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**Exhibit R-2, RDT&E Budget Item Justification:** PB 2017 Army **Date:** February 2016

<b>Appropriation/Budget Activity</b> 2040: Research, Development, Test & Evaluation, Army / BA 5: System Development & Demonstration (SDD)	<b>R-1 Program Element (Number/Name)</b> PE 0605033A / Ground-Based Operational Surveillance System - Expeditionary (GBOSS-E)
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COST (\$ in Millions)	Prior Years	FY 2015	FY 2016	FY 2017 Base	FY 2017 OCO	FY 2017 Total	FY 2018	FY 2019	FY 2020	FY 2021	Cost To Complete	Total Cost
Total Program Element	-	0.000	0.000	5.032	-	5.032	1.720	1.484	0.000	0.000	0.000	8.236
EQ3: Grnd-Based Opnl Surv Sys -Exped (GBOSS-E)	-	0.000	0.000	5.032	-	5.032	1.720	1.484	0.000	0.000	0.000	8.236

**Note**

Ground-Based Operational Surveillance System (Expeditionary) (G-BOSS(E)) was previously funded in Integrated Base Defense (IBD) Program Element: 0205402A EF2. This is not a new start program in FY17.

**A. Mission Description and Budget Item Justification**

Ground-Based Operational Surveillance System (Expeditionary) (G-BOSS(E)) will replace the interim Persistent Surveillance System-Ground (PSS-G) Increment 1 towers with improved persistent surveillance capabilities and will provide network integration and better mobility utilizing modular configurations. G-BOSS(E) will replace obsolete, quick reaction capability (QRC) surveillance and force protections systems utilizing modular configurations: Light (man-transportable) for extra small base camps or small outpost/company, Medium (mid sensor height) for small to medium size base, and Heavy (high level sensor height) for large contingency base camps. G-BOSS(E) will operate in a stand-alone mode or as part of an integrated network utilizing government owned software, be easily operated and maintained, and be rugged enough to support employment in expeditionary operations worldwide.

**B. Program Change Summary (\$ in Millions)**

	<u>FY 2015</u>	<u>FY 2016</u>	<u>FY 2017 Base</u>	<u>FY 2017 OCO</u>	<u>FY 2017 Total</u>
Previous President's Budget	0.000	0.000	0.000	-	0.000
Current President's Budget	0.000	0.000	5.032	-	5.032
Total Adjustments	0.000	0.000	5.032	-	5.032
• Congressional General Reductions	-	-			
• Congressional Directed Reductions	-	-			
• Congressional Rescissions	-	-			
• Congressional Adds	-	-			
• Congressional Directed Transfers	-	-			
• Reprogrammings	-	-			
• SBIR/STTR Transfer	-	-			
• Adjustments to Budget Years	-	-	5.032	-	5.032

**Change Summary Explanation**

Program was previously funded in Integrated Base Defense (IBD) Program Element: 0205402A EF2 in FY16.

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<b>Exhibit R-2A, RDT&amp;E Project Justification:</b> PB 2017 Army										<b>Date:</b> February 2016		
<b>Appropriation/Budget Activity</b> 2040 / 5					<b>R-1 Program Element (Number/Name)</b> PE 0605033A / <i>Ground-Based Operational Surveillance System - Expeditionary (GBOSS-E)</i>				<b>Project (Number/Name)</b> EQ3 / <i>Grnd-Based Opnl Surv Sys -Exped (GBOSS-E)</i>			
<b>COST (\$ in Millions)</b>	<b>Prior Years</b>	<b>FY 2015</b>	<b>FY 2016</b>	<b>FY 2017 Base</b>	<b>FY 2017 OCO</b>	<b>FY 2017 Total</b>	<b>FY 2018</b>	<b>FY 2019</b>	<b>FY 2020</b>	<b>FY 2021</b>	<b>Cost To Complete</b>	<b>Total Cost</b>
EQ3: <i>Grnd-Based Opnl Surv Sys -Exped (GBOSS-E)</i>	-	0.000	0.000	5.032	-	5.032	1.720	1.484	0.000	0.000	0.000	8.236
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

**Note**

Ground-Based Operational Surveillance System (Expeditionary) (G-BOSS(E)) was previously funded in Integrated Base Defense Program Element: 0205402A EF2. This is not a new start program in FY17.

