

UNCLASSIFIED

Exhibit P-40, Budget Line Item Justification: PB 2017 Navy **Date:** February 2016

Appropriation / Budget Activity / Budget Sub Activity: 1109N: Procurement, Marine Corps / BA 04: Communications and Electronics Equipment / BSA 15: Radar + Equipment (Non-Tel)	P-1 Line Item Number / Title: 4655 / Ground/Air Task Oriented Radar (G/ATOR)
---	--

ID Code (A=Service Ready, B=Not Service Ready): A	Program Elements for Code B Items: 0204460M, 0506313M	Other Related Program Elements: 0206313M
---	---	--

Line Item MDAP/MAIS Code: 386	Item MDAP/MAIS Code(s): N/A
-------------------------------	-----------------------------

Resource Summary	Prior Years	FY 2015	FY 2016	FY 2017 Base	FY 2017 OCO	FY 2017 Total	FY 2018	FY 2019	FY 2020	FY 2021	To Complete	Total
Procurement Quantity (<i>Units in Each</i>)	-	2	3	3	-	3	3	6	8	8	-	33
Gross/Weapon System Cost (<i>\$ in Millions</i>)	0.000	88.338	126.866	123.758	-	123.758	124.623	220.136	270.077	283.664	379.626	1,617.088
Less PY Advance Procurement (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) (<i>\$ in Millions</i>)	0.000	88.338	126.866	123.758	-	123.758	124.623	220.136	270.077	283.664	379.626	1,617.088
Plus CY Advance Procurement (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority (<i>\$ in Millions</i>)	0.000	88.338	126.866	123.758	-	123.758	124.623	220.136	270.077	283.664	379.626	1,617.088

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

Initial Spares (<i>\$ in Millions</i>)	-	2.572	-	11.193	-	11.193	20.327	13.112	13.270	13.528	Continuing	Continuing
Flyaway Unit Cost (<i>\$ in Millions</i>)	-	44.169	38.938	37.883	-	37.883	34.894	32.872	32.818	34.299	-	45.839
Gross/Weapon System Unit Cost (<i>\$ in Millions</i>)	-	44.169	42.289	41.253	-	41.253	41.541	36.689	33.760	35.458	-	49.003

Description:

Ground/Air Task Oriented Radar (G/ATOR AN/TPS-80) - The Ground/Air Task Oriented Radar is a multi-role, ground-based, expeditionary radar that replaces five legacy radar systems for the Marine Air Ground Task Force.

It satisfies the Marine Air Command and Control System (G/ATOR Block 1) and the Ground Counter Fire/Counter Battery (G/ATOR Block 2) capabilities. The G/ATOR replaces the AN/TPS-63 and complements the AN/TPS-59 long range radar and will provide mobile, multi-functional, three-dimensional surveillance of air breathing targets, detection of cruise missiles and UAS, and the cueing of air defense weapons. The G/ATOR contributes to the extension of Sea Shield/Sea Strike by surveillance and detection of enemy air threats not seen by Navy sensors in the littorals by participating in a cooperative engagement network of sensors and shooters; G/ATOR enables Integrated Fire Control (IFC) and provides engage/fire on remote capability. G/ATOR surveillance coverage with IFC will provide unprecedented reach, volume, and precision in the execution of Operational Maneuver From The Sea allowing Naval forces to project and sustain power deep inland. Prior year funding for the G/ATOR program can be found in BLI 4650 - Radar Systems.

Secondary Distribution	FY 2015	FY 2016	FY 2017 Base	FY 2017 OCO	FY 2017 Total	FY 2018	FY 2019	FY 2020	FY 2021
Navy	Quantity	2	3	3	-	3	3	2	4
	Total Obligation Authority	88.338	126.866	123.758	-	123.758	124.623	100.183	147.732
NR	Quantity	-	-	-	-	-	-	4	4
	Total Obligation Authority	-	-	-	-	-	-	119.953	122.345
Total: Secondary Distribution	Quantity	-	-	-	-	-	-	-	-
	Total Obligation Authority	88.338	126.866	123.758	-	123.758	124.623	220.136	270.077

UNCLASSIFIED

Exhibit P-40, Budget Line Item Justification: PB 2017 Navy **Date:** February 2016

