	May 2020	May 2023	86,986	235.73	Y		
5.2) DA54 MELTABLE FUZE PLUG		2019	TO BE SELECTED / UNKNOWN	C / FFP	PICATINNY ARSENAL, NJ	Mar 2019	Sep 2020	43,900	8.06	Y		
5.2) DA54 MELTABLE FUZE PLUG	✓	2019	TO BE SELECTED / UNKNOWN	C / FFP	PICATINNY ARSENAL, NJ	Mar 2019	Sep 2020	25,463	8.06	Y		
5.2) DA54 MELTABLE FUZE PLUG	✓	2020	TO BE SELECTED / UNKNOWN	C / FFP	PICATINNY ARSENAL, NJ	Feb 2020	Aug 2021	88,725	10.40	Y		
5.3) DA54 Explosive Fill IMX 104		2019	BAE ORDNANCE SYSTEMS / KINDSPORT, TN	C / IDIQ	ROCK ISLAND ARSENAL, IL	Jun 2019	Dec 2020	43,039	22.34	Y		
5.3) DA54 Explosive Fill IMX 104	✓	2019	BAE ORDNANCE SYSTEMS / KINDSPORT, TN	C / IDIQ	ROCK ISLAND ARSENAL, IL	Jun 2019	Dec 2020	24,964	22.34	Y		
5.3) DA54 Explosive Fill IMX 104	✓	2020	BAE ORDNANCE SYSTEMS / KINDSPORT, TN	C / IDIQ	ROCK ISLAND ARSENAL, IL	Feb 2020	Aug 2021	86,986	22.78	Y		
5.4) DA54 Supplementary Charge, PBXN9		2019	TO BE SELECTED / UNKNOWN	C / IDIQ	ROCK ISLAND ARSENAL, IL	Feb 2019	Aug 2020	43,900	18.99	Y		
5.4) DA54 Supplementary Charge, PBXN9	✓	2019	TO BE SELECTED / UNKNOWN	C / IDIQ	ROCK ISLAND ARSENAL, IL	Feb 2019	Aug 2020	25,463	18.99	Y		
5.4) DA54 Supplementary Charge, PBXN9	✓	2020	TO BE SELECTED / UNKNOWN	C / IDIQ	ROCK ISLAND ARSENAL, IL	Feb 2020	Aug 2021	88,725	19.37	Y		
5.5) DA54 Wooden Pallets		2019	TO BE SELECTED / UNKNOWN	SS / FFP	ROCK ISLAND ARSENAL, IL	Aug 2019	Aug 2020	5,594	120.00	Y		
5.5) DA54 Wooden Pallets	✓	2019	TO BE SELECTED / UNKNOWN	SS / FFP	ROCK ISLAND ARSENAL, IL	Aug 2019	Aug 2020	3,245	120.00	Y		

Exhibit P-5a, Procurement History and Planning: PB 2020 Navy		Date: March 2019
Appropriation / Budget Activity / Budget Sub Activity: 1508N / 02 / 1	P-1 Line Item Number / Title: 1650 / Artillery Munitions	Aggregated Items: Artillery, All Types (1)