**A. Mission Description and Budget Item Justification**

Ground-Based Operational Surveillance System (Expeditionary) (G-BOSS(E)) will replace the interim Persistent Surveillance System-Ground (PSS-G) Increment 1 towers with improved persistent surveillance capabilities and will provide network integration and better mobility utilizing modular configurations. G-BOSS(E) will replace obsolete, quick reaction capability (QRC) surveillance and force protections systems utilizing modular configurations: Light (man-transportable) for extra small base camps or small outpost/company, Medium (mid sensor height) for small to medium size base, and Heavy (high level sensor height) for large contingency base camps. G-BOSS(E) will operate in a stand-alone mode or as part of an integrated network utilizing government owned software, be easily operated and maintained, and be rugged enough to support employment in expeditionary operations worldwide.

FY 2017 Base Funding in the amount of \$5.032 million supports the system level Critical Design Review (CDR), development and integration for both medium and heavy variants, and the production of the Engineering & Manufacturing Development (EMD) assets (production representative articles) for both the Heavy and Medium variants. The RDTE will support the completion of the Technical Data Package (TDP) and Product Support Analysis and Package for all system configurations, as well as the Developmental Testing (DT)/early Operational Assessment (OA) for a single system variant.

**B. Accomplishments/Planned Programs (\$ in Millions)**

	<b>FY 2015</b>	<b>FY 2016</b>	<b>FY 2017</b>
<b>Title:</b> G-BOSS(E) Design and Build	-	-	5.032
<b>Description:</b> G-BOSS(E) completes building of Prototype/Engineering Development Models (EDMs) and starts Development Testing (DT).			
<b>FY 2017 Plans:</b> G-BOSS(E) completes building of Engineering Development Models (EDMs) and starts Development Testing (DT)/Early Operational Assessment (OA)			
<b>Accomplishments/Planned Programs Subtotals</b>	-	-	5.032

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<b>Exhibit R-2A, RDT&amp;E Project Justification:</b> PB 2017 Army	<b>Date:</b> February 2016
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<b>Appropriation/Budget Activity</b> 2040 / 5	<b>R-1 Program Element (Number/Name)</b> PE 0605033A / <i>Ground-Based Operational Surveillance System - Expeditionary (GBOSS-E)</i>	<b>Project (Number/Name)</b> EQ3 / <i>Grnd-Based Opnl Surv Sys -Exped (GBOSS-E)</i>
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**C. Other Program Funding Summary (\$ in Millions)**

<u>Line Item</u>	<u>FY 2015</u>	<u>FY 2016</u>	<u>FY 2017</u> <u>Base</u>	<u>FY 2017</u> <u>OCO</u>	<u>FY 2017</u> <u>Total</u>	<u>FY 2018</u>	<u>FY 2019</u>	<u>FY 2020</u>	<u>FY 2021</u>	<u>Cost To</u> <u>Complete</u>	<u>Total Cost</u>
• M90212: <i>G-BOSS(E) (M90212)</i>	-	-	-	-	-	6.276	19.770	20.435	17.188	0	63.669
• 0205402A: <i>Integrated Base Defense (0205402A)</i>	4.196	10.750	-	-	-	-	-	-	-	0	14.946

**Remarks**

Ground-Based Operational Surveillance System (Expeditionary) (G-BOSS(E)) was previously funded in Integrated Base Defense (IBD) Program Element: 0205402A EF2, which was a shared funding line between Integrated Ground Security, Surveillance and Response Capability (IGSSR-C), GBOSS-(E) and Integrated Base Defense (IBD). GBOSS-(E) portion was \$5.750 million in FY 2016.

**D. Acquisition Strategy**

Ground-Based Operational Surveillance System (Expeditionary) (G-BOSS(E)) will replace the interim Persistent Surveillance System – Ground (PSS-G) Increment 1 towers with improved persistent surveillance capabilities along with network integration and better mobility utilizing modular configurations. The G-BOSS(E) Capability Design Document (CDD) was approved May 2014. In FY 2014, the Department of Defense (DoD) Physical Security Enterprise and Analysis Group (PSEAG) provided funds to conduct pre-milestone B activities.

G-BOSS(E) received an approved Materiel Development Decision (MDD) from the Milestone Decision Authority (MDA) on 4 December 2015. Pending successful Milestone B decision in FY 2016, the existing United States Marine Corps (USMC) tower's design (Ground Based Operational Surveillance System) (GBOSS) will be leveraged and modified to meet the Army's G-BOSS(E) program requirements.

