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**Department of Defense
Fiscal Year (FY) 2018 Budget Estimates**

May 2017



Air Force

Justification Book Volume 1 of 1

Space Procurement, Air Force

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Air Force • Budget Estimates FY 2018 • Procurement

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Appropriation Language
Fiscal Year 2018 President's Budget Request
Space Procurement, Air Force

For construction, procurement, and modification of spacecraft, launch services, and related equipment (including ground control and communication equipment) and training devices; expansion of public and private plants, Government-owned equipment and installation thereof in such plants, erection of structures, and acquisition of land, for the foregoing purposes, and such lands and interests therein, may be acquired, and construction prosecuted thereon prior to approval of title; reserve plant and Government and contractor-owned equipment layaway; and other expenses necessary for the foregoing purposes including rents and transportation of things; \$3,373,031,000 to remain available for obligations until September 30, 2022.

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Department of the Air Force
 FY 2018 President's Budget Request
 Exhibit P-1 FY 2018 President's Budget Request
 Total Obligational Authority
 (Dollars in Thousands)

04 May 2017

Appropriation -----	FY 2016 Base + OCO -----	FY 2017 PB Request with CR Adj Base -----	FY 2017 Total PB Requests* with CR Adj Base -----
Aircraft Procurement, Air Force	15,948,514	15,722,662	17,570,182
Missile Procurement, Air Force	3,188,714	2,904,680	2,904,680
Space Procurement, Air Force	2,811,456	2,806,111	2,826,011
Procurement of Ammunition, Air Force	1,973,389	1,741,199	1,811,199
Other Procurement, Air Force	21,818,134	18,275,655	19,552,800
Total Department of the Air Force	45,740,207	41,450,307	44,664,872

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Department of the Air Force
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 (Dollars in Thousands)

04 May 2017

Appropriation -----	FY 2017 PB Request with CR Adj OCO -----	FY 2017 Total PB Requests* with CR Adj OCO -----	FY 2017 Less Enacted Div B P.L.114-254** OCO -----	FY 2017 Remaining Req with CR Adj OCO -----
Aircraft Procurement, Air Force	128,900	202,000		202,000
Missile Procurement, Air Force	289,142	289,142	-83,900	205,242
Space Procurement, Air Force				
Procurement of Ammunition, Air Force	228,874	228,874	-201,563	27,311
Other Procurement, Air Force	3,477,001	3,826,798	-137,884	3,688,914
Total Department of the Air Force	4,123,917	4,546,814	-423,347	4,123,467

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Department of the Air Force
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 (Dollars in Thousands)

04 May 2017

Appropriation -----	FY 2017 Total PB Requests** with CR Adj Base+OCO+SAA -----	FY 2017 Total PB Requests* with CR Adj Base + OCO -----	FY 2017 Less Enacted Div B P.L.114-254** OCO -----	FY 2017 Remaining Req with CR Adj Base + OCO -----
Aircraft Procurement, Air Force	15,851,562	17,772,182		17,772,182
Missile Procurement, Air Force	3,277,722	3,193,822	-83,900	3,109,922
Space Procurement, Air Force	2,806,111	2,826,011		2,826,011
Procurement of Ammunition, Air Force	2,171,636	2,040,073	-201,563	1,838,510
Other Procurement, Air Force	21,890,540	23,379,598	-137,884	23,241,714
Total Department of the Air Force	45,997,571	49,211,686	-423,347	48,788,339

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Department of the Air Force
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 (Dollars in Thousands)

04 May 2017

Appropriation -----	FY 2018 Base -----	FY 2018 OCO -----	FY 2018 Total -----
Aircraft Procurement, Air Force	15,430,849	740,778	16,171,627
Missile Procurement, Air Force	2,296,182	395,400	2,691,582
Space Procurement, Air Force	3,370,775	2,256	3,373,031
Procurement of Ammunition, Air Force	1,376,602	501,509	1,878,111
Other Procurement, Air Force	19,603,497	4,008,887	23,612,384
Total Department of the Air Force	42,077,905	5,648,830	47,726,735

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 (Dollars in Thousands)

04 May 2017

Appropriation: Space Procurement, Air Force

Budget Activity -----	FY 2016 Base + OCO -----	FY 2017 PB Request with CR Adj Base -----	FY 2017 Total PB Requests* with CR Adj Base -----
01. Space Procurement, Air Force	2,811,456	3,033,137	3,053,037
02. Spares		22,606	22,606
20. Undistributed		-249,632	-249,632
Total Space Procurement, Air Force	2,811,456	2,806,111	2,826,011

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Department of the Air Force
FY 2018 President's Budget Request
Exhibit P-1 FY 2018 President's Budget Request
Total Obligational Authority
(Dollars in Thousands)

04 May 2017

Appropriation: Space Procurement, Air Force

Budget Activity -----	FY 2017 PB Request with CR Adj OCO -----	FY 2017 Total PB Requests* with CR Adj OCO -----	FY 2017 Less Enacted Div B P.L.114-254** OCO -----	FY 2017 Remaining Req with CR Adj OCO -----
01. Space Procurement, Air Force				
02. Spares				
20. Undistributed				
Total Space Procurement, Air Force				

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Department of the Air Force
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04 May 2017

Appropriation: Space Procurement, Air Force

Budget Activity -----	FY 2017 Total PB Requests** with CR Adj Base+OCO+SAA -----	FY 2017 Total PB Requests* with CR Adj Base + OCO -----	FY 2017 Less Enacted Div B P.L.114-254** OCO -----	FY 2017 Remaining Req with CR Adj Base + OCO -----
01. Space Procurement, Air Force	3,033,137	3,053,037		3,053,037
02. Spares	22,606	22,606		22,606
20. Undistributed	-249,632	-249,632		-249,632
Total Space Procurement, Air Force	2,806,111	2,826,011		2,826,011

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Department of the Air Force
 FY 2018 President's Budget Request
 Exhibit P-1 FY 2018 President's Budget Request
 Total Obligational Authority
 (Dollars in Thousands)

04 May 2017

Appropriation: Space Procurement, Air Force

Budget Activity -----	FY 2018 Base -----	FY 2018 OCO -----	FY 2018 Total -----
01. Space Procurement, Air Force	3,352,066	2,256	3,354,322
02. Spares	18,709		18,709
20. Undistributed			
Total Space Procurement, Air Force	3,370,775	2,256	3,373,031

Department of the Air Force
 FY 2018 President's Budget Request
 Exhibit P-1 FY 2018 President's Budget Request
 Total Obligational Authority
 (Dollars in Thousands)

04 May 2017

Appropriation: 3021F Space Procurement, Air Force

Line No	Item Nomenclature	Ident Code	FY 2016		FY 2017		FY 2017		S e c
			Quantity	Cost	Quantity	Cost	Quantity	Cost	
Budget Activity 01: Space Procurement, Air Force									
Space Programs									
1	Advanced EHF	A		327,366		645,569		645,569	U
2	AF Satellite Comm System	A		74,673		42,375		42,375	U
3	Counterspace Systems	A		43,065		26,984		46,884	U
4	Family of Beyond Line-of-Sight Terminals	A		52,192	16	88,963	16	88,963	U
5	Wideband Gapfiller Satellites(Space)	A		74,476		86,272		86,272	U
6	GPS III Space Segment	A	1	(255,370)		(34,059)		(34,059)	U
	Less: Advance Procurement (PY)			(-57,000)					U
				198,370		34,059		34,059	
7	Global Postioning (Space)	A		1,623		2,169		2,169	U
8	Spaceborne Equip (Comsec)	A		13,362		46,708		46,708	U
9	Global Positioning (Space)	A		64,135		13,171		13,171	U
10	MILSATCOM	A		35,495		41,799		41,799	U
11	Evolved Expendable Launch Capability	A		571,076		768,586		768,586	U
12	Evolved Expendable Launch Veh(Space)	A	4	679,851	5	737,853	5	737,853	U
13	SBIR High (Space)	A		542,713		362,504		362,504	U
14	SBIR High (Space)								U
	Advance Procurement (CY)								
	C (FY 2018 for FY 2020) (M)								
15	NUDET Detection System	A		5,095		4,395		4,395	U

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Department of the Air Force
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 Total Obligational Authority
 (Dollars in Thousands)

04 May 2017

Appropriation: 3021F Space Procurement, Air Force

Line No	Item Nomenclature	Ident Code	FY 2017 PB Request with CR Adj		FY 2017 Total PB Requests* with CR Adj		FY 2017 Less Enacted Div B P.L.114-254**		FY 2017 Remaining Req with CR Adj		S e c e
			Quantity	Cost	Quantity	Cost	Quantity	Cost	Quantity	Cost	
Budget Activity 01: Space Procurement, Air Force											

Space Programs											
1	Advanced EHF	A									U
2	AF Satellite Comm System	A									U
3	Counterspace Systems	A									U
4	Family of Beyond Line-of-Sight Terminals	A									U
5	Wideband Gapfiller Satellites (Space)	A									U
6	GPS III Space Segment	A									U
	Less: Advance Procurement (PY)										U
			-----	-----	-----	-----	-----	-----	-----		
7	Global Positioning (Space)	A									U
8	Spaceborne Equip (Comsec)	A									U
9	Global Positioning (Space)	A									U
10	MILSATCOM	A									U
11	Evolved Expendable Launch Capability	A									U
12	Evolved Expendable Launch Veh (Space)	A									U
13	SBIR High (Space)	A									U
14	SBIR High (Space)										U
	Advance Procurement (CY)										U
	C (FY 2018 for FY 2020) (M)										U
15	NUDET Detection System	A									U

P-1C1F: FY 2018 President's Budget Request (Published Version), as of May 4, 2017 at 10:02:54

Department of the Air Force
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 (Dollars in Thousands)

04 May 2017

Appropriation: 3021F Space Procurement, Air Force

Line No	Item Nomenclature	Ident Code	FY 2017 Total		FY 2017 Total		FY 2017 Less Enacted		FY 2017 Remaining Req		S e c
			Quantity	Cost	Quantity	Cost	Quantity	Cost	Quantity	Cost	
Budget Activity 01: Space Procurement, Air Force											

Space Programs											
1	Advanced EHF	A		645,569		645,569				645,569	U
2	AF Satellite Comm System	A		42,375		42,375				42,375	U
3	Counterspace Systems	A		26,984		46,884				46,884	U
4	Family of Beyond Line-of-Sight Terminals	A	16	88,963	16	88,963			16	88,963	U
5	Wideband Gapfiller Satellites(Space)	A		86,272		86,272				86,272	U
6	GPS III Space Segment	A		(34,059)		(34,059)				(34,059)	U
	Less: Advance Procurement (PY)										U
				-----		-----				-----	
				34,059		34,059				34,059	
7	Global Postioning (Space)	A		2,169		2,169				2,169	U
8	Spaceborne Equip (Comsec)	A		46,708		46,708				46,708	U
9	Global Positioning (Space)	A		13,171		13,171				13,171	U
10	MILSATCOM	A		41,799		41,799				41,799	U
11	Evolved Expendable Launch Capability	A		768,586		768,586				768,586	U
12	Evolved Expendable Launch Veh(Space)	A	5	737,853	5	737,853			5	737,853	U
13	SBIR High (Space)	A		362,504		362,504				362,504	U
14	SBIR High (Space)										U
	Advance Procurement (CY)										
	C (FY 2018 for FY 2020) (M)										
15	NUDET Detection System	A		4,395		4,395				4,395	U

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Appropriation: 3021F Space Procurement, Air Force

Line No	Item Nomenclature	Ident Code	FY 2018 Base		FY 2018 OCO		FY 2018 Total		S e c
			Quantity	Cost	Quantity	Cost	Quantity	Cost	
Budget Activity 01: Space Procurement, Air Force									

Space Programs									
1	Advanced EHF	A		56,974				56,974	U
2	AF Satellite Comm System	A		57,516				57,516	U
3	Counterspace Systems	A		28,798				28,798	U
4	Family of Beyond Line-of-Sight Terminals	A		146,972				146,972	U
5	Wideband Gapfiller Satellites(Space)	A		80,849				80,849	U
6	GPS III Space Segment	A		(85,894)				(85,894)	U
	Less: Advance Procurement (PY)								U
				-----		-----		-----	
				85,894				85,894	
7	Global Postioning (Space)	A		2,198				2,198	U
8	Spaceborne Equip (Comsec)	A		25,048				25,048	U
9	Global Positioning (Space)	A							U
10	MILSATCOM	A		33,033		2,256		35,289	U
11	Evolved Expendable Launch Capability	A		957,420				957,420	U
12	Evolved Expendable Launch Veh(Space)	A	3	606,488			3	606,488	U
13	SBIR High (Space)	A		981,009				981,009	U
14	SBIR High (Space)								
	Advance Procurement (CY)			132,420				132,420	U
	C (FY 2018 for FY 2020) (M)			(132,420)				(132,420)	
15	NUDET Detection System	A		6,370				6,370	U

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Appropriation: 3021F Space Procurement, Air Force

Line No	Item Nomenclature	Ident Code	FY 2016		FY 2017		FY 2017		S e c
			Quantity	Cost	with CR Adj	Base	Total	PB Requests*	
							with CR Adj	Base	
16	Space Mods	A		24,689		8,642		8,642	U
17	Spacelift Range System Space	A		103,275		123,088		123,088	U
Total Space Procurement, Air Force				2,811,456		3,033,137		3,053,037	
Budget Activity 02: Spares									

SSpares									
18	Initial Spares/Repair Parts	A				22,606		22,606	U
Total Spares						22,606		22,606	
Budget Activity 20: Undistributed									

Undistributed									
19	Adj to Match Continuing Resolution	A				-249,632		-249,632	U
Total Undistributed						-249,632		-249,632	
Total Space Procurement, Air Force				2,811,456		2,806,111		2,826,011	

Department of the Air Force
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 (Dollars in Thousands)

04 May 2017

Appropriation: 3021F Space Procurement, Air Force

Line No	Item Nomenclature	Ident Code	FY 2017 PB Request with CR Adj		FY 2017 Total PB Requests* with CR Adj		FY 2017 Less Enacted Div B P.L.114-254**		FY 2017 Remaining Req with CR Adj		S e c e
			Quantity	Cost	Quantity	Cost	Quantity	Cost	Quantity	Cost	
16	Space Mods	A									U
17	Spacelift Range System Space	A									U
Total Space Procurement, Air Force			-----	-----	-----	-----	-----	-----	-----		
Budget Activity 02: Spares											

SSpares											
18	Initial Spares/Repair Parts	A									U
Total Spares			-----	-----	-----	-----	-----	-----	-----		
Budget Activity 20: Undistributed											

Undistributed											
19	Adj to Match Continuing Resolution	A									U
Total Undistributed			-----	-----	-----	-----	-----	-----	-----		
Total Space Procurement, Air Force			-----	-----	-----	-----	-----	-----	-----		

Department of the Air Force
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 Exhibit P-1 FY 2018 President's Budget Request
 Total Obligational Authority
 (Dollars in Thousands)

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Appropriation: 3021F Space Procurement, Air Force

Line No	Item Nomenclature	Ident Code	FY 2017 Total		FY 2017 Total		FY 2017 Less Enacted		FY 2017 Remaining Req		S e c
			Quantity	Cost	Quantity	Cost	Quantity	Cost	Quantity	Cost	
16	Space Mods	A		8,642		8,642				8,642	U
17	Spacelift Range System Space	A		123,088		123,088				123,088	U
Total Space Procurement, Air Force				3,033,137		3,053,037				3,053,037	
Budget Activity 02: Spares											

SSpares											
18	Initial Spares/Repair Parts	A		22,606		22,606				22,606	U
Total Spares				22,606		22,606				22,606	
Budget Activity 20: Undistributed											

Undistributed											
19	Adj to Match Continuing Resolution	A		-249,632		-249,632				-249,632	U
Total Undistributed				-249,632		-249,632				-249,632	
Total Space Procurement, Air Force				2,806,111		2,826,011				2,826,011	

Department of the Air Force
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 (Dollars in Thousands)

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Appropriation: 3021F Space Procurement, Air Force

Line No	Item Nomenclature	Ident Code	FY 2018 Base		FY 2018 OCO		FY 2018 Total		S e c
			Quantity	Cost	Quantity	Cost	Quantity	Cost	
16	Space Mods	A		37,203			37,203		U
17	Spacelift Range System Space	A		113,874			113,874		U
Total Space Procurement, Air Force				3,352,066		2,256	3,354,322		
Budget Activity 02: Spares									

SSpares									
18	Initial Spares/Repair Parts	A		18,709			18,709		U
Total Spares				18,709			18,709		
Budget Activity 20: Undistributed									

Undistributed									
19	Adj to Match Continuing Resolution	A							U
Total Undistributed									
Total Space Procurement, Air Force				3,370,775		2,256	3,373,031		

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2	01	01	AFSCOM	AF Satellite Comm System.....	Volume 1 - 7
3	01	01	CTRSPC	Counterspace Systems.....	Volume 1 - 19
4	01	01	FBLOST	Family of Beyond Line-of-Sight Terminals.....	Volume 1 - 23
5	01	01	GAP000	Wideband Gapfiller Satellites(Space).....	Volume 1 - 33
6	01	01	GPSIII	GPS III Space Segment.....	Volume 1 - 39
6	01	01	GPSIII	GPS III Space Segment, Advance Procurement.....	Volume 1 - 45
7	01	01	GPSSPC	Global Postioning (Space).....	Volume 1 - 47
8	01	01	MC0MSE	Spaceborne Equip (Comsec).....	Volume 1 - 51
9	01	01	MGPS00	Global Positioning (Space).....	Volume 1 - 55
10	01	01	MILSAT	MILSATCOM.....	Volume 1 - 63
11	01	01	MSEELC	EVOLVED EXPENDABLE LAUNCH CAPABILITY.....	Volume 1 - 69
12	01	01	MSEELV	Evolved Expendable Launch Veh(Space).....	Volume 1 - 79
13	01	01	MSSBIR	SBIR High (Space).....	Volume 1 - 93
14	01	01	MSSBIR	SBIR High (Space), Advance Procurement.....	Volume 1 - 97
15	01	01	NUDETS	NUDET Detection System.....	Volume 1 - 99

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Appropriation 3021F: Space Procurement, Air Force

Line #	BA	BSA	Line Item Number	Line Item Title	Page
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17	01	01	SPRNGE	Spacelift Range System Space.....	Volume 1 - 127

Appropriation 3021F: Space Procurement, Air Force

Line #	BA	BSA	Line Item Number	Line Item Title	Page
18	02	02	SSPARE	Initial Spares/Repair Parts.....	

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Advanced EHF	ADV555	1	01	01.....	Volume 1 - 1
Counterspace Systems	CTRSPC	3	01	01.....	Volume 1 - 19
EVOLVED EXPENDABLE LAUNCH CAPABILITY	MSEELC	11	01	01.....	Volume 1 - 69
Evolved Expendable Launch Veh(Space)	MSEELV	12	01	01.....	Volume 1 - 79
Family of Beyond Line-of-Sight Terminals	FBLOST	4	01	01.....	Volume 1 - 23
GPS III Space Segment	GPSIII	6	01	01.....	Volume 1 - 39
GPS III Space Segment, Advance Procurement	GPSIII	6	01	01.....	Volume 1 - 45
Global Positioning (Space)	MGPS00	9	01	01.....	Volume 1 - 55
Global Postioning (Space)	GPSSPC	7	01	01.....	Volume 1 - 47
Initial Spares/Repair Parts	SSPARE	18	02	02.....	
MILSATCOM	MILSAT	10	01	01.....	Volume 1 - 63
NUDET Detection System	NUDETS	15	01	01.....	Volume 1 - 99
SBIR High (Space)	MSSBIR	13	01	01.....	Volume 1 - 93
SBIR High (Space), Advance Procurement	MSSBIR	14	01	01.....	Volume 1 - 97
Space Mods	SPCMOD	16	01	01.....	Volume 1 - 113
Spaceborne Equip (Comsec)	MCOMSE	8	01	01.....	Volume 1 - 51

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Wideband Gapfiller Satellites(Space)	GAP000	5	01	01.....	Volume 1 - 33

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Air Force • Budget Estimates FY 2018 • Procurement
Exhibit P-1, Procurement Program
(Listing by Appropriation, then Line Number)

Appropriation 3021F: Space Procurement, Air Force
BA 01: Space Procurement, Air Force / BSA 1: Space Programs

Line#	Cost Type	Line Item #	Line Item Title	Cost (\$ in Millions)									
				FY 2016		FY 2017		FY 2018 Base		FY 2018 OCO		FY 2018 Total	
				Quantity	Amount	Quantity	Amount	Quantity	Amount	Quantity	Amount	Quantity	Amount
1	A	ADV555	Advanced EHF	-	327.366	-	645.569	-	56.974	-	0.000	-	56.974
2	A	AFSCOM	AF Satellite Comm System	-	74.673	-	42.375	-	57.516	-	0.000	-	57.516
3	A	CTRSPC	Counterspace Systems	-	43.065	-	46.884	-	28.798	-	0.000	-	28.798
4	A	FBLOST	Family of Beyond Line-of-Sight Terminals	-	52.192	-	88.963	-	146.972	-	0.000	-	146.972
5	A	GAP000	Wideband Gapfiller Satellites(Space)	-	74.476	-	86.272	-	80.849	-	0.000	-	80.849
6	A	GPSIII	GPS III Space Segment	1	255.370	-	34.059	-	85.894	-	0.000	-	85.894
6	B	GPSIII	GPS III Space Segment	1	57.000	-	0.000	-	0.000	-	-	-	0.000
6	C	GPSIII	GPS III Space Segment	1	-	-	-	-	-	-	-	-	-
7	A	GPSSPC	Global Positioning (Space)	-	1.623	-	2.169	-	2.198	-	0.000	-	2.198
8	A	MCOMSE	Spaceborne Equip (Comsec)	-	13.362	-	46.708	-	25.048	-	0.000	-	25.048
9	A	MGPS00	Global Positioning (Space)	-	64.135	-	13.171	-	0.000	-	0.000	-	0.000
10	A	MILSAT	MILSATCOM	-	35.495	-	41.799	-	33.033	-	2.256	-	35.289

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Air Force • Budget Estimates FY 2018 • Procurement
 Exhibit P-1, Procurement Program
 (Listing by Appropriation, then Line Number)

Appropriation 3021F: Space Procurement, Air Force
BA 01: Space Procurement, Air Force / BSA 1: Space Programs

Line#	Cost Type	Line Item #	Line Item Title	Cost (\$ in Millions)									
				FY 2016		FY 2017		FY 2018 Base		FY 2018 OCO		FY 2018 Total	
				Quantity	Amount	Quantity	Amount	Quantity	Amount	Quantity	Amount	Quantity	Amount
11	A	MSEELC	EVOLVED EXPENDABLE LAUNCH CAPABILITY	-	571.076	-	768.586	-	957.420	-	0.000	-	957.420
12	A	MSEELV	Evolved Expendable Launch Veh(Space)	4	679.851	5	737.853	3	606.488	-	0.000	3	606.488
13	A	MSSBIR	SBIR High (Space)	-	542.713	-	362.504	-	981.009	-	0.000	-	981.009
13	B	MSSBIR	SBIR High (Space)	-	0.000	-	0.000	-	0.000	-	-	-	0.000
14	C	MSSBIR	SBIR High (Space)	-	0.000	-	0.000	-	132.420	-	-	-	132.420
15	A	NUDETS	NUDET Detection System	-	5.095	-	4.395	-	6.370	-	0.000	-	6.370
16	A	SPCMOD	Space Mods	-	24.689	-	8.642	-	37.203	-	0.000	-	37.203
17	A	SPRNGE	Spacelift Range System Space	-	103.275	-	123.088	-	113.874	-	0.000	-	113.874
Total: Space Procurement, Air Force / Space Programs				-	2,811.456	-	3,053.037	-	3,352.066	-	2.256	-	3,354.322

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Air Force • Budget Estimates FY 2018 • Procurement
 Exhibit P-1, Procurement Program
 (Listing by Appropriation, then Line Number)

Appropriation 3021F: Space Procurement, Air Force
BA 02: Spares / BSA 2: SSpares

Line#	Cost Type	Line Item #	Line Item Title	Cost (\$ in Millions)									
				FY 2016		FY 2017		FY 2018 Base		FY 2018 OCO		FY 2018 Total	
				Quantity	Amount	Quantity	Amount	Quantity	Amount	Quantity	Amount	Quantity	Amount
18	A	SSPARE	Initial Spares/Repair Parts	-	0.000	-	22.606	-	18.709	-	0.000	-	18.709
Total: Spares / SSpares				-	0.000	-	22.606	-	18.709	-	0.000	-	18.709

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Exhibit P-1M, Procurement Programs - Modification Summary
(Listing by Model)

Lookup Matrix by Model

Model:	Air Force Satellite Control Network		
Modification P-40a Aggregated Items Title:	AF Satellite Comm System		
Item Number	Item Title		Applies to Multiple Models
Uncategorized			
03 - ESD	03-ESD - Electronic Scheduling Dissemination		No
P-3a Individual Modifications			
Modification Number	Modification Title		Applies to Multiple Models
1	Remote Tracking Station Block Change (RBC)		No

Model:	SBIRS		
Modification P-40a Aggregated Items Title:	SBIRS Mobile System & Fixed Comm Electronics Upgrades		
Item Number	Item Title		Applies to Multiple Models
Uncategorized			
SPAF1	SBIRS Mobile System & Fixed Comm Electronics Upgrades		No

Model:	GPS-OCS		
P-3a Individual Modifications			
Modification Number	Modification Title		Applies to Multiple Models
1	NAVSTAR GPS-OCS COTS UPGRADE		No

Model:	NA		
Modification P-40a Aggregated Items Title:	Submarine-Launched Ballistic Missile (SLBM) Radar Warning System		
Item Number	Item Title		Applies to Multiple Models
Uncategorized			

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Air Force • Budget Estimates FY 2018 • Procurement
Exhibit P-1M, Procurement Programs - Modification Summary
(Listing by Model)

Model:	NA	
Modification P-40a Aggregated Items Title:	Submarine-Launched Ballistic Missile (SLBM) Radar Warning System	
Item Number	Item Title	Applies to Multiple Models
P-3A PAVE PAWS Modifications	P-3A PAVE PAWS Modification (formerly PAVE PAWS Front End)	No

Model:	No text provided.	
P-3a Individual Modifications		
Modification Number	Modification Title	Applies to Multiple Models
1	Weather Space Vehicle Relay Ground Station	No

Model:	Spacelift Range System Space	
Modification P-40a Aggregated Items Title:	0305182F SPRNGE	
Item Number	Item Title	Applies to Multiple Models
Uncategorized		
01-MEN	Modernization of Eastern Range Network (MEN)	No
02-WMN	Western Range Modernization of Network (WMN)	No
P-3a Individual Modifications		
Modification Number	Modification Title	Applies to Multiple Models
1	Range Command Destruct Modernization (RCDM)	No
2	Range Communications Facility (RCF)	No

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Air Force • Budget Estimates FY 2018 • Procurement
 Exhibit P-1M, Procurement Programs - Modification Summary
 (Funding for Modifications)

Funding (\$ M)

Modification P-40a Item Title P-3a Modification Title	PYS	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total	FY 2019	FY 2020	FY 2021	FY 2022
Exhibit P-40a										
03-ESD - Electronic Scheduling Dissemination	-	-	-	6.404	-	6.404	-	-	-	-
SBIRS Mobile System & Fixed Comm Electronics Upgrades	-	8.988	7.541	7.693	-	7.693	-	-	-	-
P-3A PAVE PAWS Modification (formerly PAVE PAWS Front End)	-	9.379	-	-	-	-	-	-	-	-
Modernization of Eastern Range Network (MEN)	-	1.048	5.499	3.000	-	3.000	-	-	-	-
Western Range Modernization of Network (WMN)	-	12.779	41.199	7.890	-	7.890	-	-	-	-
Exhibit P-3a										
Remote Tracking Station Block Change (RBC)	0.000	45.666	0.716	25.175	0.000	25.175	-	-	-	-
NAVSTAR GPS-OCS COTS UPGRADE	-	13.136	7.667	13.654	0.000	13.654	-	-	-	-
Weather Space Vehicle Relay Ground Station	-	0.000	0.000	18.620	0.000	18.620	-	-	-	-
Range Command Destruct Modernization (RCDM)	0.000	2.839	3.117	42.127	0.000	42.127	-	-	-	-
Range Communications Facility (RCF)	-	0.000	8.000	20.099	0.000	20.099	-	-	-	-
Totals (Total Obligation Authority)										
Total Obligation Authority	0.000	93.835	73.739	144.662	0.000	144.662	0.000	0.000	0.000	0.000

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ACRONYMS

GENERAL ACRONYMS

A&AS	- Advisory & Assistance Services
ABIDES	- Automated Budget Interactive Data Environment System
ACAT	- Acquisition Category
ACTD	- Advanced Concept Technology Demonstration
AGM	- Air-to-Ground Missile
AIM	- Air Intercept Missile
AIS	- Avionics Intermediate Shop
ACMI	- Aircraft Combat Maneuvering Instrumentation
AMRAAM	- Advanced Medium-Range Air-to-Air Missile
APPN	- Appropriation
ATD	- Advanced Technology Development
BA	- Budget Activity
BLSS	- Base Level Self-Sufficiency Spares
BY	- Budget Year
C3	- Command, Control, and Communication System
CFE	- Contractor Furnished Equipment
CONOPS	- Concept of Operation
CONUS	- Continental United States
CPMS	- Comprehensive Power Management System
CPT	- Cockpit Procedures Trainer
CRA	- Continuing Resolution Authority
CTS	- Countermeasures Test Set
CY	- Current Year
ECCM	- Electronic Counter Counter-Measures
ECM	- Electronic Counter Measures
ECO	- Engineering Change Orders
EOQ	- Economic Order Quantity
ECP	- Engineering Change Proposal
EPA	- Economic Price Adjustment
EW	- Electronic Warfare
EWAIISP	- Electronic Warfare Avionics Integration Support Facility
FLIR	- Forward Looking Infra Red

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FOT&E	- Follow-on Test and Evaluation
FOC	- Fully Operational Capability
FLTS	- Flight Line Test Set
FPIF	- Fixed Price Incentive Firm
FPIS	- Fixed Price Incentive Fee, Successive Targets
FY	- Fiscal Year
GANS	- Global Access Navigation & Safety
GATM	- Global Air Traffic Management
GFE	- Government Furnished Equipment
GFP	- Government Furnished Property
GPS	- Global Positioning System
GSE	- Ground Support Equipment
ICS	- Interim Contractor Support
IOC	- Initial Operating Capability
IPE	- Increased Performance Engine
JPALS	- Joint Precision Approach and Landing System
MAIS	- Major Automated Information System Program
MDAP	- Major Defense Acquisition Program
METS	- Mobile Electronic Test Stations
MYP	- Multiyear Procurement
MSIP	- Multi-Stage Improvement Program
NAVWAR	- Navigation Warfare
NMC Rate	- Not Mission Capable Rate
OFF	- Operational Flight Program
OT&E	- Operational Test and Evaluation
OWRM	- Other War Reserve Material
PAGEL	- Priced Aerospace Ground Equipment List
PB	- President's Budget
PGSE	- Peculiar Ground Support Equipment
PMA	- Program Management Administration
PMC	- Procurement Method Code
PNO	- Acquisition Program Number (MDAP Codes)
PR	- Purchase Request
PRCP	- Program Resource Collection Process
PTT	- Part Task Trainer
PY	- Prior Year

