Exhibit R-2, RDT&E Budget Item Justification: PB 2012 Air Force										DATE: February 2011	
APPROPRIATION/BUDGET ACTIVITY 3600: *Research, Development, Test & Evaluation, Air Force* BA 7: *Operational Systems Development*				R-1 ITEM NOMENCLATURE PE 0305265F: *GPS III Space Segment*							
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	410.469	828.171	463.081	-	463.081	318.782	220.831	249.453	229.460	Continuing	Continuing
676007: *DASS Integration, GPS*	-	-	2.143	-	2.143	1.792	2.688	1.443	1.293	Continuing	Continuing
67A019: *GPS IIIA*	410.469	446.304	460.938	-	460.938	316.990	218.143	248.010	228.167	Continuing	Continuing
67A020: *OCX*	-	381.867	-	-	-	-	-	-	-	Continuing	Continuing

Note

Totals include funding for PRCP Program Number 292, GPS IIIA.

The program funding includes overhead reduction and Review, Study, Board reduction efficiencies that are not intended to impact program content. The efficiencies reductions total $3.965M in FY12.

FY12-16 total OCX funding transferred to PE 0603423F.

In FY2012, BPAC 67007, DASS Integration, includes new start efforts.

A. Mission Description and Budget Item Justification

The Navstar Global Positioning System (GPS) is a space based navigation system that fills validated Joint Service requirements for worldwide, accurate, common grid three dimensional positioning/navigation for military aircraft, ships, and ground personnel. The consistent accuracy, unaffected by location or weather and available in real time, significantly improves effectiveness of reconnaissance, weapons delivery, mine countermeasures and rapid deployment for all services.

The system is composed of three segments: user equipment (funded under PE 0305164F), space, and a control network. The satellites broadcast high accuracy data using precisely synchronized signals which are received and processed by user equipment installed in military platforms. This equipment computes the platform position and velocity and provides steering vectors to target locations or navigation equipment installed in military platforms. The control segment provides daily updates to the navigation messages broadcast from the satellites to maintain system precision in three dimensions to 16 meters spherical error probable worldwide. Additionally, GPS supports the United States Nuclear Detonation (NUDET) Detection System (NDS) mission, and provides strategic and tactical support to the following Department of Defense (DoD) missions: Joint Operations by providing capabilities for Positioning, Navigation, and Timing (PNT), Command, Control, Communications, and Intelligence, Special Operations; Military Operations in Urban Terrain, Defense-Wide Mission Support, Air Mobility, and Space Launch Orbital Support.

GPS IIIA is the next generation space vehicle to join the Navstar GPS constellation. GPS IIIA space vehicles will deliver significant enhancements, including a new L1C (civil) Galileo-compatible signal, enhanced M-code Earth Coverage power, and a growth path to full warfighter capabilities. GPS IIIA is in the Production & Deployment Phase.

Exhibit R-2, RDT&E Budget Item Justification: PB 2012 Air Force	DATE: February 2011
APPROPRIATION/BUDGET ACTIVITY 3600: *Research, Development, Test & Evaluation, Air Force* BA 7: *Operational Systems Development*	**R-1 ITEM NOMENCLATURE** PE 0305265F: *GPS III Space Segment*

Funds for GPS IIIA will support research, development, test and evaluation of two GPS IIIA space vehicles and associated simulators through a structured systems engineering approach that matures and delivers space vehicles for launch. The program includes capability maturation and risk reduction efforts (Capability Insertion Program (CIP)), to address and mitigate program cost schedule and technical challenges. Additionally, the program includes engineering studies and analyses, trade studies, system development, test and evaluation efforts, integrated logistics support products, on orbit support, and mission operations in support of civil applications necessary to support efforts to protect U.S. military and allies' use of GPS.

OCX is the next generation GPS control segment which includes, but is not limited to, advanced concept development, systems engineering and analysis, modernized control segment development, training simulators, Integrated Logistics Support (ILS) products, and developmental test resources. The OCX acquisition was established to 1) fly the GPS III satellites, 2) incorporate situational awareness to support Navwar and signal monitoring, and 3) enable mission capability upgrades to support warfighter Effects-Based Approach to Operations (EBAO).