Item Number / Title [DODIC]	OCO	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
5.5) DA54 Wooden Pallets	✓	2020	TO BE SELECTED / UNKNOWN	SS / FFP	ROCK ISLAND ARSENAL, IL	Feb 2020	Feb 2021	11,307	122.39	Y		
5.6) DA54 Explosive Fill IMX-101(†)		2019	BAE ORDNANCE SYSTEMS / KINGSPORT, TN	C / IDIQ	ROCK ISLAND ARSENAL, IL	Jun 2019	Oct 2021	1,420,312	14.99	Y		
5.6) DA54 Explosive Fill IMX-101(†)	✓	2019	BAE ORDNANCE SYSTEMS / KINGSPORT, TN	C / IDIQ	ROCK ISLAND ARSENAL, IL	Jun 2019	Oct 2021	823,812	14.99	Y		
5.6) DA54 Explosive Fill IMX-101(†)	✓	2020	BAE ORDNANCE SYSTEMS / KINGSPORT, TN	C / IDDQ	ROCK ISLAND ARSENAL, IL	Feb 2020	Jun 2022	2,870,538	16.48	Y		
5.7) DA54 M795 IM Metal Part		2019	TO BE SELECTED / UNKNOWN	C / IDIQ	PICATINNY ARSENAL, NJ	Aug 2019	Apr 2021	43,900	436.92	Y		
5.7) DA54 M795 IM Metal Part	✓	2019	TO BE SELECTED / UNKNOWN	C / IDIQ	PICATINNY ARSENAL, NJ	Aug 2019	Apr 2021	25,463	436.92	Y		
5.7) DA54 M795 IM Metal Part	✓	2020	TO BE SELECTED / UNKNOWN	C / IDIQ	PICATINNY ARSENAL, NJ	Feb 2020	Aug 2021	88,725	437.85	Y		
6) DA58 155mm Extended Range, M982 Excalibur 1B												
6.1) DA58 Complete Round	✓	2018	Raytheon Missile Systems / Tucson, AZ	C / FFP	PICATINNY ARSENAL, NJ	Jan 2018	Jan 2019	69	65,678.32	Y		
6.2) DA58 Container Excalibur	✓	2018	Raytheon Missile Systems / Tucson, AZ	C / FFP	PICATINNY ARSENAL, NJ	Jan 2018	Aug 2019	69	2,100.00	Y		
8) DA68, 155mm HE IM Training M1122A1												
8.1) DA68 Load, Assemble, Pack (LAP)	✓	2020	TO BE SELECTED / UNKNOWN	C / IDDQ	PICATINNY ARSENAL, NJ	May 2020	Sep 2022	20,162	150.00	Y		
8.2) DA68 Metal Parts - M1122A1	✓	2020	TO BE SELECTED / UNKNOWN	C / IDIQ	PICATINNY ARSENAL, NJ	Feb 2020	Aug 2021	20,565	338.13	Y		
8.3) DA68 Supplemental Charge, PBXN9	✓	2020	TO BE SELECTED / UNKNOWN	C / IDIQ	ROCK ISLAND ARSENAL, IL	Feb 2020	Aug 2021	20,565	19.37	Y		
8.4) DA68 Plug, Lifting, Meltable For IM	✓	2020	TO BE SELECTED / UNKNOWN	C / FFP	PICATINNY ARSENAL, NJ	Feb 2020	Aug 2021	20,565	10.40	Y		
8.5) DA68 Explosive Fill IMX-104	✓	2020	BAE ORDNANCE SYSTEMS / KINGSPORT, TN	C / IDIQ	ROCK ISLAND ARSENAL, IL	Feb 2020	Aug 2022	80,648	22.78	Y		
8.6) DA68 Wooden Pallet, IMX	✓	2020	TO BE SELECTED / UNKNOWN	SS / FFP	ROCK ISLAND ARSENAL, IL	Feb 2020	Aug 2021	2,621	122.39	Y		
9) DA67, Chg Prop 155mm (MACS) M232A2												
9.1) DA67 Load, Assemble, Pack (LAP)	✓	2020	TO BE SELECTED / UNKNOWN	C / IDIQ	PICATINNY ARSENAL, NJ	Mar 2020	Mar 2022	28,114	53.25	Y		
9.2) DA67, Propellant, M31A2	✓	2020	TO BE SELECTED / unknown	C / IDIQ	PICATINNY ARSENAL, NJ	Mar 2020	Nov 2021	135,509	20.31	Y		
9.3) DA67 Container, M232A1	✓	2020	TO BE SELECTED / UNKNOWN	C / IDIQ	PICATINNY ARSENAL, NJ	Mar 2020	Mar 2021	5,903	62.15	Y		

Exhibit P-5a, Procurement History and Planning: PB 2020 Navy		**Date:** March 2019
Appropriation / Budget Activity / Budget Sub Activity: 1508N / 02 / 1	**P-1 Line Item Number / Title:** 1650 / Artillery Munitions	**Aggregated Items:** Artillery, All Types (1)

Item Number / Title [DODIC]	OCO	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
9.4) DA67 Combustable Cases M232A1	✓	2020	TO BE SELECTED / UNKNOWN	C / IDIQ	PICATINNY ARSENAL, NJ	Mar 2020	Mar 2021	28,957	44.67	Y		
9.5) DA67 Ignition Propellant, MACS	✓	2020	TO BE SELECTED / UNKNOWN	C / FFP	PICATINNY ARSENAL, NJ	Mar 2020	Mar 2021	1,828	11.30	Y		

(†) indicates the presence of a P-21

Exhibit P-21, Production Schedule: PB 2020 Navy | **Date:** March 2019

Appropriation / Budget Activity / Budget Sub Activity: 1508N / 02 / 1

P-1 Line Item Number / Title: 1650 / Artillery Munitions

Aggregated Items: Artillery, All Types (1)

