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* / BA 3: *Advanced Technology Development (ATD)*					R-1 Program Element (Number/Name) PE 0603601F / *Conventional Weapons Technology*							
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	-	33.410	42.046	48.536	-	48.536	45.401	52.969	56.529	58.566	Continuing	Continuing
63670A: *Conventional Weapons Development*	-	33.410	42.046	48.536	-	48.536	45.401	52.969	56.529	58.566	Continuing	Continuing

A. Mission Description and Budget Item Justification

This project develops, demonstrates, and integrates advanced ordnance and guidance technologies for air-launched conventional weapons. The program focuses on conventional ordnance component technologies such as warheads, fuzes, and explosives, as well as munition guidance component technologies such as navigation and control systems and seekers. Technologies to be developed, demonstrated, and integrated address blast, fragmentation, penetration, low-collateral damage, variable depth/location fuzing, precise guidance, and high performance and insensitive explosives. Efforts in this program have been coordinated through the Department of Defense (DoD) Science and Technology (S&T) Executive Committee process to harmonize efforts and eliminate duplication.

This program is in Budget Activity 3, Advanced Technology Development because this budget activity includes development of subsystems and components and efforts to integrate subsystems and components into system prototypes for field experiments and/or tests in a simulated environment.

B. Program Change Summary ($ in Millions)	FY 2014	FY 2015	FY 2016 Base	FY 2016 OCO	FY 2016 Total
Previous President's Budget	33.996	42.046	50.047	-	50.047
Current President's Budget	33.410	42.046	48.536	-	48.536
Total Adjustments	-0.586	-	-1.511	-	-1.511
• Congressional General Reductions	-	-			
• Congressional Directed Reductions	-	-			
• Congressional Rescissions	-	-			
• Congressional Adds	-	-			
• Congressional Directed Transfers	-	-			
• Reprogrammings	-	-			
• SBIR/STTR Transfer	-0.586	-			
• Other Adjustments	-	-	-1.511	-	-1.511

Change Summary Explanation

Decrease in FY 2016 due to higher DoD priorities.

C. Accomplishments/Planned Programs ($ in Millions)	FY 2014	FY 2015	FY 2016
Title: Ordnance Technologies	6.400	8.000	4.500

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C. Accomplishments/Planned Programs ($ in Millions)	FY 2014	FY 2015	FY 2016
Description: Develop and demonstrate ordnance technologies to improve conventional, air-delivered munitions. Specific technical areas of focus include fuzes, energetic materials, and warheads. ***FY 2014 Accomplishments:*** Completed demonstrations of a conventional ordnance package capable of penetrating high performance concrete at increased impact velocities. Demonstrated survivability and performance of a new hard target warhead explosive fill, which subsequently was certified as a DoD-approved energetic. Completed demonstration of technologies that enable velocity augmentation for penetrating weapons. Continued developing an ordnance package capable of tailoring the effect of the weapon for the target and its surrounding environment. Continued development of alternate fuze technologies to increase the reliability of penetrating weapons. ***FY 2015 Plans:*** Demonstrate alternate fuzing technologies to increase the reliability of penetrating weapons. Develop and assess ordnance technologies that enable high-speed strike weapon concepts through use of reactive composite cases, dual use of propulsion fuels, and focused fragmentation. Complete the development of an ordnance package that enables the warfighter to tailor the weapon effects for the target and its surrounding environment. ***FY 2016 Plans:*** Continue to demonstrate alternate fuzing technologies to increase the reliability of penetrating weapons. Continue to develop and assess ordnance technologies that enable high-speed strike weapon concepts. Develop ordnance technologies that enable general purpose warheads that are lethal across an ever increasing spectrum of targets, with the aim of a simplified family of warheads.			
Title: Guidance Technologies	11.500	7.000	5.500
Description: Develop and demonstrate guidance technologies to improve the precision, controlled lethality, and flexibility of conventional, air-delivered munitions. Specific technical areas include precision navigation and terminal seekers. ***FY 2014 Accomplishments:*** Completed simulations of weapon navigation and control necessary for penetration into hard targets at high velocities. Demonstrated technologies for precision weapon navigation in GPS-degraded environments. Developed technologies capable of guiding a high-speed strike weapon characterized by very high terminal speed and high end-game maneuverability. ***FY 2015 Plans:***			

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C. Accomplishments/Planned Programs ($ in Millions)	FY 2014	FY 2015	FY 2016
Continue to develop and assess technologies capable of guiding a high-speed strike weapon characterized by very high terminal speed and high end-game maneuverability. ***FY 2016 Plans:*** Continue to develop and assess technologies capable of guiding a high-speed strike weapon characterized by very high terminal speed and high end-game maneuverability. Continue to explore alternative guidance and control concepts that enable an improved air-to-air missile.			
Title: Advanced Munition Concept Technologies ***Description:*** Demonstrate advanced conventional munition concepts. These innovative concepts integrate ordnance, guidance, and carriage and release technologies to demonstrate warfighter capability. ***FY 2014 Accomplishments:*** Completed full scale, sled track demonstrations of a high-speed penetrating weapon concept. Investigated concepts for cooperative control of small weapons to produce scalable effects to increase the capacity and capability of fifth-generation aircraft. Developed ordnance and guidance technologies for tactically relevant long range strike weapons and reduce risk for a potential follow-on acquisition program. ***FY 2015 Plans:*** Conduct relevant long range strike weapon technology demonstration to reduce risk for a potential follow-on acquisition program. Continue the development of a munition concept to incorporate technologies for carriage and terminal impact at high-speed. Continue investigating concepts for cooperative control of small weapons to produce scalable effects to increase the capacity and capability of fifth-generation aircraft. Demonstrate the ability to articulate the trades and synergies of kinetic energy and directed energy weapons by incorporating higher fidelity methodologies into systems level analysis, including the joint weapons effectiveness analyses. Demonstrate weapon integration concept for air target engagement. ***FY 2016 Plans:*** Continue to conduct relevant long range strike weapon technology demonstration to reduce risk for a potential follow-on acquisition program. Continue the development of a munition concept to incorporate technologies for carriage and terminal impact at high speed. Continue investigating concepts for cooperative control of small weapons to produce scalable effects to increase the capacity and capability of fifth-generation aircraft. Continue to demonstrate the ability to articulate the trades and synergies of kinetic energy and directed energy weapons by incorporating higher fidelity methodologies into systems level analysis, including the joint weapons effectiveness analyses. Demonstrate weapon integration concept for air target engagement.	15.510	27.046	38.536
Accomplishments/Planned Programs Subtotals	33.410	42.046	48.536

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D. Other Program Funding Summary ($ in Millions)

N/A

Remarks

E. Acquisition Strategy

N/A

F. 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.