Exhibit R-2, RDT&E Budget Item Justification: PB 2014 Air Force

#### APPROPRIATION/BUDGET ACTIVITY

R-1 ITEM NOMENCLATURE

3600: Research, Development, Test & Evaluation, Air Force

PE 0603860F: Joint Precision Approach and Landing Systems - Dem/Val

BA 4: Advanced Component Development & Prototypes (ACD&P)

,	•	• •	,									
COST (\$ in Millions)	All Prior Years	FY 2012	FY 2013 <sup>#</sup>	FY 2014 Base	FY 2014 OCO ##	FY 2014 Total	FY 2015	FY 2016	FY 2017	FY 2018	Cost To Complete	Total Cost
Total Program Element	150.340	7.076	57.975	0.000	-	0.000	0.000	0.000	0.000	0.000	Continuing	Continuing
644652: Precision Landing Systems	150.340	7.076	57.975	0.000	-	0.000	0.000	0.000	0.000	0.000	Continuing	Continuing
Quantity of RDT&E Articles		0	0	0		0	0	0	0	0		

<sup>&</sup>lt;sup>#</sup> FY 2013 Program is from the FY 2013 President's Budget, submitted February 2012

#### Note

### A. Mission Description and Budget Item Justification

JPALS is an Acquisition Category ID program. System development includes an incremental approach employing a family of Land-Based (fixed and deployable) and Sea-Based systems. On 16 March 2007, the Joint Requirements Oversight Council (JROC) approved the Capability Development Document (CDD) for the JPALS family of systems and Increment 1 for the Sea-Based System and designated the Navy as the JPALS lead Department of Defense (DoD) Service and lead Component for the Sea-Based System. On 19 January 2010, the JROC approved Increment 2 CDD for the Land-Based System and designated the Air Force as the lead Component for the Land-Based System.

As reflected in the JPALS CDD, JPALS is intended to be the next generation precision approach and landing system which would provide a common interoperable system for both DoD and civil use. A cornerstone of the JPALS implementation strategy was parallel development and implementation with the Federal Aviation Administration Local Area Augmentation System (LAAS) which was based on the same GPS Ground Based Augmentation System (GBAS) technology. However, since the CDD was approved, the pace of the FAA LAAS implementation and phase down of the legacy instrument landing system has slowed. This, combined with an on-going tech refresh (life extension) of the legacy Instrument Landing System (ILS), development of a Deployable ILS, the fact that new platforms (F-35, KC-46) will be ILS equipped, and the need to fund higher Air Force priorities, the Air Force is delaying JPALS implementation for the foreseeable future. The Army has also delayed JPALS implementation beyond the current future years defense plan.

As JPALS is now early to need for the Air Force, Land-Based Increment 2 development responsibility is being transferred from the Air Force to the Navy. Both Service Acquisition Executives are in agreement on transfer of the Land-Based Increment 2. The Navy has a near term need in FY17 for a shore based system to support Joint Strike Fighter carrier landing training. The Air Force will monitor the progress of JPALS implementation but, in the interim, continue the use of the legacy Instrument Landing System (ILS). ILS is supportable through the 2030 timeframe and, in its fixed and deployable configuration, will provide an effective and affordable landing system capability. The Air Force will also retain a limited number mobile precision approach radars to provide joint Service interoperability at deployed location as all Navy and Army aircraft are not ILS equipped.

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<sup>##</sup> The FY 2014 OCO Request will be submitted at a later date

**Exhibit R-2**, **RDT&E Budget Item Justification:** PB 2014 Air Force

#### APPROPRIATION/BUDGET ACTIVITY

R-1 ITEM NOMENCLATURE

3600: Research, Development, Test & Evaluation, Air Force

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BA 4: Advanced Component Development & Prototypes (ACD&P)

As JPALS Land-Based Incremement 2 is being transferred to the Navy beginning in FY13, no FY14 funding is requested. The Navy program element is 0603860N/Project 3354.

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.

B. Program Change Summary (\$ in Millions)	FY 2012	FY 2013	FY 2014 Base	FY 2014 OCO	FY 2014 Total
Previous President's Budget	19.879	57.975	19.578	-	19.578
Current President's Budget	7.076	57.975	0.000	-	0.000
Total Adjustments	-12.803	0.000	-19.578	-	-19.578
<ul> <li>Congressional General Reductions</li> </ul>	-	0.000			
<ul> <li>Congressional Directed Reductions</li> </ul>	-	0.000			
<ul> <li>Congressional Rescissions</li> </ul>	0.000	0.000			
<ul> <li>Congressional Adds</li> </ul>	-	0.000			
<ul> <li>Congressional Directed Transfers</li> </ul>	-	0.000			
<ul> <li>Reprogrammings</li> </ul>	-10.917	0.000			
SBIR/STTR Transfer	-1.886	0.000			
Other Adjustments	0.000	0.000	-19.578	-	-19.578

## **Change Summary Explanation**

In FY12 \$10.917M was reprogrammed to other Air Force priorities. Funds were no longer executable in FY12 as Milestone B and development contract award were delayed while Land-Based Increment 2 program management responsibility transfers to the Navy.