Items (Units in Millions, * = < 500)							Fiscal Year 2018												Fiscal Year 2019												BALANCE
										Calendar Year 2018												Calendar Year 2019									
OCO	MFR #	FY	SERVICE	PROC QTY	ACCEPT PRIOR TO 1 OCT 2017	BAL DUE AS OF 1 OCT	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) D528 Projectile, 155mm Smoke White Phosphorus M825																															
1.1) D528 Hardware																															
✓	27	2020	NAVY	.005	.000	.005																									.005
3) D529 155mm HE M795 w/TNT																															
3.1) D529 M795 LAP																															
	28	2018	NAVY	.065	.000	.065								A -	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	.065
✓	28	2018	NAVY	.006	.000	.006								A -	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	.006
3.2) D529 M795 Metal Parts																															
	29	2018	NAVY	.067	.000	.067											A -	-	-	-	-	-	-	-	-	-	-	-	-	-	.067
✓	29	2018	NAVY	.006	.000	.006											A -	-	-	-	-	-	-	-	-	-	-	-	-	-	.006
4) DA51 155mm HE Training Projectile M1122																															
4.1) DA51 Load, Assemble & Pack (LAP)																															
	30	2018	NAVY	.080	.000	.080				A -	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	.080
	30	2019	NAVY	.029	.000	.029																A -	-	-	-	-	-	-	-	-	.029
5) DA54 155mm HE M795 W/IMX																															
5.1) DA54 Load, Assemble, Pack (LAP)																															
	31	2019	NAVY	.043	.000	.043																		A -	-	-	-	-	-	-	.043
✓	31	2019	NAVY	.025	.000	.025																		A -	-	-	-	-	-	-	.025
✓	31	2020	NAVY	.087	.000	.087																									.087
5.6) DA54 Explosive Fill IMX-101																															
	32	2019	NAVY	1.420	.000	1.420																					A -	-	-	-	1.420
✓	32	2019	NAVY	.824	.000	.824																					A -	-	-	-	.824
✓	32	2020	NAVY	2.871	.000	2.871																									2.871
							OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	

Exhibit P-21, Production Schedule: PB 2020 Navy | **Date:** March 2019

Appropriation / Budget Activity / Budget Sub Activity: 1508N / 02 / 1

P-1 Line Item Number / Title: 1650 / Artillery Munitions

Aggregated Items: Artillery, All Types (1)

Items (Units in Millions, * = < 500)							Fiscal Year 2020												Fiscal Year 2021												BALANCE
										Calendar Year 2020												Calendar Year 2021									
OCO	MFR #	FY	SERVICE	PROC QTY	ACCEPT PRIOR TO 1 OCT 2019	BAL DUE AS OF 1 OCT	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) D528 Projectile, 155mm Smoke White Phosphorus M825																															
1.1) D528 Hardware																															
✓	27	2020	NAVY	.005	.000	.005				A -	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	.005
3) D529 155mm HE M795 w/TNT																															
3.1) D529 M795 LAP																															
	28	2018	NAVY	.065	.000	.065	-	-	-	-	-	-	-	.014	.016	.016	.012	.008													.000
✓	28	2018	NAVY	.006	.000	.006	-	-	-	-	-	-	-	.006																	.000
3.2) D529 M795 Metal Parts																															
	29	2018	NAVY	.067	.000	.067	-	-	-	-	.018	.018	.014	.017																	.000
✓	29	2018	NAVY	.006	.000	.006	-	-	-	-	.003	.002	.002																		.000
4) DA51 155mm HE Training Projectile M1122																															
4.1) DA51 Load, Assemble & Pack (LAP)																															
	30	2018	NAVY	.080	.000	.080	-	-	-	-	-	-	-	-	-	-	.013	.013	.013	.013	.013	.010	.005								.000
	30	2019	NAVY	.029	.000	.029	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	.003	.008	.010	.008						.000
5) DA54 155mm HE M795 W/IMX																															
5.1) DA54 Load, Assemble, Pack (LAP)																															
	31	2019	NAVY	.043	.000	.043	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	.043
✓	31	2019	NAVY	.025	.000	.025	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	.025
✓	31	2020	NAVY	.087	.000	.087								A -	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	.087
5.6) DA54 Explosive Fill IMX-101																															
	32	2019	NAVY	1.420	.000	1.420	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1.420
✓	32	2019	NAVY	.824	.000	.824	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	.824
✓	32	2020	NAVY	2.871	.000	2.871					A -	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2.871
							OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	

Exhibit P-21, Production Schedule: PB 2020 Navy | **Date:** March 2019

Appropriation / Budget Activity / Budget Sub Activity: 1508N / 02 / 1

P-1 Line Item Number / Title: 1650 / Artillery Munitions

Aggregated Items: Artillery, All Types (1)

