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Exhibit R-2, RDT&E Budget Item Justification: PB 2016 Air Force **Date:** February 2015

Appropriation/Budget Activity 3600: Research, Development, Test & Evaluation, Air Force I BA 4: Advanced Component Development & Prototypes (ACD&P)					R-1 Program Element (Number/Name) PE 0603851F I Intercontinental Ballistic Missile - Dem/Val							
COST (\$ in Millions)	Prior Years	FY 2014	FY 2015	FY 2016 Base	FY 2016 OCO	FY 2016 Total	FY 2017	FY 2018	FY 2019	FY 2020	Cost To Complete	Total Cost
Total Program Element	-	72.696	30.885	39.765	-	39.765	83.660	73.309	68.310	65.508	Continuing	Continuing
641020: ICBM Guidance Applications	-	28.513	0.493	5.251	-	5.251	18.638	14.873	12.837	12.871	Continuing	Continuing
641021: ICBM Propulsion Applications	-	34.810	16.072	6.910	-	6.910	15.118	10.901	11.885	6.962	Continuing	Continuing
641022: ICBM Reentry Vehicle Applications	-	-	3.951	11.367	-	11.367	22.670	22.179	18.727	19.753	Continuing	Continuing
641024: ICBM Command & Control (C2) Applications	-	-	2.469	14.764	-	14.764	24.273	22.884	21.900	21.934	Continuing	Continuing
641025: Ground Based Strategic Deterrence (GBSD)	-	9.373	6.913	-	-	-	-	-	-	-	Continuing	Continuing
644209: Long Range Planning (LRP)	-	-	0.987	1.473	-	1.473	2.961	2.472	2.961	3.988	Continuing	Continuing

A. Mission Description and Budget Item Justification

This program ensures a responsive design and development engineering infrastructure to address emerging issues and technology insertion within the current Intercontinental Ballistic Missile (ICBM), future strategic systems/capability including the Ground Based Strategic Deterrent (GBSD), and other common strategic mission areas, where appropriate, to develop enhanced multi-use capabilities. Efforts identify methods to reduce life cycle costs, improve nuclear safety and surety, and ensure strategic missile viability. On-going demonstration and validation projects include Guidance Application Program (GAP), GBSD, Propulsion Application Program (PAP), Reentry Vehicle Application Program (RVAP), Command and Control Applications (C2AP) and Long Range Planning (LRP).

Future GBSD efforts will be reflected in PE 0605230F, Ground Based Strategic Deterrent, Project 641025.

BA4 - This program is in Budget Activity 4, Advanced Component Development and Prototypes (ACD&P) because efforts are necessary to evaluate integrated technologies, representative modes or prototype systems in a high fidelity and realistic operating environment.

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Exhibit R-2, RDT&E Budget Item Justification: PB 2016 Air Force				Date: February 2015	
Appropriation/Budget Activity		R-1 Program Element (Number/Name)			
3600: Research, Development, Test & Evaluation, Air Force I BA 4: Advanced Component Development & Prototypes (ACD&P)		PE 0603851F I Intercontinental Ballistic Missile - Dem/Val			
B. Program Change Summary (\$ in Millions)	FY 2014	FY 2015	FY 2016 Base	FY 2016 OCO	FY 2016 Total
Previous President's Budget	72.696	30.885	18.029	-	18.029
Current President's Budget	72.696	30.885	39.765	-	39.765
Total Adjustments	-	-	21.736	-	21.736
• Congressional General Reductions	-	-			
• Congressional Directed Reductions	-	-			
• Congressional Rescissions	-	-			
• Congressional Adds	-	-			
• Congressional Directed Transfers	-	-			
• Reprogrammings	-	-			
• SBIR/STTR Transfer	-	-			
• Other Adjustments	-	-	21.736	-	21.736
Change Summary Explanation					
FY16 Significant Change: \$21.736M added across the applications programs to mature and develop advanced technologies to provide risk reduction for future programs related to the Ground Based Strategic Deterrent (GBSD).					

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Exhibit R-2A, RDT&E Project Justification: PB 2016 Air Force										Date: February 2015		
Appropriation/Budget Activity 3600 / 4					R-1 Program Element (Number/Name) PE 0603851F / Intercontinental Ballistic Missile - Dem/Val				Project (Number/Name) 641020 / ICBM Guidance Applications			
COST (\$ in Millions)	Prior Years	FY 2014	FY 2015	FY 2016 Base	FY 2016 OCO	FY 2016 Total	FY 2017	FY 2018	FY 2019	FY 2020	Cost To Complete	Total Cost
641020: ICBM Guidance Applications	-	28.513	0.493	5.251	-	5.251	18.638	14.873	12.837	12.871	Continuing	Continuing
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

A. Mission Description and Budget Item Justification

The Guidance Applications Program (GAP) ensures the development of strategic capability in response to the Nuclear Posture Review, recommendations of the United States Strategic Command (USSTRATCOM) Strategic Advisory Group, USSTRATCOM Commander Guidance, and the Defense Science Board Task Force on Nuclear Deterrence. Efforts are focused on current and future requirements and technologies, reduced life cycle costs, and increased nuclear surety and safety. Activities leverage the efforts of the Science and Technology community and are coordinated with the Navy strategic applications program to enhance synergy and avoid duplication. Key elements include developing responsive technologies with common applications for future strategic guidance capabilities.

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

	FY 2014	FY 2015	FY 2016 Base	FY 2016 OCO	FY 2016 Total
Title: Guidance Application Program	28.513	0.493	5.251	-	5.251
Description: Develop and mature, in coordination with the Navy, advanced technologies and concepts to support future requirements.					
FY 2014 Accomplishments: Continued to develop, analyze and evaluate strategic guidance technologies, concepts and architectures for use in current or future ICBM systems. Efforts included the conceptual studies of guidance related systems and instruments, such as accelerometers and gyro technology. Assessed and tested strategic radiation hardened parts for consolidation into a AF/Navy rad hard parts library. Developed a capability to test current and future strategic guidance instruments. Continued GBSD pre-Milestone A activities and technology maturation for guidance system development risk reduction.					
FY 2015 Plans: Continue to identify, develop, analyze and evaluate advanced strategic guidance technologies for potential use in the current or future ICBM systems.					
FY 2016 Base Plans:					