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R&M	- Reliability and Maintainability
RAA	- Required Asset Availability
RDT&E	- Research, Development, Test and Evaluation
RWR	- Radar Warning Receiver
ROM	- Rough Order of Magnitude
SS	- Sole Source
SOF	- Special Operation Force
TAF	- Tactical Air Force
TCAS	- Traffic Collision Alert and Avoidance System
TEWS	- Tactical Electronic Warfare System
TISS	- TEWS Intermediate Support System
TOA	- Total Obligation Authority
WCF	- Working Capital Fund
WRM	- War Reserve Material
WST	- Weapon System Trainer
UAV	- Unmanned Aerial Vehicle
XML	- Extensible Markup Language

BASE / ORGANIZATIONAL ACRONYMS

ACC	- Air Combat Command
AETC	- Air Education & Training Command
AFCAO	- Air Force Computer Acquisition Office
AFCESA	- Air Force Civil Engineering Support Agency
AFCIC	- AF Communications & Information Center
AFCSC	- Air Force Cryptologic Service Center
AFESC	- Air Force Engineering Services Center
AFGWC	- Air Force Global Weather Central
AFIT	- Air Force Institute of Technology
AFLCMC	- Air Force Life Cycle Management Center
AFMC	- Air Force Materiel Command
AFMETCAL	- Air Force Metrology and Calibration Office
AFMLO	- Air Force Medical Logistics Office
AFOSI	- Air Force Office of Special Investigation
AFOTEC	- Air Force Operational Test & Evaluation Center
AFPC	- Air Force Personnel Center

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AFPSL	- AF Primary Standards Lab
AFR	- Air Force Reserve
AFSOC	- AF Special Operations Command
AFSPC	- Air Force Space Command
AIA	- Air Intelligence Agency
ALC	- Air Logistics Center
AMC	- Air Mobility Command
ANG	- Air National Guard
ASC	- Aeronautical Systems Center
AETC	- Air Education Training Command
AU	- Air University
AWS	- Air Weather Service
CIA	- Central Intelligence Agency
DGSC	- Defense General Support Center
DLA	- Defense Logistics Center
DOE	- Department of Energy
DPSC	- Defense Personnel Support Center
DSCC	- Defense Supply Center, Columbus
DTIC	- Defense Technical Information Center
ER	- Eastern Range
ESC	- Electronic Systems Center
FAA	- Federal Aviation Agency
FBI	- Federal Bureau of Investigation
GSA	- General Services Administration
JCS	- Joint Chiefs of Staff
NATO	- North Atlantic Treaty Organization
OSD	- Office of the Secretary of Defense
PACAF	- Pacific Air Forces
USAF	- United States Air Force
USAFA	- United States Air Force Academy
USAFE	- United States Air Force Europe
USCENTCOM	- United States Central Command
USEUCOM	- United States European Command
USMC	- United States Marine Corps
USSTRATCOM	- United States Strategic Command
WP AFB	- Wright-Patterson AFB, OH

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CONTRACT METHOD / TYPE ACRONYMS

C	- Competitive
BA	- Basic Agreement
BOA	- Basic Ordering Agreement
BPA	- Blanket Purchasing Agreement
CS	- Cost Sharing
IDDQ	- Indefinite Delivery, Definite Quantity
IDIQ	- Indefinite Delivery, Indefinite Quantity
IDRT	- Indefinite Delivery, Requirements
Letter	- Letter
LH	- Labor-hour
MIPR	- Military Interdepartmental Purchase Request
MIPR-C	- Military Interdepartmental Purchase Request - Competitive
MIPR-OPT	- Military Interdepartmental Purchase Request - Option
MIPR-OTH	- Military Interdepartmental Purchase Request – Other
MIPR-SS	- Military Interdepartmental Purchase Request - Sole Source
OPT	- Option
OTH	- Other
PO	- Project Order
REQN	- Requisition
SS	- Sole Source
T&M	- Time and Materials
UCA	- Undefinitized Contract Action
WP	- Work Project

CONTRACTED BY ACRONYMS

11 WING	- 11th Support Wing, Washington, DC
ACC	- Air Combat Command, Langley AFB, VA
AEDC	- Arnold Engineering Development Center, Arnold AFB, TN
AAC	- Air Armament Center, Eglin AFB, FL
AEDC	- Arnold Engineering Development Center, Arnold AFB, TN
AETC	- Air Education and Training Command, Randolph AFB, TX
AFCIC	- Air Force Communications and Information Center, Washington, DC
AFCESA	- Air Force Civil Engineering Support Agency, Tyndall AFB, FL
AFFTC	- Air Force Flight Test Center, Edwards AFB, CA

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AFLCMC	- Air Force Life Cycle Management Center, Wright-Patterson AFB, OH
AFMC	- Air Force Materiel Command, Wright-Patterson AFB, OH
AFMETCAL	- Air Force Metrology and Calibration Office, Heath, Ohio
AFMLO	- Air Force Medical Logistics Office, Ft Detrick, MD
AIA	- Air Intelligence Agency, Kelly AFB, TX
AMC	- Air Mobility Command, Scott AFB, IL
ASC	- Aeronautical Systems Center, Wright-Patterson AFB, OH & Eglin AFB, FL
AFWA	- Air Force Weather Agency, Offutt AFB, NE
DGSC	- Defense General Support Center, Richmond, VA
DPSC	- Defense Personnel Support Center, Philadelphia, PA
ER	- Eastern Range, Patrick AFB, FL
ESC	- Electronic Systems Center, Hanscom AFB, MA
HSC	- Human Services Center, Brook AFB, TX
OC-ALC	- Oklahoma City Air Logistics Center, Tinker AFB, OK
OO-ALC	- Ogden Air Logistics Center, Hill AFB, UT
SMC	- Space & Missile Systems Center, Los Angeles AFB, CA
US STRATCOM	- US Strategic Command, Offutt AFB, NE
WACC	- Washington Area Contracting Center, Washington DC
WR	- Western Range, Vandenberg AFB, CA
WR-ALC	- Warner-Robins Air Logistics Center, Robins AFB, GA
AFSPC	- Air Force Space Command, Peterson AFB, CO
HQ ANG	- Headquarters, Air National Guard, Washington, DC
USAFE	- United States Air Force Europe, Ramstein AB, GE
USAFA	- United States Air Force Academy, Colorado Springs, CO
SSG	- Standard Systems Group, Maxwell AFB-Gunter Annex, AL

IDENTIFICATION CODES

Code "A"	- Line items of material which have been approved for Air Force service use.
Code "B"	- Line items of material that have not been approved for Service use
OBAN	- Operating Budget Account Number, 2-digit code for unit allocated funds

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Exhibit P-40, Budget Line Item Justification: FY 2018 Air Force **Date:** May 2017

Appropriation / Budget Activity / Budget Sub Activity:
 3021F: Space Procurement, Air Force / BA 01: Space Procurement, Air Force / BSA
 1: Space Programs

P-1 Line Item Number / Title:
 ADV555 / Advanced EHF

ID Code (A=Service Ready, B=Not Service Ready): A **Program Elements for Code B Items:** N/A **Other Related Program Elements:** 0605431F

Line Item MDAP/MAIS Code: 261

Resource Summary	Prior Years	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total	FY 2019	FY 2020	FY 2021	FY 2022	To Complete	Total
Procurement Quantity (<i>Units in Each</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost (<i>\$ in Millions</i>)	-	327.366	645.569	56.974	0.000	56.974	29.299	31.180	31.742	-	-	1,122.130
Less PY Advance Procurement (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) (<i>\$ in Millions</i>)	-	327.366	645.569	56.974	0.000	56.974	29.299	31.180	31.742	-	-	1,122.130
Plus CY Advance Procurement (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority (<i>\$ in Millions</i>)	-	327.366	645.569	56.974	0.000	56.974	29.299	31.180	31.742	-	-	1,122.130

(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)

Initial Spares (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Flyaway Unit Cost (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-

Description:

Develop and acquire Advanced Extremely High Frequency (AEHF) Military Satellite Communications (MILSATCOM) satellites, mission control segment and cryptography for survivable, anti-jam, worldwide, secure communications for the strategic and tactical warfighter. AEHF satellites will replenish the existing EHF system (Milstar) providing much higher capacity and data rate (5x increase over Milstar II) capabilities. AEHF is a cooperative program that includes International Partners (Canada, the United Kingdom, and the Kingdom of the Netherlands). The AEHF procurement program element funds the Command and Control System - Consolidated (CCS-C) mission unique software and databases for AEHF 4-6 satellites. CCS-C provides launch and early orbit support and on-orbit anomaly resolution.

AEHF Space Vehicle-3 (SV-3) and SV-4 are derivatives of the first two AEHF satellites which were delivered on the AEHF System Development and Demonstration (SDD) contract (RDT&E funded). SV-3 was successfully launched on 18 Sep 2013. SV-4 has a projected launch availability of 1QFY18.

SVs 5 and 6 are being procured under the Department of Defense's Efficient Space Procurement (ESP) approach which enables stable production and strategic sub-tier management through the block buy of space vehicles employing fixed-price contracting. The AEHF block buy of two satellites enables savings by reducing the effect of obsolescence and production breaks, allowing for economic buying of components, and optimizing production resources. Additionally, ESP enables cost efficiencies with the prime and subcontractor team as well as predictability for the space industrial base. SV-5 and SV-6 have projected launch availability in FY19.

The flyaway unit cost is not included on P-40 exhibit because there are multiple P-5 Cost Analysis exhibits.

As of the FY2016 PB submission, space programs' satellite procurement funding has been re-categorized from appropriation 3020, Missile Procurement Air Force (MPAF) to appropriation 3021, Space Procurement Air Force (SPAF), in FY2016 and beyond. Total MPAF/SPAF procurement funding is \$5,729.465M. Total AEHF SV3 SV4 MPAF/SPAF funds are \$3,064.613M. Total AEHF SV5 SV6 MPAF/SPAF funds are \$2,664.852M.

Funding for this exhibit is contained in PE 1203604F.

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Exhibit P-40, Budget Line Item Justification: FY 2018 Air Force **Date:** May 2017

Appropriation / Budget Activity / Budget Sub Activity: 3021F: Space Procurement, Air Force / BA 01: Space Procurement, Air Force / BSA 1: Space Programs **P-1 Line Item Number / Title:** ADV555 / Advanced EHF

ID Code (A=Service Ready, B=Not Service Ready): A **Program Elements for Code B Items:** N/A **Other Related Program Elements:** 0605431F

Line Item MDAP/MAIS Code: 261

Exhibits Schedule					Prior Years	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total
Exhibit Type	Title*	Subexhibits	ID CD	MDAP/MAIS Code	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)
P-5	AEHF SV3 SV4		A		- / -	- / 95.186	- / 33.170	- / -	- / -	- / -
P-5	AEHF SV5 SV6		A		- / -	- / 232.180	- / 612.399	- / 56.974	- / -	- / 56.974
P-40	Total Gross/Weapon System Cost				- / -	- / 327.366	- / 645.569	- / 56.974	- / 0.000	- / 56.974

*Title represents 1) the Number / Title for Items; 2) the Number / Title [DODIC] for Ammunition; and/or 3) the Number / Title (Modification Type) for Modifications.

Note: Totals in this Exhibit P-40 set may not be exact or sum exactly due to rounding.

Justification:
 In FY 2018 AEHF will continue funding efforts such as aspects of the SV 5-6 production block buy, technical support to include obsolescence/Diminishing Manufacturing Sources (DMS) studies, systems engineering and integration (SE&I), AEHF Calibration Facility/Interim Command and Control (ACF/IC2) test asset support, and continue program office and other related support activities that may include, but are not limited to studies, technical analysis, etc.

On 31 Oct 2013, a Fixed-Price Incentive (Firm Target) contract for the AEHF SV 5/6 Production and Launch Operations was definitized, with a period of performance from fiscal years 2012 through 2021. The maximum total program funding liability is \$2.232 billion (includes \$227M in FY11 advanced procurement funds).

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Exhibit P-5, Cost Analysis: FY 2018 Air Force		Date: May 2017
Appropriation / Budget Activity / Budget Sub Activity: 3021F / 01 / 1	P-1 Line Item Number / Title: ADV555 / Advanced EHF	Item Number / Title [DODIC]: - / AEHF SV3 SV4

ID Code (A=Service Ready, B=Not Service Ready) : A	MDAP/MAIS Code:
---	------------------------

Resource Summary	Prior Years	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total
Procurement Quantity (Units in Each)	-	-	-	-	-	-
Gross/Weapon System Cost (\$ in Millions)	-	95.186	33.170	-	-	-
Less PY Advance Procurement (\$ in Millions)	-	-	-	-	-	-
Net Procurement (P-1) (\$ in Millions)	-	95.186	33.170	-	-	-
Plus CY Advance Procurement (\$ in Millions)	-	-	-	-	-	-
Total Obligation Authority (\$ in Millions)	-	95.186	33.170	-	-	-

(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)

Initial Spares (\$ in Millions)	-	-	-	-	-	-
Gross/Weapon System Unit Cost (\$ in Millions)	-	-	-	-	-	-

Note: Subtotals or Totals in this Exhibit P-5 may not be exact or sum exactly due to rounding.

Cost Elements	Prior Years			FY 2016			FY 2017			FY 2018 Base			FY 2018 OCO			FY 2018 Total		
	Unit Cost (\$ M)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ M)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ M)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ M)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ M)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ M)	Qty (Each)	Total Cost (\$ M)
Space Vehicle - AEHF SV3 SV4 Cost																		
Non Recurring Cost																		
Enterprise SE&I	-	-	-	-	-	2.302	-	-	1.479	-	-	-	-	-	-	-	-	-
Technical Mission Analysis (WS)	-	-	-	-	-	10.000	-	-	10.764	-	-	-	-	-	-	-	-	-
<i>Subtotal: Non Recurring Cost</i>	-	-	-	-	-	12.302	-	-	12.243	-	-	-	-	-	-	-	-	-
<i>Subtotal: Space Vehicle - AEHF SV3 SV4 Cost</i>	-	-	-	-	-	12.302	-	-	12.243	-	-	-	-	-	-	-	-	-
Checkout and Launch - AEHF SV3 SV4 Cost																		
AEHF SV 4 Launch Support Services/Launch Readiness	-	-	-	-	-	73.098	-	-	15.128	-	-	-	-	-	-	-	-	-
AEHF SV 4 Propellant	-	-	-	-	-	3.705	-	-	-	-	-	-	-	-	-	-	-	-
AEHF SV 3-4 Satellite Transportation for Launch	-	-	-	-	-	0.000	-	-	1.393	-	-	-	-	-	-	-	-	-
Day-Of-Launch Facility	-	-	-	-	-	0.297	-	-	-	-	-	-	-	-	-	-	-	-
NSA Production Support	-	-	-	-	-	0.840	-	-	-	-	-	-	-	-	-	-	-	-
<i>Subtotal: Checkout and Launch - AEHF SV3 SV4 Cost</i>	-	-	-	-	-	77.940	-	-	16.521	-	-	-	-	-	-	-	-	-
Support - AEHF SV3 SV4 Cost																		
FFRDC	-	-	-	-	-	0.000	-	-	1.656	-	-	-	-	-	-	-	-	-
A&AS	-	-	-	-	-	4.719	-	-	2.000	-	-	-	-	-	-	-	-	-
Other Support	-	-	-	-	-	0.225	-	-	0.750	-	-	-	-	-	-	-	-	-

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Exhibit P-5, Cost Analysis: FY 2018 Air Force												Date: May 2017					
Appropriation / Budget Activity / Budget Sub Activity: 3021F / 01 / 1						P-1 Line Item Number / Title: ADV555 / Advanced EHF						Item Number / Title [DODIC]: - / AEHF SV3 SV4					
ID Code (A=Service Ready, B=Not Service Ready) : A												MDAP/MAIS Code:					

Note: Subtotals or Totals in this Exhibit P-5 may not be exact or sum exactly due to rounding.

Cost Elements	Prior Years			FY 2016			FY 2017			FY 2018 Base			FY 2018 OCO			FY 2018 Total		
	Unit Cost (\$ M)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ M)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ M)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ M)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ M)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ M)	Qty (Each)	Total Cost (\$ M)
<i>Subtotal: Support - AEHF SV3 SV4 Cost</i>	-	-	-	-	-	4.944	-	-	4.406	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost	-	-	-	-	-	95.186	-	-	33.170	-	-	-	-	-	-	-	-	-

Remarks:

Total AEHF SV3 SV4 funds are \$3,064.613M.

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Exhibit P-5, Cost Analysis: FY 2018 Air Force						Date: May 2017		
Appropriation / Budget Activity / Budget Sub Activity: 3021F / 01 / 1			P-1 Line Item Number / Title: ADV555 / Advanced EHF			Item Number / Title [DODIC]: - / AEHF SV5 SV6		
ID Code (A=Service Ready, B=Not Service Ready) : A				MDAP/MAIS Code:				
Resource Summary			Prior Years	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total
Procurement Quantity (Units in Each)			-	-	-	-	-	-
Gross/Weapon System Cost (\$ in Millions)			-	232.180	612.399	56.974	-	56.974
Less PY Advance Procurement (\$ in Millions)			-	-	-	-	-	-
Net Procurement (P-1) (\$ in Millions)			-	232.180	612.399	56.974	-	56.974
Plus CY Advance Procurement (\$ in Millions)			-	-	-	-	-	-
Total Obligation Authority (\$ in Millions)			-	232.180	612.399	56.974	-	56.974
<i>(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)</i>								
Initial Spares (\$ in Millions)			-	-	-	-	-	-
Gross/Weapon System Unit Cost (\$ in Millions)			-	-	-	-	-	-

Note: Subtotals or Totals in this Exhibit P-5 may not be exact or sum exactly due to rounding.

Cost Elements	Prior Years			FY 2016			FY 2017			FY 2018 Base			FY 2018 OCO			FY 2018 Total		
	Unit Cost (\$ M)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ M)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ M)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ M)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ M)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ M)	Qty (Each)	Total Cost (\$ M)
Space Vehicle - SV5 SV6 Cost																		
Recurring Cost																		
AEHF SV 5-6 Block Buy	-	-	-	-	-	182.441	-	-	555.147	-	-	-	-	-	-	-	-	-
Enterprise SE&I	-	-	-	-	-	9.934	-	-	10.558	-	-	12.773	-	-	-	-	-	12.773
Technical Mission Analysis	-	-	-	-	-	12.035	-	-	14.761	-	-	18.039	-	-	-	-	-	18.039
ACF/IC2 Test Asset Support	-	-	-	-	-	8.976	-	-	9.251	-	-	9.093	-	-	-	-	-	9.093
<i>Subtotal: Recurring Cost</i>	-	-	-	-	-	213.386	-	-	589.717	-	-	39.905	-	-	-	-	-	39.905
<i>Subtotal: Space Vehicle - SV5 SV6 Cost</i>	-	-	-	-	-	213.386	-	-	589.717	-	-	39.905	-	-	-	-	-	39.905
Checkout and Launch - SV5 SV6 Cost																		
AEHF SV 5-6 Propellant	-	-	-	-	-	-	-	-	-	-	-	7.861	-	-	-	-	-	7.861
AEHF Spectrum Management	-	-	-	-	-	0.180	-	-	0.244	-	-	0.176	-	-	-	-	-	0.176
AEHF SV 5-6 Launch Support Services/Launch Readiness	-	-	-	-	-	0.214	-	-	0.531	-	-	0.000	-	-	-	-	-	0.000
Command & Control System-Consolidated (CCS-C) Launch Support AEHF 5-6	-	-	-	-	-	1.906	-	-	0.000	-	-	-	-	-	-	-	-	-
AEHF SV 5-6 Satellite Transportation for Launch	-	-	-	-	-	-	-	-	1.533	-	-	1.685	-	-	-	-	-	1.685

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Exhibit P-5, Cost Analysis: FY 2018 Air Force												Date: May 2017					
Appropriation / Budget Activity / Budget Sub Activity: 3021F / 01 / 1						P-1 Line Item Number / Title: ADV555 / Advanced EHF						Item Number / Title [DODIC]: - / AEHF SV5 SV6					
ID Code (A=Service Ready, B=Not Service Ready) : A												MDAP/MAIS Code:					

Note: Subtotals or Totals in this Exhibit P-5 may not be exact or sum exactly due to rounding.

Cost Elements	Prior Years			FY 2016			FY 2017			FY 2018 Base			FY 2018 OCO			FY 2018 Total		
	Unit Cost (\$ M)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ M)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ M)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ M)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ M)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ M)	Qty (Each)	Total Cost (\$ M)
<i>Subtotal: Checkout and Launch - SV5 SV6 Cost</i>	-	-	-	-	-	2.300	-	-	2.308	-	-	9.722	-	-	-	-	-	9.722
<i>Support - SV5 SV6 Cost</i>																		
FFRDC	-	-	-	-	-	0.600	-	-	0.621	-	-	2.400	-	-	-	-	-	2.400
A&AS	-	-	-	-	-	15.894	-	-	19.753	-	-	4.628	-	-	-	-	-	4.628
Other Support	-	-	-	-	-	0.000	-	-	0.000	-	-	0.319	-	-	-	-	-	0.319
<i>Subtotal: Support - SV5 SV6 Cost</i>	-	-	-	-	-	16.494	-	-	20.374	-	-	7.347	-	-	-	-	-	7.347
Gross/Weapon System Cost	-	-	-	-	-	232.180	-	-	612.399	-	-	56.974	-	-	-	-	-	56.974

Remarks:

AEHF SV 5-6 Block Buy funding includes Engineering Change Orders

Total AEHF SV5 SV6 funds are \$2,664.852M.

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Exhibit P-40, Budget Line Item Justification: FY 2018 Air Force **Date:** May 2017

Appropriation / Budget Activity / Budget Sub Activity:
 3021F: Space Procurement, Air Force / BA 01: Space Procurement, Air Force / BSA
 1: Space Programs

P-1 Line Item Number / Title:
 AFSCOM / AF Satellite Comm System

ID Code (A=Service Ready, B=Not Service Ready): A **Program Elements for Code B Items:** 0305110F **Other Related Program Elements:** 1203110F

Line Item MDAP/MAIS Code: N/A

Resource Summary	Prior Years	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total	FY 2019	FY 2020	FY 2021	FY 2022	To Complete	Total
Procurement Quantity (<i>Units in Each</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost (<i>\$ in Millions</i>)	0.000	74.673	42.375	57.516	0.000	57.516	44.507 ^(a)	47.924 ^(b)	48.785 ^(c)	49.783 ^(d)	-	365.563 ^(e)
Less PY Advance Procurement (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) (<i>\$ in Millions</i>)	0.000	74.673	42.375	57.516	0.000	57.516	44.507	47.924	48.785	49.783	-	365.563
Plus CY Advance Procurement (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority (<i>\$ in Millions</i>)	0.000	74.673	42.375	57.516	0.000	57.516	44.507	47.924	48.785	49.783	-	365.563

(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)

Initial Spares (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Flyaway Unit Cost (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-

Description:

The Air Force Satellite Control Network (AFSCN) is a satellite ground terminal network comprised of two communication nodes (Schriever AFB & Vandenberg AFB) and 15 antenna systems. The antennas are distributed around the world at seven locations -- Vandenberg Tracking Station (VTS), Diego Garcia Station (DGS), Guam Tracking Station (GTS), Hawaii Tracking Station (HTS), New Hampshire Tracking Station (NHS), Thule Tracking Station (TTS), and Telemetry and Commanding Station (TCS) at RAF Oakingham, England -- to ensure global coverage for 140 satellites in various orbits. The AFSCN conducts an average of 450 satellite contacts per day supporting Positioning, Navigation and Timing (PNT); Intelligence, Surveillance and Reconnaissance (ISR); Missile Warning; Communications; Weather; and Research and Development (R&D) satellites for Department of Defense (DoD), Intelligence Community (IC), and National Aeronautics and Space Administration (NASA) operations. While most of the 450 satellite contacts/day are routine command and control activities, the AFSCN is also used for satellite emergencies (e.g. tumbling satellite) because its high power antennas are often the only earthbound assets that can contact a non-responsive satellite to re-establish command & control. During FY 2016, the AFSCN supported 11 space vehicle emergencies resulting in the preservation of over \$2.7B worth of satellites. In addition to routine and emergency satellite operations C2, the AFSCN provides support to launch vehicle and early orbit operations, ensuring worldwide antennas receive telemetry and transmit commands to newly orbiting satellites to initiate early orbit checkout. During FY 2016, the AFSCN supported 21 NSS launches delivering \$9.8B worth of satellites to their operational orbits. Finally, the AFSCN provides Factory Compatibility Testing (FCT) to ensure satellites and launch vehicles can communicate via the AFSCN before the satellite is launched.

These funds are used to procure modernized equipment and SE&I for the AFSCN to ensure the capability is available to support DoD, Intelligence community, and civil users.

Support Enterprise Ground Service (EGS), Commercial Augmentation, cybersecurity operations & implementation of the evolving Space Warfighter Construct (SWC) in response to the Space Enterprise Vision (SEV).

Principal efforts include:

AFSCN Interim Supply Support: procures support services, peculiar and common support materials, and required re-procurement data for the Satellite Control Network Contract, and to transition to government supply support.

AFSCN Commodity Procurement: The Air Force will use various contract vehicles to address the highest priority concerns/issues. Obsolescence and sustainment "worst actors" are prioritized annually in order of criticality to the mission. The potential for failed satellite contacts drives priority. In FY 2018, funds are planned to be used for Cyber Defense solutions, to AFSCN Network Edge Transport System (ANETS) formerly Wide Area Network Interface (WANIF) implementation and Electronic Scheduling Dissemination Standard Space Training environment for external users. Other FYDP projects include: Authentication,

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Exhibit P-40, Budget Line Item Justification: FY 2018 Air Force		Date: May 2017
Appropriation / Budget Activity / Budget Sub Activity: 3021F: Space Procurement, Air Force / BA 01: Space Procurement, Air Force / BSA 1: Space Programs		P-1 Line Item Number / Title: AFSCOM / AF Satellite Comm System
ID Code (A=Service Ready, B=Not Service Ready): A	Program Elements for Code B Items: 0305110F	Other Related Program Elements: 1203110F
Line Item MDAP/MAIS Code: N/A		
<p>Authorization, Auditing/Host Based Security System (AAA/HBSS) implementation to external users, AFSCN test bed (ATB) replacements, continued cyber defense work, network automation, moving the ATB from a leased contractor facility to a government facility, Range/Network/Communication obsolescence replacements, and Multi-band & Phased Array projects.</p> <p>Remote Tracking Station (RTS) Block Change (RBC): The RBC Program was initiated in Dec 2001 to modernize the legacy system. The RBC program replaces legacy remote ground antenna systems that have reached end of life. To date, RBC systems have been installed at VTS, DGS, TCS, GTS, HTS, and NHS. TTS completed in 1Q FY 2016. In addition, the Air Force is upgrading the electronics in the remaining eight serviceable systems. This "hybrid" architecture couples the RBC electronics with existing antennas and normalizes electronics across the network. A prototype effort was implemented in FY 2012 to validate the approach and the first two hybrid articles were awarded in FY 2013 to upgrade legacy systems at GTS and HTS. A third article was awarded in FY 2014 to upgrade the legacy system at VTS. Funds in FY 2015 (DGS, TTS), FY 2016 (TCS, NHS) and FY 2018 (TCS, a station with three antenna systems) continue RBC Hybrid procurement for the remaining locations; completion is projected by FY 2022. Finally, the Enhanced High Power Amplifier (EHPA) spacecraft anomaly resolution system scheduled for first-article delivery in 4Q 2016 is delayed due to development issues to 3Q FY2018 and the remaining EHPA buys will be delayed as well; VTS is moved from FY 2016 to FY 2018. NHS remains in FY 2019 and DGS is planned for FY 2020. Future EHPA buys for VTS, NHS and DGS will provide high-power capability at four sites. The EHPA enables emergency satellite operations and is needed to replace obsolete parts. These efforts include systems engineering and integration (SE&I) activities.</p> <p>ELECTRONIC SCHEDULING DISSEMINATION: ESD allows satellite operators to request contact time with their satellites via the shared AFSCN antennas, automatically de-conflict overlapping requests, create a schedule, and publish the schedule in real time to all users. The ESD program may require a new hardware purchase to integrate selected tool or will initialize Interim Contractor Support (ICS) pending successful resolution of all known CAT I Urgent Deficiency Reports (DRs). The ICS phase, including ongoing maintenance, drawing updates, technical data updates, and general support will be required as ESD prepares for initial deployment. The ICS period concludes once maintenance responsibility is transferred to the inheriting organization. ICS is planned for approximately one year across FY 2018 - FY 2019.</p> <p>Funding for this effort is contained in PE 0305110F. As of the FY 2016 PB submission, space programs procurement funding has been re-categorized from appropriation 3080, Other Procurement Air Force (OPAF) to appropriation 3021, Space Procurement Air Force (SPAF), in FY 2016 and beyond. This exhibit will display values in FY 2016 and beyond. Total OPAF/SPAF procurement funding is \$365.563M.</p> <p>Recapitalization Projects are reclassified as commodity buys instead of modifications, because they do not change form, fit, function of a fielded system or subsystem. Therefore associated funding for these commodities is now described on a P-40a exhibit instead of a P-3a exhibit for this budget submission.</p> <p>Funding in this exhibit for FY 2018 to "Cost to Complete" is budgeted in PE 1203110F.</p>		

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Exhibit P-40, Budget Line Item Justification: FY 2018 Air Force **Date:** May 2017

Appropriation / Budget Activity / Budget Sub Activity:
3021F: Space Procurement, Air Force / BA 01: Space Procurement, Air Force / BSA
1: Space Programs

P-1 Line Item Number / Title:
AFSCOM / AF Satellite Comm System

ID Code (A=Service Ready, B=Not Service Ready): A **Program Elements for Code B Items:** 0305110F **Other Related Program Elements:** 1203110F

Line Item MDAP/MAIS Code: N/A

Exhibits Schedule					Prior Years	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total
Exhibit Type	Title*	Subexhibits	ID CD	MDAP/MAIS Code	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)
P-5	AF Satellite Comm System		B		- / -	- / 20.259	- / 26.162	- / 19.828	- / -	- / 19.828
P-40a	AF Satellite Comm System				- / 0.000	- / 0.000	- / 0.000	- / 6.404	- / 0.000	- / 6.404
P-3a	1 / Remote Tracking Station Block Change (RBC) (Capability Improvement)				- / 0.000	- / 45.666	- / 0.716	- / 25.175	- / 0.000	- / 25.175
P-40a	AF Satellite Comm System				- / -	- / 8.748	- / 15.497	- / 6.109	- / -	- / 6.109
P-40	Total Gross/Weapon System Cost				- / 0.000	- / 74.673	- / 42.375	- / 57.516	- / 0.000	- / 57.516

Exhibits Schedule					FY 2019	FY 2020	FY 2021	FY 2022	To Complete	Total
Exhibit Type	Title*	Subexhibits	ID CD	MDAP/MAIS Code	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)
P-5	AF Satellite Comm System		B		- / -	- / -	- / -	- / -	- / -	- / -
P-40a	AF Satellite Comm System				- / -	- / -	- / -	- / -	- / -	- / -
P-3a	1 / Remote Tracking Station Block Change (RBC) (Capability Improvement)				- / -	- / -	- / -	- / -	- / -	- / -
P-40a	AF Satellite Comm System				- / -	- / -	- / -	- / -	- / -	- / -
P-40	Total Gross/Weapon System Cost				- / 44.507	- / 47.924	- / 48.785	- / 49.783	- / -	- / 365.563

*Title represents 1) the Number / Title for Items; 2) the Number / Title [DODIC] for Ammunition; and/or 3) the Number / Title (Modification Type) for Modifications. Title represents the P-40a Title when only the P-40a Summary/Total is shown.

Note: Totals in this Exhibit P-40 set may not be exact or sum exactly due to rounding.