Items (Units in Millions, * = < 500)							Fiscal Year 2022												Fiscal Year 2023												BALANCE
										Calendar Year 2022												Calendar Year 2023									
OCO	MFR #	FY	SERVICE	PROC QTY	ACCEPT PRIOR TO 1 OCT 2021	BAL DUE AS OF 1 OCT	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) D528 Projectile, 155mm Smoke White Phosphorus M825																															
1.1) D528 Hardware																															
✓	27	2020	NAVY	.005	.000	.005	-	-	-	-	-	-	-	-	-	.005															.000
3) D529 155mm HE M795 w/TNT																															
3.1) D529 M795 LAP																															
	28	2018	NAVY	.065	.065	.000																									.000
✓	28	2018	NAVY	.006	.006	.000																									.000
3.2) D529 M795 Metal Parts																															
	29	2018	NAVY	.067	.067	.000																									.000
✓	29	2018	NAVY	.006	.006	.000																									.000
4) DA51 155mm HE Training Projectile M1122																															
4.1) DA51 Load, Assemble & Pack (LAP)																															
	30	2018	NAVY	.080	.080	.000																									.000
	30	2019	NAVY	.029	.029	.000																									.000
5) DA54 155mm HE M795 W/IMX																															
5.1) DA54 Load, Assemble, Pack (LAP)																															
	31	2019	NAVY	.043	.000	.043	-	-	-	-	-	.005	.005	.005	.005	.005	.005	.010	.003												.000
✓	31	2019	NAVY	.025	.000	.025	-	-	-	-	-	.005	.005	.005	.005	.005															.000
✓	31	2020	NAVY	.087	.000	.087	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	.010	.010	.010	.013	.013	.031
5.6) DA54 Explosive Fill IMX-101																															
	32	2019	NAVY	1.420	.000	1.420	.250	.250	.250	.250	.250	.170																			.000
✓	32	2019	NAVY	.824	.000	.824	.250	.250	.324																						.000
✓	32	2020	NAVY	2.871	.000	2.871	-	-	-	-	-	-	-	-	.250	.250	.250	.250	.250	.250	.500	.500	.371								.000
							OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	

Exhibit P-21, Production Schedule: PB 2020 Navy | **Date:** March 2019

Appropriation / Budget Activity / Budget Sub Activity: 1508N / 02 / 1

P-1 Line Item Number / Title: 1650 / Artillery Munitions

Aggregated Items: Artillery, All Types (1)

Items (Units in Millions, * = < 500)							Fiscal Year 2024												Fiscal Year 2025												BALANCE
										Calendar Year 2024												Calendar Year 2025									
OCO	MFR #	FY	SERVICE	PROC QTY	ACCEPT PRIOR TO 1 OCT 2023	BAL DUE AS OF 1 OCT	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) D528 Projectile, 155mm Smoke White Phosphorus M825																															
1.1) D528 Hardware																															
✓	27	2020	NAVY	.005	.005	.000																									.000
3) D529 155mm HE M795 w/TNT																															
3.1) D529 M795 LAP																															
	28	2018	NAVY	.065	.065	.000																									.000
✓	28	2018	NAVY	.006	.006	.000																									.000
3.2) D529 M795 Metal Parts																															
	29	2018	NAVY	.067	.067	.000																									.000
✓	29	2018	NAVY	.006	.006	.000																									.000
4) DA51 155mm HE Training Projectile M1122																															
4.1) DA51 Load, Assemble & Pack (LAP)																															
	30	2018	NAVY	.080	.080	.000																									.000
	30	2019	NAVY	.029	.029	.000																									.000
5) DA54 155mm HE M795 W/IMX																															
5.1) DA54 Load, Assemble, Pack (LAP)																															
	31	2019	NAVY	.043	.043	.000																									.000
✓	31	2019	NAVY	.025	.025	.000																									.000
✓	31	2020	NAVY	.087	.056	.031	.013	.013	.005																						.000
5.6) DA54 Explosive Fill IMX-101																															
	32	2019	NAVY	1.420	1.420	.000																									.000
✓	32	2019	NAVY	.824	.824	.000																									.000
✓	32	2020	NAVY	2.871	2.871	.000																									.000
							OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	

Exhibit P-21, Production Schedule: PB 2020 Navy		Date: March 2019
Appropriation / Budget Activity / Budget Sub Activity: 1508N / 02 / 1	**P-1 Line Item Number / Title:** 1650 / Artillery Munitions	**Aggregated Items:** Artillery, All Types (1)

MFR Ref #	Manufacturer Name - Location	Production Rates (Each / Year)			Procurement Leadtime (Months)							
					Initial				Reorder			
		MSR For 2020	1-8-5 For 2020	MAX For 2020	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	PINE BLUFF ARSENAL - PINE BLUFF, AR	9,000	12,000	15,000	6	4	30	34	6	4	30	34
2	AMERICAN ORDANCE - MIDDLETOWN, IA	8,100	16,000	20,000	11	11	24	35	6	6	24	30
3	MEDICO INDUSTRIES - WILKES-BARRE, PA	10,000	35,000	40,000	11	11	12	23	6	6	12	18
4	CRANE ARMY AMMUNITION ACTIVITY - CRANE, IN	5,000	13,000	30,000	6	6	24	30	6	6	24	30
5	AMERICAN ORDNANCE - MIDDLETOWN, IA	81,000	130,000	200,000	8	8	36	44	8	8	36	44
6	BAE ORDNANCE SYSTEMS - KINGSPORT, TN			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).