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Exhibit R-2A, RDT&E Project Justification: PB 2016 Air Force										Date: February 2015	
Appropriation/Budget Activity 3600 / 4				R-1 Program Element (Number/Name) PE 0603851F / <i>Intercontinental Ballistic Missile - Dem/Val</i>				Project (Number/Name) 641020 / <i>ICBM Guidance Applications</i>			
B. Accomplishments/Planned Programs (\$ in Millions)						FY 2014	FY 2015	FY 2016 Base	FY 2016 OCO	FY 2016 Total	
Mature, analyze, and evaluate advanced strategic guidance technologies for potential use in the current or future ICBM systems, such as accelerometers and gyro technology. Advanced technologies will support GBSD risk reduction.											
FY 2016 OCO Plans: N/A											
Accomplishments/Planned Programs Subtotals						28.513	0.493	5.251	-	5.251	
C. Other Program Funding Summary (\$ in Millions)											
Line Item	FY 2014	FY 2015	FY 2016 Base	FY 2016 OCO	FY 2016 Total	FY 2017	FY 2018	FY 2019	FY 2020	Cost To Complete	Total Cost
• RDTE: BA04: PE 0605230F: <i>Ground Based Strategic Deterrent</i>	-	-	75.166	-	75.166	120.735	207.048	218.162	324.778	Continuing	Continuing
Remarks											
D. Acquisition Strategy											
Accomplish studies, analyses, concept development and engineering; efforts will be conducted using contracting strategies deemed most appropriate, generally using competitive contracts.											
E. Performance Metrics											
Please refer to the Performance Base Budget Overview Book for information on how Air Force resources are applied and how those resources are contributing to Air Force performance goals and most importantly, how they contribute to our mission.											

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2016 Air Force												Date: February 2015			
Appropriation/Budget Activity 3600 / 4						R-1 Program Element (Number/Name) PE 0603851F / Intercontinental Ballistic Missile - Dem/Val				Project (Number/Name) 641020 / ICBM Guidance Applications					
Product Development (\$ in Millions)				FY 2014		FY 2015		FY 2016 Base		FY 2016 OCO		FY 2016 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
Guidance Application Program Concept, Design and Architecture - Guidance (CDAG)	C/CPFF	Various* : Various**,	-	10.952	May 2014	-		-		-		-	Continuing	Continuing	10.952
Develop, analyze, evaluate, prototype and test instrument technologies	C/CPFF	Honeywell*** : Various****, NM	-	3.348	Apr 2014	-		-		-		-	Continuing	Continuing	31.017
Guidance Application Program Pre-acquisition Activities and studies	C/CPFF	Various : Various,	-	1.065	May 2014	-		-		-		-	Continuing	Continuing	1.065
Assess, evaluate and test radiation hard electronics	MIPR	Navy Crane : Crane, IN	-	0.265	Jun 2014	-		-		-		-	Continuing	Continuing	0.265
Sensor Technology - Evaluate, test (performance, environmental, thermal, radiation), maturity/ integration	C/CPFF	Draper Labs : Various*****,	-	-		0.482	Apr 2015	5.066	Apr 2016	-		5.066	Continuing	Continuing	26.000
Subtotal			-	15.630		0.482		5.066		-		5.066	-	-	69.299
Remarks															
* Boeing, Lockheed, and General Dynamics ** Boeing - Huntington Beach, CA; Lockheed - King of Prussia, PA; General Dynamics - Pittsfield, PA ***Category II MIPR to AFRL/RV ****Clearwater, FL; Redmond, WA; Phoenix, AZ *****Cambridge, MA and Washington D.C.															

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2016 Air Force												Date: February 2015			
Appropriation/Budget Activity 3600 / 4						R-1 Program Element (Number/Name) PE 0603851F / <i>Intercontinental Ballistic Missile - Dem/Val</i>						Project (Number/Name) 641020 / <i>ICBM Guidance Applications</i>			
Support (\$ in Millions)				FY 2014		FY 2015		FY 2016 Base		FY 2016 OCO		FY 2016 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
Guidance Application Program Engineering Support	C/Various	TASC : Roy, UT	-	1.131	Jul 2014	-		-		-		-	Continuing	Continuing	-
Guidance Application Program Technical Services	C/CPAF	BAE : Clearfield, UT	-	7.752	Jul 2014	-		-		-		-	Continuing	Continuing	-
Subtotal			-	8.883		-		-		-		-	-	-	-
Test and Evaluation (\$ in Millions)				FY 2014		FY 2015		FY 2016 Base		FY 2016 OCO		FY 2016 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
Guidance Application Program Inertial Test Capability	MIPR	Various : Various,	-	0.560	Jun 2014	-		-		-		-	Continuing	Continuing	-
Subtotal			-	0.560		-		-		-		-	-	-	-
Management Services (\$ in Millions)				FY 2014		FY 2015		FY 2016 Base		FY 2016 OCO		FY 2016 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
Guidance Application Program Program Management Administrative Support Services	C/Various	Various : Various,	-	0.698	Jun 2014	0.011	Feb 2015	0.185	Feb 2016	-		0.185	Continuing	Continuing	-
Aerospace FFRDC	SS/FFP	Aerospace Corp. : Los Angeles, CA	-	2.742	May 2014	-		-		-		-	Continuing	Continuing	-
Subtotal			-	3.440		0.011		0.185		-		0.185	-	-	-
Remarks Costs and services in support of program office management and administration processes such as: program oversight, resource justification, budget and programming, milestone and scheduling--PMA costs.															

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2016 Air Force											Date: February 2015						
Appropriation/Budget Activity 3600 / 4					R-1 Program Element (Number/Name) PE 0603851F / Intercontinental Ballistic Missile - Dem/Val					Project (Number/Name) 641020 / ICBM Guidance Applications							
					Prior Years	FY 2014		FY 2015		FY 2016 Base		FY 2016 OCO		FY 2016 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals					-	28.513		0.493		5.251		-		5.251	-	-	-

Remarks

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Exhibit R-4, RDT&E Schedule Profile: PB 2016 Air Force			Date: February 2015		
Appropriation/Budget Activity 3600 / 4		R-1 Program Element (Number/Name) PE 0603851F / <i>Intercontinental Ballistic Missile - Dem/Val</i>			Project (Number/Name) 641020 / <i>ICBM Guidance Applications</i>

	FY 2014				FY 2015				FY 2016				FY 2017				FY 2018				FY 2019				FY 2020			
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
Rad Hard Electronics																												
Electronics Hard Parts Library																												
Concept Design and Architecture																												
Strategic Fiber Optical Gyro Development																												
Guidance Studies and Maturation																												
Sensor Technology Report																												

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Exhibit R-4A, RDT&E Schedule Details: PB 2016 Air Force			Date: February 2015
Appropriation/Budget Activity 3600 / 4	R-1 Program Element (Number/Name) PE 0603851F / <i>Intercontinental Ballistic Missile - Dem/Val</i>	Project (Number/Name) 641020 / <i>ICBM Guidance Applications</i>	