Funds for OCX will support engineering studies and analyses, architectural engineering studies, trade studies, technology needs forecasting, science and technology, technology development, systems engineering, system development, test and evaluation efforts, GPS enterprise integration and mission operations in support of upgrades and product improvements for military and civil applications necessary to support efforts to protect U.S. military and allies' use of GPS. Additionally, funds will ensure a disciplined Capability Insertion Program (CIP) plan to meet Joint Requirements Oversight Council (JROC) approved required capabilities. Funding is transferred to PE 0603423F beginning in FY12.

The Distress Alerting Satellite System (DASS) is an approved secondary payload on GPS III space vehicles beginning in Block B. DASS will fill validated National Search and Rescue Committee requirements to provide enduring, space-based distress alerting capability to detect, locate, and relay distress alerts to fulfill its responsibilities under the SECDEF's National Search and Rescue Plan.

In addition the USAF has on-going requirements to rescue its own personnel in harm’s way per Air Force Doctrine Document 2-1.6. The implementation of a US Mid Earth Orbiting Search and Rescue Space Segment is via a Canadian-Provided 406 MHZ SAR repeater on the GPS Block III satellites presents a cost effective opportunity with low risk to build on existing Proof of Concept work and provide a proven SAR system that accommodates existing and planned 406 MHz beacons. USAF and USCG senior leaders have agreed that, as the operational sponsors and main users of the capability, they will share (50/50) integration costs associated with integrating Canadian provided SAR repeater to GPS III B & C Space Vehicles. Costs presented represent USAF 50% Share.

DASS is a New Start for the GPS III program. DASS funding will be applied to early integration activities for GPS IIIB through the Capabilities Insertion Program (CIP) in FY12.

This program is Budget Activity 7 - Operational System Development because it supports operational systems (GPS).

Exhibit R-2, RDT&E Budget Item Justification: PB 2012 Air Force	DATE: February 2011
APPROPRIATION/BUDGET ACTIVITY 3600: *Research, Development, Test & Evaluation, Air Force* BA 7: *Operational Systems Development*	R-1 ITEM NOMENCLATURE PE 0305265F: *GPS III Space Segment*

B. Program Change Summary ($ in Millions)	FY 2010	FY 2011	FY 2012 Base	FY 2012 OCO	FY 2012 Total
Previous President's Budget	423.466	828.171	445.848	-	445.848
Current President's Budget	410.469	828.171	463.081	-	463.081
Total Adjustments	-12.997	-	17.233	-	17.233
• Congressional General Reductions		-			
• Congressional Directed Reductions		-			
• Congressional Rescissions	-1.776	-			
• Congressional Adds		-			
• Congressional Directed Transfers		-			
• Reprogrammings	-	-			
• SBIR/STTR Transfer	-11.221	-			
• Other Adjustments	-	-	17.233	-	17.233

Change Summary Explanation

FY12 changes:

GPS IIIA FY12 funding

Increased $140.192M for engineering change orders and additional costs to complete non-recurring engineering required to assure on time delivery of GPS IIIA SVs 1 and 2.

Decreased -$2.542M for overhead reduction and report, study, board reduction efficiencies. Reductions for efficiencies are not intended to impact program content.

Decreased -$5.506M for higher DoD priorities.

OCX FY12 funding

Increased $275.138M to fully fund program for Milestone B.

Decreased -$392.192M. OCX funding in FY12 and beyond transferred to PE 0603423F.

DASS FY12 Funding

Increased $2.143M to initiate new program.

Exhibit R-2A, RDT&E Project Justification: PB 2012 Air Force			DATE: February 2011
APPROPRIATION/BUDGET ACTIVITY 3600: *Research, Development, Test & Evaluation, Air Force* BA 7: *Operational Systems Development*	R-1 ITEM NOMENCLATURE PE 0305265F: *GPS III Space Segment*	PROJECT 676007: *DASS Integration, GPS*	

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
676007: *DASS Integration, GPS*	-	-	2.143	-	2.143	1.792	2.688	1.443	1.293	Continuing	Continuing
Quantity of RDT&E Articles	0	0	0	0	0	0	0	0	0		

A. Mission Description and Budget Item Justification

The Distress Alerting Satellite System (DASS) is an approved secondary payload on GPS III beginning in Block B. DASS fills validated National Search and Rescue Committee requirements to provide enduring, space-based distress alerting capability to detect, locate, and relay distress alerts to fulfill its responsibilities under the SECDEF's National Search and Rescue Plan.