Appropriation / Budget Activity / Budget Sub Activity: 1109N: Procurement, Marine Corps / BA 04: Communications and Electronics Equipment / BSA 15: Radar + Equipment (Non-Tel)	P-1 Line Item Number / Title: 4655 / Ground/Air Task Oriented Radar (G/ATOR)
---	--

ID Code (A=Service Ready, B=Not Service Ready): A	Program Elements for Code B Items: 0204460M, 0506313M	Other Related Program Elements: 0206313M
--	--	---

Line Item MDAP/MAIS Code: 386	Item MDAP/MAIS Code(s): N/A
--------------------------------------	------------------------------------

Exhibits Schedule				Prior Years	FY 2015	FY 2016	FY 2017 Base	FY 2017 OCO	FY 2017 Total
Exhibit Type	Title*	Subexhibits	ID CD	Quantity / 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 / Ground/Air Task Oriented Radar (G/ATOR)	P-5a, P-21		- / 0.000	2 / 88.338	3 / 126.866	3 / 123.758	- / -	3 / 123.758
P-40	Total Gross/Weapon System Cost			- / 0.000	2 / 88.338	3 / 126.866	3 / 123.758	- / -	3 / 123.758

*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:

FY2015 Base Appropriation:
 AN/TPS-80 G/ATOR \$88.338M - FY15 funding procured two Gallium Arsenide (GaAs) Low Rate Initial Production (LRIP) G/ATOR systems and provided funding for support associated with the procurement of systems.

FY2016 Base Appropriation:
 AN/TPS-80 G/ATOR \$126.866M - FY16 funding procures three Gallium Nitride (GaN) LRIP G/ATOR systems and provides funding for support associated with the procurement of systems, Program Management, and Logistics Support required to begin G/ATOR fielding related activities.

FY2017 Base Appropriation Request:
 AN/TPS-80 G/ATOR \$123.758M - FY17 funding will procure three Gallium Nitride (GaN) LRIP G/ATOR systems and provide funding for support associated with the procurement of systems, Hardware, Program Management, and Logistics Support required for G/ATOR fielding related activities. The decrease (\$3.108) in funding from FY16 to FY17 reflects the efficiency gains which lowered the cost of the second LRIP of GaN G/ATOR systems.

UNCLASSIFIED

Exhibit P-5, Cost Analysis: PB 2017 Navy		Date: February 2016
Appropriation / Budget Activity / Budget Sub Activity: 1109N / 04 / 15	P-1 Line Item Number / Title: 4655 / Ground/Air Task Oriented Radar (G/ATOR)	Item Number / Title [DODIC]: 1 / Ground/Air Task Oriented Radar (G/ATOR)

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

Resource Summary	Prior Years	FY 2015	FY 2016	FY 2017 Base	FY 2017 OCO	FY 2017 Total
Procurement Quantity (<i>Units in Each</i>)	-	2	3	3	-	3
Gross/Weapon System Cost (<i>\$ in Millions</i>)	0.000	88.338	126.866	123.758	-	123.758
Less PY Advance Procurement (<i>\$ in Millions</i>)	-	-	-	-	-	-
Net Procurement (P-1) (<i>\$ in Millions</i>)	0.000	88.338	126.866	123.758	-	123.758
Plus CY Advance Procurement (<i>\$ in Millions</i>)	-	-	-	-	-	-
Total Obligation Authority (<i>\$ in Millions</i>)	0.000	88.338	126.866	123.758	-	123.758

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

Initial Spares (<i>\$ in Millions</i>)	-	2.572	-	11.193	-	11.193
Gross/Weapon System Unit Cost (<i>\$ in Millions</i>)	-	44.169	42.289	41.253	-	41.253