FY14 funding zeroed out as JPALS Land-Based Increment 2 development is being transferred to the Navy. JPALS is early to need for the Air Force while the Navy has an urgent near term need in FY17 for shore based training in support of Joint Strike Fighter carrier capability. The AF will continue to use the legacy Instrument Landing System which is supportable through the 2030 timeframe.

C. Accomplishments/Planned Programs (\$ in Millions)	FY 2012	FY 2013	FY 2014
Title: JPALS Acquisition and Technical Services Support (Program Management and Administration)	7.076	0.300	0.000
Description: Provides Acquisition and Technical services for systems engineering and program execution for JPALS			
FY 2012 Accomplishments:			

PE 0603860F: Joint Precision Approach and Landing Systems - Dem... Air Force

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Exhibit R-2, RDT&E Budget Item Justification: PB 2014 Air Force

APPROPRIATION/BUDGET ACTIVITY

3600: Research, Development, Test & Evaluation, Air Force
BA 4: Advanced Component Development & Prototypes (ACD&P)

PE 0603860F: Joint Precision Approach and Landing Systems - Dem/Val

C. Accomplishments/Planned Programs (\$ in Millions)	FY 2012	FY 2013	FY 2014
Provided system engineering and program support services to complete the JPALS request for proposal (RFP) package and other required program documentation (Prior to decision to transfer to the Navy, RFP release was planned for 2nd Qtr FY12 and Milestone B 3rd Qtr FY13). Provided technical support and facilitated documentation transfer to Navy.			
FY 2013 Plans: Provides systems engineering and program support services to Navy in support of transition to Navy managed engineering, manufacturing, and development (EMD) phase.			
<b>FY 2014 Plans:</b> N/A			
Title: JPALS Eng & Manf Development	0.000	57.675	0.00
Description: System design and development of JPALS ground systems.			
FY 2012 Accomplishments: N/A			
FY 2013 Plans: Supports Navy with development of updated Land-Based Increment 2 request for proposal and Milestone B approval as restructured program is reviewed by the Joint Requirements Oversight Council and the Service Acquisition Executive (OSD/AT&L).			
<b>FY 2014 Plans:</b> N/A			
Accomplishments/Planned Programs Subtotals	7.076	57.975	0.00

## D. Other Program Funding Summary (\$ in Millions)

N/A

## **Remarks**

# E. Acquisition Strategy

The Air Force Increment 2 Engineering, and Manufacturing Development (EMD) contract for development of Fixed-Based and Tactical JPALS systems was planned for competitive Fixed Price Incentive Firm contract award. Acquisition strategy will now be developed by the Navy and may change.

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Exhibit R-2, RDT&E Budget Item Justification: PB 2014 Air Force	DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY	R-1 ITEM NOMENCLATURE
3600: Research, Development, Test & Evaluation, Air Force BA 4: Advanced Component Development & Prototypes (ACD&P)	PE 0603860F: Joint Precision Approach and Landing Systems - Dem/Val
F. Performance Metrics	
Please refer to the Performance Base Budget Overview Book for informance performance goals and most importantly, how they contribute to	mation on how Air Force resources are applied and how those resources are contributing to Air our mission.

PE 0603860F: Joint Precision Approach and Landing Systems - Dem... Air Force

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2014 Air Force

APPROPRIATION/BUDGET ACTIVITY

3600: Research, Development, Test & Evaluation, Air Force

BA 4: Advanced Component Development & Prototypes (ACD&P)

R-1 ITEM NOMENCLATURE

**PROJECT** 

Landing Systems - Dem/Val

PE 0603860F: Joint Precision Approach and 644652: Precision Landing Systems

DATE: April 2013

Product Developme	nt (\$ in Mi	llions)		FY 2	2012	FY 2	2013	FY 2 Ba	2014 ise	FY 2		FY 2014 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	All Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
EMD	TBD	NAVAIR PMA-213:Pax River NAS, MD	0.000	0.000		57.675	Aug 2013	0.000		-		0.000	0.000	57.675	TBD
		Subtotal	0.000	0.000		57.675		0.000		0.000		0.000	0.000	57.675	

Support (\$ in Millions	s)			FY 2	2012	FY 2	2013	FY 2 Ba		FY 2		FY 2014 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	All Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To	Total Cost	Target Value of Contract
Anti-Jam and Threat Analysis	C/T&M	AFRL:Dayton, OH	10.000	0.000		0.000		0.000		-		0.000	0.000	10.000	10.000
Architecture Trade Studies and Analysis	C/T&M	AES:Lex Park, MD	32.281	0.000		0.000		0.000		-		0.000	0.000	32.281	27.781
Technical Maturation (1)	SS/CPAF	BAE:Wayne,, NJ	21.722	0.000		0.000		0.000		-		0.000	0.000	21.722	19.642
Technical Maturation (2)	Various	Various: Various, CA	20.579	0.000		0.000		0.000		-		0.000	0.000	20.579	3.214
		Subtotal	84.582	0.000		0.000		0.000		0.000		0.000	0.000	84.582	60.637