In addition the USAF has on-going requirements to rescue its own personnel in harm's way per Air Force Doctrine Document 2-1.6. The implementation of a US Mid Earth Orbiting Search and Rescue Space Segment is via a Canadian-Provided 406 MHZ SAR repeater on the GPS Block III satellites presents a cost effective opportunity with low risk to build on existing Proof of Concept work and provide a proven SAR system that accommodates existing and planned 406 MHz beacons. USAF and USCG senior leaders have agreed that, as the operational sponsors and main users of the capability, they will share (50/50) integration costs associated with integrating Canadian provided SAR repeater to GPS III B & C Space Vehicles. Costs presented represent USAF 50% Share.

DASS is a New Start for the GPS III program.

This program is in Budget Activity 7 - Operational Systems Development because it supports operational systems.

B. Accomplishments/Planned Programs ($ in Millions)	FY 2010	FY 2011	FY 2012 Base	FY 2012 OCO	FY 2012 Total
Title: DASS	-	-	2.143	-	2.143
Description: MAJOR THRUST: GPS III space segment nonrecurring and recurring contract costs to add one DASS unit to each SV beginning at GPS IIIB and continuing through GPS IIIC (24 SVs total).					
FY 2010 Accomplishments:					
FY 2011 Plans:					
FY 2012 Base Plans: Development and integration of DASS antennas, DASS miscellaneous hardware and cabling, DASS-related space vehicle software, Integrating DASS payload onto the GPS III space vehicles, DASS-related GNST and GSS components and integration, Associated System Engineering and Program Management (SE/PM),					

Exhibit R-2A, RDT&E Project Justification: PB 2012 Air Force		DATE: February 2011
APPROPRIATION/BUDGET ACTIVITY 3600: *Research, Development, Test & Evaluation, Air Force* BA 7: *Operational Systems Development*	R-1 ITEM NOMENCLATURE PE 0305265F: *GPS III Space Segment*	PROJECT 676007: *DASS Integration, GPS*

B. Accomplishments/Planned Programs ($ in Millions)	FY 2010	FY 2011	FY 2012 Base	FY 2012 OCO	FY 2012 Total
Enterprise-level contractor SEIT/PM , Other Government Costs (OGC). Costs do not include development and production of Canadian payload box. ***FY 2012 OCO Plans:***					
Accomplishments/Planned Programs Subtotals	-	-	2.143	-	2.143

C. Other Program Funding Summary ($ in Millions)

Line Item	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
• RDT&E AF: *PE 0305265F, GPS III*	410.469	446.304	460.297	0.000	460.297	316.328	217.458	247.201	227.330	Continuing	Continuing

D. Acquisition Strategy

The Air Force is pursuing a "Block" approach to the GPS III next generation space segment to rapidly respond to warfighter capability requirements. DASS will follow this same strategy. The Block acquisition approach utilizes a disciplined systems engineering approach which focuses on mitigating cost and schedule risk through a lower risk incremental delivery of mature technologies. This approach focuses on mission success and on time delivery. DASS will be inserted into the acquisition strategy beginning with GPS III B – SV 9 and will conclude with GPS III C - SV 32.

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.

Exhibit R-3, RDT&E Project Cost Analysis: PB 2012 Air Force		DATE: February 2011
APPROPRIATION/BUDGET ACTIVITY 3600: *Research, Development, Test & Evaluation, Air Force* BA 7: *Operational Systems Development*	R-1 ITEM NOMENCLATURE PE 0305265F: *GPS III Space Segment*	PROJECT 676007: *DASS Integration, GPS*

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
DASS	C/Various	Lockheed Martin:Newtown, PA	-	-		2.143	Nov 2011	-		2.143	Continuing	Continuing	0.000
		Subtotal	-	-		2.143		-		2.143			0.000

Support ($ 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
		Subtotal	-	-		-		-		-	0.000	0.000	0.000

Test and Evaluation ($ 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
		Subtotal	-	-		-		-		-	0.000	0.000	0.000