Exhibit P-5, Cost Analysis: PB 2020 Navy		Date: March 2019
Appropriation / Budget Activity / Budget Sub Activity: 1508N / 02 / 1	P-1 Line Item Number / Title: 1650 / Artillery Munitions	Item Number / Title [DODIC]: 1 / Fuze, All Types
ID Code (A=Service Ready, B=Not Service Ready) :	MDAP/MAIS Code:	

Resource Summary	Prior Years	FY 2018	FY 2019	FY 2020 Base	FY 2020 OCO	FY 2020 Total
Procurement Quantity *(Units in Each)*	-	-	-	-	-	-
Gross/Weapon System Cost *($ in Millions)*	0.000	19.368	13.595	0.000	76.581	76.581
Less PY Advance Procurement *($ in Millions)*	-	-	-	-	-	-
Net Procurement (P-1) *($ in Millions)*	0.000	19.368	13.595	0.000	76.581	76.581
Plus CY Advance Procurement *($ in Millions)*	-	-	-	-	-	-
Total Obligation Authority *($ in Millions)*	**0.000**	**19.368**	**13.595**	**0.000**	**76.581**	**76.581**
(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 2018			FY 2019			FY 2020 Base			FY 2020 OCO			FY 2020 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 - N340 Fuze Point Detonating M739A1 Cost																		
Recurring Cost																		
1.1.1) N340 Complete Fuze(†)	-	-	0.000	71.93	4,576	0.329	-	-	0.000	-	-	0.000	74.84	198,567	14.861	74.84	198,567	14.861
1.1.2) N340 Productiong Engineering	-	-	0.000	-	-	0.162	-	-	0.000	-	-	0.000	-	-	0.999	-	-	0.999
1.1.3) N340 Acceptance Testing	-	-	0.000	-	-	0.011	-	-	0.000	-	-	0.000	-	-	0.800	-	-	0.800
Subtotal: Recurring Cost	-	-	*0.000*	-	-	*0.502*	-	-	*0.000*	-	-	*0.000*	-	-	*16.660*	-	-	*16.660*
Subtotal: Hardware - N340 Fuze Point Detonating M739A1 Cost	**-**	**-**	***0.000***	**-**	**-**	***0.502***	**-**	**-**	***0.000***	**-**	**-**	***0.000***	**-**	**-**	***16.660***	**-**	**-**	***16.660***
Hardware - NA29 Precisiong Guided Kit (NPGK) Cost																		
Recurring Cost																		
2.1.1) NA29 Complete Fuze(†)	-	-	0.000	6,821.92	2,418	16.496	6,934.14	1,593	11.046	-	-	0.000	7,286.95	7,631	55.607	7,286.95	7,631	55.607
2.1.2) NA29 Production Engineering	-	-	0.000	-	-	1.010	-	-	1.247	-	-	0.000	-	-	1.287	-	-	1.287
2.1.3) NA29 PGK NET SUPPORT	-	-	0.000	-	-	0.500	-	-	0.205	-	-	0.000	-	-	1.698	-	-	1.698
Subtotal: Recurring Cost	-	-	*0.000*	-	-	*18.006*	-	-	*12.498*	-	-	*0.000*	-	-	*58.592*	-	-	*58.592*
Non Recurring Cost																		

Exhibit P-5, Cost Analysis: PB 2020 Navy		Date: March 2019
Appropriation / Budget Activity / Budget Sub Activity: 1508N / 02 / 1	P-1 Line Item Number / Title: 1650 / Artillery Munitions	Item Number / Title [DODIC]: 1 / Fuze, All Types
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 2018			FY 2019			FY 2020 Base			FY 2020 OCO			FY 2020 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)
2.2.1) NA29 DOTC GPS Obsolesc.	-	-	0.000	-	-	0.186	-	-	0.671	-	-	0.000	-	-	1.329	-	-	1.329
2.2.2) NA29 Melody II Qual	-	-	0.000	-	-	0.235	-	-	0.132	-	-	0.000	-	-	0.000	-	-	0.000
2.2.3) NA29 CINCO Buy	-	-	0.000	-	-	0.101	-	-	0.060	-	-	0.000	-	-	0.000	-	-	0.000
2.2.4) NA29 MELODY ASIC II Chip	-	-	0.000	-	-	0.338	-	-	0.234	-	-	0.000	-	-	0.000	-	-	0.000
Subtotal: Non Recurring Cost	-	-	*0.000*	-	-	*0.860*	-	-	*1.097*	-	-	*0.000*	-	-	*1.329*	-	-	*1.329*
Subtotal: Hardware - NA29 Precisiong Guided Kit (NPGK) Cost	**-**	**-**	***0.000***	**-**	**-**	***18.866***	**-**	**-**	***13.595***	**-**	**-**	***0.000***	**-**	**-**	***59.921***	**-**	**-**	***59.921***
Gross/Weapon System Cost	**-**	**-**	**0.000**	**-**	**-**	**19.368**	**-**	**-**	**13.595**	**-**	**-**	**0.000**	**-**	**-**	**76.581**	**-**	**-**	**76.581**

Remarks:
Pricing is provided by the Army Single Manager for Conventional Ammunition (SMCA) and incorporates other service buys.

