

**UNCLASSIFIED**

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

<b>Appropriation/Budget Activity</b> 3600: <i>Research, Development, Test &amp; Evaluation, Air Force I BA 6: RDT&amp;E Management Support</i>					<b>R-1 Program Element (Number/Name)</b> PE 0605807F / <i>Test and Evaluation Support</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>
Total Program Element	-	691.977	683.308	661.417	0.000	661.417	672.180	680.576	693.772	706.945	Continuing	Continuing
6606TG: <i>96th Test Group</i>	-	36.413	35.797	36.680	0.000	36.680	37.442	38.036	38.707	39.438	Continuing	Continuing
6606TS: <i>Test and Evaluation Support</i>	-	655.564	647.511	624.737	0.000	624.737	634.738	642.540	655.065	667.507	Continuing	Continuing

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

Test facilities, capabilities and resources operated through this program include wind tunnels, rocket and jet engine test cells, armament test ranges, hardware-in-the-loop test facilities, climatic test facilities, avionics test facilities, aircraft testbeds, dry lakebed landing sites, instrumented test ranges, civilian payroll, and contractor services. It also provides resources for maintaining and modifying as required Air Force Materiel Command (AFMC) assigned test and test support coded aircraft. No acquisition contracts are funded from this program; test support contracts for services and supplies and equipment are predominantly awarded on the basis of full and open competition.

This program is in Budget Activity 6, RDT&E Management Support, because this budget activity includes research, development, test, and evaluation efforts and funds to sustain and/or modernize the installations or operations required for general research, development, test and evaluation.

<b>B. Program Change Summary (\$ in Millions)</b>	<b>FY 2015</b>	<b>FY 2016</b>	<b>FY 2017 Base</b>	<b>FY 2017 OCO</b>	<b>FY 2017 Total</b>
Previous President's Budget	689.509	673.908	666.993	0.000	666.993
Current President's Budget	691.977	683.308	661.417	0.000	661.417
Total Adjustments	2.468	9.400	-5.576	0.000	-5.576
• Congressional General Reductions	0.000	0.000			
• Congressional Directed Reductions	0.000	0.000			
• Congressional Rescissions	0.000	0.000			
• Congressional Adds	0.000	9.400			
• Congressional Directed Transfers	0.000	0.000			
• Reprogrammings	2.468	0.000			
• SBIR/STTR Transfer	0.000	0.000			
• Other Adjustments	0.000	0.000	-5.576	0.000	-5.576

**Change Summary Explanation**

FY15: \$2.468M increase for unscheduled emergency F-15 heavy maintenance.

FY16: \$9.400M congressional increase.

FY17: \$5.576M decrease for pricing adjustments; for non-flying/flying spares, aviation fuel, and civilian pay.

**UNCLASSIFIED**

<b>Exhibit R-2A, RDT&amp;E Project Justification:</b> PB 2017 Air Force										<b>Date:</b> February 2016		
<b>Appropriation/Budget Activity</b> 3600 / 6					<b>R-1 Program Element (Number/Name)</b> PE 0605807F / <i>Test and Evaluation Support</i>				<b>Project (Number/Name)</b> 6606TG / <i>96th Test Group</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>
6606TG: <i>96th Test Group</i>	-	36.413	35.797	36.680	0.000	36.680	37.442	38.036	38.707	39.438	Continuing	Continuing
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

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

Project infrastructure support is provided for the unique capabilities of the 96th Test Group (TG) facilities: Central Inertial and Global Positioning System (GPS) Test Facility (CIGTF/746th Test Squadron), the Holloman High Speed Test Track (HHSTT/846th Test Squadron) and the National Radar Cross Section (RCS) Test Facility (NRTF/96 TG Det 2), the 586th Flight Test Squadron including Detachment 1 (Det 1), 96 TG Operating Location (96 TG OL-AA) at Kirtland AFB, and 96 TG Operation Location (96 TG OL-AC) at Wright-Patterson AFB.

CIGTF provides independent test and evaluation of inertial, Global Positioning System, and integrated systems used for aircraft navigation and missile guidance systems, including vulnerability to electronic interference.