- Justification:**
- 1) AFSCN Interim Supply Support (P-5): FY 2018 funding provides peculiar and common support material, required re-procurement data, and interim supply support management. In addition, funds procure the most urgently needed capital equipment replacements for items that exceed the O&M dollar threshold. This equipment replaces items such as, but not limited to, high power amplifiers, processors, archival event recorders, and router switches, AFSCN Link Projection System (ALPS) equipment, legacy Electronic Scheduling Dissemination (ESD) 2.7 equipment and Diminishing Manufacturing Sources and Material Shortages (DMSMS) items which are at the top of the sustainers "worst actors" list and account for significant maintenance effort, down time, and lost or failed contacts.
 - 2) AFSCN Commodity Procurement (P-40a): FY18 funds are critical to ensuring telemetry, tracking, and commanding are provided for over 140 satellites and that satellite emergencies requiring high-power antennas can be supported.
 - 3) RBC (P3a): FY18 funds ensure telemetry, tracking, and commanding are provided for over 140 satellites and that satellite emergencies requiring high-power antennas can be supported.
 - 4) ELECTRONIC SCHEDULING DISSEMINATION (P3a): FY18 funds are required to ensuring operational turnover and deployment of the ESD system, allowing satellite operators to request contact time, create a schedule, and publish the schedule in real-time to all users. Without this system, the process would require extensive manual operator interaction, which exceeds current operational resources.
 - 5) FY18 funds will continue program office and other related support activities that may include, but are not limited to studies, technical analysis, etc.

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Exhibit P-40, Budget Line Item Justification: FY 2018 Air Force		Date: May 2017
Appropriation / Budget Activity / Budget Sub Activity: 3021F: Space Procurement, Air Force / BA 01: Space Procurement, Air Force / BSA 1: Space Programs		P-1 Line Item Number / Title: AFSCOM / AF Satellite Comm System
ID Code (A=Service Ready, B=Not Service Ready): A	Program Elements for Code B Items: 0305110F	Other Related Program Elements: 1203110F
Line Item MDAP/MAIS Code: N/A		

Efforts with funding starting in FY 2019 through FY 2022 are summarized on the P-40. Not all details of this funding are included in this P-40 exhibit set. A summary of the excepted details is as follows:

- (a) FY 2019 Cost Delta: 44.507 million
- (b) FY 2020 Cost Delta: 47.924 million
- (c) FY 2021 Cost Delta: 48.785 million
- (d) FY 2022 Cost Delta: 49.783 million
- (e) FY Total Cost Delta: 365.563 million

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Exhibit P-5, Cost Analysis: FY 2018 Air Force						Date: May 2017		
Appropriation / Budget Activity / Budget Sub Activity: 3021F / 01 / 1			P-1 Line Item Number / Title: AFSCOM / AF Satellite Comm System			Item Number / Title [DODIC]: - / AF Satellite Comm System		
ID Code (A=Service Ready, B=Not Service Ready) : B				MDAP/MAIS Code:				
Resource Summary			Prior Years	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total
Procurement Quantity (Units in Each)			-	-	-	-	-	-
Gross/Weapon System Cost (\$ in Millions)			-	20.259	26.162	19.828	-	19.828
Less PY Advance Procurement (\$ in Millions)			-	-	-	-	-	-
Net Procurement (P-1) (\$ in Millions)			-	20.259	26.162	19.828	-	19.828
Plus CY Advance Procurement (\$ in Millions)			-	-	-	-	-	-
Total Obligation Authority (\$ in Millions)			-	20.259	26.162	19.828	-	19.828
<i>(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)</i>								
Initial Spares (\$ in Millions)			-	-	-	-	-	-
Gross/Weapon System Unit Cost (\$ in Millions)			-	-	-	-	-	-

Note: Subtotals or Totals in this Exhibit P-5 may not be exact or sum exactly due to rounding.

Cost Elements	Prior Years			FY 2016			FY 2017			FY 2018 Base			FY 2018 OCO			FY 2018 Total		
	Unit Cost (\$ M)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ M)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ M)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ M)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ M)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ M)	Qty (Each)	Total Cost (\$ M)
Logistics - AFSCNS Cost																		
Recurring Cost																		
INTERIM SUPPLY SPT - Labor	-	-	-	-	-	2.229	-	-	0.918	-	-	1.110	-	-	-	-	-	1.110
INTERIM SUPPLY SPT -- Materiel	-	-	-	-	-	3.344	-	-	1.377	-	-	1.665	-	-	-	-	-	1.665
Technical Mission Analysis	-	-	-	-	-	8.498	-	-	8.299	-	-	5.636	-	-	-	-	-	5.636
Test & Evaluation	-	-	-	-	-	0.557	-	-	0.518	-	-	0.534	-	-	-	-	-	0.534
Enterprise Systems Engineering and Integration (SE&I)	-	-	-	-	-	1.662	-	-	9.645	-	-	5.891	-	-	-	-	-	5.891
<i>Subtotal: Recurring Cost</i>	-	-	-	-	-	16.290	-	-	20.757	-	-	14.836	-	-	-	-	-	14.836
<i>Subtotal: Logistics - AFSCNS Cost</i>	-	-	-	-	-	16.290	-	-	20.757	-	-	14.836	-	-	-	-	-	14.836
Support - Support End Item Cost																		
Advisory & Assistance Services (A&AS)	-	-	-	-	-	1.650	-	-	2.551	-	-	2.390	-	-	-	-	-	2.390
Other Support	-	-	-	-	-	0.727	-	-	1.111	-	-	0.798	-	-	-	-	-	0.798
FFRDC	-	-	-	-	-	1.592	-	-	1.743	-	-	1.804	-	-	-	-	-	1.804
<i>Subtotal: Support - Support End Item Cost</i>	-	-	-	-	-	3.969	-	-	5.405	-	-	4.992	-	-	-	-	-	4.992
Gross/Weapon System Cost	-	-	-	-	-	20.259	-	-	26.162	-	-	19.828	-	-	-	-	-	19.828

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Exhibit P-40a, Budget Item Justification For Aggregated Modification Items: FY 2018 Air Force **Date:** May 2017

Appropriation / Budget Activity / Budget Sub Activity: 3021F / 01 / 1	P-1 Line Item Number / Title: AFSCOM / AF Satellite Comm System	Aggregated Modification Items Title: AF Satellite Comm System
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Item Number / Title	ID CD	MDAP/MAIS Code	Prior Years			FY 2016			FY 2017			FY 2018 Base			FY 2018 OCO			FY 2018 Total		
			Unit Cost (\$ M)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ M)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ M)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ M)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ M)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ M)	Qty (Each)	Total Cost (\$ M)
03 - ESD / 03-ESD - Electronic Scheduling Dissemination			-	-	-	-	-	-	-	-	-	-	-	6.404	-	-	-	-	-	6.404
Total			-	-	0.000	-	-	0.000	-	-	0.000	-	-	6.404	-	-	0.000	-	-	6.404

Note: Subtotals or Totals in this Exhibit P-40a may not be exact or sum exactly, due to rounding.

Modification Information:

Item Number / Title	Models of Systems Affected	Modification Type
03 - ESD / 03-ESD - Electronic Scheduling Dissemination	Air Force Satellite Control Network	Capability Improvement

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Exhibit P-3a, Individual Modification: FY 2018 Air Force		Date: May 2017
Appropriation / Budget Activity / Budget Sub Activity: 3021F / 01 / 1	P-1 Line Item Number / Title: AFSCOM / AF Satellite Comm System	Modification Number / Title: 1 / Remote Tracking Station Block Change (RBC)

ID Code (A=Service Ready, B=Not Service Ready) :	MDAP/MAIS Code:
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Resource Summary	Prior Years	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total	FY 2019	FY 2020	FY 2021	FY 2022	To Complete	Total
Procurement Quantity (<i>Units in Each</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost (<i>\$ in Millions</i>)	0.000	45.666	0.716	25.175	0.000	25.175	-	-	-	-	-	-
Less PY Advance Procurement (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) (<i>\$ in Millions</i>)	0.000	45.666	0.716	25.175	0.000	25.175	-	-	-	-	-	-
Plus CY Advance Procurement (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority (<i>\$ in Millions</i>)	0.000	45.666	0.716	25.175	0.000	25.175	-	-	-	-	-	-
<i>(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)</i>												
Initial Spares (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-

Description:

Remote Tracking Station (RTS) Block Change (RBC): FY18 Funds are required for an RBC Hybrid at TCS, and an EHPA at VTS. These efforts include systems engineering and integration (SE&I) activities.

The RBC Program was initiated in Dec 2001 to modernize the legacy system. The RBC program replaces legacy remote ground antenna systems that have reached end of life. To date, RBC systems have been installed at VTS, DGS, TCS, GTS, HTS, and NHS. TTS completed in 1Q FY 2016. In addition, the Air Force is upgrading the electronics in the remaining eight serviceable systems. This "hybrid" architecture couples the RBC electronics with existing antennas and normalizes electronics across the network. A prototype effort was implemented in FY 2012 to validate the approach and the first two hybrid articles were awarded in FY 2013 to upgrade legacy systems at GTS and HTS. A third article was awarded in FY 2014 to upgrade the legacy system at VTS. Funds in FY 2015 (DGS, TTS), FY 2016 (TCS, NHS) and FY 2018 (TCS, a station with three antenna systems) continue RBC Hybrid procurement for the remaining locations; completion is projected by FY 2022. Finally, the Enhanced High Power Amplifier (EHPA) spacecraft anomaly resolution system scheduled for first-article delivery in 4Q 2016 is delayed due to development issues to 3Q FY 2018 and the remaining EHPA buys will be delayed as well; VTS is moved from FY 2016 to FY 2018. NHS remains in FY 2019 and DGS is planned for FY 2020. Future EHPA buys for VTS, NHS and DGS will provide high-power capability at four sites. The EHPA enables emergency satellite operations and is needed to replace obsolete parts.

Milestone/Development Status

N/A

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Exhibit P-3a, Individual Modification: FY 2018 Air Force		Date: May 2017
Appropriation / Budget Activity / Budget Sub Activity: 3021F / 01 / 1	P-1 Line Item Number / Title: AFSCOM / AF Satellite Comm System	Modification Number / Title: 1 / Remote Tracking Station Block Change (RBC)

ID Code (A=Service Ready, B=Not Service Ready) :	MDAP/MAIS Code:
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Models of Systems Affected: Air Force Satellite Control Network	Modification Type: Capability Improvement	Related RDT&E PEs:
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Financial Plan	Prior Years	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total	FY 2019	FY 2020	FY 2021	FY 2022	To Complete	Total
	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)

Procurement

Modification Item 1 of 2: E-HPA												
B Kits												
Recurring												
E-HPA:EQUIPMENT Group B (Active)	- / -	- / -	- / -	1 / 8.662	- / -	1 / 8.662	- / -	- / -	- / -	- / -	- / -	- / -
<i>Subtotal: Recurring</i>	- / -	- / -	- / -	- / 8.662	- / -	- / 8.662	- / -	- / -	- / -	- / -	- / -	- / -
<i>Subtotal: E-HPA</i>	- / -	- / -	- / -	- / 8.662	- / -	- / 8.662	- / -	- / -	- / -	- / -	- / -	- / -
Modification Item 2 of 2: RBC/Hybrid												
B Kits												
Recurring												
RBC/Hybrid:EQUIPMENT Group B (Active)	- / -	2 / 45.666	- / 0.716	1 / 16.513	- / -	1 / 16.513	- / -	- / -	- / -	- / -	- / -	- / -
<i>Subtotal: Recurring</i>	- / -	- / 45.666	- / 0.716	- / 16.513	- / -	- / 16.513	- / -	- / -	- / -	- / -	- / -	- / -
<i>Subtotal: RBC/Hybrid</i>	- / -	- / 45.666	- / 0.716	- / 16.513	- / -	- / 16.513	- / -	- / -	- / -	- / -	- / -	- / -
<i>Subtotal: Procurement, All Modification Items</i>	- / -	- / 45.666	- / 0.716	- / 25.175	- / -	- / 25.175	- / -	- / -	- / -	- / -	- / -	- / -

Installation

Modification Item 1 of 2: E-HPA												
Modification Item 2 of 2: RBC/Hybrid												
<i>Subtotal: Installation</i>	- / -	2 / 0.000	- / -	2 / 0.000	- / -	2 / 0.000	- / -	- / -	- / -	- / -	- / -	- / -

Total												
Total Cost (Procurement + Support + Installation)	0.000	45.666	0.716	25.175	0.000	25.175	-	-	-	-	-	-

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Exhibit P-3a, Individual Modification: FY 2018 Air Force		Date: May 2017
Appropriation / Budget Activity / Budget Sub Activity: 3021F / 01 / 1	P-1 Line Item Number / Title: AFSCOM / AF Satellite Comm System	Modification Number / Title: 1 / Remote Tracking Station Block Change (RBC)

ID Code (A=Service Ready, B=Not Service Ready) :	MDAP/MAIS Code:
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Modification Item 1 of 2: E-HPA

Manufacturer Information

Manufacturer Name: Honeywell Technical Solutions, Inc (HTSI)	Manufacturer Location: Colorado Springs, CO
Administrative Leadtime (in Months): 9	Production Leadtime (in Months): 24

Dates	FY 2016	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022
Contract Dates	Oct 2016	Oct 2017	Oct 2018				
Delivery Dates	Oct 2018	Oct 2019	Oct 2020				

Installation Information

Method of Implementation: Contract Field Team

Installation Cost	Prior Years	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total	FY 2019	FY 2020	FY 2021	FY 2022	To Complete	Total
	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)
Prior Years	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2016	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2017	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2018	- / -	- / -	- / -	1 / 0.000	- / -	1 / 0.000	- / -	- / -	- / -	- / -	- / -	- / -
FY 2019	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2020	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2021	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2022	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
Total	- / -	- / -	- / -	1 / 0.000	- / -	1 / 0.000	- / -	- / -	- / -	- / -	- / -	- / -

Installation Schedule

	PYS	FY 2016				FY 2017				FY 2018				FY 2019				FY 2020				FY 2021				FY 2022				TC	Tot
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4		
In	0	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	1	-	-	-	1	-	-	-	-	-	-	-	-	0	3
Out	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	1	-	-	-	1	-	-	-	-	0	3

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Exhibit P-3a, Individual Modification: FY 2018 Air Force		Date: May 2017
Appropriation / Budget Activity / Budget Sub Activity: 3021F / 01 / 1	P-1 Line Item Number / Title: AFSCOM / AF Satellite Comm System	Modification Number / Title: 1 / Remote Tracking Station Block Change (RBC)

ID Code (A=Service Ready, B=Not Service Ready) :	MDAP/MAIS Code:
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Modification Item 2 of 2: RBC/Hybrid

Manufacturer Information

Manufacturer Name: Honeywell Technical Solutions, Inc (HTSI)	Manufacturer Location: Colorado Springs, CO
Administrative Leadtime (in Months): 9	Production Leadtime (in Months): 9

Dates	FY 2016	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022
Contract Dates	Mar 2016	Mar 2017	Mar 2018				
Delivery Dates	Dec 2016	Dec 2017	Dec 2018				

Installation Information

Method of Implementation: Contract Field Team

Installation Cost	Prior Years	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total	FY 2019	FY 2020	FY 2021	FY 2022	To Complete	Total
	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)
Prior Years	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2016	- / -	2 / 0.000	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2017	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2018	- / -	- / -	- / -	1 / 0.000	- / -	1 / 0.000	- / -	- / -	- / -	- / -	- / -	- / -
FY 2019	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2020	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2021	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2022	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
Total	- / -	2 / 0.000	- / -	1 / 0.000	- / -	1 / 0.000	- / -	- / -	- / -	- / -	- / -	- / -

Installation Schedule

	PYS	FY 2016				FY 2017				FY 2018				FY 2019				FY 2020				FY 2021				FY 2022				TC	Tot
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4		
In	0	-	2	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	3
Out	0	-	-	-	-	-	-	-	-	-	-	-	-	-	2	-	-	-	1	-	-	-	-	-	-	-	-	-	-	0	3

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Exhibit P-40a, Budget Item Justification For Aggregated Items: FY 2018 Air Force **Date:** May 2017

Appropriation / Budget Activity / Budget Sub Activity: 3021F / 01 / 1	P-1 Line Item Number / Title: AFSCOM / AF Satellite Comm System	Aggregated Items Title: AF Satellite Comm System
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Item Number / Title [DODIC]	ID CD	MDAP/MAIS Code	Prior Years			FY 2016			FY 2017			FY 2018 Base			FY 2018 OCO			FY 2018 Total		
			Unit Cost (\$ M)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ M)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ M)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ M)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ M)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ M)	Qty (Each)	Total Cost (\$ M)
Commodity Procurement																				
Commodity Procurement	A		-	-	-	8.748	1	8.748	15.497	1	15.497	6.109	1	6.109	-	-	-	6.109	1	6.109
Subtotal: Commodity Procurement			-	-	-	-	-	8.748	-	-	15.497	-	-	6.109	-	-	-	-	-	6.109
Total			-	-	-	-	-	8.748	-	-	15.497	-	-	6.109	-	-	-	-	-	6.109

Note: Subtotals or Totals in this Exhibit P-40a may not be exact or sum exactly, due to rounding.

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Exhibit P-40, Budget Line Item Justification: FY 2018 Air Force **Date:** May 2017

Appropriation / Budget Activity / Budget Sub Activity:
 3021F: Space Procurement, Air Force / BA 01: Space Procurement, Air Force / BSA
 1: Space Programs

P-1 Line Item Number / Title:
 CTRSPC / Counterspace Systems

ID Code (A=Service Ready, B=Not Service Ready): B **Program Elements for Code B Items:** 0604421F **Other Related Program Elements:** N/A

Line Item MDAP/MAIS Code: N/A

Resource Summary	Prior Years	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total	FY 2019	FY 2020	FY 2021	FY 2022	To Complete	Total
Procurement Quantity (<i>Units in Each</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost (<i>\$ in Millions</i>)	-	43.065	46.884	28.798	0.000	28.798	1.130	0.000	0.000	0.000	-	119.877
Less PY Advance Procurement (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) (<i>\$ in Millions</i>)	-	43.065	46.884	28.798	0.000	28.798	1.130	0.000	0.000	0.000	-	119.877
Plus CY Advance Procurement (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority (<i>\$ in Millions</i>)	-	43.065	46.884	28.798	0.000	28.798	1.130	0.000	0.000	0.000	-	119.877

(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)

Initial Spares (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Flyaway Unit Cost (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-

Description:

The Counter Communications System (CCS) Pre-planned Product Improvement (P3I) program provides expeditionary, deployable, reversible offensive space control (OCS) effects applicable across the full spectrum of conflict. It prevents adversary satellite communications (SATCOM) in the Area of Responsibility (AOR) including Command and Control (C2), Early Warning, and Propaganda; and hosts Rapid Reaction Capabilities in response to Urgent Needs. Acquisition Decision Memorandum (24 April 2009) directed all capabilities identified in the October 2006 CCS Block 20, Joint Requirements Oversight Council (JROC) approved Capability Development Document (CDD) shall be accomplished as P3I upgrades to the CCS Block 10.

Funding for this exhibit and developmental funding for CCS is in Program Element 1206421F, BPAC 65A001 Counterspace Systems.

Bounty Hunter (BH) supports the Defensive Space Control of US systems in a specific AOR and provides the capacity to prevent effective adversary use of Command, Control, Communications, Computers, and Intelligence (C4I). The system was originally a response to Joint Urgent Operational Need. In 2013 AF Requirements Oversight Council directed incorporation of BH capabilities into a Program of Record.

Developmental funding for BH is in Program Element 1206421F, BPAC 65A013 Bounty Hunter.

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Exhibit P-40, Budget Line Item Justification: FY 2018 Air Force **Date:** May 2017

Appropriation / Budget Activity / Budget Sub Activity: 3021F: Space Procurement, Air Force / BA 01: Space Procurement, Air Force / BSA 1: Space Programs **P-1 Line Item Number / Title:** CTRSPC / Counterspace Systems

ID Code (A=Service Ready, B=Not Service Ready): B **Program Elements for Code B Items:** 0604421F **Other Related Program Elements:** N/A

Line Item MDAP/MAIS Code: N/A

Exhibits Schedule					Prior Years	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total
Exhibit Type	Title*	Subexhibits	ID CD	MDAP/MAIS Code	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)
P-5	Counterspace Systems		B		- / -	- / 43.065	- / 46.884	- / 28.798	- / 0.000	- / 28.798
P-40	Total Gross/Weapon System Cost				- / -	- / 43.065	- / 46.884	- / 28.798	- / 0.000	- / 28.798

*Title represents 1) the Number / Title for Items; 2) the Number / Title [DODIC] for Ammunition; and/or 3) the Number / Title (Modification Type) for Modifications.

Note: Totals in this Exhibit P-40 set may not be exact or sum exactly due to rounding.

Justification:
 COUNTER COMMUNICATIONS SYSTEM (CCS): Funding in FY 2018 provides equipment (e.g., signal generation hardware, antennas, spectrum analyzers) for two completely new CCS 10.2 systems (versus an upgrade to an existing CCS 10.1 system) for the Active Duty Air Force and Air National Guard (ANG) Units. Continue program office and other related support activities that may include, but are not limited to studies, technical analysis, etc.

 BOUNTY HUNTER (BH): Funding in FY 2018 provides equipment (e.g., emitters, antennas, spectrum analyzers) upgrades to the currently deployed BH system to counter emerging Electro-magnetic Interference (EMI), EMI upgrades to the second BH system currently in CONUS, production of a BH training system and production of a BH accreditation system.

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Exhibit P-5, Cost Analysis: FY 2018 Air Force						Date: May 2017		
Appropriation / Budget Activity / Budget Sub Activity: 3021F / 01 / 1			P-1 Line Item Number / Title: CTRSPC / Counterspace Systems			Item Number / Title [DODIC]: - / Counterspace Systems		
ID Code (A=Service Ready, B=Not Service Ready) : B				MDAP/MAIS Code:				
Resource Summary			Prior Years	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total
Procurement Quantity (Units in Each)			-	-	-	-	-	-
Gross/Weapon System Cost (\$ in Millions)			-	43.065	46.884	28.798	0.000	28.798
Less PY Advance Procurement (\$ in Millions)			-	-	-	-	-	-
Net Procurement (P-1) (\$ in Millions)			-	43.065	46.884	28.798	0.000	28.798
Plus CY Advance Procurement (\$ in Millions)			-	-	-	-	-	-
Total Obligation Authority (\$ in Millions)			-	43.065	46.884	28.798	0.000	28.798
<i>(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)</i>								
Initial Spares (\$ in Millions)			-	-	-	-	-	-
Gross/Weapon System Unit Cost (\$ in Millions)			-	-	-	-	-	-

Note: Subtotals or Totals in this Exhibit P-5 may not be exact or sum exactly due to rounding.

Cost Elements	Prior Years			FY 2016			FY 2017			FY 2018 Base			FY 2018 OCO			FY 2018 Total		
	Unit Cost (\$ M)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ M)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ M)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ M)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ M)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ M)	Qty (Each)	Total Cost (\$ M)
Hardware - Hardware End Item Cost																		
Recurring Cost																		
a. CCS 10.2 Upgrade Kit	-	-	-	4.246	2	8.492	-	-	0.000	-	-	0.000	-	-	-	-	-	0.000
b. CCS 10.2 System	-	-	-	6.339	3	19.016	6.339	2	12.677	7.132	2	14.265	-	-	-	7.132	2	14.265
c. CCS Antennas	-	-	-	3.790	4	15.161	3.790	2	7.581	3.982	2	7.963	-	-	-	3.982	2	7.963
d. CCS Antenna Upgrades	-	-	-	-	-	-	1.430	16	22.886	-	-	-	-	-	-	-	-	-
e. CCS Depot Spares	-	-	-	-	-	-	3.350	1	3.350	-	-	-	-	-	-	-	-	-
f. BH EMI Upgrade Kit	-	-	-	-	-	-	-	-	-	0.800	2	1.600	-	-	-	0.800	2	1.600
g. BH Reference Emitters	-	-	-	-	-	-	-	-	-	0.235	7	1.645	-	-	-	0.235	7	1.645
h. BH Training / Accreditation Systems	-	-	-	-	-	-	-	-	-	1.408	2	2.816	-	-	-	1.408	2	2.816
<i>Subtotal: Recurring Cost</i>	-	-	-	-	-	42.669	-	-	46.494	-	-	28.289	-	-	-	-	-	28.289
<i>Subtotal: Hardware - Hardware End Item Cost</i>	-	-	-	-	-	42.669	-	-	46.494	-	-	28.289	-	-	-	-	-	28.289
Support - Support End Item Cost																		
e. FFRDC	-	-	-	-	-	0.155	-	-	0.125	-	-	0.230	-	-	-	-	-	0.230
f. A&AS	-	-	-	-	-	0.241	-	-	0.265	-	-	0.279	-	-	-	-	-	0.279
<i>Subtotal: Support - Support End Item Cost</i>	-	-	-	-	-	0.396	-	-	0.390	-	-	0.509	-	-	-	-	-	0.509
Gross/Weapon System Cost	-	-	-	-	-	43.065	-	-	46.884	-	-	28.798	-	-	0.000	-	-	28.798

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Exhibit P-5, Cost Analysis: FY 2018 Air Force		Date: May 2017
Appropriation / Budget Activity / Budget Sub Activity: 3021F / 01 / 1	P-1 Line Item Number / Title: CTRSPC / Counterspace Systems	Item Number / Title [DODIC]: - / Counterspace Systems
ID Code (A=Service Ready, B=Not Service Ready) : B	MDAP/MAIS Code:	

UNCLASSIFIED

Exhibit P-40, Budget Line Item Justification: FY 2018 Air Force **Date:** May 2017

Appropriation / Budget Activity / Budget Sub Activity:
 3021F: Space Procurement, Air Force / BA 01: Space Procurement, Air Force / BSA
 1: Space Programs

P-1 Line Item Number / Title:
 FBLOST / Family of Beyond Line-of-Sight Terminals

ID Code (A=Service Ready, B=Not Service Ready): B **Program Elements for Code B Items:** 0303001F **Other Related Program Elements:** 0303601F

Line Item MDAP/MAIS Code: 199

Resource Summary	Prior Years	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total	FY 2019	FY 2020	FY 2021	FY 2022	To Complete	Total
Procurement Quantity (<i>Units in Each</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost (<i>\$ in Millions</i>)	-	52.192	88.963	146.972	0.000	146.972	28.096	32.357	8.569	0.000	-	357.149
Less PY Advance Procurement (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) (<i>\$ in Millions</i>)	-	52.192	88.963	146.972	0.000	146.972	28.096	32.357	8.569	0.000	-	357.149
Plus CY Advance Procurement (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority (<i>\$ in Millions</i>)	-	52.192	88.963	146.972	0.000	146.972	28.096	32.357	8.569	0.000	-	357.149
<i>(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)</i>												
Initial Spares (<i>\$ in Millions</i>)	-	-	14.078	3.598	-	3.598	20.752	-	-	-	-	38.428
Flyaway Unit Cost (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-

Description:

The Family of Advanced Beyond Line-of-Sight Terminals (FAB-T) program replaces legacy Milstar terminals and will provide Extremely High Frequency (EHF), protected high data rate communication for nuclear and conventional forces to include Presidential and National Voice Conferencing (PNVC). FAB-T will provide this new, highly secure, state-of-the-art capability for DoD platforms to include strategic platforms and airborne/ground command posts via Milstar, AEHF, and Enhanced Polar System (EPS) satellites. FAB-T terminals will also support the critical command and control (C2) of the Milstar, AEHF and EPS satellite constellations. In June 2014 the Air Force down-selected to Raytheon for production of FAB-T Command Post Terminals (CPT). Production contract options to produce CPT terminals were exercised after a successful Milestone C decision was approved September 1, 2015. In FY 2018, FAB-T will begin full rate production terminal purchases as described in the P-5a and P-21, while continuing site survey and terminal install activities, and Interim Contractor Support of existing fielded terminals. Also, the program will begin activity to ensure FAB-T terminal interoperability with the full AEHF satellite constellation. Continue program office and other related support activities that may include, but are not limited to studies, technical analysis, etc

PNVC communication Baseband Interface Group (BIG) equipment purchases will provide voice encoding/decoding and encryption/decryption via KY-280s for use with Milstar and Advanced EHF satellite communication networks. The equipment will support Senior Leader Conferencing via Survivable Emergency Communication Networks (SECN) digitization and support, secure, survivable voice conferencing capability for the President and national senior leaders.

In June 2014 the Air Force down-selected to Raytheon for production of FAB-T Command Post Terminals (CPT). Production contract options to produce CPT terminals were exercised after a Milestone C decision was approved September 1, 2015.

In the prior years through FY 2014, FAB-T was in OPAF Line Item Number 836780.

In FY 2015 FAB-T was in OPAF Line Item Number 836700.

This exhibit is funded in PE 1203001F.

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Exhibit P-40, Budget Line Item Justification: FY 2018 Air Force **Date:** May 2017

Appropriation / Budget Activity / Budget Sub Activity: 3021F: Space Procurement, Air Force / BA 01: Space Procurement, Air Force / BSA 1: Space Programs
P-1 Line Item Number / Title: FBLOST / Family of Beyond Line-of-Sight Terminals

ID Code (A=Service Ready, B=Not Service Ready): B **Program Elements for Code B Items:** 0303001F **Other Related Program Elements:** 0303601F

Line Item MDAP/MAIS Code: 199

Exhibits Schedule					Prior Years	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total
Exhibit Type	Title*	Subexhibits	ID CD	MDAP/MAIS Code	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)
P-5	Family of Beyond Line-of-Sight Terminals	P-5a, P-21	B		- / -	- / 52.192	16 / 88.963	- / 146.972	- / 0.000	- / 146.972
P-40	Total Gross/Weapon System Cost				- / -	- / 52.192	- / 88.963	- / 146.972	- / 0.000	- / 146.972

*Title represents 1) the Number / Title for Items; 2) the Number / Title [DODIC] for Ammunition; and/or 3) the Number / Title (Modification Type) for Modifications.

Note: Totals in this Exhibit P-40 set may not be exact or sum exactly due to rounding.

Justification:
 In FY 2018, FAB-T will begin full rate production terminal purchases as described in the P-5a and P-21, while continuing site survey and terminal install activities, and Interim Contractor Support of existing fielding terminals. Also, the program will begin activity to ensure FAB-T terminal interoperability with the full AEHF satellite constellation. PNVC will purchase Baseband Interface Group equipment. Continue program office and other related support activities that may include, but are not limited to studies, technical analysis, etc.

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Exhibit P-5, Cost Analysis: FY 2018 Air Force		Date: May 2017
Appropriation / Budget Activity / Budget Sub Activity: 3021F / 01 / 1	P-1 Line Item Number / Title: FBLOST / Family of Beyond Line-of-Sight Terminals	Item Number / Title [DODIC]: - / Family of Beyond Line-of-Sight Terminals

ID Code (A=Service Ready, B=Not Service Ready) : B	MDAP/MAIS Code:
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Resource Summary	Prior Years	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total
Procurement Quantity (Units in Each)	-	-	16	-	-	-
Gross/Weapon System Cost (\$ in Millions)	-	52.192	88.963	146.972	0.000	146.972
Less PY Advance Procurement (\$ in Millions)	-	-	-	-	-	-
Net Procurement (P-1) (\$ in Millions)	-	52.192	88.963	146.972	0.000	146.972
Plus CY Advance Procurement (\$ in Millions)	-	-	-	-	-	-
Total Obligation Authority (\$ in Millions)	-	52.192	88.963	146.972	0.000	146.972

(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)

Initial Spares (\$ in Millions)	-	0.000	14.078	3.598	-	3.598
Gross/Weapon System Unit Cost (\$ in Millions)	-	-	5.560	-	-	-

Note: Subtotals or Totals in this Exhibit P-5 may not be exact or sum exactly due to rounding.