Management Services ($ 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
		Subtotal	-	-		-		-		-	0.000	0.000	0.000

	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
Project Cost Totals	-	-		2.143		-		2.143			0.000

Remarks

Exhibit R-4, RDT&E Schedule Profile: PB 2012 Air Force		DATE: February 2011
APPROPRIATION/BUDGET ACTIVITY 3600: *Research, Development, Test & Evaluation, Air Force* BA 7: *Operational Systems Development*	**R-1 ITEM NOMENCLATURE** PE 0305265F: *GPS III Space Segment*	**PROJECT** 676007: *DASS Integration, GPS*

Exhibit R-4A, RDT&E Schedule Details: PB 2012 Air Force		DATE: February 2011
APPROPRIATION/BUDGET ACTIVITY 3600: *Research, Development, Test & Evaluation, Air Force* BA 7: *Operational Systems Development*	**R-1 ITEM NOMENCLATURE** PE 0305265F: *GPS III Space Segment*	**PROJECT** 676007: *DASS Integration, GPS*

Schedule Details

	Start		End	
Events	**Quarter**	**Year**	**Quarter**	**Year**
IIIB Delta Preliminary Design Review (PDR)	4	2012	4	2012

Exhibit R-2A, RDT&E Project Justification: PB 2012 Air Force			DATE: February 2011
APPROPRIATION/BUDGET ACTIVITY 3600: *Research, Development, Test & Evaluation, Air Force* BA 7: *Operational Systems Development*	R-1 ITEM NOMENCLATURE PE 0305265F: *GPS III Space Segment*	PROJECT 67A019: *GPS IIIA*	

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
67A019: *GPS IIIA*	410.469	446.304	460.938	-	460.938	316.990	218.143	248.010	228.167	Continuing	Continuing
Quantity of RDT&E Articles	0	0	0	0	0	0	0	0	0		

Note

Totals include funding for PRCP Program Number 292, GPS IIIA.

A. Mission Description and Budget Item Justification

GPS IIIA is the next generation space vehicle supporting the Navstar GPS constellation. GPS IIIA space vehicles will deliver significant enhancements, including a new L1C (civil) Galileo-compatible signal, enhanced M-code Earth Coverage power, and a growth path to full warfighter capabilities. GPS IIIA is in the Production & Deployment Phase.

Funds in this PE for GPS IIIA will support research, development, test and evaluation of two GPS IIIA space vehicles and associated simulators through a structured systems engineering approach that matures and delivers space vehicles for launch. The program includes capability maturation and risk reduction efforts to address and mitigate program cost (Capability Insertion Program (CIP)), schedule and technical challenges. Additionally the program also includes engineering studies and analyses, trade studies, system development, test and evaluation efforts, integrated logistics support products, on orbit support, and mission operations in support of civil applications necessary to support efforts to protect U.S. military and allies' use of GPS.

B. Accomplishments/Planned Programs ($ in Millions)	FY 2010	FY 2011	FY 2012 Base	FY 2012 OCO	FY 2012 Total
Title: GPS III	410.469	446.304	460.938	-	460.938
Description: Development, test and evaluation of two GPS IIIA space vehicles and associated simulators, capability maturation, risk reduction efforts, engineering studies and analyses, trade studies, system development, test and evaluation efforts, and integrated logistics support products.					
FY 2010 Accomplishments: GPS IIIA space vehicle development, SE&I, technical and program support, capability maturation and risk reduction.					
FY 2011 Plans: GPS IIIA space vehicle development, SE&I, technical and program support, capability maturation and risk reduction.					
FY 2012 Base Plans:					

Exhibit R-2A, RDT&E Project Justification: PB 2012 Air Force		DATE: February 2011
APPROPRIATION/BUDGET ACTIVITY 3600: *Research, Development, Test & Evaluation, Air Force* BA 7: *Operational Systems Development*	R-1 ITEM NOMENCLATURE PE 0305265F: *GPS III Space Segment*	PROJECT 67A019: *GPS IIIA*

B. Accomplishments/Planned Programs ($ in Millions)	FY 2010	FY 2011	FY 2012 Base	FY 2012 OCO	FY 2012 Total
GPS IIIA space vehicle development, SE&I, technical and program support, capability maturation and risk reduction. ***FY 2012 OCO Plans:***					
Accomplishments/Planned Programs Subtotals	410.469	446.304	460.938	-	460.938