Schedule Details

Events	Start		End	
	Quarter	Year	Quarter	Year
Rad Hard Electronics	2	2014	4	2014
Electronics Hard Parts Library	2	2014	2	2015
Concept Design and Architecture	3	2014	2	2016
Strategic Fiber Optical Gyro Development	3	2014	4	2016
Guidance Studies and Maturation	3	2015	4	2020
Sensor Technology Report	4	2015	4	2015

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Exhibit R-2A, RDT&E Project Justification: PB 2016 Air Force										Date: February 2015		
Appropriation/Budget Activity 3600 / 4					R-1 Program Element (Number/Name) PE 0603851F / Intercontinental Ballistic Missile - Dem/Val				Project (Number/Name) 641021 / ICBM Propulsion Applications			
COST (\$ in Millions)	Prior Years	FY 2014	FY 2015	FY 2016 Base	FY 2016 OCO	FY 2016 Total	FY 2017	FY 2018	FY 2019	FY 2020	Cost To Complete	Total Cost
641021: ICBM Propulsion Applications	-	34.810	16.072	6.910	-	6.910	15.118	10.901	11.885	6.962	Continuing	Continuing
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

A. Mission Description and Budget Item Justification

The Propulsion Applications Program (PAP) develops strategic propulsion capability through projects exploring improvements and/or alternatives to current propulsion systems, conducting studies assessing application of new technologies to meet future common propulsion systems requirements, assessing opportunities for applying common materials and technology between the ICBM, submarine-launched ballistic missile (SLBM) propulsion systems, and other rocket motor propulsion capabilities. Efforts are focused on current and future requirements and technologies, reduced life cycle costs, and increased nuclear surety and safety.

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

	FY 2014	FY 2015	FY 2016 Base	FY 2016 OCO	FY 2016 Total
Title: Propulsion Application Program	34.810	16.072	6.910	-	6.910
Description: - Assess, develop, evaluate, and demonstrate common solid and liquid propulsion technology and manufacturing leading up to a static fire and test of strategic propulsion systems. - Develop capability and explore improvements to current and future propulsion systems. - Support the research and development industrial base and critical infrastructure.					
FY 2014 Accomplishments: - Continued to support the Solid Rocket Motor research and development industrial base and critical infrastructure. - Conducted two successful Large Class Stage II Static Tests. - Continued assessment and demonstration of ordnance and post-boost technology development. - Continued Medium Class Stage III development. Continued to integrate and analyze medium class motors and technology insertion opportunities.					
FY 2015 Plans: - Continue to support the SRM research and development industrial base and critical infrastructure. - Continue assessment and demonstration of ordnance and post-boost technology development. - Continue propulsion system development and conduct MCS III static fire testing. - Continue to integrate and analyze medium class motors and technology insertion opportunities.					
FY 2016 Base Plans: - Continue to support the SRM research and development industrial base and critical infrastructure.					

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Exhibit R-2A, RDT&E Project Justification: PB 2016 Air Force										Date: February 2015	
Appropriation/Budget Activity 3600 / 4				R-1 Program Element (Number/Name) PE 0603851F / Intercontinental Ballistic Missile - Dem/Val				Project (Number/Name) 641021 / ICBM Propulsion Applications			
B. Accomplishments/Planned Programs (\$ in Millions)						FY 2014	FY 2015	FY 2016 Base	FY 2016 OCO	FY 2016 Total	
- Continue assessment and demonstration of propulsion systems to include ordnance, thrust vector control, and post-boost technology development.											
FY 2016 OCO Plans: N/A											
Accomplishments/Planned Programs Subtotals						34.810	16.072	6.910	-	6.910	
C. Other Program Funding Summary (\$ in Millions)											
Line Item	FY 2014	FY 2015	FY 2016 Base	FY 2016 OCO	FY 2016 Total	FY 2017	FY 2018	FY 2019	FY 2020	Cost To Complete	Total Cost
• RDTE: BA04: PE 065230F: Ground Based Strategic Deterrent	-	-	75.166	-	75.166	120.735	207.048	218.162	324.778	Continuing	Continuing
Remarks											
D. Acquisition Strategy											
Studies, analyses, limited engineering, hardware development and testing will be accomplished; efforts will be conducted using contracting strategies deemed most appropriate, generally using competitive contracts.											
E. Performance Metrics											
Please refer to the Performance Base Budget Overview Book for information on how Air Force resources are applied and how those resources are contributing to Air Force performance goals and most importantly, how they contribute to our mission.											

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2016 Air Force												Date: February 2015			
Appropriation/Budget Activity 3600 / 4						R-1 Program Element (Number/Name) PE 0603851F / Intercontinental Ballistic Missile - Dem/Val				Project (Number/Name) 641021 / ICBM Propulsion Applications					
Product Development (\$ in Millions)				FY 2014		FY 2015		FY 2016 Base		FY 2016 OCO		FY 2016 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
Propulsion Application Program Medium Class Stage 3	C/CPFF	ATK : Magna, UT	-	15.622	Oct 2013	-		-		-		-	Continuing	Continuing	49.419
Propulsion Application Program Medium Class Stage 3	C/CPFF	Aerojet : Sacramento, CA	-	8.500	Oct 2013	-		-		-		-	Continuing	Continuing	28.939
Propulsion Application Program PAP/AFRL Studies	C/Various	Various : Various,	-	1.000	Feb 2014	1.500	Apr 2015	-		-		-	Continuing	Continuing	-
Propulsion Application Program Ground Based Strategic Deterrence Propulsion Studies	C/FFP	TBD : TBD,	-	-		2.000	Mar 2015	-		-		-	Continuing	Continuing	-
Propulsion Application Program Thrust Vector Control Study - Contractor #1	C/CPFF	TBD : TBD,	-	1.957	Mar 2015	-		2.877	Feb 2016	-		2.877	Continuing	Continuing	-
Propulsion Application Program Thrust Vector Control Study - Contractor #2	C/CPFF	TBD : TBD,	-	1.956	Mar 2015	-		2.877	Feb 2016	-		2.877	Continuing	Continuing	-
Propulsion Application Program Post Boost Study	C/CPFF	TBD : TBD,	-	-		8.678	Mar 2015	-		-		-	Continuing	Continuing	-
Propulsion Application Program Advanced Ordnance & Stage Separation Studies	C/CPFF	TBD : TBD,	-	-		1.000	Apr 2015	-		-		-	Continuing	Continuing	-
Subtotal			-	29.035		13.178		5.754		-		5.754	-	-	-