(†) indicates the presence of a P-5a

Exhibit P-5a, Procurement History and Planning: PB 2020 Navy		Date: March 2019
Appropriation / Budget Activity / Budget Sub Activity: 1508N / 02 / 1	P-1 Line Item Number / Title: 1650 / Artillery Munitions	Item Number / Title [DODIC]: 1 / Fuze, All Types

Cost Elements	OCO	FY	Contractor and Location	Method/Type or Funding Vehicle	Location of PCO	Award Date	Date of First Delivery	Qty (Each)	Unit Cost ($)	Specs Avail Now?	Date Revision Available	RFP Issue Date
1.1.1) N340 Complete Fuze(†)		2018	ACTION MANUFACTURING INC / Bristol, PA	C / IDIQ	PICATINNY ARSENAL, NJ	Nov 2018	Nov 2021	4,576	71.93	Y		
1.1.1) N340 Complete Fuze(†)	✓	2020	ACTION MANUFACTURING INC / Bristol, PA	C / IDIQ	PICATINNY ARSENAL, NJ	Aug 2020	Aug 2023	198,567	74.84	Y		
2.1.1) NA29 Complete Fuze(†)		2018	NORTHROP GRUMMAN INNOVATION SYSTEMS / PLYMOUTH, MN	SS / FFP	PICATINNY ARSENAL, NJ	Mar 2018	Mar 2020	2,304	6,821.92	Y		
2.1.1) NA29 Complete Fuze(†)	✓	2018	NORTHROP GRUMMAN INNOVATION SYSTEMS / PLYMOUTH, MN	SS / FFP	PICATINNY ARSENAL, NJ	Mar 2018	Mar 2020	114	6,821.92	Y		
2.1.1) NA29 Complete Fuze(†)		2019	NORTHROP GRUMMAN INNOVATION SYSTEMS / PLYMOUTH, MN	SS / FFP	PICATINNY ARSENAL, NJ	Mar 2019	Mar 2021	1,593	6,934.14	Y		
2.1.1) NA29 Complete Fuze(†)	✓	2020	NORTHROP GRUMMAN INNOVATION SYSTEMS / PLYMOUTH, MN	SS / FFP	PICATINNY ARSENAL, NJ	Mar 2020	Mar 2022	7,631	7,286.95	Y		

(†) indicates the presence of a P-21

Exhibit P-21, Production Schedule: PB 2020 Navy | **Date:** March 2019

Appropriation / Budget Activity / Budget Sub Activity: 1508N / 02 / 1 | **P-1 Line Item Number / Title:** 1650 / Artillery Munitions | **Item Number / Title [DODIC]:** 1 / Fuze, All Types

Cost Elements (Units in Thousands)							Fiscal Year 2018												Fiscal Year 2019												BALANCE
										Calendar Year 2018												Calendar Year 2019									
OCO	MFR #	FY	SERVICE	PROC QTY	ACCEPT PRIOR TO 1 OCT 2017	BAL DUE AS OF 1 OCT	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	
1.1.1) N340 Complete Fuze																															
	1	2018	NAVY	4.576	.000	4.576														A -	-	-	-	-	-	-	-	-	-	-	4.576
✓	1	2020	NAVY	198.567	.000	198.567																									198.567
2.1.1) NA29 Complete Fuze																															
	2	2018	NAVY	2.304	.000	2.304						A -	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2.304
✓	2	2018	NAVY	.114	.000	.114						A -	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	.114
	2	2019	NAVY	1.593	.000	1.593																		A -	-	-	-	-	-	-	1.593
✓	2	2020	NAVY	7.631	.000	7.631																									7.631
							OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	

Exhibit P-21, Production Schedule: PB 2020 Navy		**Date:** March 2019
Appropriation / Budget Activity / Budget Sub Activity: 1508N / 02 / 1	**P-1 Line Item Number / Title:** 1650 / Artillery Munitions	**Item Number / Title [DODIC]:** 1 / Fuze, All Types