C. Other Program Funding Summary ($ in Millions)

Line Item	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
• Related Activities:	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	Continuing	Continuing
• RDT&E: *AF PE 0603423F, OCX*	288.402	0.000	390.889	0.000	390.889	369.453	386.742	280.494	201.079	Continuing	Continuing
• RDT&E (2): *AF PE 0305265F, OCX*	0.000	381.867	0.000	0.000	0.000	0.000	0.000	0.000	0.000	Continuing	Continuing
• MPAF PE 0305265F: *GPS III Space Segment*	0.000	122.490	515.337	0.000	515.337	515.408	529.623	555.924	626.121	Continuing	Continuing
• OPAF PE 0603423F: *OCX*	0.000	0.000	0.000	0.000	0.000	0.000	11.431	12.656	13.385	Continuing	Continuing

D. Acquisition Strategy

The Air Force is pursuing a "Block" approach to the GPS III next generation space segment to rapidly respond to warfighter capability requirements. The Block acquisition approach utilizes a disciplined systems engineering approach which focuses on mitigating cost and schedule risk through a lower risk incremental delivery of mature technologies. This approach focuses on mission success and on time delivery. The first block of GPS III satellites, GPS IIIA, will have GPS IIF capabilities plus up to a 10 dB increase in military (M-code) signal power, a new L1C civil signal compatible with the European Galileo and a satellite bus capable of supporting Block B and C capability upgrades.

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.

Exhibit R-3, RDT&E Project Cost Analysis: PB 2012 Air Force			DATE: February 2011
APPROPRIATION/BUDGET ACTIVITY 3600: *Research, Development, Test & Evaluation, Air Force* BA 7: *Operational Systems Development*	R-1 ITEM NOMENCLATURE PE 0305265F: *GPS III Space Segment*	PROJECT 67A019: *GPS IIIA*	

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
Block IIIA Development	C/Various	Lockheed Martin:Newtown, PA	692.293	376.898	Nov 2010	398.403	Nov 2011	-		398.403	Continuing	Continuing	0.000
SE&I	C/CPAF	SAIC:Huntington Beach, CA	11.641	5.100	Nov 2010	5.300	Nov 2011	-		5.300	Continuing	Continuing	0.000
Modernization/SE & Technical Support	Various	Various:Various,	33.767	12.779	Nov 2010	13.641	Nov 2011	-		13.641	Continuing	Continuing	0.000
		Subtotal	737.701	394.777		417.344		-		417.344			0.000

Support ($ 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
Wing Support	Various	Various:Various,	34.474	31.727	Nov 2010	24.774	Nov 2011	-		24.774	Continuing	Continuing	0.000
FFRDC	Various	Aerospace:El Segundo, CA	17.340	19.800	Nov 2010	18.820	Nov 2011	-		18.820	0.000	55.960	0.000
		Subtotal	51.814	51.527		43.594		-		43.594			0.000

Test and Evaluation ($ 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
		Subtotal	-	-		-		-		-	0.000	0.000	0.000

Management Services ($ 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
		Subtotal	-	-		-		-		-	0.000	0.000	0.000

Exhibit R-3, RDT&E Project Cost Analysis: PB 2012 Air Force		DATE: February 2011
APPROPRIATION/BUDGET ACTIVITY 3600: *Research, Development, Test & Evaluation, Air Force* BA 7: *Operational Systems Development*	R-1 ITEM NOMENCLATURE PE 0305265F: *GPS III Space Segment*	PROJECT 67A019: *GPS IIIA*

	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	789.515	446.304		460.938		-		460.938			0.000

Remarks

Exhibit R-4, RDT&E Schedule Profile: PB 2012 Air Force		DATE: February 2011
APPROPRIATION/BUDGET ACTIVITY 3600: *Research, Development, Test & Evaluation, Air Force* BA 7: *Operational Systems Development*	**R-1 ITEM NOMENCLATURE** PE 0305265F: *GPS III Space Segment*	**PROJECT** 67A019: *GPS IIIA*