Cost Elements	Prior Years			FY 2016			FY 2017			FY 2018 Base			FY 2018 OCO			FY 2018 Total		
	Unit Cost (\$ M)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ M)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ M)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ M)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ M)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ M)	Qty (Each)	Total Cost (\$ M)
Hardware - 0303601F MILSATCOM Space; 0303001F FBLOST Cost																		
Recurring Cost																		
FAB-T Terminals (PE 33601F/33001F) ^(†)	-	-	-	4.157	9	37.416	3.641	18	65.537	4.339	26	112.826	-	-	-	4.339	26	112.826
Technical Mission Analysis	-	-	-	-	-	6.230	-	-	17.665	-	-	25.834	-	-	-	-	-	25.834
Enterprise SE&I	-	-	-	-	-	2.770	-	-	2.031	-	-	2.067	-	-	-	-	-	2.067
GFE	-	-	-	-	-	3.140	-	-	-	-	-	0.000	-	-	-	-	-	0.000
<i>Subtotal: Recurring Cost</i>	-	-	-	-	-	49.556	-	-	85.233	-	-	140.727	-	-	-	-	-	140.727
<i>Subtotal: Hardware - 0303601F MILSATCOM Space; 0303001F FBLOST Cost</i>	-	-	-	-	-	49.556	-	-	85.233	-	-	140.727	-	-	-	-	-	140.727
Hardware - PNVC Cost																		
Recurring Cost																		
BIG Terminal	-	-	-	-	-	-	-	-	-	0.369	6	2.214	-	-	-	0.369	6	2.214
<i>Subtotal: Recurring Cost</i>	-	-	-	-	-	-	-	-	-	-	-	2.214	-	-	-	-	-	2.214
<i>Subtotal: Hardware - PNVC Cost</i>	-	-	-	-	-	-	-	-	-	-	-	2.214	-	-	-	-	-	2.214
Support - 0303001F FBLOST Cost																		
FAB-T A&AS	-	-	-	-	-	1.668	-	-	3.135	-	-	3.308	-	-	-	-	-	3.308
Other Support	-	-	-	-	-	0.968	-	-	0.595	-	-	0.723	-	-	-	-	-	0.723

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Exhibit P-5, Cost Analysis: FY 2018 Air Force		Date: May 2017
Appropriation / Budget Activity / Budget Sub Activity: 3021F / 01 / 1	P-1 Line Item Number / Title: FBLOST / Family of Beyond Line-of-Sight Terminals	Item Number / Title [DODIC]: - / Family of Beyond Line-of-Sight Terminals
ID Code (A=Service Ready, B=Not Service Ready) : B		MDAP/MAIS Code:

Note: Subtotals or Totals in this Exhibit P-5 may not be exact or sum exactly due to rounding.

Cost Elements	Prior Years			FY 2016			FY 2017			FY 2018 Base			FY 2018 OCO			FY 2018 Total		
	Unit Cost (\$ M)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ M)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ M)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ M)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ M)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ M)	Qty (Each)	Total Cost (\$ M)
<i>Subtotal: Support - 0303001F FBLOST Cost</i>	-	-	-	-	-	2.636	-	-	3.730	-	-	4.031	-	-	-	-	-	4.031
Gross/Weapon System Cost	-	-	-	-	-	52.192	5.560	16	88.963	-	-	146.972	-	-	0.000	-	-	146.972

Remarks:

This P-Doc incorporates two Program Elements for FAB-T: PE 0303601F - Prior years through FY 2015; and PE 0303001F - FY 2016 and out.

(†) indicates the presence of a P-5a

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Exhibit P-5a, Procurement History and Planning: FY 2018 Air Force								Date: May 2017				
Appropriation / Budget Activity / Budget Sub Activity: 3021F / 01 / 1			P-1 Line Item Number / Title: FBLOST / Family of Beyond Line-of-Sight Terminals					Item Number / Title [DODIC]: - / Family of Beyond Line-of-Sight Terminals				

Cost Elements	O C O	FY	Contractor and Location	Method/Type or Funding Vehicle	Location of PCO	Award Date	Date of First Delivery	Qty (Each)	Unit Cost (\$ M)	Specs Avail Now?	Date Revision Available	RFP Issue Date
FAB-T Terminals (PE 33601F/33001F) ^(†)		2016	Raytheon / Largo, FL	Various	AFLCMC Hanscom AFB	Jul 2016	Jan 2018	9	4.157	N	Jun 2016	Mar 2013
FAB-T Terminals (PE 33601F/33001F) ^(†)		2017	Raytheon / Largo, FL	Various	AFLCMC Hanscom AFB	Apr 2017	Sep 2018	18	3.641	N	Mar 2017	Mar 2013
FAB-T Terminals (PE 33601F/33001F) ^(†)		2018	Raytheon / Largo, FL	Various	AFLCMC Hanscom AFB	Apr 2018	Sep 2019	26	4.339	N	Nov 2017	Mar 2013

^(†) indicates the presence of a P-21

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Exhibit P-21, Production Schedule: FY 2018 Air Force															Date: May 2017									
Appropriation / Budget Activity / Budget Sub Activity: 3021F / 01 / 1										P-1 Line Item Number / Title: FBLOST / Family of Beyond Line-of-Sight Terminals										Item Number / Title [DODIC]: - / Family of Beyond Line-of-Sight Terminals				

Cost Elements <i>(Units in Each)</i>						Fiscal Year 2018												Fiscal Year 2019												BALANCE	
O C O	M F R #	FY	SERVICE	PROC QTY	ACCEPT PRIOR TO 1 OCT 2017	BAL DUE AS OF 1 OCT	Calendar Year 2018												Calendar Year 2019												
							O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P	O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G		S E P
FAB-T Terminals (PE 33601F/33001F)																															
	1	2016	AF	9	0	9	-	-	-	1	1	1	1	1	1	1	1												0		
	1	2017	AF	18	0	18	-	-	-	-	-	-	-	-	-	1	1	2	2	2	2	1	2	2	1	1	1		0		
	1	2018	AF	26	0	26																						2	24		
							O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P	O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P	

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Exhibit P-21, Production Schedule: FY 2018 Air Force															Date: May 2017														
Appropriation / Budget Activity / Budget Sub Activity: 3021F / 01 / 1										P-1 Line Item Number / Title: FBLOST / Family of Beyond Line-of-Sight Terminals										Item Number / Title [DODIC]: - / Family of Beyond Line-of-Sight Terminals									

Cost Elements <i>(Units in Each)</i>						Fiscal Year 2020												Fiscal Year 2021												BALANCE	
O C O	M F R #	FY	SERVICE	PROC QTY	ACCEPT PRIOR TO 1 OCT 2019	BAL DUE AS OF 1 OCT	Calendar Year 2020												Calendar Year 2021												
							O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P	O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G		S E P
FAB-T Terminals (PE 33601F/33001F)																															
	1	2016	AF	9	9	0																						0			
	1	2017	AF	18	18	0																						0			
	1	2018	AF	26	2	24	2	2	2	2	2	2	2	2	2	2												0			
							O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P	O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P	

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Exhibit P-21, Production Schedule: FY 2018 Air Force		Date: May 2017
Appropriation / Budget Activity / Budget Sub Activity: 3021F / 01 / 1	P-1 Line Item Number / Title: FBLOST / Family of Beyond Line-of-Sight Terminals	Item Number / Title [DODIC]: - / Family of Beyond Line-of-Sight Terminals

MFR Ref #	Manufacturer Name - Location	Production Rates (Each / Year)			Procurement Leadtime (Months)								
		MSR For 2018	1-8-5 For 2018	MAX For 2018	Initial				Reorder				
					ALT Prior to Oct 1	ALT After Oct 1	Manufacturing PLT	Total After Oct 1	ALT Prior to Oct 1	ALT After Oct 1	Manufacturing PLT	Total After Oct 1	
1	Raytheon - Largo, FL	1	36	60	0	0	0	0	0	0	0	0	0

"A" in the Delivery Schedule indicates the Contract Award Date.

Note: Due to space limitations, quantities in the Exhibit P-21 delivery calendar are truncated and rounded based on the maximum quantity in the calendar as follows. If the maximum quantity is less than or equal to than 9,999, all quantities are shown as each. If the maximum quantity is between 10,000 and 999,999 all quantities are shown in thousands. If the maximum quantity is between 1,000,000 and 999,999,999 all quantities are shown in millions (rounded to the nearest thousand). If the maximum quantity is equal or greater than 1,000,000,000 all quantities are shown in billions (rounded to the nearest million).

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Exhibit P-40, Budget Line Item Justification: FY 2018 Air Force **Date:** May 2017

Appropriation / Budget Activity / Budget Sub Activity:
3021F: Space Procurement, Air Force / BA 01: Space Procurement, Air Force / BSA
1: Space Programs

P-1 Line Item Number / Title:
GAP000 / Wideband Gapfiller Satellites(Space)

ID Code (A=Service Ready, B=Not Service Ready): A **Program Elements for Code B Items:** N/A **Other Related Program Elements:** 0605433F

Line Item MDAP/MAIS Code: 326

Resource Summary	Prior Years	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total	FY 2019	FY 2020	FY 2021	FY 2022	To Complete	Total
Procurement Quantity (<i>Units in Each</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost (<i>\$ in Millions</i>)	-	74.476	86.272	80.849	0.000	80.849	62.112	0.000	0.000	0.000	-	303.709
Less PY Advance Procurement (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) (<i>\$ in Millions</i>)	-	74.476	86.272	80.849	0.000	80.849	62.112	0.000	0.000	0.000	-	303.709
Plus CY Advance Procurement (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority (<i>\$ in Millions</i>)	-	74.476	86.272	80.849	0.000	80.849	62.112	0.000	0.000	0.000	-	303.709

(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)

Initial Spares (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Flyaway Unit Cost (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-

Description:

The Wideband Global SATCOM (WGS) System provides the DoD with high data rate military satellite communication (MILSATCOM) services in accordance with the Joint Space Management Board-approved MILSATCOM architecture (August 1996), the Joint Requirements Oversight Council (JROC)-approved MILSATCOM Capstone Requirements Document (October 1997), and JROC-approved WGS Operational Requirements Document (May 2000). This program was originally conceived to augment the near-term "bandwidth gap" in warfighter communications needs. Dual-frequency WGS satellites augment, then replace the DoD's Defense Satellite Communications System X-band service and augment one-way Global Broadcast Service Ka-band capabilities. In addition, WGS provides a high capacity two-way Ka-band service.

WGS Block I consists of satellites 1-3. These satellites were successfully launched on 10 October 2007, 3 April 2009, and 5 December 2009, respectively.

WGS Block II consists of satellites 4-6. Block II satellites are designed with slight modifications to better support the Airborne Intelligence, Surveillance and Reconnaissance mission. Satellite 4 was successfully launched on 19 January 2012. Satellite 5 was successfully launched on 24 May 2013.

A United States-Australia WGS partnership was codified in a Memorandum of Understanding (MOU) dated 14 November 2007. Australia provides funds needed to buy Space Vehicle-6 (SV-6) in exchange for access to constellation-wide (SVs 1-6) resources. Satellite 6 was successfully launched on 7 August 2013. SV-6 is not included in the Procurement Quantities in these documents.

WGS Block II Follow-On (B2FO) consists of satellites 7-10. The WGS procurement program element funds the Command and Control System - Consolidated (CCS-C) mission unique software and databases for the WGS B2FO satellites. CCS-C provides launch and early orbit support and on-orbit anomaly resolution.

A multilateral partnership between the United States, Canada, Denmark, Luxembourg, the Netherlands, and New Zealand was codified in an MOU in January 2012. The United States contributions include existing and programmed infrastructure, to include the acquisition, launch, operations, and sustainment costs of WGS 1-8, and the launch, operations, and sustainment of SV-9. Other Partners' contributions fund SV-9 acquisition and support activities. Each Partner provides funds needed to buy SV-9 in exchange for access to constellation-wide (SVs 1-9) resources commensurate with its level of contribution. SV-9 is not included in the Procurement Quantities in these documents.

WGS-7 was successfully launched on 23 July 2015. WGS-8 was successfully launched on 7 December 2016. WGS-9 was successfully launched on 18 March 2017. WGS-10 will be launched in FY19.

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Exhibit P-40, Budget Line Item Justification: FY 2018 Air Force		Date: May 2017
Appropriation / Budget Activity / Budget Sub Activity: 3021F: Space Procurement, Air Force / BA 01: Space Procurement, Air Force / BSA 1: Space Programs		P-1 Line Item Number / Title: GAP000 / Wideband Gapfiller Satellites(Space)
ID Code (A=Service Ready, B=Not Service Ready): A	Program Elements for Code B Items: N/A	Other Related Program Elements: 0605433F
Line Item MDAP/MAIS Code: 326		
<p>Discussions for potential future partnerships regarding the WGS program continue in support of National Space Policy and improved operational efficiency.</p> <p>The Air Force has been working to identify opportunities for more affordable, efficient commercial satellite communications (COMSATCOM) business arrangements. Specifically, the Space and Missile Systems Center (SMC), Military Satellite Communications Systems (MILSATCOM) Directorate has developed a five phase COMSATCOM pathfinder investment strategy to burn down risk targeting affordability and performance.</p> <p>In an FY2014 effort to study SATCOM capabilities to support Remotely Piloted Aircraft (RPA) requirements, the WGS program invested \$8.0M in what is known as COMSATCOM Pathfinder #1. In Pathfinder #1, on-orbit commercial Ku-band transponders were purchased to support AFRICOM while demonstrating risk mitigation steps toward future innovative, affordable procurement of long term COMSATCOM capabilities.</p> <p>In FY2016, Congress added \$26.0M for the COMSATCOM Pathfinder effort. Pathfinder #2 will purchase commercial pre-launch transponders that will include protection features.</p> <p>In FY2017, the Air Force will execute Pathfinder #3. Pathfinder #3 builds on the Pathfinder #2 scope and incorporates access to commercial ground stations. The current plan for Pathfinder #3 is to use an Other Transactions Authority (OTA) contract to purchase commercial transponders and ground station hardware at a commercial site. Under the OTA, the government and contractor team will demonstrate the ability to flexibly reassign bandwidth between multiple users and work cooperatively to refine that process over a period of five years. As the current interpretation of the OTA statutes within the Air Force indicates that this type of OTA requires RDT&E funds, the Air Force is seeking reprogramming to re-color Pathfinder #3 funds from Procurement to RDT&E.</p> <p>In FY2018-2019, the Air Force has programmed funds for Pathfinders #4-5. Pathfinder #4 is being developed to ensure it will address portions of the five goals from the FY16 NDAA that were not addressed in Pathfinders #1-3. Pathfinder #5 will culminate with use of commercial high-capacity satellites to demonstrate all five goals from the FY16 NDAA.</p> <p>The flyaway unit cost is not included on P-40 exhibit because there are multiple P-5 Cost Analysis exhibits.</p> <p>As of the FY2016 PB submission, space programs' satellite procurement funding has been re-categorized from Appropriation 3020, Missile Procurement Air Force (MPAF), to Appropriation 3021, Space Procurement Air Force (SPAF), in FY2016 and beyond. Total MPAF/SPAF procurement funding is \$3,322.439M. Total WGS SV1-SV5 MPAF funds are \$1,619.426M. There are no WGS SV1-SV5 SPAF funds. Total WGS Block II Follow-On (B2FO) MPAF/SPAF funds are \$1,703.013M.</p> <p>Funding for this exhibit is contained in PE 1203600F.</p> <p>This program has associated Research Development Test and Evaluation funding in PE 1206433F.</p>		

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Exhibit P-40, Budget Line Item Justification: FY 2018 Air Force **Date:** May 2017

Appropriation / Budget Activity / Budget Sub Activity:
3021F: Space Procurement, Air Force / BA 01: Space Procurement, Air Force / BSA
1: Space Programs

P-1 Line Item Number / Title:
GAP000 / Wideband Gapfiller Satellites(Space)

ID Code (A=Service Ready, B=Not Service Ready): A **Program Elements for Code B Items:** N/A **Other Related Program Elements:** 0605433F

Line Item MDAP/MAIS Code: 326

Exhibits Schedule					Prior Years	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total
Exhibit Type	Title*	Subexhibits	ID CD	MDAP/MAIS Code	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)
P-5	WGS B2FO		A		- / -	- / 74.476	- / 86.272	- / 80.849	- / -	- / 80.849
P-40	Total Gross/Weapon System Cost				- / -	- / 74.476	- / 86.272	- / 80.849	- / 0.000	- / 80.849

*Title represents 1) the Number / Title for Items; 2) the Number / Title [DODIC] for Ammunition; and/or 3) the Number / Title (Modification Type) for Modifications.

Note: Totals in this Exhibit P-40 set may not be exact or sum exactly due to rounding.

Justification:

FY2018 funding includes: Continue support for Block II Follow-On (B2FO) satellite production, including Federally Funded Research and Development Center (FFRDC) technical analysis, mission assurance, test support (to include Camp Parks), technical support to include obsolescence/Diminishing Manufacturing Sources (DMS) studies, program office and other related support activities. Continue to expand the COMSATCOM Pathfinder investment to provide affordable, resilient, flexible, high capacity COMSATCOM capabilities to users worldwide. Also funds the Command and Control System - Consolidated (CCS-C) mission unique software and databases for the WGS Block II Follow-On (B2FO) satellites. Continue program office and other related support activities that may include, but are not limited to studies, technical analysis, etc.

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Exhibit P-5, Cost Analysis: FY 2018 Air Force		Date: May 2017
Appropriation / Budget Activity / Budget Sub Activity: 3021F / 01 / 1	P-1 Line Item Number / Title: GAP000 / Wideband Gapfiller Satellites(Space)	Item Number / Title [DODIC]: - / WGS B2FO

ID Code (A=Service Ready, B=Not Service Ready) : A				MDAP/MAIS Code:			
Resource Summary		Prior Years	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total
Procurement Quantity (Units in Each)		-	-	-	-	-	-
Gross/Weapon System Cost (\$ in Millions)		-	74.476	86.272	80.849	-	80.849
Less PY Advance Procurement (\$ in Millions)		-	-	-	-	-	-
Net Procurement (P-1) (\$ in Millions)		-	74.476	86.272	80.849	-	80.849
Plus CY Advance Procurement (\$ in Millions)		-	-	-	-	-	-
Total Obligation Authority (\$ in Millions)		-	74.476	86.272	80.849	-	80.849
<i>(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)</i>							
Initial Spares (\$ in Millions)		-	-	-	-	-	-
Gross/Weapon System Unit Cost (\$ in Millions)		-	-	-	-	-	-

Note: Subtotals or Totals in this Exhibit P-5 may not be exact or sum exactly due to rounding.

Cost Elements	Prior Years			FY 2016			FY 2017			FY 2018 Base			FY 2018 OCO			FY 2018 Total		
	Unit Cost (\$ M)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ M)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ M)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ M)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ M)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ M)	Qty (Each)	Total Cost (\$ M)
Checkout and Launch - WGS Block II Follow-On Cost																		
WGS Block II Follow-On Checkout & Launch/ Launch Readiness	-	-	-	-	-	28.393	-	-	23.682	-	-	26.878	-	-	-	-	-	26.878
WGS Block II Follow-On Storage, Reactivation and Transport	-	-	-	-	-	3.038	-	-	17.556	-	-	-	-	-	-	-	-	-
Command & Control System - Consolidated (CCS-C) WGS Block II Follow-On support	-	-	-	-	-	-	-	-	-	-	-	0.208	-	-	-	-	-	0.208
Technical Mission Analysis	-	-	-	-	-	9.468	-	-	6.200	-	-	5.339	-	-	-	-	-	5.339
WGS Enterprise SE&I	-	-	-	-	-	1.596	-	-	1.688	-	-	0.881	-	-	-	-	-	0.881
<i>Subtotal: Checkout and Launch - WGS Block II Follow-On Cost</i>	-	-	-	-	-	42.495	-	-	49.126	-	-	33.306	-	-	-	-	-	33.306
Support - WGS Block II Follow-On Cost																		
WGS Block II Follow-on Test Support	-	-	-	-	-	0.122	-	-	0.240	-	-	0.104	-	-	-	-	-	0.104
WGS Block II Follow-on Lincoln Labs	-	-	-	-	-	1.000	-	-	1.035	-	-	0.833	-	-	-	-	-	0.833
Pathfinder COMSATCOM pooled bandwidth and demo	-	-	-	-	-	26.000	-	-	30.000	-	-	41.000	-	-	-	-	-	41.000
WGS Block II Follow-on A&AS	-	-	-	-	-	4.220	-	-	5.183	-	-	5.011	-	-	-	-	-	5.011

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Exhibit P-5, Cost Analysis: FY 2018 Air Force												Date: May 2017					
Appropriation / Budget Activity / Budget Sub Activity: 3021F / 01 / 1						P-1 Line Item Number / Title: GAP000 / Wideband Gapfiller Satellites(Space)						Item Number / Title [DODIC]: - / WGS B2FO					
ID Code (A=Service Ready, B=Not Service Ready) : A												MDAP/MAIS Code:					

Note: Subtotals or Totals in this Exhibit P-5 may not be exact or sum exactly due to rounding.

Cost Elements	Prior Years			FY 2016			FY 2017			FY 2018 Base			FY 2018 OCO			FY 2018 Total		
	Unit Cost (\$ M)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ M)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ M)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ M)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ M)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ M)	Qty (Each)	Total Cost (\$ M)
FFRDC	-	-	-	-	-	0.639	-	-	0.688	-	-	0.595	-	-	-	-	-	0.595
<i>Subtotal: Support - WGS Block II Follow-On Cost</i>	-	-	-	-	-	31.981	-	-	37.146	-	-	47.543	-	-	-	-	-	47.543
Gross/Weapon System Cost	-	-	-	-	-	74.476	-	-	86.272	-	-	80.849	-	-	-	-	-	80.849

Remarks:

Total WGS Block II Follow-On (B2FO) 3020/3021 funds are \$1,703.013M.

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Exhibit P-40, Budget Line Item Justification: FY 2018 Air Force **Date: May 2017**

Appropriation / Budget Activity / Budget Sub Activity:
3021F: Space Procurement, Air Force / BA 01: Space Procurement, Air Force / BSA
1: Space Programs

P-1 Line Item Number / Title:
GPSIII / GPS III Space Segment

ID Code (A=Service Ready, B=Not Service Ready): A **Program Elements for Code B Items:** N/A **Other Related Program Elements:** N/A

Line Item MDAP/MAIS Code: 292

Resource Summary	Prior Years	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total	FY 2019	FY 2020	FY 2021	FY 2022	To Complete	Total
Procurement Quantity (<i>Units in Each</i>)	-	1	-	-	-	-	2	2	2	3	13	23
Gross/Weapon System Cost (<i>\$ in Millions</i>)	0.000	255.370	34.059	85.894	0.000	85.894	783.805	796.375	779.683	1,131.497	7,395.744	11,262.427
Less PY Advance Procurement (<i>\$ in Millions</i>)	-	57.000	0.000	0.000	-	0.000	0.000	0.000	0.000	0.000	-	57.000
Net Procurement (P-1) (<i>\$ in Millions</i>)	0.000	198.370	34.059	85.894	0.000	85.894	783.805	796.375	779.683	1,131.497	7,395.744	11,205.427
Plus CY Advance Procurement (<i>\$ in Millions</i>)	57.000	-	-	-	-	-	-	-	-	-	-	57.000
Total Obligation Authority (<i>\$ in Millions</i>)	57.000	198.370	34.059	85.894	0.000	85.894	783.805	796.375	779.683	1,131.497	7,395.744	11,262.427

(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)

Initial Spares (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Flyaway Unit Cost (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost (<i>\$ in Millions</i>)	-	255.370	-	-	-	-	391.903	398.188	389.842	377.166	568.903	489.671

Description:

The 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. GPS must comply with 10 United States Code (USC) Sec. 2281, which requires that the Secretary of Defense ensures the continued sustainment and operation of GPS for military and civilian purposes, and 51 USC Sec. 50112, which requires that GPS complies with certain standards and facilitates international cooperation.

The system is composed of three segments: User Equipment (funded under PE 1203164F), Space (funded under PE 1203265F and 1203165F), and a Control Network (funded under PE 1203423F and 1203165F). RDT&E,AF funding for GPS III, including development and acquisition of Space Vehicles (SV) 01-02, is in PE 1203265F, BPAC 23GPS3, GPS III Space Segment. 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 waypoints. 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 (C3I); Special Operations; Military Operations in Urban Terrain (MOUT); Defense-Wide Mission Support (DWMS); Air Mobility; and Space Launch Orbital Support.

GPS III is the next generation SV to join the GPS constellation. GPS III SVs will deliver significant enhancements, including a new civil (L1C) Galileo-compatible signal and enhanced anti-jam power. Two auxiliary payloads, Search and Rescue/GPS (SAR/GPS) and Laser Retroreflector Array (LRA) will be added no earlier than SV11. The SAR/GPS payload provided by Canada will fill a validated National Search and Rescue Committee requirement to provide enduring, space-based distress alerting capability to detect, locate, and relay distress alerts to fulfill its responsibilities under international agreements for Search and Rescue. LRA, built by the Naval Research Lab (NRL), is a passive reflector that will improve accuracy and provide better ephemeris data. National Geospatial-Intelligence Agency (NGA) funds the integration costs of the LRA.

USD(AT&L) approved the first phase of a two-phased GPS III SV acquisition strategy starting no earlier than SV11. Phase 1 utilizes FY2015-2017 RDT&E funding to mature three contractors' GPS production designs. Phase 1 is a Production Readiness Feasibility Assessment which is providing data and insight into contractors GPS III Production Designs with emphasis on a mature navigation payload and production-ready designs. Phase 2 has not been approved and options continue to be explored by USD(AT&L). Notionally, Phase 2 will be a full and open competition for up to 22 GPS III SVs with an expected decision no earlier than SV11. Phase 2 is funded via Space Procurement Air Force (SPAF) in PE 1203265F, BPAC 23GPS3.

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Exhibit P-40, Budget Line Item Justification: FY 2018 Air Force		Date: May 2017
Appropriation / Budget Activity / Budget Sub Activity: 3021F: Space Procurement, Air Force / BA 01: Space Procurement, Air Force / BSA 1: Space Programs		P-1 Line Item Number / Title: GPSIII / GPS III Space Segment
ID Code (A=Service Ready, B=Not Service Ready): A	Program Elements for Code B Items: N/A	Other Related Program Elements: N/A
Line Item MDAP/MAIS Code: 292		
<p>The Air Force GPS directorate received USD(AT&L) approval to purchase GPS III SV09-10 at the December 2014 Defense Acquisition Board in order to sustain the constellation while competitive options are pursued. The GPS III SV09-10 purchase will be on the current Lockheed Martin contract as technical equivalents of SV01-08. SV09 is funded with FY2014 MPAF advance procurement and FY2015 MPAF regular procurement. SV10 is funded with FY2015 MPAF advance procurement and FY2016 SPAF regular procurement.</p> <p>Funding for this exhibit is contained in PE 12035265F, Project 23GPS3, GPS III Space Segment.</p>		

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Exhibit P-40, Budget Line Item Justification: FY 2018 Air Force **Date:** May 2017

Appropriation / Budget Activity / Budget Sub Activity:
3021F: Space Procurement, Air Force / BA 01: Space Procurement, Air Force / BSA
1: Space Programs

P-1 Line Item Number / Title:
GPSIII / GPS III Space Segment

ID Code (A=Service Ready, B=Not Service Ready): A **Program Elements for Code B Items:** N/A **Other Related Program Elements:** N/A

Line Item MDAP/MAIS Code: 292

Exhibits Schedule					Prior Years	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total
Exhibit Type	Title*	Subexhibits	ID CD	MDAP/MAIS Code	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)
P-5	GPS III Space Segment		A		- / 0.000	1 / 255.370	- / 34.059	- / 85.894	- / 0.000	- / 85.894
P-40	Total Gross/Weapon System Cost				- / 0.000	1 / 255.370	- / 34.059	- / 85.894	- / 0.000	- / 85.894

*Title represents 1) the Number / Title for Items; 2) the Number / Title [DODIC] for Ammunition; and/or 3) the Number / Title (Modification Type) for Modifications.

Note: Totals in this Exhibit P-40 set may not be exact or sum exactly due to rounding.

Justification:
 FY2018 funding procures independent technical, systems engineering, and integration support critical to managing SV03-10 production milestones, mission assurance activities and launch preparation events.
 Continue program office and other related support activities that may include, but are not limited to studies, technical analysis, etc.
 Refer to P5A in lieu of Item Schedule for unit cost based on actual contract award or forecast contract cost.

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Exhibit P-5, Cost Analysis: FY 2018 Air Force		Date: May 2017
Appropriation / Budget Activity / Budget Sub Activity: 3021F / 01 / 1	P-1 Line Item Number / Title: GPSIII / GPS III Space Segment	Item Number / Title [DODIC]: - / GPS III Space Segment

ID Code (A=Service Ready, B=Not Service Ready) : A	MDAP/MAIS Code:
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Resource Summary	Prior Years	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total
Procurement Quantity (Units in Each)	-	1	-	-	-	-
Gross/Weapon System Cost (\$ in Millions)	0.000	255.370	34.059	85.894	0.000	85.894
Less PY Advance Procurement (\$ in Millions)	-	57.000	0.000	0.000	-	0.000
Net Procurement (P-1) (\$ in Millions)	0.000	198.370	34.059	85.894	0.000	85.894
Plus CY Advance Procurement (\$ in Millions)	57.000	-	-	-	-	-
Total Obligation Authority (\$ in Millions)	57.000	198.370	34.059	85.894	0.000	85.894

(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)

Initial Spares (\$ in Millions)	-	-	-	-	-	-
Gross/Weapon System Unit Cost (\$ in Millions)	-	255.370	-	-	-	-

Note: Subtotals or Totals in this Exhibit P-5 may not be exact or sum exactly due to rounding.

Cost Elements	Prior Years			FY 2016			FY 2017			FY 2018 Base			FY 2018 OCO			FY 2018 Total		
	Unit Cost (\$ M)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ M)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ M)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ M)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ M)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ M)	Qty (Each)	Total Cost (\$ M)
Hardware - GPS III Cost																		
Recurring Cost																		
GPS III SV 11+ SAR	-	-	-	-	-	3.308	-	-	3.330	-	-	3.392	-	-	-	-	-	3.392
<i>Subtotal: Recurring Cost</i>	-	-	-	-	-	3.308	-	-	3.330	-	-	3.392	-	-	-	-	-	3.392
<i>Subtotal: Hardware - GPS III Cost</i>	-	-	-	-	-	3.308	-	-	3.330	-	-	3.392	-	-	-	-	-	3.392
Space Vehicle - Space Vehicle End Item Cost																		
Recurring Cost																		
GPS III SV 03-10	-	-	-	168.239	1	168.239	-	-	13.430	-	-	7.053	-	-	0.000	-	-	7.053
GPS III SV11+	-	-	-	-	-	0.000	-	-	0.085	-	-	2.000	-	-	-	-	-	2.000
GPS III SV 03-10 Enterprise SE&I	-	-	-	-	-	0.000	-	-	0.000	-	-	0.124	-	-	-	-	-	0.124
GPS III SV11+ Enterprise SE&I	-	-	-	-	-	0.000	-	-	0.000	-	-	0.000	-	-	-	-	-	0.000
GPS III SV 03-10 Technical Mission Analysis	-	-	-	-	-	13.678	-	-	5.800	-	-	7.365	-	-	-	-	-	7.365
GPS III SV 11+ Technical Mission Analysis	-	-	-	-	-	0.000	-	-	0.000	-	-	15.656	-	-	-	-	-	15.656
GPS III SV 03-10 Less Advanced Procurement	-	-	-	-	-	57.000	-	-	0.000	-	-	0.000	-	-	-	-	-	0.000
GPS III SV 03-10 Plus Advanced Procurement	-	-	-	-	-	0.000	-	-	0.000	-	-	0.000	-	-	-	-	-	0.000

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Exhibit P-5, Cost Analysis: FY 2018 Air Force		Date: May 2017
Appropriation / Budget Activity / Budget Sub Activity: 3021F / 01 / 1	P-1 Line Item Number / Title: GPSIII / GPS III Space Segment	Item Number / Title [DODIC]: - / GPS III Space Segment

ID Code (A=Service Ready, B=Not Service Ready) : A	MDAP/MAIS Code:
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Note: Subtotals or Totals in this Exhibit P-5 may not be exact or sum exactly due to rounding.