HHSTT capabilities include full-scale testing in flight representative environments, realistic live-fire simulations, test item and target fragment recovery, precision trajectory analysis and high speed photography.

NRTF provides radar cross section (RCS) monostatic and bistatic amplitude and phase measurements, antenna pattern measurements, glint and near field measurements for low observable targets.

The 586th Flight Test Squadron executes flight test and test support for advanced avionics and weapons development of joint, international and commercial test programs. Det 1 provides the liaison function for coordinating and scheduling all US Air Force test and training operations at White Sands Missile Range (WSMR). OL-AA provides test support for the Air Force Research Lab (AFRL) Directed Energy Division.

The 96 TG OL-AC includes the Landing Gear Test Facility (LGTF) with capabilities such as variable and fixed inertia dynamometers, compression/tension load applicators, 4 drop towers, a burst pit and a dynamic load simulator. The 96 TG OL-AC also includes the Air Vehicle Survivability Office that provides support for Air Force aircraft acquisition programs. The 96th TG support services contracts are awarded on the basis of full and open competition.

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

	<b>FY 2015</b>	<b>FY 2016</b>	<b>FY 2017</b>
<b>Title:</b> 96th Test Group	36.413	35.797	36.680
<b>Description:</b> Provide infrastructure at the 96th Test Group (TG) to support testing of DoD, other Government Agencies, foreign military sales, and commercial weapon systems.			
<b>FY 2015 Accomplishments:</b>			

**UNCLASSIFIED**

<b>Exhibit R-2A, RDT&amp;E Project Justification:</b> PB 2017 Air Force	<b>Date:</b> February 2016
---	----------------------------

<b>Appropriation/Budget Activity</b> 3600 / 6	<b>R-1 Program Element (Number/Name)</b> PE 0605807F / <i>Test and Evaluation Support</i>	<b>Project (Number/Name)</b> 6606TG / <i>96th Test Group</i>
--	--	---

<b>B. Accomplishments/Planned Programs (\$ in Millions)</b>	FY 2015	FY 2016	FY 2017
Total consists of utilities, contractor services, and civilian pay.			
<b><i>FY 2016 Plans:</i></b> Total consists of utilities, contractor services, and civilian pay.			
<b><i>FY 2017 Plans:</i></b> Total consists of utilities, contractor services, and civilian pay.			
<b>Accomplishments/Planned Programs Subtotals</b>	36.413	35.797	36.680

<b>C. Other Program Funding Summary (\$ in Millions)</b>											
<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 Complete</u>	<u>Total Cost</u>
• NA: NA	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	-	-

**Remarks**

**D. Acquisition Strategy**

Not applicable

**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.

**UNCLASSIFIED**

<b>Exhibit R-2A, RDT&amp;E Project Justification:</b> PB 2017 Air Force										<b>Date:</b> February 2016		
<b>Appropriation/Budget Activity</b> 3600 / 6					<b>R-1 Program Element (Number/Name)</b> PE 0605807F / <i>Test and Evaluation Support</i>				<b>Project (Number/Name)</b> 6606TS / <i>Test and Evaluation Support</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>
6606TS: <i>Test and Evaluation Support</i>	-	655.564	647.511	624.737	0.000	624.737	634.738	642.540	655.065	667.507	Continuing	Continuing
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

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

This project provides resources to operate the Air Force Test Center (AFTC) test activities which are included in the Department of Defense (DoD) Major Range and Test Facility Base (MRTFB). Test facilities/capabilities operated through this program include wind tunnels, rocket and jet engine test cells, hypersonic and subsonic testing, modeling and simulation, technology, limited space environmental simulation chambers, armament test ranges, hardware-in-the-loop test facilities, climatic test facilities, avionics test facilities, aircraft testbeds, dry lakebed landing sites, instrumented test ranges, and test aircraft maintenance, as well as USAF Test Pilot School.