The acquisition strategy for FY 2017 is pending approval from the Milestone Decision Authority (MDA), with plans to leverage the Naval Surface Warfare Center (NSWC) at Crane, Indiana and the Night Vision and Electronic Sensors Directorate (NVESD), Fort Belvoir, Virginia to provide system design, development, and integration support, as well as a Technical Data Package (TDP) to support future procurements.

Milestone C is planned for FY 2019 to align G-BOSS(E), IGSSR-C, and Tactical Security System (TSS) in order to gain programmatic efficiencies.

**E. Performance Metrics**

N/A

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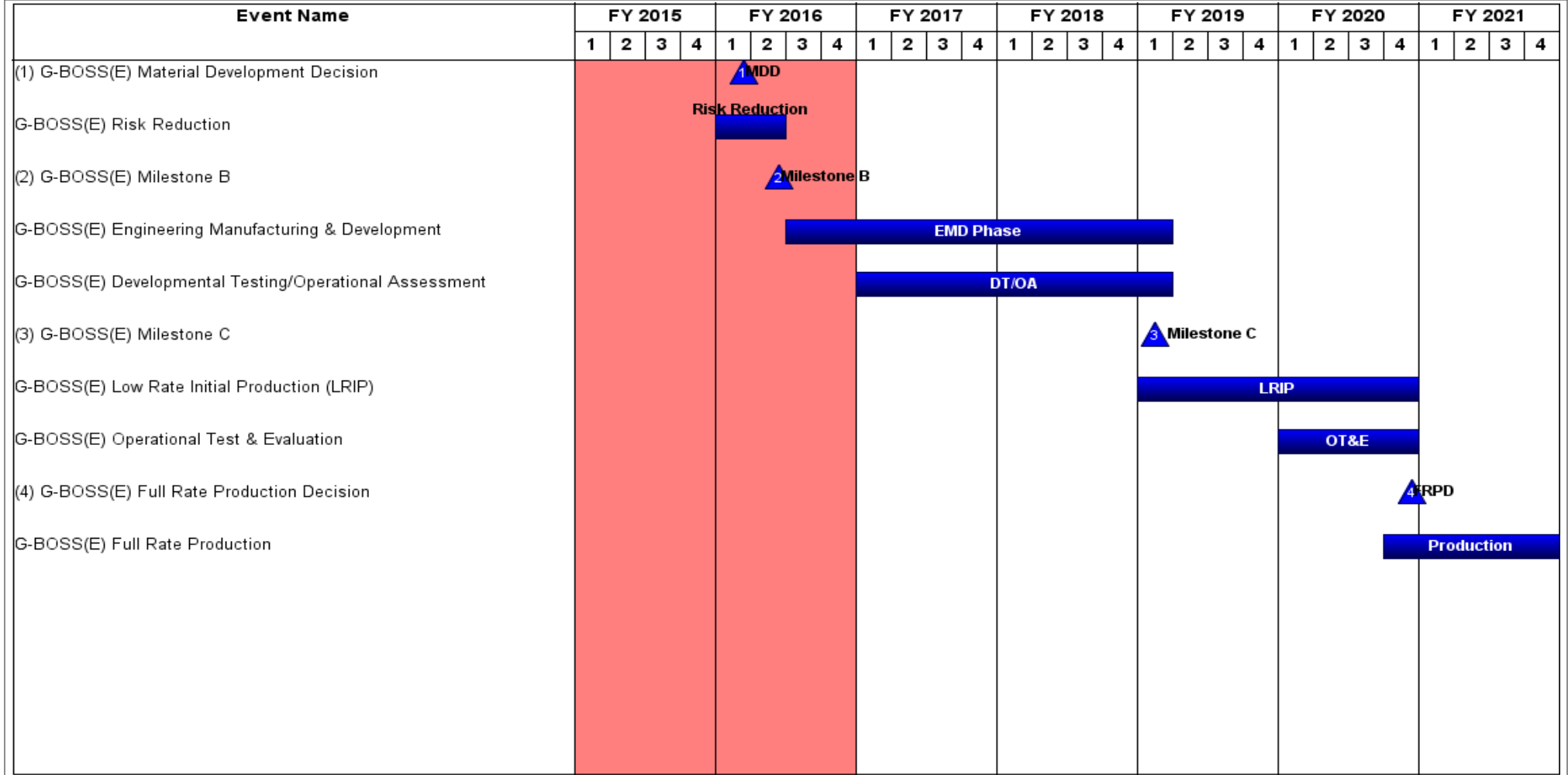
Exhibit R-3, RDT&E Project Cost Analysis: PB 2017 Army												Date: February 2016			
Appropriation/Budget Activity				R-1 Program Element (Number/Name)					Project (Number/Name)						
2040 / 5				PE 0605033A / Ground-Based Operational Surveillance System - Expeditionary (GBOSS-E)					EQ3 / Grnd-Based Opnl Surv Sys -Exped (GBOSS-E)						
Management Services (\$ in Millions)				FY 2015		FY 2016		FY 2017 Base		FY 2017 OCO		FY 2017 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
G-BOSS(E) Project Management	MIPR	PM EOIR : Fort Belvoir, VA	0.000	-		-		0.153	Dec 2016	-		0.153	Continuing	Continuing	Continuing
<b>Subtotal</b>			0.000	-		-		0.153		-		0.153	-	-	-
Product Development (\$ in Millions)				FY 2015		FY 2016		FY 2017 Base		FY 2017 OCO		FY 2017 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
G-BOSS(E) Design	MIPR	NSWC Crane : Crane, IN	0.000	-		-		1.977	Dec 2016	-		1.977	Continuing	Continuing	Continuing
G-BOSS(E) Prototypes	MIPR	NSWC Crane : Crane, IN	0.000	-		-		1.856	Dec 2016	-		1.856	Continuing	Continuing	Continuing
G-BOSS(E) Software Development	TBD	TBD : TBD	0.000	-		-		0.264	Dec 2016	-		0.264	Continuing	Continuing	Continuing
<b>Subtotal</b>			0.000	-		-		4.097		-		4.097	-	-	-
Support (\$ in Millions)				FY 2015		FY 2016		FY 2017 Base		FY 2017 OCO		FY 2017 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
G-BOSS(E) Design Support	MIPR	RDECOM CERDEC : Fort Belvoir, VA	0.000	-		-		0.338	Dec 2016	-		0.338	Continuing	Continuing	Continuing
ARL Human Systems Integration Support	MIPR	US Army ARL : Adelphi, MD	0.000	-		-		0.025	Dec 2016	-		0.025	Continuing	Continuing	Continuing
CECOM FSD - Safety	MIPR	CECOM : APG, MD	0.000	-		-		0.219	Dec 2016	-		0.219	Continuing	Continuing	Continuing
<b>Subtotal</b>			0.000	-		-		0.582		-		0.582	-	-	-