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2016 Air Force												Date: February 2015			
Appropriation/Budget Activity 3600 / 4						R-1 Program Element (Number/Name) PE 0603851F / <i>Intercontinental Ballistic Missile - Dem/Val</i>				Project (Number/Name) 641021 / <i>ICBM Propulsion Applications</i>					

Support (\$ in Millions)				FY 2014		FY 2015		FY 2016 Base		FY 2016 OCO		FY 2016 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
Propulsion Application Program Integration Support	C/FFP	BAE Systems : Clearfield, UT	-	0.857	Aug 2014	0.656	Aug 2015	0.956	Aug 2016	-		0.956	Continuing	Continuing	-
Subtotal			-	0.857		0.656		0.956		-		0.956	-	-	-

Test and Evaluation (\$ in Millions)				FY 2014		FY 2015		FY 2016 Base		FY 2016 OCO		FY 2016 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
Subtotal			-	-		-		-		-		-	-	-	-

Management Services (\$ in Millions)				FY 2014		FY 2015		FY 2016 Base		FY 2016 OCO		FY 2016 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
Propulsion Application Program Management Administration	Various	Various : Various,	-	4.918	Jun 2014	2.238	Feb 2015	0.200	Feb 2016	-		0.200	Continuing	Continuing	-
Subtotal			-	4.918		2.238		0.200		-		0.200	-	-	-

Remarks Costs and services in support of program office management and administration processes such as: program oversight, resource justification, budget and programming, milestone and scheduling--PMA costs.															
			Prior Years	FY 2014		FY 2015		FY 2016 Base		FY 2016 OCO		FY 2016 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals			-	34.810		16.072		6.910		-		6.910	-	-	-
Remarks															

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Exhibit R-4, RDT&E Schedule Profile: PB 2016 Air Force			Date: February 2015		
Appropriation/Budget Activity 3600 / 4		R-1 Program Element (Number/Name) PE 0603851F / <i>Intercontinental Ballistic Missile - Dem/Val</i>			Project (Number/Name) 641021 / <i>ICBM Propulsion Applications</i>

	FY 2014				FY 2015				FY 2016				FY 2017				FY 2018				FY 2019				FY 2020			
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
LCS 2 Static Test 1																												
LCS 2 Static Test 2																												
Advanced Ordnance & Stage Separation Studies																												
Preliminary Concept Trade - Thrust Vector Control Study																												
MCS 3 Sea level Static Test																												
Preliminary Concept Trade - Post Boost Study																												
MCS 3 Altitude Static Test																												
Thrust Vector Control Prototype Test																												
Post Boost Optional Prototype Test																												

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Exhibit R-4A, RDT&E Schedule Details: PB 2016 Air Force			Date: February 2015
Appropriation/Budget Activity 3600 / 4	R-1 Program Element (Number/Name) PE 0603851F / <i>Intercontinental Ballistic Missile - Dem/Val</i>	Project (Number/Name) 641021 / <i>ICBM Propulsion Applications</i>	

Schedule Details

Events	Start		End	
	Quarter	Year	Quarter	Year
LCS 2 Static Test 1	2	2014	2	2014
LCS 2 Static Test 2	3	2014	3	2014
Advanced Ordnance & Stage Separation Studies	3	2015	1	2017
Preliminary Concept Trade - Thrust Vector Control Study	4	2015	4	2015
MCS 3 Sea level Static Test	4	2015	4	2015
Preliminary Concept Trade - Post Boost Study	1	2016	1	2016
MCS 3 Altitude Static Test	2	2016	2	2016
Thrust Vector Control Prototype Test	3	2017	3	2017
Post Boost Optional Prototype Test	4	2017	4	2017

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Exhibit R-2A, RDT&E Project Justification: PB 2016 Air Force										Date: February 2015		
Appropriation/Budget Activity 3600 / 4					R-1 Program Element (Number/Name) PE 0603851F / Intercontinental Ballistic Missile - Dem/Val				Project (Number/Name) 641022 / ICBM Reentry Vehicle Applications			
COST (\$ in Millions)	Prior Years	FY 2014	FY 2015	FY 2016 Base	FY 2016 OCO	FY 2016 Total	FY 2017	FY 2018	FY 2019	FY 2020	Cost To Complete	Total Cost
641022: ICBM Reentry Vehicle Applications	-	-	3.951	11.367	-	11.367	22.670	22.179	18.727	19.753	Continuing	Continuing
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		
A. Mission Description and Budget Item Justification												
The Reentry Vehicle Applications Program (RVAP) ensures the ICBM force is equipped with the safest, most reliable Reentry Systems, and explores options for common, multi-mission capabilities. The program enables a responsive engineering infrastructure to support Reentry Systems beyond their original design life by addressing system issues and ensuring the availability of long-lead components and materials while identifying life cycle cost reductions methods. In addition, the program develops and tests advanced Reentry System technologies to meet future requirements. The program leverages investments by the Science & Technology community and Navy reentry systems applications program. Testing may occur on a space available basis on AF and Navy Force Development Evaluation (FDE) flights.												
B. Accomplishments/Planned Programs (\$ in Millions)								FY 2014	FY 2015	FY 2016 Base	FY 2016 OCO	FY 2016 Total
Title: Reentry Vehicle Application Program								-	3.951	11.367	-	11.367
Description: Mature, evaluate, and test reentry system materials and technologies for use in current and future strategic applications.												
FY 2014 Accomplishments: N/A												
FY 2015 Plans: Assess, develop, and evaluate Penetration Aid Suites, Multiple Independently-Targeted RV (MIRV)/Shroud, Nosetip and Thermal Protection System (TPS) Material Development, RV types/range extension, antenna window, and conduct commonality testing with the Navy.												
FY 2016 Base Plans: Continue to mature and evaluate Penetration Aid Suites, Multiple Independently-Targeted RV (MIRV)/Shroud, Bulkhead Development, Nosetip and Thermal Protection System (TPS) Material Development, RV types/range extension, antenna window, and conduct commonality testing with the Navy.												
FY 2016 OCO Plans: N/A												
Accomplishments/Planned Programs Subtotals								-	3.951	11.367	-	11.367

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Exhibit R-2A, RDT&E Project Justification: PB 2016 Air Force		Date: February 2015
Appropriation/Budget Activity 3600 / 4	R-1 Program Element (Number/Name) PE 0603851F / <i>Intercontinental Ballistic Missile - Dem/Val</i>	Project (Number/Name) 641022 / <i>ICBM Reentry Vehicle Applications</i>
C. Other Program Funding Summary (\$ in Millions) N/A		
Remarks		
D. Acquisition Strategy Studies, analyses, limited engineering, and pre-prototype hardware development will be accomplished; efforts will be conducted using contracting strategies deemed most appropriate, generally using competitive contracts.		
E. Performance Metrics Please refer to the Performance Base Budget Overview Book for information on how Air Force resources are applied and how those resources are contributing to Air Force performance goals and most importantly, how they contribute to our mission.		