Cost Elements	Prior Years			FY 2016			FY 2017			FY 2018 Base			FY 2018 OCO			FY 2018 Total		
	Unit Cost (\$ M)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ M)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ M)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ M)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ M)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ M)	Qty (Each)	Total Cost (\$ M)
<i>Subtotal: Recurring Cost</i>	-	-	-	-	-	238.917	-	-	19.315	-	-	32.198	-	-	0.000	-	-	32.198
<i>Non Recurring Cost</i>																		
GPS III SV 11+ NRE	-	-	-	-	-	0.000	-	-	0.000	-	-	0.000	-	-	-	-	-	0.000
<i>Subtotal: Non Recurring Cost</i>	-	-	-	-	-	0.000	-	-	0.000	-	-	0.000	-	-	-	-	-	0.000
<i>Subtotal: Space Vehicle - Space Vehicle End Item Cost</i>	-	-	-	-	-	238.917	-	-	19.315	-	-	32.198	-	-	0.000	-	-	32.198
<i>Checkout and Launch - Checkout And Launch End Item Cost</i>																		
GPS III SV 03-10 Launch Services	-	-	-	-	-	1.900	-	-	5.200	-	-	13.369	-	-	-	-	-	13.369
GPS III SV 03-10 On-Orbit Incentive	-	-	-	-	-	0.000	-	-	0.000	-	-	0.000	-	-	-	-	-	0.000
GPS III SV 03-10 Storage and MRT	-	-	-	-	-	0.000	-	-	1.200	-	-	3.700	-	-	-	-	-	3.700
GPS III SV 11+ Launch Services	-	-	-	-	-	0.000	-	-	0.000	-	-	0.000	-	-	-	-	-	0.000
<i>Subtotal: Checkout and Launch - Checkout And Launch End Item Cost</i>	-	-	-	-	-	1.900	-	-	6.400	-	-	17.069	-	-	-	-	-	17.069
<i>Support - Support End Item Cost</i>																		
GPS III SV 03-10 FFRDC	-	-	-	-	-	7.185	-	-	2.194	-	-	5.076	-	-	-	-	-	5.076
GPS III SV 03-10 A&AS	-	-	-	-	-	2.410	-	-	2.752	-	-	11.149	-	-	-	-	-	11.149
GPS III SV 03-10 Other Support	-	-	-	-	-	1.650	-	-	0.000	-	-	2.198	-	-	-	-	-	2.198
GPS III SV 11+ FFRDC	-	-	-	-	-	0.000	-	-	0.000	-	-	8.552	-	-	-	-	-	8.552
GPS III SV 11+ A&AS	-	-	-	-	-	0.000	-	-	0.068	-	-	5.011	-	-	-	-	-	5.011
GPS III SV 11+ Other Support	-	-	-	-	-	0.000	-	-	0.000	-	-	1.249	-	-	-	-	-	1.249
GPS III SV 11+ Launch/ On-Orbit Support	-	-	-	-	-	0.000	-	-	0.000	-	-	-	-	-	-	-	-	-
<i>Subtotal: Support - Support End Item Cost</i>	-	-	-	-	-	11.245	-	-	5.014	-	-	33.235	-	-	-	-	-	33.235
Gross/Weapon System Cost	-	-	0.000	255.370	1	255.370	-	-	34.059	-	-	85.894	-	-	0.000	-	-	85.894

Remarks:

\$57.0M FY15 Advance Procurement was appropriated in MPAF MGPS00 GPS III. Due to transition to SPAF in FY16, FY15 Advance Procurement will be reported with SPAF to preserve Weapon System Costs. This will allow the funding entries to balance and eliminate the xml warnings.

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Exhibit P-5, Cost Analysis: FY 2018 Air Force		Date: May 2017
Appropriation / Budget Activity / Budget Sub Activity: 3021F / 01 / 1	P-1 Line Item Number / Title: GPSIII / GPS III Space Segment	Item Number / Title [DODIC]: - / GPS III Space Segment
ID Code (A=Service Ready, B=Not Service Ready) : A	MDAP/MAIS Code:	
P5a and P21 information is populated in IDECS but are not exported due to zero procurement quantity in FY18.		

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Exhibit P-40, Budget Line Item Justification: FY 2018 Air Force **Date:** May 2017

Appropriation / Budget Activity / Budget Sub Activity:
 3021F: Space Procurement, Air Force / BA 01: Space Procurement, Air Force / BSA
 1: Space Programs

P-1 Line Item Number / Title:
 GPSSPC / Global Positioning (Space)

ID Code (A=Service Ready, B=Not Service Ready): A **Program Elements for Code B Items:** N/A **Other Related Program Elements:** 1203164F

Line Item MDAP/MAIS Code: N/A

Resource Summary	Prior Years	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total	FY 2019	FY 2020	FY 2021	FY 2022	To Complete	Total
Procurement Quantity (<i>Units in Each</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost (<i>\$ in Millions</i>)	-	1.623	2.169	2.198	0.000	2.198	2.199	2.238	2.278	2.325	-	15.030
Less PY Advance Procurement (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) (<i>\$ in Millions</i>)	-	1.623	2.169	2.198	0.000	2.198	2.199	2.238	2.278	2.325	-	15.030
Plus CY Advance Procurement (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority (<i>\$ in Millions</i>)	-	1.623	2.169	2.198	0.000	2.198	2.199	2.238	2.278	2.325	-	15.030

(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)

Initial Spares (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Flyaway Unit Cost (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-

Description:

The Navstar Global Positioning System (GPS) provides highly accurate time, three-dimensional position, and velocity information to an unlimited number of users anywhere on or above the surface of the earth, in any weather. GPS satisfies validated joint service requirements for worldwide, accurate, common grid navigation for military aircraft, ships, ground vehicles and personnel. The system is comprised of three segments: (1) satellites, (2) a ground control, and (3) user equipment. The satellites broadcast high-accuracy data using precisely synchronized signals that are received and processed by user equipment installed in military platforms. The ground control network updates the navigation messages broadcast from the satellites to provide system vectors to target location or navigational way points. Funds in this line support various GPS specific production efforts associated with the ground control and user equipment segments.

KEY DATA LOADING INSTALLATION FACILITY (KLIF)/GPS SECURITY DEVICE: The KLIF facilitates the programming of black key (cryptographic) algorithms into the Selective Availability Anti-Spoofing Module (SAASM) to provide accurate positioning solutions for GPS users using secure equipment.

Funding for this exhibit contained in PE 1203164F NAVSTAR GPS (User Equipment)(Space).

Justification:

PE 1203164F NAVSTAR GPS (USER EQUIPMENT) (SPACE)

KEY DATA LOADING INSTALLATION FACILITY (KLIF)/GPS SECURITY DEVICE: FY2018 funding provides for the programming of black key (cryptographic) algorithms into the Selective Availability Anti-Spoofing Module (SAASM), providing an accurate positioning solution for GPS users using secure equipment. Funding will procure support for Key Data Processors (KDP), ensuring uninterrupted support to SAASM vendors. SAASM vendors are required to use government-provided KDP as part of the security architecture of GPS User Equipment.

Continue program office and other related support activities that may include, but are not limited to studies, technical analysis, etc.

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Exhibit P-40, Budget Line Item Justification: FY 2018 Air Force **Date:** May 2017

Appropriation / Budget Activity / Budget Sub Activity:
3021F: Space Procurement, Air Force / BA 01: Space Procurement, Air Force / BSA
1: Space Programs

P-1 Line Item Number / Title:
MCOMSE / Spaceborne Equip (Comsec)

ID Code (A=Service Ready, B=Not Service Ready): A **Program Elements for Code B Items:** N/A **Other Related Program Elements:** N/A

Line Item MDAP/MAIS Code: N/A

Resource Summary	Prior Years	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total	FY 2019	FY 2020	FY 2021	FY 2022	To Complete	Total
Procurement Quantity (<i>Units in Each</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost (<i>\$ in Millions</i>)	-	13.362	46.708	25.048	0.000	25.048	32.157	34.368	34.987	26.586	-	213.216
Less PY Advance Procurement (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) (<i>\$ in Millions</i>)	-	13.362	46.708	25.048	0.000	25.048	32.157	34.368	34.987	26.586	-	213.216
Plus CY Advance Procurement (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority (<i>\$ in Millions</i>)	-	13.362	46.708	25.048	0.000	25.048	32.157	34.368	34.987	26.586	-	213.216

(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)

Initial Spares (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Flyaway Unit Cost (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-

Description:

Space Communications Security (COMSEC) procures cryptographic products to operate in the space environment and for ground nodes that link to space assets. Space COMSEC equipment is a foundational element in achieving AF space and information superiority. Space COMSEC is an enabler for space system compliance with DoDI 8581.01 - Information Assurance (IA) Policy for Space Systems Used by the Department of Defense. Space COMSEC mission provides communications security products and lifecycle sustainment support to all DoD satellite systems and commercial systems supporting DOD missions. Secure communication allows the DoD to achieve and maintain decision superiority, the key to successful application of the military instrument of national power in modern, high-tempo, full spectrum operations. Space COMSEC equipment protects information such as warfighter positions, mission planning, target strikes, commanders' orders, intelligence, force strength, and force readiness and ensures adversaries cannot interpret, manipulate, or destroy information. When an adversary is capable of interpretation, manipulation, or destruction of the information used by the warfighter, DoD military forces will suffer significant and/or devastating mission degradation that can result in loss of life and resources and/or exceptionally grave damage to national security. Space COMSEC enables secure Command and Control (C2) of satellites and prevents unauthorized access and destruction. It enables secure transmission of satellite systems' health and status telemetry data (satellite health and relative orbital position) to ground control stations, thus protecting critical information about the capabilities of DoD satellite systems. The capability of a system must be protected from an adversary to avoid exploitation of a system weakness/limitation, knowledge of which could assist an adversary in a successful mission against DoD military forces. Space COMSEC also provides secure transmission of information collected by satellite sensors (mission data), which provides the warfighter an integrated view of the battle space. Space COMSEC provides for secure SATCOM, positioning, navigation, timing, weather, nuclear detection and early warning missions. Space COMSEC also enables Transmission Security (TRANSEC) for space platforms. Space COMSEC mission procures crypto end items and logistics elements to support developing and operational space systems.

Funding for this effort is in program element (PE) 0303140F.

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Exhibit P-40, Budget Line Item Justification: FY 2018 Air Force **Date:** May 2017

Appropriation / Budget Activity / Budget Sub Activity: 3021F: Space Procurement, Air Force / BA 01: Space Procurement, Air Force / BSA 1: Space Programs **P-1 Line Item Number / Title:** MCOMSE / Spaceborne Equip (Comsec)

ID Code (A=Service Ready, B=Not Service Ready): A **Program Elements for Code B Items:** N/A **Other Related Program Elements:** N/A

Line Item MDAP/MAIS Code: N/A

Exhibits Schedule					Prior Years	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total
Exhibit Type	Title*	Subexhibits	ID CD	MDAP/MAIS Code	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)
P-5	Spaceborne Equip (Comsec)	P-5a	A		- / -	- / 13.362	- / 46.708	- / 24.996	- / 0.000	- / 24.996
P-40	Total Gross/Weapon System Cost				- / -	- / 13.362	- / 46.708	- / 25.048	- / 0.000	- / 25.048

*Title represents 1) the Number / Title for Items; 2) the Number / Title [DODIC] for Ammunition; and/or 3) the Number / Title (Modification Type) for Modifications.

Note: Totals in this Exhibit P-40 set may not be exact or sum exactly due to rounding.

Justification:

a. Products: FY18 funding provides for the production of Space COMSEC products to meet developing and operational space program needs. Space COMSEC products include End Crypto Units (ECU), Embedded Solutions (ES), TRANSEC and ancillaries. Due to low volume production quantities and high reliability design, Space COMSEC products can range in price from \$10K per unit to \$2M per unit. As a commodity item, Space COMSEC procures standard crypto products which enable minimized lifecycle footprints. Space COMSEC procures from multiple crypto vendors; however, with the low volume consumption by space programs, the space crypto industry base is less than a dozen companies. Items procured during execution may change based on critical equipment needed to support current Air Force mission requirements. Contractor support costs are included as part of the Space COMSEC products funding line in order to provide for end item operational capability.

b. Logistics: FY18 funding provides for the production of Space COMSEC Logistics elements. Space COMSEC products typically have a 20 to 40 year lifecycle to support development, launch and operation of multiple Air Force and DoD space systems. Space COMSEC is provided as Government Furnished Equipment (GFE) to the space system developing contractors and operational ground stations. Space COMSEC products are high cost critical assets and are organically sustained to include component level maintenance exclusively by the Air Force. Logistics procures the necessary lifecycle sustainment elements required to meet the 40 year mission requirements. Logistics elements include, but not limited to, specialized test sets, certified training materials and courses, maintenance manuals, provisioning, spare components, and modifications. Contractor support costs are included as part of the Space COMSEC logistics funding line in order to provide for end item operational capability.

UNCLASSIFIED

Exhibit P-5, Cost Analysis: FY 2018 Air Force		Date: May 2017
Appropriation / Budget Activity / Budget Sub Activity: 3021F / 01 / 1	P-1 Line Item Number / Title: MCOMSE / Spaceborne Equip (Comsec)	Item Number / Title [DODIC]: - / Spaceborne Equip (Comsec)

ID Code (A=Service Ready, B=Not Service Ready) : A	MDAP/MAIS Code:
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Resource Summary	Prior Years	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total
Procurement Quantity (<i>Units in Each</i>)	-	-	-	-	-	-
Gross/Weapon System Cost (<i>\$ in Millions</i>)	-	13.362	46.708	24.996	0.000	24.996
Less PY Advance Procurement (<i>\$ in Millions</i>)	-	-	-	-	-	-
Net Procurement (P-1) (<i>\$ in Millions</i>)	-	13.362	46.708	24.996	0.000	24.996
Plus CY Advance Procurement (<i>\$ in Millions</i>)	-	-	-	-	-	-
Total Obligation Authority (<i>\$ in Millions</i>)	-	13.362	46.708	24.996	0.000	24.996

(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)

Initial Spares (<i>\$ in Millions</i>)	-	-	-	-	-	-
Gross/Weapon System Unit Cost (<i>\$ in Millions</i>)	-	-	-	-	-	-

Note: Subtotals or Totals in this Exhibit P-5 may not be exact or sum exactly due to rounding.

Cost Elements	Prior Years			FY 2016			FY 2017			FY 2018 Base			FY 2018 OCO			FY 2018 Total		
	Unit Cost (\$ M)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ M)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ M)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ M)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ M)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ M)	Qty (Each)	Total Cost (\$ M)
Hardware - 0303140F MCOMSE Spaceborne Equip (COMSEC) Cost																		
Recurring Cost																		
a. Products ^(t)	-	-	-	0.150	89	13.362	0.020	1,546	31.314	0.046	460	20.931	-	-	0.000	0.046	460	20.931
b. Logistics	-	-	-	-	-	-	2.199	7	15.394	0.813	5	4.065	-	-	-	0.813	5	4.065
<i>Subtotal: Recurring Cost</i>	-	-	-	-	-	13.362	-	-	46.708	-	-	24.996	-	-	0.000	-	-	24.996
<i>Subtotal: Hardware - 0303140F MCOMSE Spaceborne Equip (COMSEC) Cost</i>	-	-	-	-	-	13.362	-	-	46.708	-	-	24.996	-	-	0.000	-	-	24.996
Gross/Weapon System Cost	-	-	-	-	-	13.362	-	-	46.708	-	-	24.996	-	-	0.000	-	-	24.996

(t) indicates the presence of a P-5a

UNCLASSIFIED

Exhibit P-5a, Procurement History and Planning: FY 2018 Air Force **Date:** May 2017

Appropriation / Budget Activity / Budget Sub Activity: 3021F / 01 / 1	P-1 Line Item Number / Title: MC0MSE / Spaceborne Equip (Comsec)	Item Number / Title [DODIC]: - / Spaceborne Equip (Comsec)
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Cost Elements	O C O	FY	Contractor and Location	Method/Type or Funding Vehicle	Location of PCO	Award Date	Date of First Delivery	Qty <i>(Each)</i>	Unit Cost <i>(\$ M)</i>	Specs Avail Now?	Date Revision Available	RFP Issue Date
a. Products		2016	MULTIPLE / MULTIPLE	C / FFP	AFLCMC Hanscom AFB	Aug 2016	May 2018	89	0.150	Y		
a. Products		2017	MULTIPLE / MULTIPLE	C / FFP	AFLCMC Hanscom AFB	Aug 2017	Jun 2019	1,546	0.020	Y		
a. Products		2018	MULTIPLE / MULTIPLE	C / FFP	AFLCMC Hanscom AFB	Jun 2018	May 2020	460	0.046	Y		

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Exhibit P-40, Budget Line Item Justification: FY 2018 Air Force **Date:** May 2017

Appropriation / Budget Activity / Budget Sub Activity:
 3021F: Space Procurement, Air Force / BA 01: Space Procurement, Air Force / BSA
 1: Space Programs

P-1 Line Item Number / Title:
 MGPS00 / Global Positioning (Space)

ID Code (A=Service Ready, B=Not Service Ready): A **Program Elements for Code B Items:** N/A **Other Related Program Elements:** N/A

Line Item MDAP/MAIS Code: 166

Resource Summary	Prior Years	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total	FY 2019	FY 2020	FY 2021	FY 2022	To Complete	Total
Procurement Quantity (<i>Units in Each</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost (<i>\$ in Millions</i>)	-	64.135	13.171	0.000	0.000	0.000	0.000	0.000	0.000	0.000	-	77.306
Less PY Advance Procurement (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) (<i>\$ in Millions</i>)	-	64.135	13.171	0.000	0.000	0.000	0.000	0.000	0.000	0.000	-	77.306
Plus CY Advance Procurement (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority (<i>\$ in Millions</i>)	-	64.135	13.171	0.000	0.000	0.000	0.000	0.000	0.000	0.000	-	77.306

(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)

Initial Spares (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Flyaway Unit Cost (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-

Description:

The Navstar Global Positioning System (GPS) 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 1203164F), satellites 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 way points. The control segment provides daily updates to the navigation messages broadcasted from the satellites to maintain system precision.

The GPS IIF program will continue On-Orbit Support on the Launch and On-Orbit Support (LOOS) firm fixed price services contract with a period of performance from 1 Jan 2013 to 31 Mar 2017. The LOOS contract will end on 31 Mar 2017 and IIF will transition to sustainment. The contract services includes: launch readiness activities, launch and on-orbit checkout of up to twelve GPS IIF Space Vehicles (SVs), storing, maintaining, and transportation of up to twelve GPS IIF SVs, on-orbit operations for up to twelve GPS IIF SVs, quick reaction support, anomaly resolution, anomaly investigation, and contract closeout. The GPS IIF program will finish contract closeout activities in the 2nd quarter of FY2017.

GPS IIF is the follow-on program to IIR-M (last launch Aug 2009) and was awarded in 1995 to Rockwell International (now Boeing, El Segundo, California). The contract was modified in 2002 for the modernization of all IIF SVs. Of the 12 satellite vehicles contracted for, 12 have been launched and are successfully on orbit (the 12th was launched in February 2016).

Block IIF was launched on the Evolved Expendable Launch Vehicle (EELV). Launch schedules are established based on constellation sustainment needs and launch manifest constraints. The system hosts the Nuclear Detonation (NUDET) Detection System (NDS) funded under PE 1203913F.

The acquisition strategy for the Block IIF satellites was a competitive multi-year contract for 6 satellites awarded in FY1996. Options for 6 additional Space Vehicles (SVs) were exercised in FY2004 and FY2005 (3 each year). Block IIF satellites have been modernized to include a new military signal and a second and third civil signal.

Funding for this exhibit contained in PE 1203165F, NAVSTAR Global Positioning System (Space and Control Segments)

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Exhibit P-40, Budget Line Item Justification: FY 2018 Air Force **Date:** May 2017

Appropriation / Budget Activity / Budget Sub Activity: 3021F: Space Procurement, Air Force / BA 01: Space Procurement, Air Force / BSA 1: Space Programs
P-1 Line Item Number / Title: MGPS00 / Global Positioning (Space)

ID Code (A=Service Ready, B=Not Service Ready): A **Program Elements for Code B Items:** N/A **Other Related Program Elements:** N/A

Line Item MDAP/MAIS Code: 166

Exhibits Schedule					Prior Years	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total
Exhibit Type	Title*	Subexhibits	ID CD	MDAP/MAIS Code	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)
P-5	Global Positioning (Space)		A		- / -	- / 64.135	- / 13.171	- / 0.000	- / 0.000	- / 0.000
P-40	Total Gross/Weapon System Cost				- / -	- / 64.135	- / 13.171	- / 0.000	- / 0.000	- / 0.000

*Title represents 1) the Number / Title for Items; 2) the Number / Title [DODIC] for Ammunition; and/or 3) the Number / Title (Modification Type) for Modifications.

Note: Totals in this Exhibit P-40 set may not be exact or sum exactly due to rounding.

Justification:
 No FY2018 funding is requested. This program completes with FY2017 funding.

UNCLASSIFIED

Exhibit P-5, Cost Analysis: FY 2018 Air Force		Date: May 2017
Appropriation / Budget Activity / Budget Sub Activity: 3021F / 01 / 1	P-1 Line Item Number / Title: MGPS00 / Global Positioning (Space)	Item Number / Title [DODIC]: - / Global Positioning (Space)

ID Code (A=Service Ready, B=Not Service Ready) : A	MDAP/MAIS Code:
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Resource Summary	Prior Years	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total
Procurement Quantity (Units in Each)	-	-	-	-	-	-
Gross/Weapon System Cost (\$ in Millions)	-	64.135	13.171	0.000	0.000	0.000
Less PY Advance Procurement (\$ in Millions)	-	-	-	-	-	-
Net Procurement (P-1) (\$ in Millions)	-	64.135	13.171	0.000	0.000	0.000
Plus CY Advance Procurement (\$ in Millions)	-	-	-	-	-	-
Total Obligation Authority (\$ in Millions)	-	64.135	13.171	0.000	0.000	0.000

(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)

Initial Spares (\$ in Millions)	-	-	-	-	-	-
Gross/Weapon System Unit Cost (\$ in Millions)	-	-	-	-	-	-

Note: Subtotals or Totals in this Exhibit P-5 may not be exact or sum exactly due to rounding.

Cost Elements	Prior Years			FY 2016			FY 2017			FY 2018 Base			FY 2018 OCO			FY 2018 Total		
	Unit Cost (\$ M)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ M)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ M)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ M)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ M)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ M)	Qty (Each)	Total Cost (\$ M)
Checkout and Launch - GPS Cost																		
GPS IIF Launch Vehicle Integration	-	-	-	-	-	0.010	-	-	-	-	-	-	-	-	-	-	-	-
GPS IIF Launch Services Planning	-	-	-	-	-	12.212	-	-	-	-	-	-	-	-	-	-	-	-
GPS IIF Propellants	-	-	-	-	-	0.044	-	-	-	-	-	-	-	-	-	-	-	-
GPS IIF GSA Vehicles	-	-	-	-	-	0.025	-	-	-	-	-	-	-	-	-	-	-	-
GPS IIF Technical Mission Analysis	-	-	-	-	-	1.300	-	-	-	-	-	-	-	-	-	-	-	-
GPS IIF Enterprise SE&I	-	-	-	-	-	1.030	-	-	1.136	-	-	-	-	-	-	-	-	-
GPS IIF Storage Reactivation & Transport	-	-	-	-	-	3.472	-	-	-	-	-	-	-	-	-	-	-	-
<i>Subtotal: Checkout and Launch - GPS Cost</i>	-	-	-	-	-	18.093	-	-	1.136	-	-	-	-	-	-	-	-	-
Support - On Orbit Support End Item Cost																		
GPS IIF On-Orbit Space Vehicle Support	-	-	-	-	-	34.802	-	-	5.000	-	-	0.000	-	-	0.000	-	-	0.000
GPS IIF Closeout	-	-	-	-	-	4.000	-	-	3.310	-	-	-	-	-	-	-	-	-
<i>Subtotal: Support - On Orbit Support End Item Cost</i>	-	-	-	-	-	38.802	-	-	8.310	-	-	0.000	-	-	0.000	-	-	0.000
Support - Support Costs End Item Cost																		
GPS IIF FFRDC	-	-	-	-	-	4.681	-	-	1.346	-	-	-	-	-	-	-	-	-
GPS IIF A&AS	-	-	-	-	-	2.359	-	-	2.359	-	-	-	-	-	-	-	-	-
GPS IIF Other Support	-	-	-	-	-	0.200	-	-	0.020	-	-	-	-	-	-	-	-	-

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Exhibit P-5, Cost Analysis: FY 2018 Air Force												Date: May 2017					
Appropriation / Budget Activity / Budget Sub Activity: 3021F / 01 / 1						P-1 Line Item Number / Title: MGPS00 / Global Positioning (Space)						Item Number / Title [DODIC]: - / Global Positioning (Space)					
ID Code (A=Service Ready, B=Not Service Ready) : A												MDAP/MAIS Code:					

Note: Subtotals or Totals in this Exhibit P-5 may not be exact or sum exactly due to rounding.

Cost Elements	Prior Years			FY 2016			FY 2017			FY 2018 Base			FY 2018 OCO			FY 2018 Total		
	Unit Cost (\$ M)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ M)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ M)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ M)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ M)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ M)	Qty (Each)	Total Cost (\$ M)
<i>Subtotal: Support - Support Costs End Item Cost</i>	-	-	-	-	-	7.240	-	-	3.725	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost	-	-	-	-	-	64.135	-	-	13.171	-	-	0.000	-	-	0.000	-	-	0.000

UNCLASSIFIED

Exhibit P-40, Budget Line Item Justification: FY 2018 Air Force **Date:** May 2017

Appropriation / Budget Activity / Budget Sub Activity:
 3021F: Space Procurement, Air Force / BA 01: Space Procurement, Air Force / BSA
 1: Space Programs

P-1 Line Item Number / Title:
 MILSAT / MILSATCOM

ID Code (A=Service Ready, B=Not Service Ready): A **Program Elements for Code B Items:** N/A **Other Related Program Elements:** N/A

Line Item MDAP/MAIS Code: 199

Resource Summary	Prior Years	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total	FY 2019	FY 2020	FY 2021	FY 2022	To Complete	Total
Procurement Quantity (<i>Units in Each</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost (<i>\$ in Millions</i>)	-	35.495	41.799	33.033	2.256	35.289	13.740	11.183	11.386	11.619	172.204	332.715
Less PY Advance Procurement (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) (<i>\$ in Millions</i>)	-	35.495	41.799	33.033	2.256	35.289	13.740	11.183	11.386	11.619	172.204	332.715
Plus CY Advance Procurement (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority (<i>\$ in Millions</i>)	-	35.495	41.799	33.033	2.256	35.289	13.740	11.183	11.386	11.619	172.204	332.715

(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)

Initial Spares (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Flyaway Unit Cost (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-

Description:

PE 1203601F MILSATCOM TERMINALS

MILITARY SATELLITE COMMUNICATIONS (MILSATCOM) joint-service systems collectively provide a broad range of satellite communication capabilities, including secure, jam-resistant, 24-hour worldwide communications to meet essential strategic, tactical and general-purpose operational requirements. MILSATCOM terminals support communications requirements for the President and Secretary of Defense, unified and specified commanders, uniformed services and defense agencies. Procurement funding is in program element (PE) 1203601F, MILSATCOM Terminals, except where otherwise noted.

UNCLASSIFIED

Exhibit P-40, Budget Line Item Justification: FY 2018 Air Force **Date:** May 2017

Appropriation / Budget Activity / Budget Sub Activity:
3021F: Space Procurement, Air Force / BA 01: Space Procurement, Air Force / BSA
1: Space Programs

P-1 Line Item Number / Title:
MILSAT / MILSATCOM

ID Code (A=Service Ready, B=Not Service Ready): A **Program Elements for Code B Items:** N/A **Other Related Program Elements:** N/A

Line Item MDAP/MAIS Code: 199

Exhibits Schedule					Prior Years	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total
Exhibit Type	Title*	Subexhibits	ID CD	MDAP/MAIS Code	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)
P-5	AFWET		A		- / -	- / 33.527	- / 33.484	- / 28.833	- / -	- / 28.833
P-5	GBS		A		- / -	- / 1.699	- / 8.043	- / 3.923	- / 2.256	- / 6.179
P-40a	Satellite Communications (SATCOM) O&M				- / -	- / 0.269	- / 0.272	- / 0.277	- / -	- / 0.277
P-40	Total Gross/Weapon System Cost				- / -	- / 35.495	- / 41.799	- / 33.033	- / 2.256	- / 35.289

*Title represents 1) the Number / Title for Items; 2) the Number / Title [DODIC] for Ammunition; and/or 3) the Number / Title (Modification Type) for Modifications. Title represents the P-40a Title when only the P-40a Summary/Total is shown.
Note: Totals in this Exhibit P-40 set may not be exact or sum exactly due to rounding.

Justification:

AIR FORCE WIDEBAND ENTERPRISE TERMINALS (AFWET) TERMINAL MODERNIZATION: AFWET terminals form the Satellite Communications (SATCOM) backbone of the DoD Information Network (DoDIN), operating over Wideband Global SATCOM (WGS), Defense Satellite Communications System, commercial and Allied satellites. These Enterprise terminals support the command and control requirements of Combatant Commanders worldwide and the communication requirements of the President, Secretary of Defense, Department of State (DoS), US strategic and tactical forces, and the North Atlantic Treaty Organization. The Air Force is responsible for terminal equipment at Air Force operated and maintained Enterprise ground terminal locations. In FY2018, the Air Force will procure and install terminal equipment via contracts to extend the life of the system, sustain operational suitability, safety and effectiveness, and maintain high interoperability with other DoD, Army, Navy, and Air Force strategic and tactical terminals. Procurement includes ground terminal modernization, installation, engineering, integration and site preparation, including radomes, facility monitoring systems, power and communication infrastructure, acceptance testing, Interconnect Facility (ICF), initial spares, Advisory and Assistance Services (A&AS), system engineering, training and other related activities. Unit cost for terminal procurement changes substantially depending on specific versions purchased (small, fixed, transportable, protected, etc). Installation, integration and site preparation costs also change substantially based on location. Life extension and modernization efforts also provide incidental increases in capability, allowing for full utilization of WGS capabilities, compliance with directives on the usage of Internet Protocol, adherence to Unified Capabilities Requirements, compliance with DISA and National Security Agency directives and more efficient and effective usage of satellite resources for jam-resistant and anti-scintillation wideband links. FY17-out line items have been reallocated to reflect actual work of Terminal Mods and Sustainment.