Cost Elements (Units in Thousands)							Fiscal Year 2020												Fiscal Year 2021												BALANCE
							Calendar Year 2020												Calendar Year 2021												
OCO	MFR #	FY	SERVICE	PROC QTY	ACCEPT PRIOR TO 1 OCT 2019	BAL DUE AS OF 1 OCT	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	
1.1.1) N340 Complete Fuze																															
	1	2018	NAVY	4.576	.000	4.576	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4.576
✓	1	2020	NAVY	198.567	.000	198.567											A -	-	-	-	-	-	-	-	-	-	-	-	-	-	198.567
2.1.1) NA29 Complete Fuze																															
	2	2018	NAVY	2.304	.000	2.304	-	-	-	-	-	.152	.152	.152	.190	.190	.190	.190	.210	.210	.210	.225	.233								.000
✓	2	2018	NAVY	.114	.000	.114	-	-	-	-	-	.038	.038	.038																	.000
	2	2019	NAVY	1.593	.000	1.593	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	.126	.126	.126	.126	.126	.126	.139	.698
✓	2	2020	NAVY	7.631	.000	7.631						A -	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	7.631
							OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	

Exhibit P-21, Production Schedule: PB 2020 Navy | **Date:** March 2019

Appropriation / Budget Activity / Budget Sub Activity: 1508N / 02 / 1 | **P-1 Line Item Number / Title:** 1650 / Artillery Munitions | **Item Number / Title [DODIC]:** 1 / Fuze, All Types

Cost Elements (Units in Thousands)							Fiscal Year 2022												Fiscal Year 2023												BALANCE
							Calendar Year 2022												Calendar Year 2023												
OCO	MFR #	FY	SERVICE	PROC QTY	ACCEPT PRIOR TO 1 OCT 2021	BAL DUE AS OF 1 OCT	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	
1.1.1) N340 Complete Fuze																															
	1	2018	NAVY	4.576	.000	4.576	-	4.576																							.000
✓	1	2020	NAVY	198.567	.000	198.567	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	35.000	35.000	128.567
2.1.1) NA29 Complete Fuze																															
	2	2018	NAVY	2.304	2.304	.000																									.000
✓	2	2018	NAVY	.114	.114	.000																									.000
	2	2019	NAVY	1.593	.895	.698	.139	.139	.139	.139	.142																				.000
✓	2	2020	NAVY	7.631	.000	7.631	-	-	-	-	-	.672	.662	.662	.662	.662	.662	.662	.662	.662	.662	.662	.339								.000
							OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	

Exhibit P-21, Production Schedule: PB 2020 Navy		Date: March 2019
Appropriation / Budget Activity / Budget Sub Activity: 1508N / 02 / 1	**P-1 Line Item Number / Title:** 1650 / Artillery Munitions	**Item Number / Title [DODIC]:** 1 / Fuze, All Types

Cost Elements (Units in Thousands)							Fiscal Year 2024												Fiscal Year 2025												BALANCE
							Calendar Year 2024												Calendar Year 2025												
OCO	MFR #	FY	SERVICE	PROC QTY	ACCEPT PRIOR TO 1 OCT 2023	BAL DUE AS OF 1 OCT	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	
1.1.1) N340 Complete Fuze																															
	1	2018	NAVY	4.576	4.576	.000																									.000
✓	1	2020	NAVY	198.567	70.000	128.567	35.000	35.000	32.900	25.667																					.000
2.1.1) NA29 Complete Fuze																															
	2	2018	NAVY	2.304	2.304	.000																									.000
✓	2	2018	NAVY	.114	.114	.000																									.000
	2	2019	NAVY	1.593	1.593	.000																									.000
✓	2	2020	NAVY	7.631	7.631	.000																									.000
							OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	

Exhibit P-21, Production Schedule: PB 2020 Navy		Date: March 2019
Appropriation / Budget Activity / Budget Sub Activity: 1508N / 02 / 1	**P-1 Line Item Number / Title:** 1650 / Artillery Munitions	**Item Number / Title [DODIC]:** 1 / Fuze, All Types

MFR Ref #	Manufacturer Name - Location	Production Rates (Each / Year)			Procurement Leadtime (Months)							
					Initial				Reorder			
		MSR For 2020	1-8-5 For 2020	MAX For 2020	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	ACTION MANUFACTURING INC - Bristol, PA	20,000	35,000	500,000	10	10	36	46	10	10	36	46
2	NORTHROP GRUMMAN INNOVATION SYSTEMS - PLYMOUTH, MN	3,330	11,000	22,000	13	9	27	36	3	6	24	30

"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 2020 Navy	Date: March 2019
Appropriation / Budget Activity / Budget Sub Activity: 1508N: Procurement of Ammo, Navy & MC / BA 02: Proc Ammo, MC / BSA 1: Marine Corps Ammunition	**P-1 Line Item Number / Title:** 1660 / Items less than $5 million

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

Line Item MDAP/MAIS Code: N/A

Resource Summary	Prior Years	FY 2018	FY 2019	FY 2020 Base	FY 2020 OCO	FY 2020 Total	FY 2021	FY 2022	FY 2023	FY 2024	To Complete	Total
Procurement Quantity *(Units in Each)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost *($ in Millions)*	65.779	3.960	6.239	0.000	4.521	4.521	4.881	4.835	4.990	5.149	Continuing	Continuing
Less PY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) *($ in Millions)*	65.779	3.960	6.239	0.000	4.521	4.521	4.881	4.835	4.990	5.149	Continuing	Continuing
Plus CY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority *($ in Millions)*	**65.779**	**3.960**	**6.239**	**0.000**	**4.521**	**4.521**	**4.881**	**4.835**	**4.990**	**5.149**	**Continuing**	**Continuing**
(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)*	-	-	-	-	-	-	-	-	-	-	-	-

