Exhibit R-2, RDT&E Budget Item Justification: PB 2012 Office of Secretary Of Defense										DATE: February 2011	
APPROPRIATION/BUDGET ACTIVITY 0400: *Research, Development, Test & Evaluation, Defense-Wide* BA 5: *Development & Demonstration (SDD)*				R-1 ITEM NOMENCLATURE PE 0604165D8Z: *Prompt Global Strike Capability Development*							
COST ($ in Millions)	**FY 2010**	**FY 2011**	**FY 2012 Base**	**FY 2012 OCO**	**FY 2012 Total**	**FY 2013**	**FY 2014**	**FY 2015**	**FY 2016**	**Cost To Complete**	**Total Cost**
Total Program Element	159.416	239.861	204.824	-	204.824	236.750	325.784	510.680	535.027	Continuing	Continuing
P165: *Prompt Global Strike*	159.416	239.861	204.824	-	204.824	236.750	325.784	510.680	535.027	Continuing	Continuing

A. Mission Description and Budget Item Justification

This Program Element (PE) was established in response to guidance associated with the Fiscal Year (FY) 2008 President's Budget, which called for the consolidation and reduction of funding for Conventional Prompt Global Strike (CPGS) efforts for the Navy (Conventional Trident Modification) and Air Force (Common Aero Vehicle) programs. Resources in this PE support the continued development of technologies to continue to enable technology transitions to close the conventional prompt global strike warfighting capability gap. The program uses a national team approach to ensure coordination between the Services, Agencies and National Research Laboratories and places emphasis on the pursuit of integrated portfolio objectives for a national CPGS system. This program funds the design, development and acquisition of guidance systems, boosters, mission planning capabilities, mission enabling capabilities, reentry systems, and payload delivery vehicles (PDVs). It procures modeling and simulation activities, command and control capabilities, test range support, as well as launch system infrastructure. Additionally, funding may be applied towards efforts such as strategic policy compliance and advanced non-nuclear warheads. The emphasis on demonstrating component and subsystem maturity on order to ultimately offer solutions for an existing warfighting capability gap dictates the need for risk reduction initiatives. With the Air Force Conventional Strike Missile (CSM) serving as the lead design to demonstrate a possible materiel solution for the CPGS warfighting capability gap, the Army Hypersonic Glide Body (HGB) design provides an alternative risk reduction path within the Air Force CSM concept. In FY 2011, funding for each of the individual service initiatives will be contingent upon their abilities to execute and achieve satisfactory progress towards project goals as determined by the CPGS portfolio manager.

Exhibit R-2, RDT&E Budget Item Justification: PB 2012 Office of Secretary Of Defense	DATE: February 2011
APPROPRIATION/BUDGET ACTIVITY 0400: *Research, Development, Test & Evaluation, Defense-Wide* BA 5: *Development & Demonstration (SDD)*	**R-1 ITEM NOMENCLATURE** PE 0604165D8Z: *Prompt Global Strike Capability Development*

B. Program Change Summary ($ in Millions)	FY 2010	FY 2011	FY 2012 Base	FY 2012 OCO	FY 2012 Total
Previous President's Budget	165.563	239.861	233.239	-	233.239
Current President's Budget	159.416	239.861	204.824	-	204.824
Total Adjustments	-6.147	-	-28.415	-	-28.415
• Congressional General Reductions		-			
• Congressional Directed Reductions		-			
• Congressional Rescissions	-	-			
• Congressional Adds		-			
• Congressional Directed Transfers		-			
• Reprogrammings	-	-			
• SBIR/STTR Transfer	-5.001	-			
• Defense Efficiency - Baseline Budget Review	-1.146	-	-4.600	-	-4.600
• Defense Efficiency - Report, Studies, Boards, and Commissions	-	-	-22.561	-	-22.561
• Defense Efficiency - Contractor Staff Support	-	-	-0.936	-	-0.936
• Economic Assumptions	-	-	-0.318	-	-0.318

Change Summary Explanation

Defense Efficiency – Baseline Review. As part of the Department of Defense reform agenda, implements a zero-based review of the organization to align resources to the most critical priorities and eliminate lower priority functions.