GLOBAL BROADCAST SERVICE (GBS): This AF-led joint program implements a worldwide high-capacity satellite broadcast information system to provide a continuous, one-way, high-speed, high-volume flow of classified and unclassified data and imagery to garrisoned, deployed or moving forces. GBS provides DoD some relief from reliance on leased commercial satellite communications. GBS Receive Suites provide lower-echelon AF users with efficient high-data-rate in-theater to many distributed information sources via satellite-hosted GBS packages. In addition to Prime Mission Equipment, FY2018 funds will fund studies (i.e. part obsolescence, encapsulation of modem, antenna trades, Pre-Planned Product Improvement (P3I) ORD requirements), integration and installation, technical manual updates, Diminishing Manufacturing Supply (DMS), spares, systems engineering, test, training, A&AS, upgrades, incorporation of Transmission Security (TRANSEC), and other related activities.

- a. GBS RECEIVE SUITES: The receive suites link users to information sources via GBS, offering worldwide service.
- b. GBS PORTABLE RECEIVE SUITES: These are Rucksack and Suitcase variants of the GBS terminals required by Special Operations Forces in forward operating areas. FY18 OCO funding will procure PRS to support combat communication in support of deployed warfighters.
- c. INTERIM NON-TRANSEC MODEM: Interim non-TRANSEC solution was operationally accepted Nov 16. This solution will be used until a TRANSEC solution is Operationally Accepted (OA).
- d. JOINT INTERNET PROTOCOL MODEM (JIPM): On November 13, 2014, DoD Chief Information Officer (CIO) re-directed the JIPM acquisition strategy to a commercial-off-the-shelf (COTS) solution.
- e. TRANSEC MODEM: GBS is funded in FY2018 to continue a TRANSEC solution.

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Exhibit P-40, Budget Line Item Justification: FY 2018 Air Force		Date: May 2017
Appropriation / Budget Activity / Budget Sub Activity: 3021F: Space Procurement, Air Force / BA 01: Space Procurement, Air Force / BSA 1: Space Programs		P-1 Line Item Number / Title: MILSAT / MILSATCOM
ID Code (A=Service Ready, B=Not Service Ready): A	Program Elements for Code B Items: N/A	Other Related Program Elements: N/A
Line Item MDAP/MAIS Code: 199		
f. GBS BROADCAST MANAGER: The Satellite Broadcast Manager (SBM) systems at two of DISA's Defense Enterprise Computing Centers (DECC) that provide the GBS broadcast to the GBS Receive Suites worldwide.		
MILSATCOM SUSTAINMENT MODIFICATIONS: Provides minor modifications for MILSATCOM systems currently in sustainment and those currently fielded. Funding FY2018 continues sustainment for PE 1203605F SATELLITE COMMUNICATIONS (SATCOMS).		
Continue program office and other related support activities that may include, but are not limited to studies, technical analysis, etc.		

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Exhibit P-5, Cost Analysis: FY 2018 Air Force		Date: May 2017
Appropriation / Budget Activity / Budget Sub Activity: 3021F / 01 / 1	P-1 Line Item Number / Title: MILSAT / MILSATCOM	Item Number / Title [DODIC]: - / AFWET

ID Code (A=Service Ready, B=Not Service Ready) : A	MDAP/MAIS Code:
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Resource Summary	Prior Years	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total
Procurement Quantity (Units in Each)	-	-	-	-	-	-
Gross/Weapon System Cost (\$ in Millions)	-	33.527	33.484	28.833	-	28.833
Less PY Advance Procurement (\$ in Millions)	-	-	-	-	-	-
Net Procurement (P-1) (\$ in Millions)	-	33.527	33.484	28.833	-	28.833
Plus CY Advance Procurement (\$ in Millions)	-	-	-	-	-	-
Total Obligation Authority (\$ in Millions)	-	33.527	33.484	28.833	-	28.833

(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)

Initial Spares (\$ in Millions)	-	-	-	-	-	-
Gross/Weapon System Unit Cost (\$ in Millions)	-	-	-	-	-	-

Note: Subtotals or Totals in this Exhibit P-5 may not be exact or sum exactly due to rounding.

Cost Elements	Prior Years			FY 2016			FY 2017			FY 2018 Base			FY 2018 OCO			FY 2018 Total		
	Unit Cost (\$ M)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ M)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ M)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ M)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ M)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ M)	Qty (Each)	Total Cost (\$ M)
Hardware - 1203601F Cost																		
Recurring Cost																		
AFWET - Terminal Modernization	-	-	-	9.419	3	28.257	8.198	3	24.594	12.134	2	24.267	-	-	-	12.134	2	24.267
AFWET - Sustainment	-	-	-	-	-	2.363	-	-	4.764	-	-	1.104	-	-	-	-	-	1.104
AFWET - Product Support	-	-	-	-	-	1.537	-	-	1.434	-	-	1.612	-	-	-	-	-	1.612
<i>Subtotal: Recurring Cost</i>	-	-	-	-	-	32.157	-	-	30.792	-	-	26.983	-	-	-	-	-	26.983
<i>Subtotal: Hardware - 1203601F Cost</i>	-	-	-	-	-	32.157	-	-	30.792	-	-	26.983	-	-	-	-	-	26.983
Support - 1203601F Cost																		
AFWET - Advisory and Assistance Services (A&AS)	-	-	-	-	-	0.515	-	-	0.809	-	-	0.509	-	-	-	-	-	0.509
AFWET - OTHER SUPPORT	-	-	-	-	-	0.855	-	-	1.883	-	-	1.341	-	-	-	-	-	1.341
<i>Subtotal: Support - 1203601F Cost</i>	-	-	-	-	-	1.370	-	-	2.692	-	-	1.850	-	-	-	-	-	1.850
Gross/Weapon System Cost	-	-	-	-	-	33.527	-	-	33.484	-	-	28.833	-	-	-	-	-	28.833

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Exhibit P-5, Cost Analysis: FY 2018 Air Force		Date: May 2017
Appropriation / Budget Activity / Budget Sub Activity: 3021F / 01 / 1	P-1 Line Item Number / Title: MILSAT / MILSATCOM	Item Number / Title [DODIC]: - / GBS

ID Code (A=Service Ready, B=Not Service Ready) : A	MDAP/MAIS Code:
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Resource Summary	Prior Years	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total
Procurement Quantity (Units in Each)	-	-	-	-	-	-
Gross/Weapon System Cost (\$ in Millions)	-	1.699	8.043	3.923	2.256	6.179
Less PY Advance Procurement (\$ in Millions)	-	-	-	-	-	-
Net Procurement (P-1) (\$ in Millions)	-	1.699	8.043	3.923	2.256	6.179
Plus CY Advance Procurement (\$ in Millions)	-	-	-	-	-	-
Total Obligation Authority (\$ in Millions)	-	1.699	8.043	3.923	2.256	6.179

(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)

Initial Spares (\$ in Millions)	-	-	-	-	-	-
Gross/Weapon System Unit Cost (\$ in Millions)	-	-	-	-	-	-

Note: Subtotals or Totals in this Exhibit P-5 may not be exact or sum exactly due to rounding.

Cost Elements	Prior Years			FY 2016			FY 2017			FY 2018 Base			FY 2018 OCO			FY 2018 Total		
	Unit Cost (\$ M)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ M)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ M)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ M)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ M)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ M)	Qty (Each)	Total Cost (\$ M)
Hardware - 1203601F Cost																		
Recurring Cost																		
GBS - Enterprise Systems Engineering & Integration	-	-	-	-	-	-	-	-	2.952	-	-	-	-	-	-	-	-	-
GBS - Technical Mission Analysis	-	-	-	-	-	-	-	-	0.000	-	-	-	-	-	-	-	-	-
GBS - Receive Suites, Integration and Installation	-	-	-	-	-	0.320	-	-	1.047	-	-	-	-	-	-	-	-	-
GBS - TRANSEC modem	-	-	-	-	-	-	-	-	3.755	-	-	3.923	-	-	-	-	-	3.923
GBS - OCO - Receive Suites	-	-	-	-	-	-	-	-	-	-	-	-	0.282	8	2.256	0.282	8	2.256
<i>Subtotal: Recurring Cost</i>	-	-	-	-	-	0.320	-	-	7.754	-	-	3.923	-	-	2.256	-	-	6.179
<i>Subtotal: Hardware - 1203601F Cost</i>	-	-	-	-	-	0.320	-	-	7.754	-	-	3.923	-	-	2.256	-	-	6.179
Support - 1203601F Cost																		
GBS - Advisory and Assistance Services (A&AS)	-	-	-	-	-	1.029	-	-	-	-	-	-	-	-	-	-	-	-
GBS - OTHER SUPPORT	-	-	-	-	-	0.350	-	-	0.289	-	-	-	-	-	-	-	-	-
<i>Subtotal: Support - 1203601F Cost</i>	-	-	-	-	-	1.379	-	-	0.289	-	-	-	-	-	-	-	-	-

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Exhibit P-5, Cost Analysis: FY 2018 Air Force												Date: May 2017					
Appropriation / Budget Activity / Budget Sub Activity: 3021F / 01 / 1						P-1 Line Item Number / Title: MILSAT / MILSATCOM						Item Number / Title [DODIC]: - / GBS					
ID Code (A=Service Ready, B=Not Service Ready) : A												MDAP/MAIS Code:					

Note: Subtotals or Totals in this Exhibit P-5 may not be exact or sum exactly due to rounding.

Cost Elements	Prior Years			FY 2016			FY 2017			FY 2018 Base			FY 2018 OCO			FY 2018 Total		
	Unit Cost (\$ M)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ M)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ M)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ M)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ M)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ M)	Qty (Each)	Total Cost (\$ M)
Gross/Weapon System Cost	-	-	-	-	-	1.699	-	-	8.043	-	-	3.923	-	-	2.256	-	-	6.179

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Exhibit P-40a, Budget Item Justification For Aggregated Items: FY 2018 Air Force															Date: May 2017				
Appropriation / Budget Activity / Budget Sub Activity: 3021F / 01 / 1					P-1 Line Item Number / Title: MILSAT / MILSATCOM										Aggregated Items Title: Satellite Communications (SATCOM) O&M				

Item Number / Title [DODIC]	ID CD	MDAP/MAIS Code	Prior Years			FY 2016			FY 2017			FY 2018 Base			FY 2018 OCO			FY 2018 Total		
			Unit Cost (\$ M)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ M)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ M)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ M)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ M)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ M)	Qty (Each)	Total Cost (\$ M)
Uncategorized																				
CCS-C	A		-	-	-	-	-	0.269	-	-	0.272	-	-	0.277	-	-	-	-	-	0.277
Subtotal: Uncategorized			-	-	-	-	-	0.269	-	-	0.272	-	-	0.277	-	-	-	-	-	0.277
Total			-	-	-	-	-	0.269	-	-	0.272	-	-	0.277	-	-	-	-	-	0.277

Note: Subtotals or Totals in this Exhibit P-40a may not be exact or sum exactly, due to rounding.

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Exhibit P-40, Budget Line Item Justification: FY 2018 Air Force **Date:** May 2017

Appropriation / Budget Activity / Budget Sub Activity: 3021F: Space Procurement, Air Force / BA 01: Space Procurement, Air Force / BSA 1: Space Programs
P-1 Line Item Number / Title: MSEELC / EVOLVED EXPENDABLE LAUNCH CAPABILITY

ID Code (A=Service Ready, B=Not Service Ready): A **Program Elements for Code B Items:** N/A **Other Related Program Elements:** 0604853F

Line Item MDAP/MAIS Code: 176

Resource Summary	Prior Years	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total	FY 2019	FY 2020	FY 2021	FY 2022	To Complete	Total
Procurement Quantity (<i>Units in Each</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost (<i>\$ in Millions</i>)	-	571.076	768.586	957.420	0.000	957.420	678.071	0.000	0.000	0.000	-	2,975.153
Less PY Advance Procurement (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) (<i>\$ in Millions</i>)	-	571.076	768.586	957.420	0.000	957.420	678.071	0.000	0.000	0.000	-	2,975.153
Plus CY Advance Procurement (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority (<i>\$ in Millions</i>)	-	571.076	768.586	957.420	0.000	957.420	678.071	0.000	0.000	0.000	-	2,975.153

(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)

Initial Spares (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Flyaway Unit Cost (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-

Description:

The Air Force requests funding for the Evolved Expendable Launch Vehicle (EELV) program in two separate P-1 line items in compliance with the Fiscal Years 2013 and 2014 Appropriation Acts. Launch services will be executed from the Evolved Expendable Launch Veh (Space) P-1 line item. Launch capability will be executed from the Evolved Expendable Launch Veh (Infrastructure) P-1 line item. Both line items are necessary to achieve successful placement of National Security Space (NSS) space vehicles (SVs) on-orbit. To comply with Fiscal Year 2016 National Defense Authorization Act, Air Force plans to end the current EELV Launch Capability at the end of Fiscal year 2019. Beginning in Fiscal Year 2020, the EELV budget request will be in a single P-1 line.

This program does not require and does not include advance procurement or initial spares. Flyaway Unit Cost is not applicable and Weapon System Unit Cost are not representative due to the mix (medium through heavy) of vehicles in the program. EELV procures launch services and is not a weapon system. The program provides launch capacity for Government National Launch Forecast (NLF) requirements, but does not take ownership of any specific launch hardware. The requirements for EELV launch services are derived from multiple spacecraft requirements. "To Complete" projections include only known requirements at this time.

The EELV program is a Major Defense Acquisition Program (MDAP) Acquisition Category (ACAT) 1D program that acquires launch services to provide critical space support required to satisfy Department of Defense (DoD) warfighter, national security, and other Government space lift missions while fostering interagency and commercial cooperation. The EELV program provides satellite delivery to specific orbits through certified launch vehicle providers. To provide flexibility to meet NSS requirements, Air Force acquires launch services through a white tail concept where designating configurations to specific missions in the same launch vehicle family is accomplished just-in-time to meet mission integration requirements.

Funding for this exhibit is contained in PE 1203953F.

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Exhibit P-40, Budget Line Item Justification: FY 2018 Air Force **Date:** May 2017

Appropriation / Budget Activity / Budget Sub Activity: 3021F: Space Procurement, Air Force / BA 01: Space Procurement, Air Force / BSA 1: Space Programs
P-1 Line Item Number / Title: MSEELC / EVOLVED EXPENDABLE LAUNCH CAPABILITY

ID Code (A=Service Ready, B=Not Service Ready): A **Program Elements for Code B Items:** N/A **Other Related Program Elements:** 0604853F

Line Item MDAP/MAIS Code: 176

Exhibits Schedule					Prior Years	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total
Exhibit Type	Title*	Subexhibits	ID CD	MDAP/MAIS Code	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)
P-5	EVOLVED EXPENDABLE LAUNCH CAPABILITY	P-5a	A		- / -	- / 571.076	- / 768.586	- / 957.420	- / 0.000	- / 957.420
P-40	Total Gross/Weapon System Cost				- / -	- / 571.076	- / 768.586	- / 957.420	- / 0.000	- / 957.420

*Title represents 1) the Number / Title for Items; 2) the Number / Title [DODIC] for Ammunition; and/or 3) the Number / Title (Modification Type) for Modifications.

Note: Totals in this Exhibit P-40 set may not be exact or sum exactly due to rounding.

Justification:
 Fiscal Year 2018 Evolved Expendable Launch Vehicle (Infrastructure) procurement funding is required to support launch and acquisition of National Security Space (NSS) launch vehicles. Fiscal Year 2017 is last year of the ordering period for Launch Services on the EELV Phase 1 contract. Phase 1 Launch Capability associated with Fiscal Year 2017 Launch Services is scheduled to complete 30 Sep 2019. Evolved Expendable Launch Vehicle (Infrastructure) is annually funded and includes, but is not limited, to systems and factory engineering, program management, standard integration/testing, launch and range activities, infrastructure, parts obsolescence mitigation, post mission analysis, studies and analysis, support costs, non-recurring engineering (NRE) and other efforts necessary to achieve Orbital Debris Mitigation Standard Practice (ODMSP) compliance. Funds are also required for fully funded Phase 1A competitive missions in the year of award with related infrastructure, studies/analysis, postponement fees, and support costs annually funded.

Launch Services (EELV) is requested under a separate P-1 line item in accordance with the direction in the Consolidated and Further Continuing Appropriations Act 2013.

A revised Memorandum of Understanding (MOU) between the Air Force and National Reconnaissance Office (NRO), dated 7 Oct 2011 provides a cost share agreement for the Launch Capability of 75 percent (Air Force) and 25 percent (NRO). The cost share arrangement for Fiscal Year 2018 is consistent with the number of total cores procured and launched during Fiscal Year 2018. This PE contains only the Air Force position.

The SV is responsible for funding mission unique integration/testing.

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Exhibit P-5, Cost Analysis: FY 2018 Air Force		Date: May 2017
Appropriation / Budget Activity / Budget Sub Activity: 3021F / 01 / 1	P-1 Line Item Number / Title: MSEELC / EVOLVED EXPENDABLE LAUNCH CAPABILITY	Item Number / Title [DODIC]: - / EVOLVED EXPENDABLE LAUNCH CAPABILITY

ID Code (A=Service Ready, B=Not Service Ready) : A	MDAP/MAIS Code:
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Resource Summary	Prior Years	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total
Procurement Quantity (Units in Each)	-	-	-	-	-	-
Gross/Weapon System Cost (\$ in Millions)	-	571.076	768.586	957.420	0.000	957.420
Less PY Advance Procurement (\$ in Millions)	-	-	-	-	-	-
Net Procurement (P-1) (\$ in Millions)	-	571.076	768.586	957.420	0.000	957.420
Plus CY Advance Procurement (\$ in Millions)	-	-	-	-	-	-
Total Obligation Authority (\$ in Millions)	-	571.076	768.586	957.420	0.000	957.420

(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)

Initial Spares (\$ in Millions)	-	-	-	-	-	-
Gross/Weapon System Unit Cost (\$ in Millions)	-	-	-	-	-	-

Note: Subtotals or Totals in this Exhibit P-5 may not be exact or sum exactly due to rounding.

Cost Elements	Prior Years			FY 2016			FY 2017			FY 2018 Base			FY 2018 OCO			FY 2018 Total		
	Unit Cost (\$ M)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ M)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ M)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ M)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ M)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ M)	Qty (Each)	Total Cost (\$ M)
Launch - Phase 1/1A Launch Capability Cost																		
Recurring Cost																		
Phase 1 Launch Capability ^(†)	-	-	-	478.902	1	478.902	597.367	1	597.367	741.110	1	741.110	-	-	0.000	741.110	1	741.110
Phase 1A Launch Capability	-	-	-	-	-	82.971	-	-	139.906	-	-	177.499	-	-	0.000	-	-	177.499
<i>Subtotal: Recurring Cost</i>	-	-	-	-	-	561.873	-	-	737.273	-	-	918.609	-	-	0.000	-	-	918.609
<i>Subtotal: Launch - Phase 1/1A Launch Capability Cost</i>	-	-	-	-	-	561.873	-	-	737.273	-	-	918.609	-	-	0.000	-	-	918.609
Support - Support End Item Cost																		
Other Support	-	-	-	-	-	0.555	0.570	1	0.570	0.594	1	0.594	-	-	0.000	0.594	1	0.594
Independent Readiness Review Team	-	-	-	-	-	8.648	30.743	1	30.743	38.217	1	38.217	-	-	0.000	38.217	1	38.217
<i>Subtotal: Support - Support End Item Cost</i>	-	-	-	-	-	9.203	-	-	31.313	-	-	38.811	-	-	0.000	-	-	38.811
Gross/Weapon System Cost	-	-	-	-	-	571.076	-	-	768.586	-	-	957.420	-	-	0.000	-	-	957.420

Remarks:

A revised Memorandum of Understanding (MOU) between the Air Force and National Reconnaissance Office (NRO), dated 7 October 2011 provides a cost share agreement for the Launch Capability of 75 percent (Air Force) and 25 percent (NRO). The cost share arrangement for Fiscal Year 2018 is consistent with the number of total cores procured and launched during Fiscal Year 2018. This PE contains only the Air Force position.

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Exhibit P-5, Cost Analysis: FY 2018 Air Force		Date: May 2017
Appropriation / Budget Activity / Budget Sub Activity: 3021F / 01 / 1	P-1 Line Item Number / Title: MSEELC / EVOLVED EXPENDABLE LAUNCH CAPABILITY	Item Number / Title [DODIC]: - / EVOLVED EXPENDABLE LAUNCH CAPABILITY
ID Code (A=Service Ready, B=Not Service Ready) : A	MDAP/MAIS Code:	
FY2018 request is higher than FY2017 to finish ordering planned Phase 1A competitive missions while completing the Phase 1 Block Buy Capability.		
(t) indicates the presence of a P-5a		

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Exhibit P-5a, Procurement History and Planning: FY 2018 Air Force								Date: May 2017				
Appropriation / Budget Activity / Budget Sub Activity: 3021F / 01 / 1			P-1 Line Item Number / Title: MSEELC / EVOLVED EXPENDABLE LAUNCH CAPABILITY					Item Number / Title [DODIC]: - / EVOLVED EXPENDABLE LAUNCH CAPABILITY				
Cost Elements	O C O	FY	Contractor and Location	Method/Type or Funding Vehicle	Location of PCO	Award Date	Date of First Delivery	Qty (Each)	Unit Cost (\$ M)	Specs Avail Now?	Date Revision Available	RFP Issue Date
Phase 1 Launch Capability		2016	United Launch Alliance (ULA) / Co	Various	SMC, LA AFB, CA	Oct 2015	Oct 2015	1	478.902	Y		Mar 2012
Phase 1 Launch Capability		2017	United Launch Alliance (ULA) / Co	Various	SMC, LA AFB, CA	Oct 2016	Oct 2016	1	597.367	Y		Mar 2012
Phase 1 Launch Capability		2018	United Launch Alliance (ULA) / Co	Various	SMC, LA AFB, CA	Oct 2017	Oct 2017	1	741.110	Y		Mar 2012

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Exhibit P-40, Budget Line Item Justification: FY 2018 Air Force **Date:** May 2017

Appropriation / Budget Activity / Budget Sub Activity:
3021F: Space Procurement, Air Force / BA 01: Space Procurement, Air Force / BSA
1: Space Programs

P-1 Line Item Number / Title:
MSEELV / Evolved Expendable Launch Veh(Space)

ID Code (A=Service Ready, B=Not Service Ready): A **Program Elements for Code B Items:** N/A **Other Related Program Elements:** 0604853F

Line Item MDAP/MAIS Code: 176

Resource Summary	Prior Years	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total	FY 2019	FY 2020	FY 2021	FY 2022	To Complete	Total
Procurement Quantity (<i>Units in Each</i>)	-	4	5	3	-	3	4	3	2	3	42	66
Gross/Weapon System Cost (<i>\$ in Millions</i>)	-	679.851	737.853	606.488	0.000	606.488	864.099	1,266.067	847.193	1,176.357	16,094.997	22,272.905
Less PY Advance Procurement (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) (<i>\$ in Millions</i>)	-	679.851	737.853	606.488	0.000	606.488	864.099	1,266.067	847.193	1,176.357	16,094.997	22,272.905
Plus CY Advance Procurement (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority (<i>\$ in Millions</i>)	-	679.851	737.853	606.488	0.000	606.488	864.099	1,266.067	847.193	1,176.357	16,094.997	22,272.905

(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)

Initial Spares (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Flyaway Unit Cost (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost (<i>\$ in Millions</i>)	-	169.963	147.571	202.163	-	202.163	216.025	422.022	423.597	392.119	383.214	337.468

Description:

The Air Force requests funding for the Evolved Expendable Launch Vehicle (EELV) program in two separate P-1 line items in compliance with the Fiscal Years 2013 and 2014 Appropriations Acts. Launch services will be executed from the Evolved Expendable Launch Veh (Space) P-1 line item. Launch capability will be executed from the Evolved Expendable Launch Veh (Infrastructure) P-1 line item. Both line items are necessary to achieve successful placement of National Security Space (NSS) space vehicles (SVs) on-orbit. To comply with Fiscal Year 2016 National Defense Authorization Act, Air Force plans to end the current EELV Launch Capability at the end of Fiscal year 2019. Beginning in Fiscal Year 2020, the EELV budget request will be in a single P-1 line. Fiscal Year 2017 is the final ordering period for the Phase 1 block buy contract.

This program does not require and does not include advance procurement or initial spares. Flyaway Unit Cost is not applicable and Weapon System Unit Cost are not representative due to the mix (medium through heavy) of vehicles in the program. EELV procures launch services and is not a weapon system. The program provides launch capacity for the Government National Launch Forecast (NLF) requirements, but does not take ownership of any specific launch hardware. The requirements for EELV launch services are derived from multiple spacecraft requirements. "To Complete" projections include only known requirements at this time.

The EELV program is a Major Defense Acquisition Program (MDAP) Acquisition Category (ACAT) 1D program that acquires launch services to provide critical space support to satisfy Department of Defense (DoD) warfighter, national security, and other Government space lift missions while fostering inter-agency and commercial cooperation. The EELV program provides satellite delivery to specific orbits through certified Launch Vehicle (LV) providers. To provide flexibility to meet NSS requirements, the Air Force acquires launch services through a white tail concept, where designating configurations to specific missions in the same launch vehicle family is accomplished just-in-time to meet mission integration requirements.

The Air Force, National Reconnaissance Office (NRO), and the National Aeronautics and Space Administration (NASA) agreed to a coordinated strategy for certification of New Entrants to launch payloads in support of NSS and other USG requirements which has so far resulted in the certification of one New Entrant. The Air Force continues to actively work with potential New Entrants to reliably launch NSS requirements. The Government may award early integration contracts to ensure each potential offeror's launch system is compatible with the intended payload. Beginning in Fiscal Year 2018, the Air Force will compete all launch service procurements for each mission where more than one certified provider can service the required reference orbit.

Funding for this exhibit is contained in PE 1203953F.

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Exhibit P-40, Budget Line Item Justification: FY 2018 Air Force **Date:** May 2017

Appropriation / Budget Activity / Budget Sub Activity:
 3021F: Space Procurement, Air Force / BA 01: Space Procurement, Air Force / BSA
 1: Space Programs

P-1 Line Item Number / Title:
 MSEELV / Evolved Expendable Launch Veh(Space)

ID Code (A=Service Ready, B=Not Service Ready): A **Program Elements for Code B Items:** N/A **Other Related Program Elements:** 0604853F

Line Item MDAP/MAIS Code: 176

Exhibits Schedule					Prior Years	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total
Exhibit Type	Title*	Subexhibits	ID CD	MDAP/MAIS Code	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)
P-5	Evolved Expendable Launch Veh(Space)	P-5a, P-21	A		- / -	4 / 679.851	5 / 737.853	3 / 606.488	- / 0.000	3 / 606.488
P-40	Total Gross/Weapon System Cost				- / -	4 / 679.851	5 / 737.853	3 / 606.488	- / 0.000	3 / 606.488

*Title represents 1) the Number / Title for Items; 2) the Number / Title [DODIC] for Ammunition; and/or 3) the Number / Title (Modification Type) for Modifications.

Note: Totals in this Exhibit P-40 set may not be exact or sum exactly due to rounding.

Justification:
 Fiscal Year 2018 Evolved Expendable Launch Vehicle (Space) procurement funding is to acquire launch services to provide critical space support required to satisfy Department of Defense (DoD) warfighter, national security, and other Government space lift missions while fostering interagency and commercial cooperation. Launch services include but are not limited to launch vehicle manufacturing, mission success incentives, recurring costs for Orbital Debris Mitigation Standard Practice, EELV secondary payload adapter/rideshare, launch propellants, independent mission assurance, evaluation and certification of potential New Entrants, early integration activities and analysis/support, and any other related studies to support mission requirements. The Air Force is responsible for funding its own missions. All non-Air Force EELV launch services are funded within their respective entities (e.g. NRO, Navy). Continue program office and other related support activities that may include, but are not limited to studies, technical analysis, etc.

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Exhibit P-5, Cost Analysis: FY 2018 Air Force		Date: May 2017
Appropriation / Budget Activity / Budget Sub Activity: 3021F / 01 / 1	P-1 Line Item Number / Title: MSEELV / Evolved Expendable Launch Veh(Space)	Item Number / Title [DODIC]: - / Evolved Expendable Launch Veh(Space)

ID Code (A=Service Ready, B=Not Service Ready) : A	MDAP/MAIS Code:
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Resource Summary	Prior Years	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total
Procurement Quantity (<i>Units in Each</i>)	-	4	5	3	-	3
Gross/Weapon System Cost (<i>\$ in Millions</i>)	-	679.851	737.853	606.488	0.000	606.488
Less PY Advance Procurement (<i>\$ in Millions</i>)	-	-	-	-	-	-
Net Procurement (P-1) (<i>\$ in Millions</i>)	-	679.851	737.853	606.488	0.000	606.488
Plus CY Advance Procurement (<i>\$ in Millions</i>)	-	-	-	-	-	-
Total Obligation Authority (<i>\$ in Millions</i>)	-	679.851	737.853	606.488	0.000	606.488

(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)

Initial Spares (<i>\$ in Millions</i>)	-	-	-	-	-	-
Gross/Weapon System Unit Cost (<i>\$ in Millions</i>)	-	169.963	147.571	202.163	-	202.163

Note: Subtotals or Totals in this Exhibit P-5 may not be exact or sum exactly due to rounding.

Cost Elements	Prior Years			FY 2016			FY 2017			FY 2018 Base			FY 2018 OCO			FY 2018 Total		
	Unit Cost (\$ M)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ M)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ M)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ M)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ M)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ M)	Qty (Each)	Total Cost (\$ M)
Launch - Launch End Item Cost																		
Recurring Cost																		
Launch Services ^(†)	-	-	-	139.014	4	556.056	118.958	5	594.792	131.582	3	394.747	-	-	0.000	131.582	3	394.747
EELV Enterprise Systems Engineering & Integration	-	-	-	-	-	27.638	-	-	38.810	-	-	50.606	-	-	0.000	-	-	50.606
Mission Assurance	-	-	-	-	-	65.030	-	-	70.292	-	-	121.262	-	-	0.000	-	-	121.262
<i>Subtotal: Recurring Cost</i>	-	-	-	-	-	<i>648.724</i>	-	-	<i>703.894</i>	-	-	<i>566.615</i>	-	-	<i>0.000</i>	-	-	<i>566.615</i>
<i>Subtotal: Launch - Launch End Item Cost</i>	-	-	-	-	-	<i>648.724</i>	-	-	<i>703.894</i>	-	-	<i>566.615</i>	-	-	<i>0.000</i>	-	-	<i>566.615</i>
Support - Support End Item Cost																		
Other Support	-	-	-	-	-	1.661	-	-	1.628	-	-	1.629	-	-	0.000	-	-	1.629
A&AS	-	-	-	-	-	5.800	-	-	6.695	-	-	13.445	-	-	0.000	-	-	13.445
FFRDC	-	-	-	-	-	23.666	-	-	25.636	-	-	24.799	-	-	0.000	-	-	24.799
<i>Subtotal: Support - Support End Item Cost</i>	-	-	-	-	-	<i>31.127</i>	-	-	<i>33.959</i>	-	-	<i>39.873</i>	-	-	<i>0.000</i>	-	-	<i>39.873</i>
Gross/Weapon System Cost	-	-	-	169.963	4	679.851	147.571	5	737.853	202.163	3	606.488	-	-	0.000	202.163	3	606.488

Remarks:
Flyaway is not applicable to a program that procures launch services. Unit cost varies due to the mix (medium through heavy lift) of vehicles in the program.