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2016 Air Force												Date: February 2015			
Appropriation/Budget Activity 3600 / 4						R-1 Program Element (Number/Name) PE 0603851F / Intercontinental Ballistic Missile - Dem/Val				Project (Number/Name) 641022 / ICBM Reentry Vehicle Applications					
Product Development (\$ in Millions)				FY 2014		FY 2015		FY 2016 Base		FY 2016 OCO		FY 2016 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
Reentry Vehicle Application Program Penetration Aid Suites	C/CPFF	TBD : TBD,	-	-		2.723	Mar 2015	5.262	Mar 2016	-		5.262	Continuing	Continuing	9.521
Reentry Vehicle Application Program Thermal Protection System (TPS) Materials	C/CPFF	TBD : TBD,	-	-		0.871	Mar 2015	2.253	Jan 2016	-		2.253	Continuing	Continuing	-
Reentry Vehicle Application Program Air Force/Navy Collaborative Flight Test Effort (CFTE)	C/CPFF	TBD* : TBD,	-	-		-		1.011	Jan 2016	-		1.011	Continuing	Continuing	-
Subtotal			-	-		3.594		8.526		-		8.526	-	-	-
Remarks															
*Category II MIPR being issued to Navy. Navy will award the contract.															
Support (\$ in Millions)				FY 2014		FY 2015		FY 2016 Base		FY 2016 OCO		FY 2016 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
Reentry Vehicle Application Program Support	C/FFP	BAE Systems : Clearfield, UT	-	-		0.210	Mar 2015	0.210	Mar 2016	-		0.210	Continuing	Continuing	-
Subtotal			-	-		0.210		0.210		-		0.210	-	-	-
Test and Evaluation (\$ in Millions)				FY 2014		FY 2015		FY 2016 Base		FY 2016 OCO		FY 2016 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
Reentry Vehicle Application Program TPS Materials	C/CPAF	Various : Various,	-	-		-		2.279	Mar 2016	-		2.279	Continuing	Continuing	-
Subtotal			-	-		-		2.279		-		2.279	-	-	-

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2016 Air Force												Date: February 2015			
Appropriation/Budget Activity 3600 / 4						R-1 Program Element (Number/Name) PE 0603851F / <i>Intercontinental Ballistic Missile - Dem/Val</i>				Project (Number/Name) 641022 / <i>ICBM Reentry Vehicle Applications</i>					

Management Services (\$ in Millions)				FY 2014		FY 2015		FY 2016 Base		FY 2016 OCO		FY 2016 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
Reentry Vehicle Application Program PMA- Government Costs	Various	Various : Various,	-	-		0.147	Mar 2015	0.352	Mar 2016	-		0.352	Continuing	Continuing	-
Subtotal			-	-		0.147		0.352		-		0.352	-	-	-

Remarks
 Costs and services in support of program office management and administration processes such as: program oversight, resource justification, budget and programming, milestone and scheduling--PMA costs.

	Prior Years	FY 2014	FY 2015	FY 2016 Base	FY 2016 OCO	FY 2016 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	-	-	3.951	11.367	-	11.367	-	-	-

Remarks

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Exhibit R-4, RDT&E Schedule Profile: PB 2016 Air Force			Date: February 2015
Appropriation/Budget Activity 3600 / 4	R-1 Program Element (Number/Name) PE 0603851F / <i>Intercontinental Ballistic Missile - Dem/Val</i>	Project (Number/Name) 641022 / <i>ICBM Reentry Vehicle Applications</i>	

	FY 2014				FY 2015				FY 2016				FY 2017				FY 2018				FY 2019				FY 2020			
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
Penetration Aid Design Study																												
Multiple Independently-Targeting Reentry Vehicles (MIRV)/Shroud																												
Bulkhead Development																												
Thermal Protection System (TPS) Materials																												
Air Force/Navy Collaborative Flight Test Effort (CFTE)																												

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Exhibit R-4A, RDT&E Schedule Details: PB 2016 Air Force			Date: February 2015
Appropriation/Budget Activity 3600 / 4	R-1 Program Element (Number/Name) PE 0603851F / <i>Intercontinental Ballistic Missile - Dem/Val</i>	Project (Number/Name) 641022 / <i>ICBM Reentry Vehicle Applications</i>	

Schedule Details

Events	Start		End	
	Quarter	Year	Quarter	Year
Penetration Aid Design Study	2	2015	4	2017
Multiple Independently-Targeting Reentry Vehicles (MIRV)/Shroud	1	2016	4	2017
Bulkhead Development	1	2016	1	2017
Thermal Protection System (TPS) Materials	1	2016	4	2017
Air Force/Navy Collaborative Flight Test Effort (CFTE)	1	2016	4	2019

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Exhibit R-2A, RDT&E Project Justification: PB 2016 Air Force										Date: February 2015		
Appropriation/Budget Activity 3600 / 4					R-1 Program Element (Number/Name) PE 0603851F / Intercontinental Ballistic Missile - Dem/Val				Project (Number/Name) 641024 / ICBM Command & Control (C2) Applications			
COST (\$ in Millions)	Prior Years	FY 2014	FY 2015	FY 2016 Base	FY 2016 OCO	FY 2016 Total	FY 2017	FY 2018	FY 2019	FY 2020	Cost To Complete	Total Cost
641024: ICBM Command & Control (C2) Applications	-	-	2.469	14.764	-	14.764	24.273	22.884	21.900	21.934	Continuing	Continuing
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		
A. Mission Description and Budget Item Justification												
The Command and Control Applications Program (C2AP) supports ICBM weapon system connectivity to the President and National Command Authorities. C2AP evaluates and develops assured, survivable, and secure communications and battlespace awareness between the missile Launch Control Centers (LCCs) and Launch Facilities (LFs) essential for mission execution. Efforts include identifying and developing current and future technologies, as well as concepts that exploit state-of-the-art communications and information transfer techniques to both current and future ICBM systems. Products include studies, demonstrations and tests such as ICBM weapon system C2 (WSC2) architectures, networks, and systems to meet nuclear command and control requirements.												
B. Accomplishments/Planned Programs (\$ in Millions)								FY 2014	FY 2015	FY 2016 Base	FY 2016 OCO	FY 2016 Total
Title: Command and Control Application Program Description: Examine and develop concepts for transforming ICBM Weapon System Command and Control to meet current and future requirements. FY 2014 Accomplishments: N/A FY 2015 Plans: - Initiating studies to identify, assess, and preserve unique strategic command and control skills and technologies to meet current and future requirements. - Beginning development of a WSC2 laboratory to facilitate development and testing of future WSC2 architectures. FY 2016 Base Plans: - Continue studies to identify, assess, and preserve unique strategic command and control skills and technologies to meet current and future requirements. - Continue development of WSC2 laboratory to facilitate development and testing of future WSC2 architectures. FY 2016 OCO Plans: N/A								-	2.469	14.764	-	14.764
Accomplishments/Planned Programs Subtotals								-	2.469	14.764	-	14.764