Defense Efficiency – Report, Studies, Boards and Commissions. As part of the Department of Defense reform agenda, reflects a reduction in the number and cost of reports, studies, DoD Boards and DoD Commissions below the aggregate level reported in previous budget submission.

Defense Efficiency – Contractor Staff Support. As part of the Department of Defense reform agenda, reduces funds below the aggregate level reported in the previous budget submission for contracts that augment staff functions.

Exhibit R-2A, RDT&E Project Justification: PB 2012 Office of Secretary Of Defense			DATE: February 2011
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COST ($ in Millions)	FY 2010	FY 2011	FY 2012 Base	FY 2012 OCO	FY 2012 Total	FY 2013	FY 2014	FY 2015	FY 2016	Cost To Complete	Total Cost
P165: *Prompt Global Strike*	159.416	239.861	204.824	-	204.824	236.750	325.784	510.680	535.027	Continuing	Continuing
Quantity of RDT&E Articles											

A. Mission Description and Budget Item Justification

This Program Element (PE) was established in response to guidance associated with the Fiscal Year (FY) 2008 President's Budget, which called for the consolidation and reduction of funding for Conventional Prompt Global Strike (CPGS) efforts for the Navy (Conventional Trident Modification) and Air Force (Common Aero Vehicle) programs. Resources in this PE support the continued development of technologies and enable technology transitions to close the conventional prompt global strike warfighting capability gap. The program uses a national team approach to ensure coordination between the Services, Agencies and National Research Laboratories and places emphasis on the pursuit of integrated portfolio objectives for a national CPGS system. This program funds the design, development and acquisition of guidance systems, boosters, mission planning capabilities, mission enabling capabilities, reentry systems, and payload delivery vehicles (PDVs). It procures modeling and simulation activities, command and control capabilities, test range support, as well as launch system infrastructure. Additionally, funding may be applied towards efforts such as strategic policy compliance and advanced non-nuclear warheads. The emphasis on demonstrating component and subsystem maturity in order to ultimately offer solutions for an existing warfighting capability gap dictates the need for risk reduction initiatives. With the Air Force Conventional Strike Missile (CSM) serving as the lead design to demonstrate a possible materiel solution for the CPGS warfighting capability gap, the Army Hypersonic Glide Body (HGB) design provides an alternative risk reduction path within the Air Force CSM concept. In FY 2011, funding for each of the individual service initiatives will be contingent upon their abilities to execute and achieve satisfactory progress towards project goals as determined by the CPGS portfolio manager.

B. Accomplishments/Planned Programs ($ in Millions)	FY 2010	FY 2011	FY 2012
Title: Hypersonic Glide Experiments and Concept Demonstration Development/Support	84.385	147.035	204.824
Description: This sub-project describes efforts to develop technologies and assess capabilities that could potentially enable transformational changes in the arena of global, time critical strike. The objectives of this sub-project are to: - Assess vehicle technologies - Exercise the ability to use a high-payload capacity system, which may demonstrate responsive, global reach against high value targets - Assess the feasibility of producing an affordable solution to fill the CPGS capability gap It will mature technologies that could lead to a system capable of global reach from Continental United States (CONUS) with the following characteristics: effects on targets in a very short-period of time from execution order; non-ballistic flight over the majority of the flight path; positive control from launch to impact; adequate cross-range/ maneuverability to avoid overflight issues; controlled stage drop over Broad Ocean area(BOA), and provides for in-flight target updates. The technologies developed will			