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Exhibit P-5, Cost Analysis: FY 2018 Air Force		Date: May 2017
Appropriation / Budget Activity / Budget Sub Activity: 3021F / 01 / 1	P-1 Line Item Number / Title: MSEELV / Evolved Expendable Launch Veh(Space)	Item Number / Title [DODIC]: - / Evolved Expendable Launch Veh(Space)
ID Code (A=Service Ready, B=Not Service Ready) : A	MDAP/MAIS Code:	
<p>A Memorandum of Understanding (MOU) between the NRO and the Air Force, dated 7 October 2011, specifies a 60/40 Air Force/NRO share ratio for Federally Funded Research and Development Center (FFRDC) Mission Assurance.</p> <p>All non-Air Force launch services are funded by their respective agencies.</p> <p>System Engineering and Integration increased due to ramping-up from one New Entrant Certification effort in FY16 to four in FY18.</p> <p>Mission Assurance also increased due to going from one New Entrant Certification effort in FY16 to four in FY18.</p> <p>(t) indicates the presence of a P-5a</p>		

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Exhibit P-5a, Procurement History and Planning: FY 2018 Air Force								Date: May 2017				
Appropriation / Budget Activity / Budget Sub Activity: 3021F / 01 / 1			P-1 Line Item Number / Title: MSEELV / Evolved Expendable Launch Veh(Space)					Item Number / Title [DODIC]: - / Evolved Expendable Launch Veh(Space)				
Cost Elements	O C O	FY	Contractor and Location	Method/Type or Funding Vehicle	Location of PCO	Award Date	Date of First Delivery	Qty (Each)	Unit Cost (\$ M)	Specs Avail Now?	Date Revision Available	RFP Issue Date
Launch Services ^(†)		2016	United Launch Alliance (ULA)/Space X / CO/CA	Various	SMC, LA AFB, CA	Dec 2015	Jun 2018	4	139.014	Y		Mar 2012
Launch Services ^(†)		2017	United Launch Alliance (ULA)/Space X / CO/CA	Various	SMC, LA AFB, CA	Dec 2016	Dec 2018	5	118.958	Y		Mar 2012
Launch Services ^(†)		2018	United Launch Alliance (ULA)/SpaceX / CO/CA	Various	SMC, LA AFB, CA	Dec 2017	Dec 2019	3	131.582	Y		Dec 2016

^(†) indicates the presence of a P-21

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Exhibit P-21, Production Schedule: FY 2018 Air Force															Date: May 2017														
Appropriation / Budget Activity / Budget Sub Activity: 3021F / 01 / 1										P-1 Line Item Number / Title: MSEELV / Evolved Expendable Launch Veh(Space)										Item Number / Title [DODIC]: - / Evolved Expendable Launch Veh(Space)									

Cost Elements <i>(Units in Each)</i>						Fiscal Year 2018														Fiscal Year 2019														BALANCE	
O C R #	M F R #	FY	SERVICE	PROC QTY	ACCEPT PRIOR TO 1 OCT 2017	BAL DUE AS OF 1 OCT	Calendar Year 2018														Calendar Year 2019														
							O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P	O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P					
Launch Services																																			
1		2016	AF	4	0	4	-	-	-	-	-	-	-	-	-	1	-	-	1	-	-	-	1	-	-	-	1					0			
1		2017	AF	5	0	5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	5									0				
2		2018	AF	3	0	3			A	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3				
							O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P	O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P					

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Exhibit P-21, Production Schedule: FY 2018 Air Force																							Date: May 2017								
Appropriation / Budget Activity / Budget Sub Activity: 3021F / 01 / 1										P-1 Line Item Number / Title: MSEELV / Evolved Expendable Launch Veh(Space)										Item Number / Title [DODIC]: - / Evolved Expendable Launch Veh(Space)											
Cost Elements (Units in Each)						Fiscal Year 2020										Fiscal Year 2021										BALANCE					
O C C O	M F R #	FY	SERVICE	PROC QTY	ACCEPT PRIOR TO 1 OCT 2019	BAL DUE AS OF 1 OCT	Calendar Year 2020										Calendar Year 2021														
							O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P	O C T	N O V	D E C	J A N	F E B	M A R	A P R		M A Y	J U N	J U L	A U G	S E P
Launch Services																															
	1	2016	AF		4	4																							0		
	1	2017	AF		5	5																							0		
	2	2018	AF		3	0	3	-	-	3																			0		
								O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P	O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P

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Exhibit P-21, Production Schedule: FY 2018 Air Force									Date: May 2017				
Appropriation / Budget Activity / Budget Sub Activity: 3021F / 01 / 1					P-1 Line Item Number / Title: MSEELV / Evolved Expendable Launch Veh(Space)					Item Number / Title [DODIC]: - / Evolved Expendable Launch Veh(Space)			
MFR Ref #	Manufacturer Name - Location	Production Rates (Each / Year)			Procurement Leadtime (Months)								
		MSR For 2018	1-8-5 For 2018	MAX For 2018	Initial				Reorder				
					ALT Prior to Oct 1	ALT After Oct 1	Manufacturing PLT	Total After Oct 1	ALT Prior to Oct 1	ALT After Oct 1	Manufacturing PLT	Total After Oct 1	
1	United Launch Alliance (ULA)/Space X - CO/CA				0	0	0	0	0	0	0	0	0
2	United Launch Alliance (ULA)/SpaceX - CO/CA	3	8	10	0	0	0	0	0	6	3	24	27

"A" in the Delivery Schedule indicates the Contract Award Date.

Note: Due to space limitations, quantities in the Exhibit P-21 delivery calendar are truncated and rounded based on the maximum quantity in the calendar as follows. If the maximum quantity is less than or equal to than 9,999, all quantities are shown as each. If the maximum quantity is between 10,000 and 999,999 all quantities are shown in thousands. If the maximum quantity is between 1,000,000 and 999,999,999 all quantities are shown in millions (rounded to the nearest thousand). If the maximum quantity is equal or greater than 1,000,000,000 all quantities are shown in billions (rounded to the nearest million).

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Exhibit P-40, Budget Line Item Justification: FY 2018 Air Force **Date:** May 2017

Appropriation / Budget Activity / Budget Sub Activity:
 3021F: Space Procurement, Air Force / BA 01: Space Procurement, Air Force / BSA
 1: Space Programs

P-1 Line Item Number / Title:
 MSSBIR / SBIR High (Space)

ID Code (A=Service Ready, B=Not Service Ready): A **Program Elements for Code B Items:** 0604441F **Other Related Program Elements:** 1206441F

Line Item MDAP/MAIS Code: 210

Resource Summary	Prior Years	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total	FY 2019	FY 2020	FY 2021	FY 2022	To Complete	Total
Procurement Quantity (<i>Units in Each</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost (<i>\$ in Millions</i>)	0.000	542.713	362.504	981.009	0.000	981.009	143.649	1,195.752	739.234	545.076	3,620.342	8,130.279
Less PY Advance Procurement (<i>\$ in Millions</i>)	-	0.000	0.000	0.000	-	0.000	0.000	536.435	0.000	0.000	-	536.435
Net Procurement (P-1) (<i>\$ in Millions</i>)	0.000	542.713	362.504	981.009	0.000	981.009	143.649	659.317	739.234	545.076	3,620.342	7,593.844
Plus CY Advance Procurement (<i>\$ in Millions</i>)	-	0.000	0.000	132.420	-	132.420	404.015	0.000	0.000	0.000	-	536.435
Total Obligation Authority (<i>\$ in Millions</i>)	0.000	542.713	362.504	1,113.429	0.000	1,113.429	547.664	659.317	739.234	545.076	3,620.342	8,130.279

(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)

Initial Spares (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Flyaway Unit Cost (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-

Description:

Note: The flyaway unit cost is not included on the P-40 exhibit because there are multiple P-5 Cost Analysis exhibits.

Funding for this exhibit contained in PE 1203915F.

The Space Based Infrared System's (SBIRS) primary mission is to provide initial warning of a ballistic missile attack on the US, its deployed forces and its allies. SBIRS enhances detection and improves reporting of intercontinental ballistic missiles, submarine launched ballistic missiles, and tactical ballistic missiles. SBIRS provides increased detection and tracking performance in order to meet requirements in the Operational Requirements Document (ORD). SBIRS will consist of satellites in Geosynchronous Earth Orbit (GEO) and in Highly Elliptical Orbit (HEO) with an integrated, centralized ground station serving all SBIRS space elements, Defense Support Program (DSP) satellites and other program related support activities. The HEO payloads operate on a classified host.

SBIRS 3-8 SATELLITES:

SBIRS GEO-3 and 4 satellites are derivatives of the first two GEO satellites which were delivered on the SBIRS Engineering and Manufacturing Development (EMD) contract (RDT&E funded). The GEO-3 and 4 satellite production efforts are necessary to meet constellation requirements. In Dec 2008, the Department approved the procurement of GEO-3 and 4 satellites and the HEO-3 and 4 payloads using a Cost-Plus contract. In order to minimize the number of storage actions and costs associated with aligning the SBIRS launches to the earliest assigned Initial Launch Capability (ILC) date of Apr 2016, the GEO-3 satellite completed production and was placed into storage in Jul 2015. The GEO-4 satellite launched as the third flight (GEO-4 Flight-3) in Jan 2017. The GEO-3 (Flight-4) satellite is projected to launch not-earlier-than 1QFY2018.

SBIRS GEO-5 and 6 satellites are derivatives of the GEO-3 and 4 satellites and will be replacements for GEO-1 and 2. A four phased contract approach awarded non-recurring engineering and parts obsolescence using advanced procurement funds in Sep 2012, followed by award of long lead items in Feb 2013, full production in Jun 2014, and technical refresh in Jun 2015. The GEO-5 and 6 technical refresh contract modification modernizes the existing spacecraft bus design to improve commonality across Air Force and Government satellite programs, and enable compatibility with multiple launch vehicles. The full production effort includes 2 satellites with persistent infrared missile and threat warning payloads, launch vehicle integration, launch and early orbit test, dual communication band modification (unified SBand), Space Warfighting Construct (SWC) efforts in response to the Space Enterprise Vision (SEV) to keep pace with evolving threat, and contractor operations support through operational acceptance.

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Exhibit P-40, Budget Line Item Justification: FY 2018 Air Force		Date: May 2017
Appropriation / Budget Activity / Budget Sub Activity: 3021F: Space Procurement, Air Force / BA 01: Space Procurement, Air Force / BSA 1: Space Programs		P-1 Line Item Number / Title: MSSBIR / SBIR High (Space)
ID Code (A=Service Ready, B=Not Service Ready): A	Program Elements for Code B Items: 0604441F	Other Related Program Elements: 1206441F
Line Item MDAP/MAIS Code: 210		
<p>For the GEO 5-6 block buy, the FY 2013 NDAA authorizes six years of incremental Production funding and limits the incrementally funded contract obligation to \$3,900M. The years of incremental funding are FY 2013-2018. Advance procurement was appropriated in FY 2011 and FY 2012. GEO 5-6 advance procurement and incremental funding are attributed to FY 2013 for the purposes of identifying full funding for procurement end items. Each year of appropriation FY 2013-2018 is in two parts, the incrementally funded contract amount and annual program support costs. The incrementally funded amount complies with the NDAA cap.</p> <p>SBIRS Space Vehicles 7 and 8 (SV-7 and 8) satellites will be functional equivalents of the GEO-6 design to replace obsolete parts and mature system resilience and affordability. SV-7 and 8 will be replenishments for GEO-3 and 4. Non-recurring engineering, obsolescence, and long-lead parts will be procured in FY 2018 via advanced procurement funds. The full production effort will start in FY19.</p> <p>SBIRS HEO-3 and 4 payloads are replenishments for HEO-1 and 2 payloads, which were delivered on the SBIRS Engineering and Manufacturing Development (EMD) contract (RDT&E funded). The HEO-1 and 2 payloads are on-orbit and certified for Integrated Tactical Warning/Attack Assessment (ITW/AA) missile warning operations and certified for technical intelligence operations. The HEO-3 payload is on-orbit and has completed its initial checkout. The HEO-4 payload was delivered to the classified host in May 2015.</p> <p>Total GEO 3-4 3020/3021 funds are \$2,845.746M. Total GEO 5-6 3020/3021 funds are \$3,457.570M. Total SV 7-8 3020/3021 Advanced Procurement funds in FY18 \$132.4M. Total HEO 3-4 3020/3021 funds are \$1,149.062M.</p> <p>SBIRS MOBILE AND FIXED SITE COMMUNICATIONS/ELECTRONIC REPLACEMENT: This effort procures DSP and SBIRS assets to maintain the Data Processing Sub-System. Fixed site examples include, but are not limited to, legacy receiver, antenna drive system, Spacecraft Simulator RF, MCS display, Rapid Delog (instantaneous translation of computer data to a human-readable format), Sybase database obsolescence, communications and network routers, and switches and time server replacements. Mobile system examples include, but are not limited to, aging radio frequency communications equipment, aging antenna equipment, aging electrical equipment and cabling, and unsupported data processing subsystem components. Funding for this effort is in program element 1203915F and was previously funded under Other Procurement Air Force (OPAF).</p> <p>SBIRS High-Altitude Electromagnetic Pulse (HEMP): This effort provides for upgrades, hardness assurance and verification testing, to gain and maintain USSTRATCOM certification. AFSPC HEMP program supports the USSTRATCOM Integrated Nuclear Survivable and Endurable Report (INSER) to the Joint Staff, Secretary of Defense, and Congress. Funding for this effort is in program element 1203915F and was previously funded under Other Procurement Air Force (OPAF) in FY 2015 only.</p> <p>SBIRS SURVIVABLE ENDURABLE EVOLUTION (S2E2): The S2E2 effort recapitalizes the DSP Mobile Ground System (MGS) DSP Mobile Ground Terminals with SBIRS Mobile Ground Terminals (SMGT). The MGS is the only US Survivable and Endurable (S/E) Tactical Warning and Attack Assessment (TW/AA) system (S/E TW/AA). It is the critical Situation Monitoring element in three national-level architectures: Integrated TW/AA System, Chairman, Joint Chiefs of Staff (CJCS) Critical Nodes, and Nuclear Command and Control System (NCCS). USSTRATCOM needs AFSPCs global S/E TW/AA operational capabilities to meet President of the United States, Joint Staff, Combatant Commander and Forward User (FU) requirements for continuous, persistent, and enduring TW/AA non-imaging infrared (NIR) for Missile Warning and static events, and Nuclear Detonation (NUDET) detection and reporting across all phases of military operations. The current MGS can only process DSP data for strategic Missile Warning and NUDET detection. This effort will address long-standing obsolescence/supportability concerns of the MGS, enable the MGS to process SBIRS and DSP satellite data. Training software, spares and integration of Universal Ground NDS Terminals (UGNTs) are included. The shelters will also be upgraded for increased protection from high altitude electromagnetic pulse (HEMP) per MIL-STD-188-125-2. Funding for this effort is in program element 1203915F and was previously funded under Other Procurement Air Force (OPAF).</p>		

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Exhibit P-40, Budget Line Item Justification: FY 2018 Air Force **Date:** May 2017

Appropriation / Budget Activity / Budget Sub Activity: 3021F: Space Procurement, Air Force / BA 01: Space Procurement, Air Force / BSA 1: Space Programs **P-1 Line Item Number / Title:** MSSBIR / SBIR High (Space)

ID Code (A=Service Ready, B=Not Service Ready): A **Program Elements for Code B Items:** 0604441F **Other Related Program Elements:** 1206441F

Line Item MDAP/MAIS Code: 210

Exhibits Schedule					Prior Years	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total
Exhibit Type	Title*	Subexhibits	ID CD	MDAP/MAIS Code	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)
P-5	GEO 3-4		A		- / -	- / 62.501	- / 95.959	- / 27.756	- / -	- / 27.756
P-5	GEO 5-6		A		- / -	- / 379.661	- / 238.457	- / 938.061	- / -	- / 938.061
P-5	SV 7-8	P-5a	A		- / -	- / -	- / -	- / 0.000	- / -	- / 0.000
P-5	HEO 3-4		A		- / 0.000	- / 10.361	- / 20.547	- / 7.499	- / -	- / 7.499
P-5	SBIRS Survivable Endurable Evolution (S2E2)		A		- / -	2 / 81.202	- / -	- / -	- / -	- / -
P-40a	SBIRS Mobile System & Fixed Comm Electronics Upgrades				- / 0.000	- / 8.988	- / 7.541	- / 7.693	- / 0.000	- / 7.693
P-40	Total Gross/Weapon System Cost				- / 0.000	- / 542.713	- / 362.504	- / 981.009	- / 0.000	- / 981.009

*Title represents 1) the Number / Title for Items; 2) the Number / Title [DODIC] for Ammunition; and/or 3) the Number / Title (Modification Type) for Modifications. Title represents the P-40a Title when only the P-40a Summary/Total is shown.

Note: Totals in this Exhibit P-40 set may not be exact or sum exactly due to rounding.

Justification:

FY 2018 funding provides for continued launch and checkout activities for GEO 3/4 and HEO 3/4; continued procurement of the GEO-5 and 6 satellites; Advanced procurement of non-recurring engineering, obsolescence modifications and upgrades, and long-lead parts for SV-7 and 8 satellites.

SBIRS Mobile System & Fixed Site Communications/Electronics Upgrades: FY 2018 funding procures operational spares, prime movers necessary to support the IOC capability of 3 SMGTs, and SBIRS ground hardware or software.

FY 2018 funding also continues Enterprise Systems Engineering and Integration (SE&I) which provides intra- and inter-program requirements development, enterprise master planning, validation and verification, specialty engineering, and architecture development and continues program office and other related support activities that may include, but are not limited to studies, technical analysis, etc.

UNCLASSIFIED

Exhibit P-5, Cost Analysis: FY 2018 Air Force		Date: May 2017
Appropriation / Budget Activity / Budget Sub Activity: 3021F / 01 / 1	P-1 Line Item Number / Title: MSSBIR / SBIR High (Space)	Item Number / Title [DODIC]: - / GEO 3-4

ID Code (A=Service Ready, B=Not Service Ready) : A	MDAP/MAIS Code:
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Resource Summary	Prior Years	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total
Procurement Quantity (Units in Each)	-	-	-	-	-	-
Gross/Weapon System Cost (\$ in Millions)	-	62.501	95.959	27.756	-	27.756
Less PY Advance Procurement (\$ in Millions)	-	-	-	-	-	-
Net Procurement (P-1) (\$ in Millions)	-	62.501	95.959	27.756	-	27.756
Plus CY Advance Procurement (\$ in Millions)	-	-	-	-	-	-
Total Obligation Authority (\$ in Millions)	-	62.501	95.959	27.756	-	27.756

(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)

Initial Spares (\$ in Millions)	-	-	-	-	-	-
Gross/Weapon System Unit Cost (\$ in Millions)	-	-	-	-	-	-

Note: Subtotals or Totals in this Exhibit P-5 may not be exact or sum exactly due to rounding.

Cost Elements	Prior Years			FY 2016			FY 2017			FY 2018 Base			FY 2018 OCO			FY 2018 Total		
	Unit Cost (\$ M)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ M)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ M)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ M)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ M)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ M)	Qty (Each)	Total Cost (\$ M)
Space Vehicle - GEO 3-4 Cost																		
Recurring Cost																		
GEO 3-4 Hardware	-	-	-	-	-	0.241	-	-	0.621	-	-	-	-	-	-	-	-	-
GEO 3-4 Integration and Assembly	-	-	-	-	-	7.459	-	-	5.507	-	-	9.485	-	-	-	-	-	9.485
GEO 3-4 Enterprise Systems Engineering & Integration (SE&I)	-	-	-	-	-	10.418	-	-	-	-	-	-	-	-	-	-	-	-
<i>Subtotal: Recurring Cost</i>	-	-	-	-	-	<i>18.118</i>	-	-	<i>6.128</i>	-	-	<i>9.485</i>	-	-	-	-	-	<i>9.485</i>
Non Recurring Cost																		
GEO 3-4 Obsolescence Non-Recurring	-	-	-	-	-	0.000	-	-	-	-	-	-	-	-	-	-	-	-
GEO 3-4 Launch Vehicle and Range Integration	-	-	-	-	-	3.145	-	-	10.149	-	-	3.684	-	-	-	-	-	3.684
<i>Subtotal: Non Recurring Cost</i>	-	-	-	-	-	<i>3.145</i>	-	-	<i>10.149</i>	-	-	<i>3.684</i>	-	-	-	-	-	<i>3.684</i>
<i>Subtotal: Space Vehicle - GEO 3-4 Cost</i>	-	-	-	-	-	<i>21.263</i>	-	-	<i>16.277</i>	-	-	<i>13.169</i>	-	-	-	-	-	<i>13.169</i>
Checkout and Launch - GEO 3-4 Cost																		
GEO 3-4 Launch Ops & Checkout	-	-	-	-	-	19.238	-	-	57.682	-	-	14.587	-	-	-	-	-	14.587
Interim Contractor Support (ICS)	-	-	-	-	-	22.000	-	-	22.000	-	-	-	-	-	-	-	-	-

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Exhibit P-5, Cost Analysis: FY 2018 Air Force												Date: May 2017					
Appropriation / Budget Activity / Budget Sub Activity: 3021F / 01 / 1						P-1 Line Item Number / Title: MSSBIR / SBIR High (Space)						Item Number / Title [DODIC]: - / GEO 3-4					
ID Code (A=Service Ready, B=Not Service Ready) : A									MDAP/MAIS Code:								

Note: Subtotals or Totals in this Exhibit P-5 may not be exact or sum exactly due to rounding.

Cost Elements	Prior Years			FY 2016			FY 2017			FY 2018 Base			FY 2018 OCO			FY 2018 Total		
	Unit Cost (\$ M)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ M)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ M)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ M)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ M)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ M)	Qty (Each)	Total Cost (\$ M)
<i>Subtotal: Checkout and Launch - GEO 3-4 Cost</i>	-	-	-	-	-	41.238	-	-	79.682	-	-	14.587	-	-	-	-	-	14.587
<i>Support - GEO 3-4 Cost</i>																		
Other Support	-	-	-	-	-	-	-	-	-	-	-	0.000	-	-	-	-	-	0.000
FFRDC	-	-	-	-	-	-	-	-	-	-	-	0.000	-	-	-	-	-	0.000
A&AS	-	-	-	-	-	-	-	-	-	-	-	0.000	-	-	-	-	-	0.000
<i>Subtotal: Support - GEO 3-4 Cost</i>	-	-	-	-	-	-	-	-	-	-	-	0.000	-	-	-	-	-	0.000
Gross/Weapon System Cost	-	-	-	-	-	62.501	-	-	95.959	-	-	27.756	-	-	-	-	-	27.756

Remarks:
Total GEO 3-4 3020/3021 funds are \$2,845.746M.

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Exhibit P-5, Cost Analysis: FY 2018 Air Force		Date: May 2017
Appropriation / Budget Activity / Budget Sub Activity: 3021F / 01 / 1	P-1 Line Item Number / Title: MSSBIR / SBIR High (Space)	Item Number / Title [DODIC]: - / GEO 5-6

ID Code (A=Service Ready, B=Not Service Ready) : A	MDAP/MAIS Code:
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Resource Summary	Prior Years	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total
Procurement Quantity (Units in Each)	-	-	-	-	-	-
Gross/Weapon System Cost (\$ in Millions)	-	379.661	238.457	938.061	-	938.061
Less PY Advance Procurement (\$ in Millions)	-	-	-	-	-	-
Net Procurement (P-1) (\$ in Millions)	-	379.661	238.457	938.061	-	938.061
Plus CY Advance Procurement (\$ in Millions)	-	-	-	-	-	-
Total Obligation Authority (\$ in Millions)	-	379.661	238.457	938.061	-	938.061

(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)

Initial Spares (\$ in Millions)	-	-	-	-	-	-
Gross/Weapon System Unit Cost (\$ in Millions)	-	-	-	-	-	-

Note: Subtotals or Totals in this Exhibit P-5 may not be exact or sum exactly due to rounding.

Cost Elements	Prior Years			FY 2016			FY 2017			FY 2018 Base			FY 2018 OCO			FY 2018 Total		
	Unit Cost (\$ M)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ M)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ M)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ M)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ M)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ M)	Qty (Each)	Total Cost (\$ M)
Space Vehicle - GEO 5-6 Cost																		
Recurring Cost																		
GEO 5-6 Hardware	-	-	-	-	-	216.874	-	-	84.351	-	-	194.102	-	-	-	-	-	194.102
GEO 5-6 Integration and Assembly	-	-	-	-	-	54.163	-	-	58.320	-	-	305.925	-	-	-	-	-	305.925
GEO 5-6 Enterprise Systems Engineering & Integration (SE&I)	-	-	-	-	-	-	-	-	17.284	-	-	18.826	-	-	-	-	-	18.826
Technical Mission Analysis	-	-	-	-	-	22.415	-	-	22.232	-	-	27.743	-	-	-	-	-	27.743
<i>Subtotal: Recurring Cost</i>	-	-	-	-	-	293.452	-	-	182.187	-	-	546.596	-	-	-	-	-	546.596
Non Recurring Cost																		
GEO 5-6 Obsolescence Non-Recurring	-	-	-	-	-	26.908	-	-	13.235	-	-	4.712	-	-	-	-	-	4.712
GEO 5-6 Launch Vehicle and Range Integration	-	-	-	-	-	1.223	-	-	1.130	-	-	28.921	-	-	-	-	-	28.921
<i>Subtotal: Non Recurring Cost</i>	-	-	-	-	-	28.131	-	-	14.365	-	-	33.633	-	-	-	-	-	33.633
<i>Subtotal: Space Vehicle - GEO 5-6 Cost</i>	-	-	-	-	-	321.583	-	-	196.552	-	-	580.229	-	-	-	-	-	580.229
Checkout and Launch - GEO 5-6 Cost																		
GEO 5-6 Launch Ops & Checkout	-	-	-	-	-	0.500	-	-	2.771	-	-	287.314	-	-	-	-	-	287.314

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Exhibit P-5, Cost Analysis: FY 2018 Air Force													Date: May 2017					
Appropriation / Budget Activity / Budget Sub Activity: 3021F / 01 / 1							P-1 Line Item Number / Title: MSSBIR / SBIR High (Space)						Item Number / Title [DODIC]: - / GEO 5-6					
ID Code (A=Service Ready, B=Not Service Ready) : A										MDAP/MAIS Code:								

Note: Subtotals or Totals in this Exhibit P-5 may not be exact or sum exactly due to rounding.

Cost Elements	Prior Years			FY 2016			FY 2017			FY 2018 Base			FY 2018 OCO			FY 2018 Total		
	Unit Cost (\$ M)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ M)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ M)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ M)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ M)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ M)	Qty (Each)	Total Cost (\$ M)
Interim Contractor Support (ICS)	-	-	-	-	-	-	-	-	-	-	-	24.500	-	-	-	-	-	24.500
<i>Subtotal: Checkout and Launch - GEO 5-6 Cost</i>	-	-	-	-	-	0.500	-	-	2.771	-	-	311.814	-	-	-	-	-	311.814
Support - GEO 5-6 Cost																		
Other Support	-	-	-	-	-	20.382	-	-	10.436	-	-	10.883	-	-	-	-	-	10.883
FFRDC	-	-	-	-	-	13.241	-	-	11.715	-	-	16.338	-	-	-	-	-	16.338
A&AS	-	-	-	-	-	23.955	-	-	16.983	-	-	18.797	-	-	-	-	-	18.797
<i>Subtotal: Support - GEO 5-6 Cost</i>	-	-	-	-	-	57.578	-	-	39.134	-	-	46.018	-	-	-	-	-	46.018
Gross/Weapon System Cost	-	-	-	-	-	379.661	-	-	238.457	-	-	938.061	-	-	-	-	-	938.061

Remarks:

The incrementally funded amount includes the above Total Space Vehicle Cost (less: SE&I, Launch Vehicle & Range Integration, and Interim Contractor Support) and Launch Ops & Checkout Cost. Total incrementally funded amount of \$2,704.6M complies with FY13 NDAA limiting procurement cost to \$3,900M.

The FY 2013 gross weapon system cost includes advance procurement amount of \$243.314M appropriated in FY 2011 and \$243.500M appropriated in FY12.

Total GEO 5-6 3020/3021 funds are \$3,457.570M.

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Exhibit P-5, Cost Analysis: FY 2018 Air Force		Date: May 2017
Appropriation / Budget Activity / Budget Sub Activity: 3021F / 01 / 1	P-1 Line Item Number / Title: MSSBIR / SBIR High (Space)	Item Number / Title [DODIC]: - / SV 7-8

ID Code (A=Service Ready, B=Not Service Ready) : A	MDAP/MAIS Code:
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Resource Summary	Prior Years	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total
Procurement Quantity (<i>Units in Each</i>)	-	-	-	-	-	-
Gross/Weapon System Cost (<i>\$ in Millions</i>)	-	-	-	0.000	-	0.000
Less PY Advance Procurement (<i>\$ in Millions</i>)	-	-	-	-	-	-
Net Procurement (P-1) (<i>\$ in Millions</i>)	-	-	-	0.000	-	0.000
Plus CY Advance Procurement (<i>\$ in Millions</i>)	-	-	-	132.420	-	132.420
Total Obligation Authority (<i>\$ in Millions</i>)	-	-	-	132.420	-	132.420

(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)

Initial Spares (<i>\$ in Millions</i>)	-	-	-	-	-	-
Gross/Weapon System Unit Cost (<i>\$ in Millions</i>)	-	-	-	-	-	-

Note: Subtotals or Totals in this Exhibit P-5 may not be exact or sum exactly due to rounding.

Cost Elements	Prior Years			FY 2016			FY 2017			FY 2018 Base			FY 2018 OCO			FY 2018 Total		
	Unit Cost <i>(\$ M)</i>	Qty <i>(Each)</i>	Total Cost <i>(\$ M)</i>	Unit Cost <i>(\$ M)</i>	Qty <i>(Each)</i>	Total Cost <i>(\$ M)</i>	Unit Cost <i>(\$ M)</i>	Qty <i>(Each)</i>	Total Cost <i>(\$ M)</i>	Unit Cost <i>(\$ M)</i>	Qty <i>(Each)</i>	Total Cost <i>(\$ M)</i>	Unit Cost <i>(\$ M)</i>	Qty <i>(Each)</i>	Total Cost <i>(\$ M)</i>	Unit Cost <i>(\$ M)</i>	Qty <i>(Each)</i>	Total Cost <i>(\$ M)</i>
Space Vehicle - SV 7-8 Cost																		
Recurring Cost																		
SV 7-8 Satellites	-	-	-	-	-	-	-	-	-	-	-	0.000	-	-	-	-	-	0.000
<i>Subtotal: Recurring Cost</i>	-	-	-	-	-	-	-	-	-	-	-	0.000	-	-	-	-	-	0.000
<i>Subtotal: Space Vehicle - SV 7-8 Cost</i>	-	-	-	-	-	-	-	-	-	-	-	0.000	-	-	-	-	-	0.000
Gross/Weapon System Cost	-	-	-	-	-	-	-	-	-	-	-	0.000	-	-	-	-	-	0.000

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Exhibit P-5a, Procurement History and Planning: FY 2018 Air Force **Date:** May 2017

Appropriation / Budget Activity / Budget Sub Activity: 3021F / 01 / 1	P-1 Line Item Number / Title: MSSBIR / SBIR High (Space)	Item Number / Title [DODIC]: - / SV 7-8
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Cost Elements	O C O	FY	Contractor and Location	Method/Type or Funding Vehicle	Location of PCO	Award Date	Date of First Delivery	Qty <i>(Each)</i>	Unit Cost <i>(\$ M)</i>	Specs Avail Now?	Date Revision Available	RFP Issue Date
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Advance Procurement

SV 7-8 Satellites: SV 7-8 Long Lead		2018	TBD / TBD	TBD	LAAFB, CA	Aug 2018	Apr 2025	1	132.420	Y	Apr 2017	
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UNCLASSIFIED

Exhibit P-5, Cost Analysis: FY 2018 Air Force		Date: May 2017
Appropriation / Budget Activity / Budget Sub Activity: 3021F / 01 / 1	P-1 Line Item Number / Title: MSSBIR / SBIR High (Space)	Item Number / Title [DODIC]: - / HEO 3-4

ID Code (A=Service Ready, B=Not Service Ready) : A	MDAP/MAIS Code:
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Resource Summary	Prior Years	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total
Procurement Quantity (Units in Each)	-	-	-	-	-	-
Gross/Weapon System Cost (\$ in Millions)	0.000	10.361	20.547	7.499	-	7.499
Less PY Advance Procurement (\$ in Millions)	-	-	-	-	-	-
Net Procurement (P-1) (\$ in Millions)	0.000	10.361	20.547	7.499	-	7.499
Plus CY Advance Procurement (\$ in Millions)	-	-	-	-	-	-
Total Obligation Authority (\$ in Millions)	0.000	10.361	20.547	7.499	-	7.499

(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)

Initial Spares (\$ in Millions)	-	-	-	-	-	-
Gross/Weapon System Unit Cost (\$ in Millions)	-	-	-	-	-	-

Note: Subtotals or Totals in this Exhibit P-5 may not be exact or sum exactly due to rounding.