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Exhibit R-2A, RDT&E Project Justification: PB 2016 Air Force		Date: February 2015
Appropriation/Budget Activity 3600 / 4	R-1 Program Element (Number/Name) PE 0603851F / <i>Intercontinental Ballistic Missile - Dem/Val</i>	Project (Number/Name) 641024 / <i>ICBM Command & Control (C2) Applications</i>
C. Other Program Funding Summary (\$ in Millions) N/A		
Remarks		
D. Acquisition Strategy Studies and analyses, and limited engineering and pre-prototype hardware development will be accomplished; efforts will be conducted using contracting strategies deemed most appropriate.		
E. Performance Metrics Please refer to the Performance Base Budget Overview Book for information on how Air Force resources are applied and how those resources are contributing to Air Force performance goals and most importantly, how they contribute to our mission.		

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2016 Air Force												Date: February 2015			
Appropriation/Budget Activity 3600 / 4						R-1 Program Element (Number/Name) PE 0603851F / Intercontinental Ballistic Missile - Dem/Val				Project (Number/Name) 641024 / ICBM Command & Control (C2) Applications					
Product Development (\$ in Millions)				FY 2014		FY 2015		FY 2016 Base		FY 2016 OCO		FY 2016 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
Command and Control Applications Program Studies*	C/CPFF	TBD : TBD,	-	-		1.973	Mar 2015	10.259	Jan 2016	-		10.259	Continuing	Continuing	-
Command and Control Applications Program Weapon System Command & Control Laboratory	SS/FFP	Aerospace Corporation : Los Angeles, CA	-	-		-		2.763	Jan 2016	-		2.763	Continuing	Continuing	6.855
Subtotal			-	-		1.973		13.022		-		13.022	-	-	-
Remarks															
*Characterize current WSC2 architecture and capabilities as well as identify and assess WSC2 state-of-the-art options and trade-offs.															
Support (\$ in Millions)				FY 2014		FY 2015		FY 2016 Base		FY 2016 OCO		FY 2016 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
Command and Control Applications Technical Services	C/FFP	BAE Systems : Clearfield, UT	-	-		0.210	Mar 2015	0.210	Feb 2016	-		0.210	Continuing	Continuing	-
Subtotal			-	-		0.210		0.210		-		0.210	-	-	-
Remarks															
Support: Integrated Logistics Support, training development, configuration manamgement support, etc--excluding PMA.															
Test and Evaluation (\$ in Millions)				FY 2014		FY 2015		FY 2016 Base		FY 2016 OCO		FY 2016 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
Subtotal			-	-		-		-		-		-	-	-	-

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2016 Air Force												Date: February 2015			
Appropriation/Budget Activity 3600 / 4						R-1 Program Element (Number/Name) PE 0603851F / <i>Intercontinental Ballistic Missile - Dem/Val</i>				Project (Number/Name) 641024 / <i>ICBM Command & Control (C2) Applications</i>					

Management Services (\$ in Millions)				FY 2014		FY 2015		FY 2016 Base		FY 2016 OCO		FY 2016 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
Command and Control Applications PMA	C/FFP	Various : Various,	-	-		0.094	Mar 2015	0.252	Feb 2016	-		0.252	Continuing	Continuing	-
Aerospace FFRDC	SS/FFP	Aerospace Corp : Los Angeles, CA	-	-		0.192	Mar 2015	1.280	Mar 2016	-		1.280	Continuing	Continuing	-
Subtotal			-	-		0.286		1.532		-		1.532	-	-	-

Remarks
 Costs and services in support of program office management and administration processes such as: program oversight, resource justification, budget and programming, milestones and scheduling--PMA costs.

	Prior Years	FY 2014	FY 2015	FY 2016 Base	FY 2016 OCO	FY 2016 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	-	-	2.469	14.764	-	14.764	-	-	-

Remarks

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Exhibit R-4, RDT&E Schedule Profile: PB 2016 Air Force																Date: February 2015											
Appropriation/Budget Activity 3600 / 4										R-1 Program Element (Number/Name) PE 0603851F / Intercontinental Ballistic Missile - Dem/Val										Project (Number/Name) 641024 / ICBM Command & Control (C2) Applications							

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Exhibit R-4A, RDT&E Schedule Details: PB 2016 Air Force			Date: February 2015
Appropriation/Budget Activity 3600 / 4	R-1 Program Element (Number/Name) PE 0603851F / <i>Intercontinental Ballistic Missile - Dem/Val</i>	Project (Number/Name) 641024 / <i>ICBM Command & Control (C2) Applications</i>	

Schedule Details

Events	Start		End	
	Quarter	Year	Quarter	Year
Command and Control Applications Program Studies & Characterization	2	2015	4	2020
Command and Control Applications Study Report	4	2015	4	2015
Command and Control Applications Program Weapon System Command & Control Laboratory	2	2016	4	2017

