

## UNCLASSIFIED

PE NUMBER: 0604856F  
PE TITLE: Common Aero Vehicle

Exhibit R-2, RDT&E Budget Item Justification								DATE <b>February 2006</b>																																					
BUDGET ACTIVITY <b>04 Advanced Component Development and Prototypes (ACD&amp;P)</b>				PE NUMBER AND TITLE <b>0604856F Common Aero Vehicle</b>																																									
Cost (\$ in Millions)	FY 2005 Actual	FY 2006 Estimate	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	Cost to Complete	Total																																				
Total Program Element (PE) Cost	16.053	26.993	33.386	32.387	40.840	44.033	82.386	Continuing	TBD																																				
A012 Common Aerospace Vehicle	16.053	26.993	33.386	32.387	40.840	44.033	82.386	Continuing	TBD																																				
<p>(U) <b><u>A. Mission Description and Budget Item Justification</u></b></p> <p>The Prompt Global Strike (PGS) Mission Needs Statement (MNS) established the requirement for rapid conventional strike worldwide to counter the proliferation of weapons of mass destruction and provide a forward presence without forward deployment. In December 2002 the DepSecDef directed the Air Force and Defense Advanced Research Projects Agency (DARPA) to establish a joint program office to accelerate the Common Aero Vehicle (CAV) effort to meet this requirement. This joint program has been named Falcon and was focused on the development and transition of more mature technologies into a future weapon system capable of delivering and deploying conventional payloads worldwide through space. As a result of FY05 Congressional language, the Falcon portion of the CAV program was restructured by DARPA and the Air Force to ensure it met the intent of Congress. Within the Falcon program, CAV has been redesignated the Hypersonic Technology Vehicle (HTV) and all weaponization activities have been excluded from Falcon. This PE will be renamed HTV.</p> <p>This program is Budget Activity 4, Advanced Component Development and Prototypes (ACDP), because it involves evaluating integrated technologies in as realistic an operating environment as possible to assess the performance or cost reduction potential of advanced technology.</p> <p>(U) <b><u>B. Program Change Summary (\$ in Millions)</u></b></p> <table style="width: 100%; margin-top: 10px;"> <thead> <tr> <th></th> <th style="text-align: right;"><u>FY 2005</u></th> <th style="text-align: right;"><u>FY 2006</u></th> <th style="text-align: right;"><u>FY 2007</u></th> </tr> </thead> <tbody> <tr> <td>(U) Previous President's Budget</td> <td style="text-align: right;">16.464</td> <td style="text-align: right;">27.394</td> <td style="text-align: right;">32.539</td> </tr> <tr> <td>(U) Current PBR/President's Budget</td> <td style="text-align: right;">16.053</td> <td style="text-align: right;">26.993</td> <td style="text-align: right;">33.386</td> </tr> <tr> <td>(U) Total Adjustments</td> <td style="text-align: right;">-0.411</td> <td style="text-align: right;">-0.401</td> <td></td> </tr> <tr> <td>(U) Congressional Program Reductions</td> <td style="text-align: right;">-0.013</td> <td style="text-align: right;">-0.010</td> <td></td> </tr> <tr> <td>    Congressional Rescissions</td> <td></td> <td style="text-align: right;">-0.391</td> <td></td> </tr> <tr> <td>    Congressional Increases</td> <td></td> <td></td> <td></td> </tr> <tr> <td>    Reprogrammings</td> <td></td> <td></td> <td></td> </tr> <tr> <td>    SBIR/STTR Transfer</td> <td style="text-align: right;">-0.398</td> <td></td> <td></td> </tr> </tbody> </table> <p>(U) <b><u>Significant Program Changes:</u></b></p>											<u>FY 2005</u>	<u>FY 2006</u>	<u>FY 2007</u>	(U) Previous President's Budget	16.464	27.394	32.539	(U) Current PBR/President's Budget	16.053	26.993	33.386	(U) Total Adjustments	-0.411	-0.401		(U) Congressional Program Reductions	-0.013	-0.010		Congressional Rescissions		-0.391		Congressional Increases				Reprogrammings				SBIR/STTR Transfer	-0.398		
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## Exhibit R-2a, RDT&amp;E Project Justification

DATE

February 2006

## BUDGET ACTIVITY

04 Advanced Component Development and Prototypes (ACD&amp;P)

## PE NUMBER AND TITLE

0604856F Common Aero Vehicle

## PROJECT NUMBER AND TITLE

A012 Common Aerospace Vehicle

Cost (\$ in Millions)	FY 2005 Actual	FY 2006 Estimate	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	Cost to Complete	Total
A012 Common Aerospace Vehicle	16.053	26.993	33.386	32.387	40.840	44.033	82.386	Continuing	TBD
Quantity of RDT&E Articles	0	0	0	0	0	0	0		

(U) **A. Mission Description and Budget Item Justification**

The Prompt Global Strike (PGS) Mission Needs Statement (MNS) established the requirement for rapid conventional strike worldwide to counter the proliferation of weapons of mass destruction and provide a forward presence without forward deployment. In December 2002 the DepSecDef directed the Air Force and Defense Advanced Research Projects Agency (DARPA) to establish a joint program office to accelerate the Common Aero Vehicle (CAV) effort to meet this requirement. This joint program has been named Falcon and was focused on the development and transition of more mature technologies into a future weapon system capable of delivering and deploying conventional payloads worldwide through space. As a result of FY05 Congressional language, the Falcon portion of the CAV program was restructured by DARPA and the Air Force to ensure it met the intent of Congress. Within the Falcon program, CAV has been redesignated the Hypersonic Technology Vehicle (HTV) and all weaponization activities have been excluded from Falcon. This PE will be renamed HTV.