Exhibit R-2A, RDT&E Project Justification: PB 2012 Office of Secretary Of Defense		DATE: February 2011
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B. Accomplishments/Planned Programs ($ in Millions)	FY 2010	FY 2011	FY 2012
have cross-service and cross-concept applicability and will be developed through close coordination among DoD components. Specific initiatives within this sub-project include: - Continue systems engineering/development and assembly, integration and test (AI&T) of one weaponized payload delivery vehicle (PDV) - Continue flight test planning and support - Integrated PDV vehicle with Minotaur IV Lite launch vehicle and conduct one operationally relevant land impact flight test demonstration - Perform analysis of the military utility of vehicle performance with respect to thermal protection materials, aerodynamics and control surfaces, navigation, guidance, control, and weapons performance - Integrate HTV-2 vehicles with Minotaur IV Lite Launch Vehicles and conduct two BOA impact flight test demonstrations ***FY 2010 Accomplishments:*** FY2010-2011 activities : conducted the HTV-2 flight experiments; finalized design concept for the CSM Payload Delivery Vehicle to include thermal protection materials, guidance systems, mission planning, and command and control; completed qualification of a Minotaur launch vehicle for a CPGS mission analysis of launch system infrastructure requirements utilizing other ballistic missile propulsion programs, and matured/demonstrated technologies associated the high speed demonstration of conventional munitions. The available resources for this sub-project were utilized to procure the PDV, warhead and booster to support the planned CSM weaponized flight test. ***FY 2011 Plans:*** DELETE: FY2011-2012 activities will: conduct the HTV-2 flight experiments; finalize design concept for the CSM Payload Delivery Vehicle to include thermal protection materials, guidance systems, mission planning, and command and control; complete qualification of a Minotaur launch vehicle for a CPGS mission analysis of launch system infrastructure requirements utilizing other ballistic missile propulsion programs, and mature/demonstrate technologies associated the high speed demonstration of conventional munitions. The available resources for this sub-project will be utilized to procure the PDV, warhead and booster to support the planned CSM weaponized flight test. ***FY 2012 Plans:*** Will accomplish the HTV-2 Critical Design Review (CDR); and the Technical Readiness Review for the CSM Payload Delivery Vehicle; and deliver the KEP warhead. The flight experiment and delta PDR will include thermal protection materials, guidance systems, mission planning, and command and control; complete qualification of a Minotaur launch vehicle for a CPGS mission analysis of launch system infrastructure requirements utilizing other ballistic missile propulsion programs, and mature/demonstrate			

Exhibit R-2A, RDT&E Project Justification: PB 2012 Office of Secretary Of Defense		DATE: February 2011
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B. Accomplishments/Planned Programs ($ in Millions)	FY 2010	FY 2011	FY 2012
technologies associated the high speed demonstration of conventional munitions. The available resources for this sub-project will be utilized to procure the PDV, warhead and booster to support the planned CSM weaponized flight test.			
Title: Alternative Re-Entry System/Warhead Engineering and Delivery Vehicle Options/Development	46.644	62.017	-
Description: This sub-project will test and evaluate alternative re-entry systems and delivery vehicle options to include Hypersonic Glide Body (HGB) and will assess the feasibility of producing an affordable alternate solution to fill the CPGS capability gap. It will mature technologies that could lead to a system capable of global reach from Continental United States (CONUS) with the following characteristics: effects on targets in a very short-period of time from execution order; non-ballistic flight over the majority of the flight path; positive control from launch to impact; adequate cross-range/maneuverability to avoid overflight issues; and controlled stage drop over BOA. The technologies developed will have cross-service and cross-concept applicability and will be developed through close coordination among DoD components. ***FY 2010 Accomplishments:*** The focus of this sub-project in FY2010-2011 was on the advanced hypersonic weapon effort. This effort researched hypersonic aerodynamics and control systems to enable a wide variety of future capabilities not currently available for rapid global response. The AHW, as a risk mitigation effort in support of the Air Force CPGS project, developed and demonstrated the capability of an HGB based Alternative Payload Delivery Vehicle (APDV) through a two-flight test schedule. The objectives of this subproject were: - Demonstrated the maturity of technologies related to thermal management, precise navigation and control, and in-flight communications with a hypersonic object. - Demonstrated the successful delivery of an operationally useful payload weight at operational/intercontinental distances. - Documented the applicability of the proven AHW technologies to a family of CPGS concepts and implementations. - Documented the design of the AHW HGB to support future acquisition activities as required. - Executed the initial integration and flight demonstration phase (Flight 1A) of the AHW including fabrication, assembly and integration of a single AHW flight vehicle in preparation for a flight test in FY11. The AHW HGB vehicle launched from the Pacific Missile Range Facility utilizing a Strategic Targets System (STARS) booster stack, separate from the launch vehicle, and fly a hypersonic glide trajectory to impact on the Reagan Test Site at Kwajalein Atoll, demonstrating flight systems integration, gathering thermal protection system performance data to assist in anchoring analytical models, and demonstrating advanced aerodynamic control features. ***FY 2011 Plans:*** The current focus of this sub-project in FY2011-2012 is on the advanced hypersonic weapon effort. This effort researches hypersonic aerodynamics and control systems to enable a wide variety of future capabilities not currently available for rapid			