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Exhibit R-2A, RDT&E Project Justification: PB 2016 Air Force										Date: February 2015		
Appropriation/Budget Activity 3600 / 4					R-1 Program Element (Number/Name) PE 0603851F / Intercontinental Ballistic Missile - Dem/Val				Project (Number/Name) 641025 / Ground Based Strategic Deterrence (GBSD)			
COST (\$ in Millions)	Prior Years	FY 2014	FY 2015	FY 2016 Base	FY 2016 OCO	FY 2016 Total	FY 2017	FY 2018	FY 2019	FY 2020	Cost To Complete	Total Cost
641025: Ground Based Strategic Deterrence (GBSD)	-	9.373	6.913	-	-	-	-	-	-	-	Continuing	Continuing
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		
A. Mission Description and Budget Item Justification												
The Ground Based Strategic Deterrence (GBSD) identifies viable concepts and materiel solutions in support of the Air Force's strategic deterrence and global strike capabilities. Funding supports pre-Milestone A activities, to include an Analysis of Alternatives (AoA) and associated concept refinement activities of potential materiel solutions. This effort will explore materiel technology alternatives at the system and sub-system levels and during the Materiel Solution Analysis (MSA) Phase leading to a Milestone-A decision.												
B. Accomplishments/Planned Programs (\$ in Millions)								FY 2014	FY 2015	FY 2016 Base	FY 2016 OCO	FY 2016 Total
Title: Ground Based Strategic Deterrent								9.373	6.913	-	-	-
Description: Perform Pre-Milestone A activities to identify potential materiel solutions for a future GBSD.												
FY 2014 Accomplishments: - Completed GBSD AoA. - Continued concept refinement, technology analyses, modeling and simulation support, engineering studies, program cost and schedule estimation, acquisition strategy development, risk reduction efforts, initial requirements definition, and Milestone A preparation.												
FY 2015 Plans: - Continue concept refinement, technology analyses, modeling and simulation support, engineering studies, program cost, schedule estimation, acquisition strategy development, risk reduction efforts, and initial requirements definition. - Complete Milestone A preparation to include development of Milestone A exit/Technology Development phase entrance documentation.												
FY 2016 Base Plans: Reflected in PE 0605230F, Ground Based Strategic Deterrent, Project 641025.												
FY 2016 OCO Plans: N/A												
Accomplishments/Planned Programs Subtotals								9.373	6.913	-	-	-

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Exhibit R-2A, RDT&E Project Justification: PB 2016 Air Force		Date: February 2015
Appropriation/Budget Activity 3600 / 4	R-1 Program Element (Number/Name) PE 0603851F / <i>Intercontinental Ballistic Missile - Dem/Val</i>	Project (Number/Name) 641025 / <i>Ground Based Strategic Deterrence (GBSD)</i>
C. Other Program Funding Summary (\$ in Millions) N/A		
Remarks		
D. Acquisition Strategy Multiple contracts may be awarded to refine materiel solution concepts. A technology development strategy will be developed during the MSA phase.		
E. Performance Metrics Please refer to the Performance Base Budget Overview Book for information on how Air Force resources are applied and how those resources are contributing to Air Force performance goals and most importantly, how they contribute to our mission.		

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2016 Air Force												Date: February 2015			
Appropriation/Budget Activity 3600 / 4						R-1 Program Element (Number/Name) PE 0603851F / <i>Intercontinental Ballistic Missile - Dem/Val</i>						Project (Number/Name) 641025 / <i>Ground Based Strategic Deterrence (GBSD)</i>			
Product Development (\$ in Millions)				FY 2014		FY 2015		FY 2016 Base		FY 2016 OCO		FY 2016 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
Ground Based Strategic Deterrent Pre-MS A activities	C/FFP	AFNWC : Albuquerque, NM	-	0.303	Jun 2014	-		-		-		-	Continuing	Continuing	0.303
Ground Based Strategic Deterrent SURVIAC Studies	C/FFP	Booz Allen Hamilton : Colorado Springs, CO	-	1.431	Aug 2014	-		-		-		-	Continuing	Continuing	1.431
Subtotal			-	1.734		-		-		-		-	-	-	1.734
Support (\$ in Millions)				FY 2014		FY 2015		FY 2016 Base		FY 2016 OCO		FY 2016 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
Ground Based Strategic Deterrent Integration Support	C/FFP	BAE Systems : Clearfield, UT	-	5.309	Sep 2014	4.692	Apr 2015	-		-		-	Continuing	Continuing	-
Subtotal			-	5.309		4.692		-		-		-	-	-	-
Remarks FY15 award dates. \$1.8M award date: 2015-03; \$2.8M award date: 2015-04															
Test and Evaluation (\$ in Millions)				FY 2014		FY 2015		FY 2016 Base		FY 2016 OCO		FY 2016 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
Subtotal			-	-		-		-		-		-	-	-	-
Management Services (\$ in Millions)				FY 2014		FY 2015		FY 2016 Base		FY 2016 OCO		FY 2016 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
Ground Based Strategic Deterrence	C/FFP	Various : Various,	-	0.648	Nov 2014	0.302	May 2015	-		-		-	Continuing	Continuing	-

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2016 Air Force												Date: February 2015			
Appropriation/Budget Activity 3600 / 4						R-1 Program Element (Number/Name) PE 0603851F / <i>Intercontinental Ballistic Missile - Dem/Val</i>				Project (Number/Name) 641025 / <i>Ground Based Strategic Deterrence (GBSD)</i>					

Management Services (\$ in Millions)				FY 2014		FY 2015		FY 2016 Base		FY 2016 OCO		FY 2016 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
Program Management Administration															
Aerospace FFRDC	SS/FFP	Aerospace Corp : Los Angeles, CA	-	1.682	Feb 2014	1.919	Mar 2015	-		-		-	Continuing	Continuing	-
Subtotal			-	2.330		2.221		-		-		-	-	-	-

Remarks
 Costs and services in support of program office management and administration processes such as: program oversight, resource justification, budget and programming, milestone and scheduling--PMA costs.

	Prior Years	FY 2014	FY 2015	FY 2016 Base	FY 2016 OCO	FY 2016 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	-	9.373	6.913	-	-	-	-	-	-

Remarks

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Exhibit R-4, RDT&E Schedule Profile: PB 2016 Air Force			Date: February 2015
Appropriation/Budget Activity 3600 / 4	R-1 Program Element (Number/Name) PE 0603851F / Intercontinental Ballistic Missile - Dem/Val	Project (Number/Name) 641025 / Ground Based Strategic Deterrence (GBSD)	

	FY 2014				FY 2015				FY 2016				FY 2017				FY 2018				FY 2019				FY 2020			
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
GBSD Analysis of Alternative																												
GBSD SURVIAC Studies																												
GBSD Integration Support																												

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Exhibit R-4A, RDT&E Schedule Details: PB 2016 Air Force			Date: February 2015
Appropriation/Budget Activity 3600 / 4	R-1 Program Element (Number/Name) PE 0603851F / <i>Intercontinental Ballistic Missile - Dem/Val</i>	Project (Number/Name) 641025 / <i>Ground Based Strategic Deterrence (GBSD)</i>	

Schedule Details

Events	Start		End	
	Quarter	Year	Quarter	Year
GBSD Analysis of Alternative	1	2014	4	2014
GBSD SURVIAC Studies	1	2014	3	2015
GBSD Integration Support	4	2014	4	2015