Test and Evaluation	(\$ in Milli	ions)		FY 2	2012	FY 2	2013	FY 2 Ba	2014 ise	FY 2		FY 2014 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	All Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To	Total Cost	Target Value of Contract
JPALS Responsible Test Organization (RTO)	Various	46th Test Wing:Eglin AFB, FL	3.909	0.000		0.000		0.000		-		0.000	0.000	3.909	4.125
JPALS Test Certification	SS/T&M	DISA:Ft Huachuca, AZ	0.375	0.000		0.000		0.000		-		0.000	0.000	0.375	0.375
		Subtotal	4.284	0.000		0.000		0.000		0.000		0.000	0.000	4.284	4.500

PE 0603860F: Joint Precision Approach and Landing Systems - Dem... Air Force

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2014 Air Force

DATE: April 2013

APPROPRIATION/BUDGET ACTIVITY

R-1 ITEM NOMENCLATURE

**PROJECT** 

3600: Research, Development, Test & Evaluation, Air Force

PE 0603860F: Joint Precision Approach and 644652: Precision Landing Systems

BA 4: Advanced Component Development & Prototypes (ACD&P)

Landing Systems - Dem/Val

Management Service	agement Services (\$ in Millions)			FY	2012	FY 2	2013	FY 2 Ba		FY 2		FY 2014 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	All 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 (PMA) - JPALS	C/T&M	Quantec, Jacobs Engineering, MITRE, Telecote Cost Services:Bedford, MA	61.474	7.076	May 2012	0.300	Apr 2013	0.000		-		0.000	0.000	68.850	74.147
		Subtotal	61.474	7.076		0.300		0.000		0.000		0.000	0.000	68.850	74.147
															Target
			All Prior					EV 2	2014	EV 2	0014	EV 2014	Cost To	Total	

	All Prior					FY 2	014 FY	2014 FY 201	4 Cost To	Total	Target Value of
	Years	FY 2	012	FY 2	013	Bas	se (	OCO Total	Complete	Cost	Contract
Project Cost Totals	150.340	7.076		57.975		0.000	0.00	0.00	0.000	215.391	

Remarks

PE 0603860F: Joint Precision Approach and Landing Systems - Dem... Air Force

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Exhibit R-4. RDT&E Schedule Profile: PB 2014 Air Force DATE: April 2013

APPROPRIATION/BUDGET ACTIVITY

3600: Research, Development, Test & Evaluation, Air Force

BA 4: Advanced Component Development & Prototypes (ACD&P)

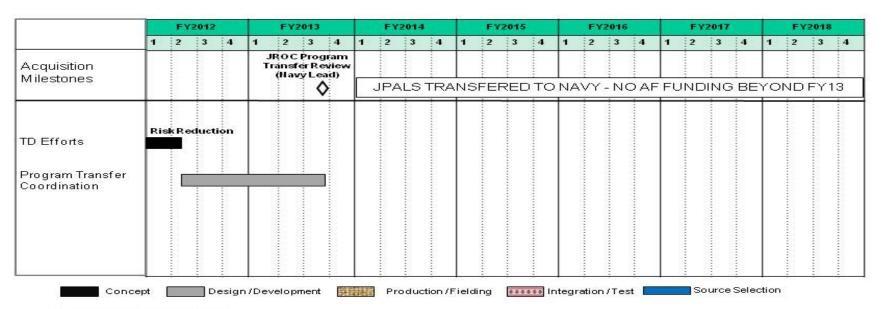
**R-1 ITEM NOMENCLATURE PROJECT** 

PE 0603860F: Joint Precision Approach and 644652: Precision Landing Systems

Landing Systems - Dem/Val



# JPALS Land-Based Inc 2 Schedule



TD - Technology Development JROC - Joint Requirements Oversight Council

Integrity - Service - Excellence

PE 0603860F: Joint Precision Approach and Landing Systems - Dem... Air Force

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DATE: April 2013 Exhibit R-4A, RDT&E Schedule Details: PB 2014 Air Force

APPROPRIATION/BUDGET ACTIVITY R-1 ITEM NOMENCLATURE **PROJECT** 

PE 0603860F: Joint Precision Approach and 644652: Precision Landing Systems 3600: Research, Development, Test & Evaluation, Air Force BA 4: Advanced Component Development & Prototypes (ACD&P)

Landing Systems - Dem/Val

# Schedule Details

	St	art	E	nd
Events	Quarter	Year	Quarter	Year
JROC Program Transfer Review	3	2013	3	2013
Risk Reduction	1	2012	2	2012
Program Transfer Coordination	2	2012	3	2013

PE 0603860F: Joint Precision Approach and Landing Systems - Dem... Air Force

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