This program is Budget Activity 4, Advanced Component Development and Prototypes (ACDP), because it involves evaluating integrated technologies in as realistic an operating environment as possible to assess the performance or cost reduction potential of advanced technology.

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

	<u>FY 2005</u>	<u>FY 2006</u>	<u>FY 2007</u>
(U) Continue HTV system design and development, systems engineering and flight test planning/support for Phase II	11.464	20.470	24.745
(U) Perform analysis and assess alternative HTV concepts/requirements and program management support	4.589	2.530	2.915
(U) Perform Prompt Global Strike Analysis of Alternatives		3.993	5.726
(U) Total Cost	16.053	26.993	33.386

(U) **C. Other Program Funding Summary (\$ in Millions)**

	<u>FY 2005</u> <u>Actual</u>	<u>FY 2006</u> <u>Estimate</u>	<u>FY 2007</u> <u>Estimate</u>	<u>FY 2008</u> <u>Estimate</u>	<u>FY 2009</u> <u>Estimate</u>	<u>FY 2010</u> <u>Estimate</u>	<u>FY 2011</u> <u>Estimate</u>	<u>Cost to</u> <u>Complete</u>	<u>Total Cost</u>
(U) AF RDT&E, PE 0604855F, ORL (R-60)	32.142	38.519						Continuing	TBD
(U) AF RDT&E, PE 0604857F, ORS			35.625	41.663	75.720	77.064	78.122	Continuing	TBD
(U) Other APPN									
(U) Defensewide RDT&E, DARPA, PE 0603285E, Falcon	12.500	40.000	50.000					Continuing	TBD

(U) **D. Acquisition Strategy**

Efforts will be executed by the joint AF/DARPA Falcon Program Office. Four Phase I contracts were awarded in November 2003, Other Transaction Agreements, with a duration of 6 months. A downselect between the four Phase I contractors occurred in August 2004 for Phase II with a single 36 month award using an Other Transaction Agreements contract vehicle. Phase II develops and launches the first HTV. Phase III is scheduled for one contractor with award set for 1QtrFY08. Phase

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**Exhibit R-2a, RDT&E Project Justification**

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III will fabricate and launch the succeeding HTV demonstrations in the Falcon program.

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## Exhibit R-3, RDT&amp;E Project Cost Analysis

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## BUDGET ACTIVITY

## 04 Advanced Component Development and Prototypes (ACD&amp;P)

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(U) <u>Cost Categories</u> (Tailor to WBS, or System/Item Requirements) (\$ in Millions)	<u>Contract</u> <u>Method &amp;</u> <u>Type</u>	<u>Performing</u> <u>Activity &amp;</u> <u>Location</u>	<u>Total</u> <u>Prior to FY</u> <u>2005</u> <u>Cost</u>	<u>FY 2005</u> <u>Cost</u>	<u>FY 2005</u> <u>Award</u> <u>Date</u>	<u>FY 2006</u> <u>Cost</u>	<u>FY 2006</u> <u>Award</u> <u>Date</u>	<u>FY 2007</u> <u>Cost</u>	<u>FY 2007</u> <u>Award</u> <u>Date</u>	<u>Cost to</u> <u>Complete</u>	<u>Total Cost</u>	<u>Target Value</u> <u>of Contract</u>
(U) <u>Product Development</u>												
Four Phase I contracts	OTA	various	4.293								4.293	4.293
Phase II contract	OTA	Lockheed-Mart in, Palmdale, CA	3.000	11.464	Feb-05	20.470	Dec-05	24.745	Oct-06	Continuing	TBD	TBD
Phase III contract	TBD	TBD								Continuing	TBD	TBD
Subtotal Product Development			7.293	11.464		20.470		24.745		Continuing	TBD	TBD
Remarks:												
(U) <u>Test &amp; Evaluation</u>												
CAV/Penetrator Flight Support	MIPR	SMC Det 12/RP, Kirtland AFB NM	3.000								3.000	3.000
Prepare hypersonic test corridor	MIPR	AF Flt Test Center, Edwards AFB CA	0.500								0.500	0.500
Subtotal Test & Evaluation			3.500	0.000		0.000		0.000		0.000	3.500	3.500
Remarks:												
(U) <u>Development Support and Management</u>												
Perform analysis and assess alternative HTV concepts/requirements & program support	various	various	4.232	4.589	Oct-04	2.530	Oct-05	2.915	Oct-06	Continuing	TBD	TBD
Perform PGS AoA	TBD	TBD				3.993	Feb-06	5.726	Oct-06	Continuing	TBD	TBD
Develop critical CAV technology	MIPR	AFRL, Kirtland AFB, NM	2.000							0.000	2.000	2.000
Subtotal Development Support and Management			6.232	4.589		6.523		8.641		Continuing	TBD	TBD
Remarks:												
(U) Total Cost			17.025	16.053		26.993		33.386		Continuing	TBD	TBD