Test and Evaluation (T&E) Support funds institutional test infrastructure activities including: Command and supervisory staffs; supply stocks; maintenance, repair, and replacement of worn or obsolete test equipment and facilities; test infrastructure for data collection, transmission, reduction, and analysis; civilian salaries; temporary duty travel; range operations and material support contract costs for hardware and software engineering and maintenance; and minor improvement and modernization projects. It also funds institutional test aircraft depot level maintenance such as: Programmed Depot Maintenance (PDM), the calendar-based cyclic scheduling of aircraft into depots for update/inspection; modifications and any other depot level repairs required by the aircraft System Program Directors (SPD); engine overhauls; depot-provided area assistance; and assorted ground support equipment overhauls.

The AFTCs two test wings and single test complex are supported by this project: (1) Arnold Engineering and Development Complex (AEDC), located at Arnold Air Force Base (AFB), TN, whose institutional test infrastructure supports operations of the largest complex of ground test facilities in the world (includes transonic, supersonic, and hypersonic wind tunnels; rocket motor and turbine engine test cells; space environmental test chambers, hyperballistic ranges; and other specialized facilities). Included are operations at the National Full-Scale Aerodynamic Complex (NFAC) located at NASA's AMES Research Center, California as well as operations at Tunnel 9 located at White Oak, Maryland.(2) 412 Test Wing (TW), located at Edwards AFB, CA, whose institutional test infrastructure supports weapons system development and operational test and evaluation for aircraft, aircraft subsystems and aircraft weapon systems, aerospace research vehicles, unmanned miniature vehicles, cruise missiles, parachute delivery/recovery systems, cargo handling systems, communications, information operations, and Electronic Warfare (EW) systems for DoD and allied forces. The 412TW mission includes the USAF Test Pilot School. (3) 96TW, located at Eglin AFB, FL, is a joint test and training complex of 724 square miles of land area, and approximately 123,000 square miles of water area. 96TW provides the institutional test infrastructure required to conduct developmental and operational test and evaluation of non-nuclear air armaments (including aircraft guns, ammunition, and air-to-surface and air-to-air guided munitions); Command, Control, Communications, Computers and Intelligence/Surveillance/Reconnaissance (C4ISR) systems; target acquisition and weapon delivery systems; multi-service climatic simulation capability; and special operations aircraft systems. 96TW provides a scientific test process that supports the development, production, sustainment, and enhancement of munitions systems that support tri-service digital weapons development. T&E support services contracts are awarded on the basis of full and open competition.

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

	<b>FY 2015</b>	<b>FY 2016</b>	<b>FY 2017</b>
<b>Title:</b> AEDC, 412TW, 96TW	655.564	647.511	624.737

**UNCLASSIFIED**

<b>Exhibit R-2A, RDT&amp;E Project Justification:</b> PB 2017 Air Force	<b>Date:</b> February 2016
---	----------------------------

<b>Appropriation/Budget Activity</b> 3600 / 6	<b>R-1 Program Element (Number/Name)</b> PE 0605807F / <i>Test and Evaluation Support</i>	<b>Project (Number/Name)</b> 6606TS / <i>Test and Evaluation Support</i>
--	--	---

<b>B. Accomplishments/Planned Programs (\$ in Millions)</b>	FY 2015	FY 2016	FY 2017
<p><b>Description:</b> Provide infrastructure to support testing at Arnold Engineering and Development Complex (AEDC), the 412TW and USAF Test Pilot School at Edwards AFB, and the 96TW at Eglin AFB.</p> <p><b>FY 2015 Accomplishments:</b> Total consists of utilities, contractor services, civilian pay, and the test and evaluation flying hour program.</p> <p><b>FY 2016 Plans:</b> Total consists of utilities, contractor services, civilian pay, and the test and evaluation flying hour program.</p> <p><b>FY 2017 Plans:</b> Total consists of utilities, contractor services, civilian pay, and the test and evaluation flying hour program.</p>			
<b>Accomplishments/Planned Programs Subtotals</b>	655.564	647.511	624.737

<b>C. Other Program Funding Summary (\$ in Millions)</b>												
<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 Complete</u>	<u>Total Cost</u>	
• NA: NA	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	-	-

**Remarks**

**D. Acquisition Strategy**  
Not applicable.

**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.

**UNCLASSIFIED**

**THIS PAGE INTENTIONALLY LEFT BLANK**

**UNCLASSIFIED**