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

Cost Elements	Prior Years			FY 2015			FY 2016			FY 2017 Base			FY 2017 OCO			FY 2017 Total		
	Unit Cost (\$ M)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ M)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ M)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ M)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ M)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ M)	Qty (Each)	Total Cost (\$ M)
Flyaway - G/ATOR - Active (PE 0204460M) & Reserve (PE 0506313M) Cost																		
Recurring Cost																		
1.1.1) G/ATOR System (Active) ⁽¹⁾ (1)	-	-	-	32.511	2	65.022	32.115	3	96.345	32.050	3	96.150	-	-	-	32.050	3	96.150
1.1.2) Systems Engineering/Program Management (SEPM) (Active)	-	-	-	-	-	13.574	-	-	15.648	-	-	11.626	-	-	-	-	-	11.626
<i>Subtotal: Recurring Cost</i>	-	-	-	-	-	78.596	-	-	111.993	-	-	107.776	-	-	-	-	-	107.776
Non Recurring Cost																		
1.2.1) Engineering Change Orders (ECO) (Active)	-	-	-	-	-	9.742	-	-	4.820	-	-	5.872	-	-	-	-	-	5.872
<i>Subtotal: Non Recurring Cost</i>	-	-	-	-	-	9.742	-	-	4.820	-	-	5.872	-	-	-	-	-	5.872
<i>Subtotal: Flyaway - G/ATOR - Active (PE 0204460M) & Reserve (PE 0506313M) Cost</i>	-	-	-	-	-	88.338	-	-	116.813	-	-	113.648	-	-	-	-	-	113.648

Hardware - G/ATOR - Active (PE 0204460M) Cost																		
Non Recurring Cost																		
2.1.1) G/ATOR Shelters ⁽²⁾	-	-	-	-	-	-	-	-	-	-	-	0.525	-	-	-	-	-	0.525

UNCLASSIFIED

Exhibit P-5, Cost Analysis: PB 2017 Navy		Date: February 2016
Appropriation / Budget Activity / Budget Sub Activity: 1109N / 04 / 15	P-1 Line Item Number / Title: 4655 / Ground/Air Task Oriented Radar (G/ATOR)	Item Number / Title [DODIC]: 1 / Ground/Air Task Oriented Radar (G/ATOR)
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 2015			FY 2016			FY 2017 Base			FY 2017 OCO			FY 2017 Total		
	Unit Cost (\$ M)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ M)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ M)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ M)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ M)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ M)	Qty (Each)	Total Cost (\$ M)
<i>Subtotal: Non Recurring Cost</i>	-	-	-	-	-	-	-	-	-	-	-	0.525	-	-	-	-	-	0.525
<i>Subtotal: Hardware - G/ATOR - Active (PE 0204460M) Cost</i>	-	-	-	-	-	-	-	-	-	-	-	0.525	-	-	-	-	-	0.525
Support - G/ATOR - Support Active (PE 0204460M) Cost																		
3.1) Program Management Support	-	-	-	-	-	-	-	-	2.703	-	-	2.750	-	-	-	-	-	2.750
3.2) Logistics Support (Shelters) ⁽³⁾	-	-	-	-	-	-	-	-	-	-	-	0.856	-	-	-	-	-	0.856
3.3) Logistics Support (Fielding)	-	-	-	-	-	-	-	-	7.350	-	-	5.979	-	-	-	-	-	5.979
<i>Subtotal: Support - G/ATOR - Support Active (PE 0204460M) Cost</i>	-	-	-	-	-	-	-	-	10.053	-	-	9.585	-	-	-	-	-	9.585
Gross/Weapon System Cost	-	-	0.000	44.169	2	88.338	42.289	3	126.866	41.253	3	123.758	-	-	-	41.253	3	123.758

(†) indicates the presence of a P-5a

Footnotes:

- (1) The decrease in unit cost from FY15 to FY16 reflects the transition from GaAs to GaN technology. The decrease in unit cost from FY16 to FY17 reflects efficiency gains which lowered the cost of the second LRIP of GaN G/ATOR systems.
- (2) Requirement derived from Change 4 of G/ATOR Block 2 Capabilities Development Document signed 22 October 2014
- (3) Requirement derived from Change 4 of G/ATOR Block 2 Capabilities Development Document signed 22 October 2014

UNCLASSIFIED

Exhibit P-5a, Procurement History and Planning: PB 2017 Navy							Date: February 2016					
Appropriation / Budget Activity / Budget Sub Activity: 1109N / 04 / 15			P-1 Line Item Number / Title: 4655 / Ground/Air Task Oriented Radar (G/ATOR)				Item Number / Title [DODIC]: 1 / Ground/Air Task Oriented Radar (G/ATOR)					