Exhibit R-4A, RDT&E Schedule Details: PB 2012 Air Force		DATE: February 2011
APPROPRIATION/BUDGET ACTIVITY 3600: *Research, Development, Test & Evaluation, Air Force* BA 7: *Operational Systems Development*	**R-1 ITEM NOMENCLATURE** PE 0305265F: *GPS III Space Segment*	**PROJECT** 67A019: *GPS IIIA*

Schedule Details

	Start		End	
Events	**Quarter**	**Year**	**Quarter**	**Year**
GPS IIIA Critical Design Review (CDR)	4	2010	4	2010
GPS IIIA Milestone C	1	2011	1	2011
GPS IIIB delta System Design Review (dSDR)	3	2011	3	2011
GPS IIIB delta Preliminary Design Review (dPDR)	4	2012	4	2012

Exhibit R-2A, RDT&E Project Justification: PB 2012 Air Force			DATE: February 2011
APPROPRIATION/BUDGET ACTIVITY 3600: *Research, Development, Test & Evaluation, Air Force* BA 7: *Operational Systems Development*	R-1 ITEM NOMENCLATURE PE 0305265F: *GPS III Space Segment*	PROJECT 67A020: *OCX*	

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
67A020: *OCX*	-	381.867	-	-	-	-	-	-	-	Continuing	Continuing
Quantity of RDT&E Articles	0	0	0	0	0	0	0	0	0		

Note

OCX funding transfers to PE 0603423F beginning in FY12.

A. Mission Description and Budget Item Justification

OCX is the next generation GPS control segment which includes, but is not limited to, advanced concept development, systems engineering and analysis, modernized control segment development, training simulators, Integrated Logistics Support (ILS) products, and developmental test resources. The OCX acquisition was established to 1) fly the GPS III satellites, 2) incorporate situational awareness to support Navwar and signal monitoring, and 3) enable mission capability upgrades to support warfighter Effects-Based Approach to Operations (EBAO).

Funds for OCX will support engineering studies and analyses, architectural engineering studies, trade studies, technology needs forecasting, science and technology, technology development, systems engineering, system development, test and evaluation efforts, GPS enterprise integration and mission operations in support of upgrades and product improvements for military and civil applications necessary to support efforts to protect U.S. military and allies' use of GPS. Additionally, funds will ensure a disciplined Capability Insertion Program (CIP) plan to meet Joint Requirements Oversight Council (JROC) approved required capabilities.

In FY2010 and FY2012-2016 this effort is funded in PE 0603423F, Global Positioning System III - Operational Control Segment.

B. Accomplishments/Planned Programs ($ in Millions)	FY 2010	FY 2011	FY 2012 Base	FY 2012 OCO	FY 2012 Total
Title: OCX	-	381.867	-	-	-
Description: Development, test and evaluation of OCX and engineering studies, technology needs forecasting, systems engineering, system development, and test and evaluation efforts.					
FY 2010 Accomplishments: NA					
FY 2011 Plans: Continued OCX Block 1-2 development System Engineering & Integration (SE&I), technical and program support.					
FY 2012 Base Plans:					

Exhibit R-2A, RDT&E Project Justification: PB 2012 Air Force		DATE: February 2011
APPROPRIATION/BUDGET ACTIVITY 3600: *Research, Development, Test & Evaluation, Air Force* BA 7: *Operational Systems Development*	R-1 ITEM NOMENCLATURE PE 0305265F: *GPS III Space Segment*	PROJECT 67A020: *OCX*

B. Accomplishments/Planned Programs ($ in Millions)	FY 2010	FY 2011	FY 2012 Base	FY 2012 OCO	FY 2012 Total
FY 2012 OCO Plans:					
Accomplishments/Planned Programs Subtotals	-	381.867	-	-	-

C. Other Program Funding Summary ($ in Millions)

Line Item	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
• Related Activities:	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	Continuing	Continuing
• PE 0603423F: *OCX RDT&E*	288.402	0.000	390.889	0.000	390.889	369.453	386.742	280.494	201.079	Continuing	Continuing
• PE 0305265F: *GPS III RDT&E*	410.469	446.304	460.297	0.000	460.297	316.328	217.458	247.201	227.330	Continuing	Continuing
• PE 0305265F (3): *GPS III Space Segment MPAF*	0.000	122.490	515.337	0.000	515.337	515.408	529.623	555.924	626.121	Continuing	Continuing
• PE 0305265F (4): *OCX OPAF*	0.000	0.000	0.000	0.000	0.000	0.000	11.431	12.656	13.385	Continuing	Continuing