Exhibit R-2A, RDT&E Project Justification: PB 2012 Office of Secretary Of Defense		DATE: February 2011
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B. Accomplishments/Planned Programs ($ in Millions)	FY 2010	FY 2011	FY 2012
global response. The AHW, as a risk mitigation effort in support of the Air Force CPGS project, develops and demonstrates the capability of an HGB based Alternative Payload Delivery Vehicle (APDV) through a two-flight test schedule (Reduced to one flight test). The objectives of this subproject are: - Demonstrate the maturity of technologies related to thermal management, precise navigation and control, and in-flight communications with a hypersonic object. - Demonstrate the successful delivery of an operationally useful payload weight at operational/intercontinental distances. - Document the applicability of the proven AHW technologies to a family of CPGS concepts and implementations. - Document the design of the AHW HGB to support future acquisition activities as required. - Execute the initial integration and flight demonstration phase (Flight 1A) of the AHW including fabrication, assembly and integration of a single AHW flight vehicle in preparation for a flight test in FY11. The AHW HGB vehicle will be launched from the Pacific Missile Range Facility utilizing a Strategic Targets System (STARS) booster stack, separate from the launch vehicle, and fly a hypersonic glide trajectory to impact on the Reagan Test Site at Kwajalein Atoll, demonstrating flight systems integration, gathering thermal protection system performance data to assist in anchoring analytical models, and demonstrating advanced aerodynamic control features.			
Title: Test Range Development ***Description:*** This sub-project will complete design, assembly and delivery of power/telemetry subsystems; assemble and integrate components to check command/control and verify range safety functions. ***FY 2010 Accomplishments:*** - Performed range modifications in preparation for technology demonstrations. Activities included the upgrade of the TP01 launch pad which has not been maintained - Built targets to support technology demonstrations - Purchased range assets to support technology demonstrations, which include ships and aircraft to receive in-flight telemetry data transmitted by the PDV (store and burst mode) ***FY 2011 Plans:*** - DELETE : Perform range modifications in preparation for technology demonstrations. Activities will include the upgrade of the TP01 launch pad which has not been maintained - Build targets to support technology demonstrations - Purchase range assets to support technology demonstrations, which include ships and aircraft to receive in-flight telemetry data transmitted by the PDV (store and burst mode)	20.508	21.571	-
Title: OSD CPGS Studies	7.879	9.238	-

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B. Accomplishments/Planned Programs ($ in Millions)	FY 2010	FY 2011	FY 2012
Description: This sub-project supports emergent CPGS study efforts. In addition, it also supports application of the Prompt Global Strike Analysis of Alternatives results, requirements development, CPGS basing alternatives, analysis and defining of mission enabling technologies, and measures to avoid conventional missile launch ambiguity. Finally, it supports administrative activities associated with the management and execution of this PE. ***FY 2010 Accomplishments:*** This sub-project supported emergent CPGS study efforts. In addition, it also supported application of the Prompt Global Strike Analysis of Alternatives results, requirements development, CPGS basing alternatives, analysis and defining of mission enabling technologies, and measures to avoid conventional missile launch ambiguity. Finally, it supported administrative activities associated with the management and execution of this PE. ***FY 2011 Plans:*** In FY2011-2012 the OSD CPGS studies activity will complete the study of strategic policy compliance to include CPGS basing alternatives and measures to avoid misinterpretation of intent; policy compliance, and operational requirements validation. The activity will conduct studies associated with mission planning systems and battle damage assessment. It will further develop and implement measures of system design performance to evaluate the performance of the primary and alternative PDV design, as well as booster, and basing considerations. This activity will also perform analysis of technology readiness of key aspects of the CPGS designs.			
Accomplishments/Planned Programs Subtotals	159.416	239.861	204.824