Cost Elements	O C O	FY	Contractor and Location	Method/Type or Funding Vehicle	Location of PCO	Award Date	Date of First Delivery	Qty <i>(Each)</i>	Unit Cost <i>(\$ M)</i>	Specs Avail Now?	Date Revision Available	RFP Issue Date
1.1.1) G/ATOR System (Active) ^(†)		2015 ⁽⁴⁾	Northrop Grumman / Linthicum, MD	SS / FPIF	Quantico, VA	Mar 2015	May 2017	2	32.511	Y		May 2013
1.1.1) G/ATOR System (Active) ^(†)		2016 ⁽⁵⁾	Northrop Grumman / Linthicum, MD	SS / FPIF	Quantico, VA	Jun 2016	Aug 2018	3	32.115	Y		May 2013
1.1.1) G/ATOR System (Active) ^(†)		2017 ⁽⁶⁾	Northrop Grumman / Linthicum, MD	SS / FPIF	Quantico, VA	Apr 2017	Jun 2019	3	32.050	Y		May 2013

^(†) indicates the presence of a P-21

Footnotes:

- ⁽⁴⁾ Date of FY15 First Delivery is based on the G/ATOR LRIP contract awarded in March 2015.
- ⁽⁵⁾ Date of FY16 First Delivery is based on the G/ATOR GaN LRIP contract award anticipated in June 2016.
- ⁽⁶⁾ Date of FY17 First Delivery is based on the G/ATOR GaN LRIP contract option award anticipated in April 2017.

UNCLASSIFIED

Exhibit P-21, Production Schedule: PB 2017 Navy															Date: February 2016														
Appropriation / Budget Activity / Budget Sub Activity: 1109N / 04 / 15										P-1 Line Item Number / Title: 4655 / Ground/Air Task Oriented Radar (G/ATOR)										Item Number / Title [DODIC]: 1 / Ground/Air Task Oriented Radar (G/ATOR)									

Cost Elements <i>(Units in Each)</i>					Fiscal Year 2017												Fiscal Year 2018												BALANCE				
O C O #	M F R #	FY	SERVICE	PROC QTY	ACCEPT PRIOR TO 1 OCT 2016	BAL DUE AS OF 1 OCT	Calendar Year 2017												Calendar Year 2018														
							O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P	O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L		A U G	S E P		
1.1.1) G/ATOR System (Active) ⁽¹⁾																																	
1		2015	NAVY	2	-	2	-	-	-	-	-	-	-	1	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1		2016	NAVY	3	-	3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	
1		2017	NAVY	3	-	3								A	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
							O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P	O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P			

UNCLASSIFIED

Exhibit P-21, Production Schedule: PB 2017 Navy															Date: February 2016														
Appropriation / Budget Activity / Budget Sub Activity: 1109N / 04 / 15										P-1 Line Item Number / Title: 4655 / Ground/Air Task Oriented Radar (G/ATOR)										Item Number / Title [DODIC]: 1 / Ground/Air Task Oriented Radar (G/ATOR)									

Cost Elements <i>(Units in Each)</i>						Fiscal Year 2019												Fiscal Year 2020												BALANCE	
O C C #	M F R #	FY	SERVICE	PROC QTY	ACCEPT PRIOR TO 1 OCT 2018	BAL DUE AS OF 1 OCT	Calendar Year 2019												Calendar Year 2020												
							O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P	O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G		S E P
1.1.1) G/ATOR System (Active) ⁽¹⁾																															
	1	2015	NAVY	2	2	-																							-		
	1	2016	NAVY	3	1	2	1	-	1																				-		
	1	2017	NAVY	3	-	3	-	-	-	-	-	-	-	1	-	1	-	1											-		
							O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P	O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P	

UNCLASSIFIED

Exhibit P-21, Production Schedule: PB 2017 Navy		Date: February 2016
Appropriation / Budget Activity / Budget Sub Activity: 1109N / 04 / 15		P-1 Line Item Number / Title: 4655 / Ground/Air Task Oriented Radar (G/ATOR)
Item Number / Title [DODIC]: 1 / Ground/Air Task Oriented Radar (G/ATOR)		

MFR Ref #	Manufacturer Name - Location	Production Rates (Each / Year)			Procurement Leadtime (Months)							
		MSR For 2017	1-8-5 For 2017	MAX For 2017	Initial				Reorder			
					ALT Prior to Oct 1	ALT After Oct 1	Manufacturing PLT	Total After Oct 1	ALT Prior to Oct 1	ALT After Oct 1	Manufacturing PLT	Total After Oct 1
1	Northrop Grumman - Linthicum, MD	2	10	12	-	5	26	31	-	5	26	31

"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).