D. Acquisition Strategy

The Air Force is pursuing a "Block" approach to the GPS III next generation control segment (OCX) to rapidly respond to warfighter capability requirements. The Block acquisition utilizes a disciplined system engineering approach which focuses on mitigating cost and schedule risk through a lower risk incremental delivery of mature technologies. This approach focuses on mission success and on time delivery. The first block of GPS III ground control segment (OCX) will provide backwards compatibility to GPS Block II mission operation and provide GPS IIIA mission operation capability.

The full content of OCX Blocks 1.0 and 2.0 includes M-code and civil signal monitoring, Net Centric Global Information Grid connectivity, command and control for GPS IIIA vehicles, and will meet current Information Assurance standards. This acquisition includes a structured capability insertion program to support risk reduction for OCX Blocks 3.0 and 4.0 (associated with controlling GPS IIIB and IIIC SVs).

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.

Exhibit R-3, RDT&E Project Cost Analysis: PB 2012 Air Force		DATE: February 2011
APPROPRIATION/BUDGET ACTIVITY 3600: *Research, Development, Test & Evaluation, Air Force* BA 7: *Operational Systems Development*	R-1 ITEM NOMENCLATURE PE 0305265F: *GPS III Space Segment*	PROJECT 67A020: *OCX*

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
Phase B OCX Blk I & II Development	C/CPIF	Raytheon:Aurora, CO	-	241.754	Nov 2010	-		-		-	Continuing	Continuing	0.000
SE&I	C/CPAF	SAIC:El Segundo, CA	-	5.993	Nov 2010	-		-		-	Continuing	Continuing	0.000
SE & Technical Support	Various	Various:Various	-	9.973	Nov 2010	-		-		-	Continuing	Continuing	0.000
		Subtotal	-	257.720		-		-		-			0.000

Remarks

Funding for this effort transfers to PE 0603423F starting in FY12.

Support ($ 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
Wing Support	Various	Various:Various	-	124.147	Nov 2010	-		-		-	Continuing	Continuing	0.000
		Subtotal	-	124.147		-		-		-			0.000

Remarks

Funding for this effort transfers to PE 0603423F starting in FY12.

Test and Evaluation ($ 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
		Subtotal	-	-		-		-		-	0.000	0.000	0.000

Management Services ($ 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
		Subtotal	-	-		-		-		-	0.000	0.000	0.000

Exhibit R-3, RDT&E Project Cost Analysis: PB 2012 Air Force			DATE: February 2011
APPROPRIATION/BUDGET ACTIVITY 3600: *Research, Development, Test & Evaluation, Air Force* BA 7: *Operational Systems Development*	R-1 ITEM NOMENCLATURE PE 0305265F: *GPS III Space Segment*	PROJECT 67A020: *OCX*	

	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	-	381.867		-		-		-			0.000

Remarks

Exhibit R-4, RDT&E Schedule Profile: PB 2012 Air Force		DATE: February 2011
APPROPRIATION/BUDGET ACTIVITY 3600: *Research, Development, Test & Evaluation, Air Force* BA 7: *Operational Systems Development*	**R-1 ITEM NOMENCLATURE** PE 0305265F: *GPS III Space Segment*	**PROJECT** 67A020: *OCX*

Exhibit R-4A, RDT&E Schedule Details: PB 2012 Air Force		DATE: February 2011
APPROPRIATION/BUDGET ACTIVITY 3600: *Research, Development, Test & Evaluation, Air Force* BA 7: *Operational Systems Development*	**R-1 ITEM NOMENCLATURE** PE 0305265F: *GPS III Space Segment*	**PROJECT** 67A020: *OCX*

Schedule Details

	Start		End	
Events	**Quarter**	**Year**	**Quarter**	**Year**
OCX Block 1-2 Preliminary Design Review	3	2011	3	2011
OCX Block 1-2 Milestone B	3	2011	3	2011