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Exhibit R-2A, RDT&E Project Justification: PB 2016 Air Force										Date: February 2015		
Appropriation/Budget Activity 3600 / 4					R-1 Program Element (Number/Name) PE 0603851F / Intercontinental Ballistic Missile - Dem/Val				Project (Number/Name) 644209 / Long Range Planning (LRP)			
COST (\$ in Millions)	Prior Years	FY 2014	FY 2015	FY 2016 Base	FY 2016 OCO	FY 2016 Total	FY 2017	FY 2018	FY 2019	FY 2020	Cost To Complete	Total Cost
644209: Long Range Planning (LRP)	-	-	0.987	1.473	-	1.473	2.961	2.472	2.961	3.988	Continuing	Continuing
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		
A. Mission Description and Budget Item Justification												
Long Range Planning (LRP) effort identifies and analyzes potential modifications to current and future Intercontinental Ballistic Missile (ICBM) Weapon Systems required to meet objectives relative to long-term sustainment, technology insertion, battlespace awareness, employment, force structure and future systems. The studies will focus on system supportability, operability, reliability, innovation and maintainability. Options/concepts generated by these studies are evaluated for feasibility, system impacts, and cost. The LRP also lays the groundwork for analysis supporting future weapon systems development and deployment. Pre-milestone activities may be conducted for current or future ICBM weapon systems to include entry criteria for milestone activities.												
B. Accomplishments/Planned Programs (\$ in Millions)								FY 2014	FY 2015	FY 2016 Base	FY 2016 OCO	FY 2016 Total
Title: Long Range Planning								-	0.987	1.473	-	1.473
Description: Analyze, study and plan current and future ICBM activities to meet requirements for long-term sustainment, technology insertion, employment force structure and future systems.												
FY 2014 Accomplishments: N/A												
FY 2015 Plans: - Initiate feasibility and life extension studies. - Conduct early phase acquisition activities that are focused on the current ICBM system and development of any future ground based system.												
FY 2016 Base Plans: - Continue feasibility and life extension studies. - Conduct early phase acquisition activities that are focused on the current and future ICBM capability.												
FY 2016 OCO Plans: N/A												
Accomplishments/Planned Programs Subtotals								-	0.987	1.473	-	1.473

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Exhibit R-2A, RDT&E Project Justification: PB 2016 Air Force		Date: February 2015
Appropriation/Budget Activity 3600 / 4	R-1 Program Element (Number/Name) PE 0603851F / <i>Intercontinental Ballistic Missile - Dem/Val</i>	Project (Number/Name) 644209 / <i>Long Range Planning (LRP)</i>
C. Other Program Funding Summary (\$ in Millions) N/A		
Remarks		
D. Acquisition Strategy Studies and analyses will be accomplished; efforts will be conducted using contracting strategies deemed most appropriate, generally using competitive contracts.		
E. Performance Metrics Please refer to the Performance Base Budget Overview Book for information on how Air Force resources are applied and how those resources are contributing to Air Force performance goals and most importantly, how they contribute to our mission.		

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2016 Air Force												Date: February 2015			
Appropriation/Budget Activity 3600 / 4						R-1 Program Element (Number/Name) PE 0603851F / <i>Intercontinental Ballistic Missile - Dem/Val</i>				Project (Number/Name) 644209 / <i>Long Range Planning (LRP)</i>					
Product Development (\$ in Millions)				FY 2014		FY 2015		FY 2016 Base		FY 2016 OCO		FY 2016 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
Long Range Planning Studies	C/FFP	BAE Systems : Clearfield, UT	-	-		0.715	Apr 2015	-		-		-	Continuing	Continuing	-
Launch Facility Restoration and Assessment/Physical Security	C/TBD	TBD : TBD,	-	-		-		1.201	Oct 2015	-		1.201	Continuing	Continuing	-
Subtotal			-	-		0.715		1.201		-		1.201	-	-	-
Support (\$ in Millions)				FY 2014		FY 2015		FY 2016 Base		FY 2016 OCO		FY 2016 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
Long Range Planning Integration Support	C/FFP	BAE Systems : Clearfield, UT	-	-		0.210	Mar 2015	0.210	Jan 2016	-		0.210	Continuing	Continuing	-
Subtotal			-	-		0.210		0.210		-		0.210	-	-	-
Test and Evaluation (\$ in Millions)				FY 2014		FY 2015		FY 2016 Base		FY 2016 OCO		FY 2016 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
Subtotal			-	-		-		-		-		-	-	-	-
Management Services (\$ in Millions)				FY 2014		FY 2015		FY 2016 Base		FY 2016 OCO		FY 2016 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
Long Range Planning PMA	Various	Various : Various,	-	-		0.062	Apr 2015	0.062	Apr 2016	-		0.062	Continuing	Continuing	-
Subtotal			-	-		0.062		0.062		-		0.062	-	-	-
Remarks Costs and Services in support of program office management and administration processes such as: program oversight, resource justification, budget and programming, milestone and schedule tracking --PMA costs.															

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2016 Air Force										Date: February 2015			
Appropriation/Budget Activity 3600 / 4					R-1 Program Element (Number/Name) PE 0603851F / <i>Intercontinental Ballistic Missile - Dem/Val</i>					Project (Number/Name) 644209 / <i>Long Range Planning (LRP)</i>			
	Prior Years	FY 2014		FY 2015		FY 2016 Base		FY 2016 OCO		FY 2016 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	-	-		0.987		1.473		-		1.473	-	-	-
Remarks													

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Exhibit R-4, RDT&E Schedule Profile: PB 2016 Air Force										Date: February 2015			
Appropriation/Budget Activity 3600 / 4					R-1 Program Element (Number/Name) PE 0603851F / <i>Intercontinental Ballistic Missile - Dem/Val</i>					Project (Number/Name) 644209 / <i>Long Range Planning (LRP)</i>			

	FY 2014				FY 2015				FY 2016				FY 2017				FY 2018				FY 2019				FY 2020			
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
Industrial Base Assessment																												
Launch Facility Restoration and Assessment																												
Physical Security																												

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Exhibit R-4A, RDT&E Schedule Details: PB 2016 Air Force			Date: February 2015
Appropriation/Budget Activity 3600 / 4	R-1 Program Element (Number/Name) PE 0603851F / <i>Intercontinental Ballistic Missile - Dem/Val</i>	Project (Number/Name) 644209 / <i>Long Range Planning (LRP)</i>	

Schedule Details

Events	Start		End	
	Quarter	Year	Quarter	Year
Industrial Base Assessment	3	2015	4	2015
Launch Facility Restoration and Assessment	1	2016	4	2017
Physical Security	3	2016	4	2018