## Exhibit R-4, RDT&amp;E Schedule Profile

DATE

February 2006

BUDGET ACTIVITY

04 Advanced Component Development and Prototypes (ACD&amp;P)

PE NUMBER AND TITLE

0604856F Common Aero Vehicle

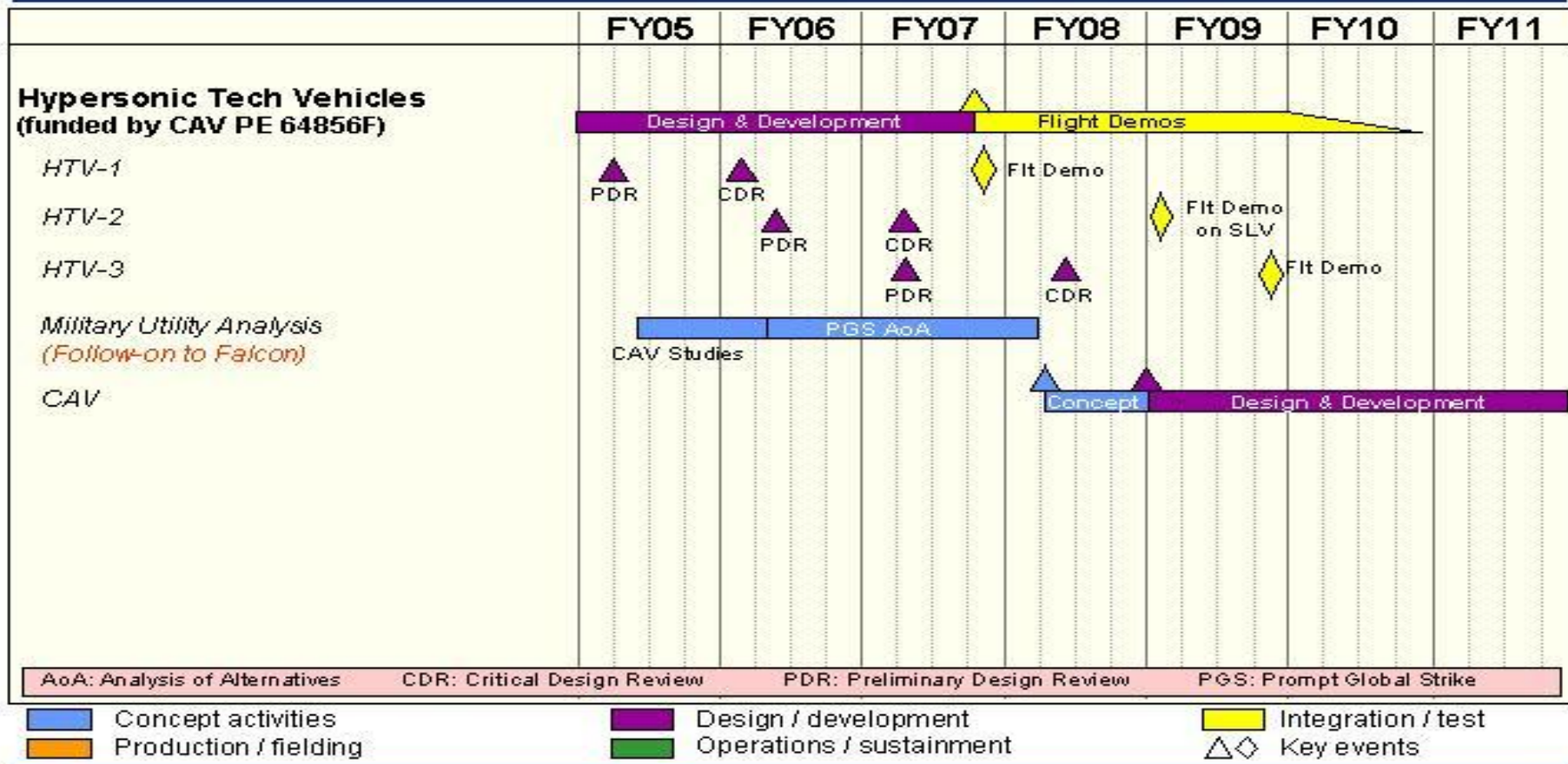
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U.S. AIR FORCE

# HTV Schedule



FY07 OSD/OMB Budget Hearing

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## Exhibit R-4a, RDT&amp;E Schedule Detail

DATE

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(U) Schedule ProfileFY 2005FY 2006FY 2007

(U) Phase II Preliminary Design Review

2Q

(U) Phase II Critical Design Review

1Q

(U) PGS AoA

2-4Q

1-4Q

(U) Initial HTV Test Launch

4Q

(U) Complete Phase II

4Q