C. Other Program Funding Summary ($ in Millions)

N/A

D. Acquisition Strategy

This PE provides resources for technical studies, as well as design, development and test activities; project support; combatant requirements application; and systems design analyses necessary to establish and execute an integrated Conventional Prompt Global Strike program. These efforts will produce: a demonstration and application of advanced technologies to support a combatant command materiel solution requirement; a DoD-wide coordinated assessment of kinetic non-nuclear system and operations concepts in a manner that supports planning, budgeting, and execution of further system concept development and procurement by the Services; resources for technical and operations projects and research, development and test and evaluation in such areas as PGS risk mitigation, strategic policy compliance, mission planning, reentry system thermal protection, advanced propulsion, advanced payload delivery and dispensing mechanisms, weapon system command and control, advanced non-nuclear warheads, modeling and simulation, launch system infrastructure, and other enabling capabilities that address emerging mission requirements.

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E. Performance Metrics

N/A

Exhibit R-3, RDT&E Project Cost Analysis: PB 2012 Office of Secretary Of Defense		DATE: February 2011
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Product Development ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2011 Cost	FY 2011 Award Date	FY 2012 Base Cost	FY 2012 Base Award Date	FY 2012 OCO Cost	FY 2012 OCO Award Date	FY 2012 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Hypersonic Glide Experiments and Concept Demonstration Development/Support	Allot	SPACE AND MISSILE CENTER:LOS ANGELES, CA	133.105	147.035	Sep 2011	204.824		-		204.824	Continuing	Continuing	Continuing
Alternative Reentry System/ Warhead Engineering and Delivery Vehicle Options/ Development	Allot	SPACE AND MISSILE DEFENSE CENTER:HUNTSVILLE, AL	60.469	62.017	Sep 2011	-		-		-	Continuing	Continuing	Continuing
Test Range Development	Allot	SPACE AND MISSILE CENTER:LOS ANGELES, CA	28.875	21.571	Sep 2011	-		-		-	Continuing	Continuing	Continuing
OSD CPGS Studies	Allot	OFFICE OF THE SECRETARY OF DEFENSE:WASHINGTON, DC	12.750	9.238	Sep 2011	-		-		-	Continuing	Continuing	Continuing
		Subtotal	235.199	239.861		204.824		-		204.824			

	Total Prior Years Cost	FY 2011		FY 2012 Base		FY 2012 OCO		FY 2012 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	235.199	239.861		204.824		-		204.824			

Remarks

Exhibit R-4, RDT&E Schedule Profile: PB 2012 Office of Secretary Of Defense		DATE: February 2011
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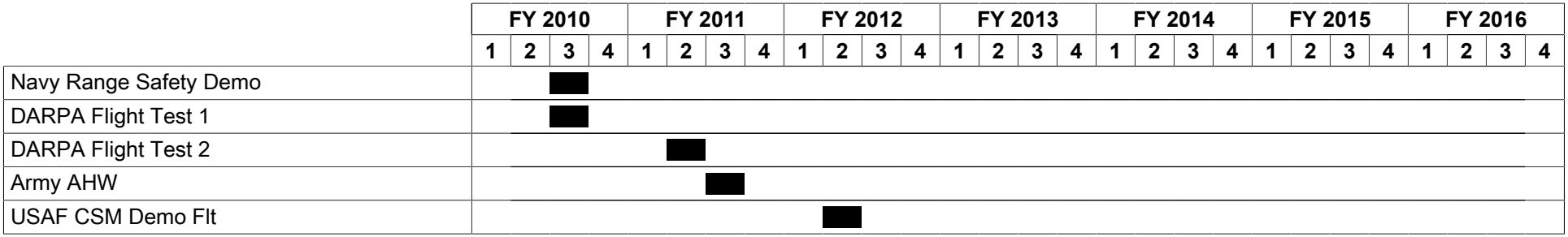

Exhibit R-4A, RDT&E Schedule Details: PB 2012 Office of Secretary Of Defense		DATE: February 2011
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Schedule Details

	Start		End	
Events	**Quarter**	**Year**	**Quarter**	**Year**
Navy Range Safety Demo	3	2010	3	2010
DARPA Flight Test 1	3	2010	3	2010
DARPA Flight Test 2	2	2011	2	2011
Army AHW	3	2011	3	2011
USAF CSM Demo Flt	2	2012	2	2012