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**Exhibit R-4, RDT&E Schedule Profile: PB 2017 Army** **Date:** February 2016

<b>Appropriation/Budget Activity</b> 2040 / 5	<b>R-1 Program Element (Number/Name)</b> PE 0605033A / <i>Ground-Based Operational Surveillance System - Expeditionary (GBOSS-E)</i>	<b>Project (Number/Name)</b> EQ3 / <i>Grnd-Based Opnl Surv Sys -Exped (GBOSS-E)</i>
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<b>Exhibit R-4A, RDT&amp;E Schedule Details:</b> PB 2017 Army		<b>Date:</b> February 2016
<b>Appropriation/Budget Activity</b> 2040 / 5	<b>R-1 Program Element (Number/Name)</b> PE 0605033A / <i>Ground-Based Operational Surveillance System - Expeditionary (GBOSS-E)</i>	<b>Project (Number/Name)</b> EQ3 / <i>Grnd-Based Opnl Surv Sys -Exped (GBOSS-E)</i>

Schedule Details

Events	Start		End	
	Quarter	Year	Quarter	Year
G-BOSS(E) Material Development Decision	1	2016	1	2016
G-BOSS(E) Risk Reduction	1	2016	2	2016
G-BOSS(E) Milestone B	2	2016	2	2016
G-BOSS(E) Engineering Manufacturing & Development	3	2016	1	2019
G-BOSS(E) Developmental Testing/Operational Assessment	1	2017	1	2019
G-BOSS(E) Milestone C	1	2019	1	2019
G-BOSS(E) Low Rate Initial Production (LRIP)	1	2019	4	2020
G-BOSS(E) Operational Test & Evaluation	1	2020	4	2020
G-BOSS(E) Full Rate Production Decision	4	2020	4	2020
G-BOSS(E) Full Rate Production	4	2020	4	2022

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