Description:

FY 2020 funding totals include $0.0M for Base and $4.521M for Overseas Contingency Operations (OCO); of which $4.521M is realigned as part of the OCO for Base Requirements. FY 2020 OCO for Base Requirements is OCO funding for base budget requirements in support of the National Defense Strategy. The Budget requests these funds in OCO to comply with the base budget defense caps included in the Budget Control Act of 2011.

Items Less Than $5 Million (LT5M) supports Marine Corps Units that have niche ammunition requirements. The LT5M line item includes the Marine Corps (MC) Competition Shooting Team with ammunition loading equipment and unique precision ammunition components through small purchase orders and the small arms small purchase credit card. This line also includes First Destination Transportation Charge (FDTC) funds that are utilized for the distribution of Marine Corps' ammunition end items from manufacturing plants assembly points. The Marine Security Guard Battalion (MSGB) funds the Marine Security Guard Battalion ammunition requirements which are procured through the U.S. State Department. Counter-Drug Interdiction funds are provided by Office of the Secretary of Defense (OSD) to the Marine Corps in the year of execution to support drug interdiction requirements.

Exhibit P-40, Budget Line Item Justification: PB 2020 Navy	**Date:** March 2019
Appropriation / Budget Activity / Budget Sub Activity: 1508N: Procurement of Ammo, Navy & MC / BA 02: Proc Ammo, MC / BSA 1: Marine Corps Ammunition	**P-1 Line Item Number / Title:** 1660 / Items less than $5 million

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 2018	FY 2019	FY 2020 Base	FY 2020 OCO	FY 2020 Total
Exhibit Type	Title*	Subexhibits	ID CD	MDAP/ MAIS Code	Quantity / Total Cost *(Each) I ($ M)*	Quantity / Total Cost *(Each) I ($ M)*	Quantity / Total Cost *(Each) I ($ M)*	Quantity / Total Cost *(Each) I ($ M)*	Quantity / Total Cost *(Each) I ($ M)*	Quantity / Total Cost *(Each) I ($ M)*
P-40a	Items less than $5 million				- / 65.779	- / 3.960	- / 6.239	- / 0.000	- / 4.521	- / 4.521
P-40	**Total Gross/Weapon System Cost**				**- / 65.779**	**- / 3.960**	**- / 6.239**	**- / 0.000**	**- / 4.521**	**- / 4.521**

*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 2020 OCO for baseline funding will procure match ammunition and components for the Marine Corps Rifle Team. Funds will continue to provide First Destination Transportation (FDT) of items delivering in FY 2020 and MSGB ammunitions requirement procured through the U.S. State Department.

FY 2020 funding decreases by $1.718 million to reflect FDT historical expenditures. A programmatic adjustment was made to procure essential ammunition items.

Exhibit P-40a, Budget Item Justification For Aggregated Items: PB 2020 Navy		Date: March 2019
Appropriation / Budget Activity / Budget Sub Activity: 1508N / 02 / 1	**P-1 Line Item Number / Title:** 1660 / 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 2018			FY 2019			FY 2020 Base			FY 2020 OCO			FY 2020 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) Items Less than $5M																				
1.1) A001, RIFLE TEAM AMMUNITION	A		-	-	0.849	-	-	0.232	-	-	0.241	-	-	0.000	-	-	0.255	-	-	0.255
1.2) DRUG INT, DRUG INTERDICTION	A		-	-	7.986	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1.3) FDTC, FIRST DESTINATION TRANSPORTATION CHARGE			-	-	47.235	-	-	2.758	-	-	4.833	-	-	0.000	-	-	3.380	-	-	3.380
1.4) MSGB, MARINE SECURITY GUARD BATTALION AMMO	A		-	-	5.509	-	-	0.970	-	-	1.165	-	-	0.000	-	-	0.886	-	-	0.886
1.5) NON-DISTR, Special Purpose MAGTF-Crisis Response	A		-	-	4.200	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Subtotal: 1) Items Less than $5M			**-**	**-**	***65.779***	**-**	**-**	***3.960***	**-**	**-**	***6.239***	**-**	**-**	***0.000***	**-**	**-**	***4.521***	**-**	**-**	***4.521***
Total			**-**	**-**	**65.779**	**-**	**-**	**3.960**	**-**	**-**	**6.239**	**-**	**-**	**0.000**	**-**	**-**	**4.521**	**-**	**-**	**4.521**

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

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