Cost Elements	Prior Years			FY 2016			FY 2017			FY 2018 Base			FY 2018 OCO			FY 2018 Total		
	Unit Cost (\$ M)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ M)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ M)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ M)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ M)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ M)	Qty (Each)	Total Cost (\$ M)
Space Vehicle - HEO 3-4 Cost																		
Recurring Cost																		
HEO 3-4 Hardware	-	-	0.000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
HEO 3-4 Integration and Assembly	-	-	0.000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
HEO 3-4 Enterprise Systems Engineering & Integration (SE&I)	-	-	0.000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
<i>Subtotal: Recurring Cost</i>	-	-	0.000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Non Recurring Cost																		
HEO 3-4 Obsolescence Non-Recurring	-	-	0.000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
HEO 3-4 Launch Vehicle and Range Integration	-	-	0.000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
<i>Subtotal: Non Recurring Cost</i>	-	-	0.000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
<i>Subtotal: Space Vehicle - HEO 3-4 Cost</i>	-	-	0.000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Checkout and Launch - HEO 3-4 Cost																		
HEO Host Accommodation	-	-	0.000	-	-	1.021	-	-	2.468	-	-	-	-	-	-	-	-	-
HEO 3-4 Launch Ops & Checkout	-	-	0.000	-	-	9.340	-	-	18.079	-	-	7.499	-	-	-	-	-	7.499

UNCLASSIFIED

Exhibit P-5, Cost Analysis: FY 2018 Air Force												Date: May 2017					
Appropriation / Budget Activity / Budget Sub Activity: 3021F / 01 / 1						P-1 Line Item Number / Title: MSSBIR / SBIR High (Space)						Item Number / Title [DODIC]: - / HEO 3-4					
ID Code (A=Service Ready, B=Not Service Ready) : A									MDAP/MAIS Code:								

Note: Subtotals or Totals in this Exhibit P-5 may not be exact or sum exactly due to rounding.

Cost Elements	Prior Years			FY 2016			FY 2017			FY 2018 Base			FY 2018 OCO			FY 2018 Total		
	Unit Cost (\$ M)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ M)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ M)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ M)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ M)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ M)	Qty (Each)	Total Cost (\$ M)
<i>Subtotal: Checkout and Launch - HEO 3-4 Cost</i>	-	-	0.000	-	-	10.361	-	-	20.547	-	-	7.499	-	-	-	-	-	7.499
<i>Support - HEO 3-4 Cost</i>																		
Other Support	-	-	0.000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
FFRDC	-	-	0.000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
A&AS	-	-	0.000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
<i>Subtotal: Support - HEO 3-4 Cost</i>	-	-	0.000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost	-	-	0.000	-	-	10.361	-	-	20.547	-	-	7.499	-	-	-	-	-	7.499

Remarks:

Total HEO 3-4 3020/3021 funds are \$1,149.062M.

UNCLASSIFIED

Exhibit P-5, Cost Analysis: FY 2018 Air Force		Date: May 2017
Appropriation / Budget Activity / Budget Sub Activity: 3021F / 01 / 1	P-1 Line Item Number / Title: MSSBIR / SBIR High (Space)	Item Number / Title [DODIC]: - / SBIRS Survivable Endurable Evolution (S2E2)

ID Code (A=Service Ready, B=Not Service Ready) : A	MDAP/MAIS Code:
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Resource Summary	Prior Years	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total
Procurement Quantity (Units in Each)	-	2	-	-	-	-
Gross/Weapon System Cost (\$ in Millions)	-	81.202	-	-	-	-
Less PY Advance Procurement (\$ in Millions)	-	-	-	-	-	-
Net Procurement (P-1) (\$ in Millions)	-	81.202	-	-	-	-
Plus CY Advance Procurement (\$ in Millions)	-	-	-	-	-	-
Total Obligation Authority (\$ in Millions)	-	81.202	-	-	-	-

(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)

Initial Spares (\$ in Millions)	-	-	-	-	-	-
Gross/Weapon System Unit Cost (\$ in Millions)	-	40.601	-	-	-	-

Note: Subtotals or Totals in this Exhibit P-5 may not be exact or sum exactly due to rounding.

Cost Elements	Prior Years			FY 2016			FY 2017			FY 2018 Base			FY 2018 OCO			FY 2018 Total		
	Unit Cost (\$ M)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ M)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ M)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ M)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ M)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ M)	Qty (Each)	Total Cost (\$ M)
Hardware - SBIRS Survivable Endurable Evolution (S2E2) Cost																		
Recurring Cost																		
2.5 S2E2 SMGT	-	-	-	25.000	2	50.000	-	-	-	-	-	-	-	-	-	-	-	-
<i>Subtotal: Recurring Cost</i>	-	-	-	-	-	50.000	-	-	-	-	-	-	-	-	-	-	-	-
Non Recurring Cost																		
2.2 S2E2 Software Integration Facility (SIF)	-	-	-	-	-	0.000	-	-	-	-	-	-	-	-	-	-	-	-
2.3 S2E2 System Test Environment (STE)	-	-	-	-	-	0.000	-	-	-	-	-	-	-	-	-	-	-	-
2.4 S2E2 SMGT 1-3 DSP/GEO Stereo Capability Modification	-	-	-	6.000	3	18.000	-	-	-	-	-	-	-	-	-	-	-	-
2.6 S2E2 Integration	-	-	-	-	-	6.502	-	-	-	-	-	-	-	-	-	-	-	-
<i>Subtotal: Non Recurring Cost</i>	-	-	-	-	-	24.502	-	-	-	-	-	-	-	-	-	-	-	-
<i>Subtotal: Hardware - SBIRS Survivable Endurable Evolution (S2E2) Cost</i>	-	-	-	-	-	74.502	-	-	-	-	-	-	-	-	-	-	-	-
Software - SBIRS Survivable Endurable Evolution (S2E2) Cost																		
Non Recurring Cost																		
2.1 S2E2 Software	-	-	-	6.700	1	6.700	-	-	-	-	-	-	-	-	-	-	-	-
<i>Subtotal: Non Recurring Cost</i>	-	-	-	-	-	6.700	-	-	-	-	-	-	-	-	-	-	-	-

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Exhibit P-5, Cost Analysis: FY 2018 Air Force		Date: May 2017
Appropriation / Budget Activity / Budget Sub Activity: 3021F / 01 / 1	P-1 Line Item Number / Title: MSSBIR / SBIR High (Space)	Item Number / Title [DODIC]: - / SBIRS Survivable Endurable Evolution (S2E2)
ID Code (A=Service Ready, B=Not Service Ready) : A		MDAP/MAIS Code:

Note: Subtotals or Totals in this Exhibit P-5 may not be exact or sum exactly due to rounding.

Cost Elements	Prior Years			FY 2016			FY 2017			FY 2018 Base			FY 2018 OCO			FY 2018 Total		
	Unit Cost (\$ M)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ M)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ M)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ M)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ M)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ M)	Qty (Each)	Total Cost (\$ M)
<i>Subtotal: Software - SBIRS Survivable Endurable Evolution (S2E2) Cost</i>	-	-	-	-	-	6.700	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost	-	-	-	40.601	2	81.202	-	-	-	-	-	-	-	-	-	-	-	-

Remarks:

Note: Starting in FY 2016 funding has been re-categorized from Other Procurement (3080) to Space Procurement Air Force (SPAF/3021).

SBIRS Survivable Endurable Evolution (S2E2): SBIRS capable MGS require the interim deliverables over this period as described below.

S2E2 Software Non-Recurring:

- FY 2011 - Provided non-recurring engineering for S2E2 System Test Environment (STE) design and integration.
- FY 2012 - Provided non-recurring engineering for S2E2 HEMP shelters and software integration.
- FY 2013 - Provided non-recurring engineering for track data relay processing, and S2E2 Maintenance Ops Support suite (MOSS).
- FY 2014 - Provided non-recurring engineering for GEO capable S2E2 upgrade.
- FY 2016 - Provided training software for Standardized Space Trainer. (SPAF funded)

S2E2 Hardware Non-Recurring:

- FY 2011 - Modernized the current Software Integration Facility (SIF) to include development functionality for S2E2.
- FY 2012 - Provided non-recurring engineering for S2E2 HEMP shelters and hardware integration.
- FY 2013 - Provided non-recurring engineering for S2E2 Maintenance Ops Support Suite (MOSS). Modernized the existing Integrated Maintenance Facility (IMF) with a sustainable MOSS for S2E2 System predeployment, maintainer training, and limited operator training.
- FY 2014 - Provided non-recurring engineering for GEO-Capable Parabolic Dish Sub-System (PDSS) antennas
- FY 2016 - Modified SMGTs 1-3 to add PDSS antennas and other hardware for full Stereo DSP/GEO capability; completes UGNT integration (SPAF funded)

S2E2 Hardware Recurring:

- FY 2012 - Procured 1 fully tested and sustainable Mono-DSP SMGT.
- FY 2013 - Procured 1 fully tested and sustainable Mono-DSP SMGT.
- FY 2014 - Procured 2 fully tested and sustainable PDSSs, and fully functional GEO-upgraded SMGTs 1&2.
- FY 2015 - Procured 1 fully tested and sustainable GEO SMGT with two PDSSs. Procures the System Test Environment (STE) for high fidelity Development, Testing & Evaluation (DT&E) and future sustainment.
- FY 2016 - Procured 2 fully capable Stereo DSP/GEO SMGTs with two PDSSs each, as well as 9 additional PDSSs needed to field full, simultaneous DSP and SBIRS downlink capability for FOC. (SPAF funded)

Total S2E2 Funding for FY 2011-2016 = \$232.5M

Quantity = 5

Gross Unit Cost = \$46.5M

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Exhibit P-40a, Budget Item Justification For Aggregated Modification Items: FY 2018 Air Force														Date: May 2017					
Appropriation / Budget Activity / Budget Sub Activity: 3021F / 01 / 1						P-1 Line Item Number / Title: MSSBIR / SBIR High (Space)						Aggregated Modification Items Title: SBIRS Mobile System & Fixed Comm Electronics Upgrades							

Item Number / Title	ID CD	MDAP/MAIS Code	Prior Years			FY 2016			FY 2017			FY 2018 Base			FY 2018 OCO			FY 2018 Total		
			Unit Cost (\$ M)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ M)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ M)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ M)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ M)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ M)	Qty (Each)	Total Cost (\$ M)
SPAF1 / SBIRS Mobile System & Fixed Comm Electronics Upgrades			-	-	-	-	-	8.988	-	-	7.541	-	-	7.693	-	-	-	-	-	7.693
Total			-	-	0.000	-	-	8.988	-	-	7.541	-	-	7.693	-	-	0.000	-	-	7.693

Note: Subtotals or Totals in this Exhibit P-40a may not be exact or sum exactly, due to rounding.

Modification Information:

Item Number / Title	Models of Systems Affected	Modification Type
SPAF1 / SBIRS Mobile System & Fixed Comm Electronics Upgrades	SBIRS	Reliability & Maintainability

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Exhibit P-40, Advance Procurement Budget Line Item Justification: FY 2018 Air Force **Date:** May 2017

Appropriation / Budget Activity / Budget Sub Activity: 3021F: Space Procurement, Air Force / BA 01: Space Procurement, Air Force / BSA 1: Space Programs	P-1 Line Item Number / Title: MSSBIR / SBIR High (Space)
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Program Elements for Code B Items: 0604441F	Other Related Program Elements: 1206441F
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Line Item MDAP/MAIS Code: 210

Resource Summary	Prior Years	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total	FY 2019	FY 2020	FY 2021	FY 2022	To Complete	Total
Gross/Weapon System Cost (<i>\$ in Millions</i>)	-	0.000	0.000	132.420	-	132.420	404.015	0.000	0.000	0.000	-	536.435
Net Procurement (P-1) (<i>\$ in Millions</i>)	-	0.000	0.000	132.420	-	132.420	404.015	0.000	0.000	0.000	-	536.435
Total Obligation Authority (<i>\$ in Millions</i>)	-	0.000	0.000	132.420	-	132.420	404.015	0.000	0.000	0.000	-	536.435

Description:

Funding for this exhibit contained in PE 1203915F.

The Space Based Infrared System's (SBIRS) primary mission is to provide initial warning of a ballistic missile attack on the US, its deployed forces and its allies. SBIRS enhances detection and improves reporting of intercontinental ballistic missiles, submarine launched ballistic missiles, and tactical ballistic missiles. SBIRS provides increased detection and tracking performance in order to meet requirements in the Operational Requirements Document (ORD). SBIRS will consist of satellites in Geosynchronous Earth Orbit (GEO) and in Highly Elliptical Orbit (HEO) with an integrated, centralized ground station serving all SBIRS space elements, Defense Support Program (DSP) satellites and other program related support activities. The HEO payloads operate on a classified host.

SBIRS Space Vehicles 7 and 8 (SV-7 and 8) satellites are functional equivalents of the GEO-6 design to replace obsolete parts and mature system resilience and affordability. SV-7 and 8 will be replenishments for GEO-3 and 4. Non-recurring engineering, obsolescence, and long-lead parts will be procured in FY 2018 via advanced procurement funds. Full production effort will start in FY19.

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Exhibit P-40, Advance Procurement Budget Line Item Justification: FY 2018 Air Force **Date:** May 2017

Appropriation / Budget Activity / Budget Sub Activity: 3021F: Space Procurement, Air Force / BA 01: Space Procurement, Air Force / BSA 1: Space Programs	P-1 Line Item Number / Title: MSSBIR / SBIR High (Space)
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Program Elements for Code B Items: 0604441F	Other Related Program Elements: 1206441F
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Line Item MDAP/MAIS Code: 210

Exhibits Schedule				Prior Years	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total
Exhibit Type	Title*	ID CD	MDAP/MAIS Code	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)
P-10	SV 7-8			- / -	- / -	- / -	- / 132.420	- / -	- / 132.420
P-40	Total Gross/Weapon System Cost			- / -	- / 0.000	- / 0.000	- / 132.420	- / -	- / 132.420

*Title represents the P-10 Title for Advance Procurement.

Note: Totals in this Exhibit P-40 set may not be exact or sum exactly due to rounding.

Justification:
 FY18 Advanced procurement provides funding of non-recurring engineering, obsolescence modifications and upgrades, and long-lead parts for SV-7 and 8 satellites.

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Exhibit P-10, Advance Procurement Requirements Analysis (page 1 - Budget Funding Justification): FY 2018 Air Force					Date: May 2017		
Appropriation / Budget Activity / Budget Sub Activity: 3021F / 01 / 1			P-1 Line Item Number / Title: MSSBIR / SBIR High (Space)			P-5 Number / Title: - / SV 7-8	
First System (2018) Award Date: August 2018		First System (2018) Completion Date: April 2025			Interval Between Systems: 9 Months		
SV 7-8		Production Leadtime <i>(Months)</i>	Prior Years <i>(Each)</i>	FY 2016 <i>(Each)</i>	FY 2017 <i>(Each)</i>	FY 2018 <i>(Each)</i>	
Quantity		12	-	-	-	-	
Cost Elements		When Required <i>(Months)</i>	Prior Years <i>(\$ M)</i>	FY 2016 <i>(\$ M)</i>	FY 2017 <i>(\$ M)</i>	FY 2018 <i>(\$ M)</i>	
Other							
SV 7-8 Satellites: SV 7-8 Long Lead ^(†)		12	0.000	-	-	132.420	
<i>Total: Other</i>			<i>0.000</i>	-	-	<i>132.420</i>	
Total Advance Procurement/Obligation Authority			-	-	-	132.420	

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Exhibit P-10, Advance Procurement Requirements Analysis (page 2 - Budget Funding Justification): FY 2018 Air Force						Date: May 2017	
Appropriation / Budget Activity / Budget Sub Activity: 3021F / 01 / 1			P-1 Line Item Number / Title: MSSBIR / SBIR High (Space)			P-5 Number / Title: - / SV 7-8	
FY 2018							
Cost Elements	QPA (Each)	Production Leadtime (Months)	Unit Cost (\$ M)	Contract Forecast Date	2018 Qty (Each)	For FY	Total Cost Request (\$ M)
Other							
SV 7-8 Satellites: SV 7-8 Long Lead ^(t)	-	24	132.420	Aug 2018	1		132.420
<i>Total: Other</i>							132.420
Total Advance Procurement/Obligation Authority							132.420

Description:
 NOTE: FY 2018/19 Advanced procurement provides funding of non-recurring engineering, obsolescence modifications and upgrades, and long-lead parts for Space Vehicles (SV) 7 and 8 necessary to protect the delivery schedule of the FY2019 SV 7-8 Production Satellite Bundle Buy with deliveries in Apr 2025 and Jan 2026.

^(t) indicates the presence of Contract Data presented in the associated P-5 Item's P-5a exhibit.

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Exhibit P-40, Budget Line Item Justification: FY 2018 Air Force **Date:** May 2017

Appropriation / Budget Activity / Budget Sub Activity:
 3021F: Space Procurement, Air Force / BA 01: Space Procurement, Air Force / BSA
 1: Space Programs

P-1 Line Item Number / Title:
 NUDETS / NUDET Detection System

ID Code (A=Service Ready, B=Not Service Ready): A **Program Elements for Code B Items:** N/A **Other Related Program Elements:** 1203913F

Line Item MDAP/MAIS Code: N/A

Resource Summary	Prior Years	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total	FY 2019	FY 2020	FY 2021	FY 2022	To Complete	Total
Procurement Quantity (<i>Units in Each</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost (<i>\$ in Millions</i>)	-	5.095	4.395	6.370	0.000	6.370	6.469	6.583	6.701	6.838	-	42.451
Less PY Advance Procurement (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) (<i>\$ in Millions</i>)	-	5.095	4.395	6.370	0.000	6.370	6.469	6.583	6.701	6.838	-	42.451
Plus CY Advance Procurement (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority (<i>\$ in Millions</i>)	-	5.095	4.395	6.370	0.000	6.370	6.469	6.583	6.701	6.838	-	42.451

(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)

Initial Spares (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Flyaway Unit Cost (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-

Description:

The United States Nuclear Detonation (NUDET) Detection System (USNDS) provides a near real-time worldwide, highly survivable/endurable capability to detect, locate, and report any nuclear detonations in the atmosphere of the earth or in near space. The USNDS Operational Requirements Document (ORD), dated 21 Jan 2004, documents the requirements for space-based NUDET detection. Space-based NUDET detection is also mandated by Public Law 110-181, dated 28 Jan 2008, which directs the Secretary of Defense to maintain the capability for space-based nuclear detection at or above 2008 capability levels. USNDS supports NUDET detection requirements across five mission areas: Integrated Tactical Warning and Attack Assessment (ITW/AA), Nuclear Force Management (NFM), Space Control (SC), Treaty Monitoring (TM) and a classified mission.

The USNDS 6 program is jointly sponsored and funded by the Department of Defense (DoD), through the US Air Force (AF), and the Department of Energy (DOE), through the National Nuclear Security Administration (NNSA) and its Nuclear Detonation Detection (NA-22) office, respectively. NNSA/NA-22 supplies USNDS space sensors as Government Furnished Equipment (GFE) to the AF USNDS Program Office, which is responsible for all acquisition and systems engineering, integration and test (SEIT) activities on space vehicles (SVs), to include Global Positioning System (GPS) and additional hosts, and their supporting ground control segments. The AF directly funds the procurement of the USNDS 6 ground segment (described below).

DoD funds its contribution to the NDS program in PE 1203913F with RDT&E, SPAF, and O&M dollars. NDS payload integration onto GPS satellites is funded in the GPS III Space Segment PE 1203265F for GPS III SVs. NDS payload integration onto Geosynchronous Earth Orbit (GEO) satellites is funded by NNSA/NA-22.

USNDS consists of space sensors and complex ground segments. The space segment sensors, funded by DOE, consists of three nuclear detection sensor payloads: the Radiation Detection Capability (RADEC) payload for Defense Support Program (DSP) satellites, the Global Burst Detection (GBD) payload for Medium Earth Orbit (MEO) platforms (GPS satellites), and the Space Atmospheric Burst Reporting System (SABRS) payload for Geosynchronous Earth Orbit platforms (classified GEO hosts). Together, these sensors and associated communications capability provided by the host satellites comprise the global NUDET space segment detection capability for the USNDS. Space sensors communicate NUDET indications to the fixed ground segment (the RADEC Data Processor (RDP) and the Integrated Correlation and Display System (ICADS)) and the deployable mobile ground segment (survivable Ground NDS Terminals (GNTs), and the survivable/endurable Universal Ground NDS Terminals (UGNTs), when fielded). The ground segment provides ground receiving analysis and reporting capabilities to national authorities, commands, and forward users as well as Department of State for the Treaty Monitoring and Verification mission.

The ground control segment is being modernized and continuously improved through an incremental evolutionary acquisition approach.

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Exhibit P-40, Budget Line Item Justification: FY 2018 Air Force		Date: May 2017
Appropriation / Budget Activity / Budget Sub Activity: 3021F: Space Procurement, Air Force / BA 01: Space Procurement, Air Force / BSA 1: Space Programs		P-1 Line Item Number / Title: NUDETS / NUDET Detection System
ID Code (A=Service Ready, B=Not Service Ready): A	Program Elements for Code B Items: N/A	Other Related Program Elements: 1203913F
Line Item MDAP/MAIS Code: N/A		
<p>The upgrade to the GNT is the survivable/endurable Universal Ground Nuclear Detonation (NUDET) Detection System (NDS) Terminal (UGNT) which is funded with AF RDT&E in this PE. The UGNT provides NUDET Detection Reports to end users through survivable and endurable USNDS communications via Milstar/Advanced Extremely High Frequency (AEHF) circuits. The GNT supports Integrated Tactical Warning and Attack Assessment (ITW/AA) and Nuclear Force Management (NFM) missions. The UGNT program modifies the baseline of the GNT program and deploys as an integral part of the Space Based Infrared System (SBIRS) Survivable/Endurable Evolution (S2E2) Mobile Ground System (SMGS) units also in support of ITW/AA and NFM. The UGNT, when integrated with the SMGS, will perform NUDET event processing with fused NDS data from GPS and DSP. SMGS capability refers to the result of the S2E2 upgrade program for the MGS mission processing capability, including the integration of UGNT. The intended end state of UGNT integration is delivery of enhanced NUDET detection capabilities that meet survivable/endurable ITW/AA requirements directed by the President, SECDEF, Joint Staff, and USSTRATCOM delivering long-term, cost effective, multi-role, multi-mission space effects to the war fighter across the range of military operations. Funding for this exhibit contained in PE 1203913F, NUDET Detection System (SPACE).</p>		
<p>Justification: GROUND NUCLEAR DETONATION DETECTION TERMINALS UPGRADES/SENSOR CHECKOUT ACTIVITIES: FY2018 funding purchases USNDS6 equipment, integration and testing for the hardened shelters, on-orbit sensor testing and system engineering for USNDS GPS payload, and simulator modification for ICADS Build 6 ground system. Continue program office and other related support activities that may include, but not limited to studies, technical analysis, etc.</p>		

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Exhibit P-40, Budget Line Item Justification: FY 2018 Air Force **Date:** May 2017

Appropriation / Budget Activity / Budget Sub Activity:
 3021F: Space Procurement, Air Force / BA 01: Space Procurement, Air Force / BSA
 1: Space Programs

P-1 Line Item Number / Title:
 SPCMOD / Space Mods

ID Code (A=Service Ready, B=Not Service Ready): A **Program Elements for Code B Items:** 1203165F **Other Related Program Elements:** 0305614F

Line Item MDAP/MAIS Code: 166

Resource Summary	Prior Years	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total	FY 2019	FY 2020	FY 2021	FY 2022	To Complete	Total
Procurement Quantity (<i>Units in Each</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost (<i>\$ in Millions</i>)	0.000	24.689	8.642	37.203	0.000	37.203	99.462	27.551	27.830	15.017	-	240.394
Less PY Advance Procurement (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) (<i>\$ in Millions</i>)	0.000	24.689	8.642	37.203	0.000	37.203	99.462	27.551	27.830	15.017	-	240.394
Plus CY Advance Procurement (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority (<i>\$ in Millions</i>)	0.000	24.689	8.642	37.203	0.000	37.203	99.462	27.551	27.830	15.017	-	240.394

(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)

Initial Spares (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Flyaway Unit Cost (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-

Description:

Space Mods Space enables the development of advanced Command and Control (C2) Battle Management, Intelligence Surveillance and Reconnaissance (ISR), and Command, Control, Communications, Computers, and Intelligence (C4I) systems to conduct effective predictive battle space awareness, facilitate precision attack, and compress the sensor-to-shooter kill chain. Permanent modifications are configuration changes to in-service systems and equipment that correct materiel or other deficiencies, or that add or delete capability. Safety modifications correct deficiencies that produce hazards to personnel, systems, or equipment. This budget line covers both new and on-going modification efforts for space equipment and systems. Modification installation funding is budgeted in the year the installation occurs.

PE 1203160F DEF METEOROLOGICAL SAT PROG (SPACE)

The DEFENSE METEOROLOGICAL SATELLITE PROGRAM (DMSP) is a fully operational program supporting a broad range of national security users who require timely and accurate global weather information. DMSP is DoD only assured source of global weather data providing visible and infrared cloud cover imagery (1/3 nautical miles (nm) constant resolution) and other meteorological, oceanographic, land surface, and space environmental data. DMSP satellites are flown in sun-synchronous, 450nm polar-orbits to meet mission requirements (sun-synchronous means the satellites cross the equator at the same local sun time on each of their 14 orbits/day).

Key elements of the DMSP constellation command and control (C2) ground system have not been re-capitalized since the equipment was transferred to the National Oceanic and Atmospheric Administration Office of Satellite Operations in 1998. Critical C2 component spares have been depleted and parts cannibalization is no longer sustainable. Therefore, DMSP re-established an OPAF (now SPAF) funding line beginning in FY15 to enable continued C2 ground segment sustainment through a selective re-capitalization effort. C2 subsystems to be addressed include but are not limited to the Telemetry and Commanding System, Mission Planning and Scheduling System, and communications tracking station interface units. This selective re-capitalization effort is intended to ensure the DMSP C2 system remains viable through the planned DMSP mission fly-out no later than 2027.

PE 1203165F NAVSTAR GPS (SPACE AND CONTROL SEGMENTS)

NAVSTAR GLOBAL POSITIONING SYSTEM (GPS) provides highly accurate time and three dimensional position and velocity information to an unlimited number of users anywhere on or above the surface of the earth, in any weather. This system supplies highly accurate position, velocity, timing, and Nuclear Detonation (NUDET) Detection System (NDS) information to properly equipped air, land, sea, and space-based users worldwide. The GPS system consists of three segments: space, control, and user equipment. The Operational Control System (OCS) is part of the control segment and requires modifications to replace high failure rate parts and preclude system operational degradation. Without these mods, aging and obsolete equipment will excessively degrade, ultimately resulting in system failure. System failure

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Exhibit P-40, Budget Line Item Justification: FY 2018 Air Force		Date: May 2017
Appropriation / Budget Activity / Budget Sub Activity: 3021F: Space Procurement, Air Force / BA 01: Space Procurement, Air Force / BSA 1: Space Programs		P-1 Line Item Number / Title: SPCMOD / Space Mods
ID Code (A=Service Ready, B=Not Service Ready): A	Program Elements for Code B Items: 1203165F	Other Related Program Elements: 0305614F
Line Item MDAP/MAIS Code: 166		
<p>or even partial system failure will cause a loss of operational availability and the transmission of inaccurate navigation data to worldwide users, resulting in potential loss of life and/or operational equipment, including multi-million dollar satellites. OCS is required to operate until the Next Generation Operational Control System (OCX) transitions to operations, to include support for GPS III and fielding of Modernized GPS User Equipment (MGUE).</p> <p>PE 1203614F JSPOC MISSION SYSTEM</p> <p>JOINT SPACE OPERATIONS CENTER (JSpOC) Mission System (JMS) provides integrated space situational awareness information and C2 of space forces for the Joint Functional Component Commander for Space (JFCC-SPACE). It will allow JFCC-SPACE to plan, direct, coordinate, and control operations of assigned forces. The JMS provides a net-centric, Services Oriented Architecture (SOA) along with space mission applications to meet the needs above. It implements a Space User Defined Operational Picture (UDOP) to provide the capability to create, visualize, and share decision-relevant views of space operational environment at all echelons.</p> <p>PE 0305912F SLBM RADAR WARNING SYSTEM</p> <p>SEA-LAUNCHED BALLISTIC MISSILE (SLBM) DETECTION AND WARNING SYSTEM: The primary mission of the 474N SLBM Detection and Warning System is to provide United States Strategic Command (USSTRATCOM) with credible Integrated Tactical Warning/Attack Assessment (ITW/AA) data on all SLBMs penetrating the coverage area. This data includes an estimation of launch and predicted impact (L&PI) locations and times. The secondary mission is to provide the Cheyenne Mountain Air Force Station, CO (CMAFS) and other users with ITW/AA data on Intercontinental Ballistic Missiles (ICBMs) penetrating the coverage area. Additionally, Perimeter Acquisition Radar Attack Characterization System (PARCS) and PAVE Phased Array Warning Systems (PAVE PAWS) support the Space Situational Awareness (SSA) mission by providing near earth satellite surveillance, tracking and identification as required by the Space Control Center, Alternate Space Control Center, and the Joint Intelligence Center. The sensors have an operational availability requirement of 98 percent. The 474N SLBM Detection and Warning System currently consists of: a) the AN/FPQ-16 PARCS and b) the AN/FPS-123 PAVE PAWS System (Phased Array Radars for SLBM Detection and Warning System).</p> <p>PE 123940F SPACE SITUATION AWARENESS OPERATIONS</p> <p>GROUND-BASED ELECTRO OPTICAL DEEP SPACE SURVEILLANCE (GEODSS) SERVICE LIFE EXTENSION PROGRAM (SLEP) Phase II: The GEODSS SLEP Phase II will replace aging unsupportable mission critical sub-systems with modern sustainable components, allowing continued mission operations through 2025. GEODSS is a three-site optical telescope system dedicated to the Space Surveillance Network (SSN). The GEODSS sites, located in Socorro, New Mexico; Maui, Hawaii; and Diego Garcia (British Indian Ocean Territories), provide time critical deep-space tracking information for the Joint Space Operations Center (JSpOC). The GEODSS SLEP Phase II will modernize the Sensor Controller, Data Processing, and other unsustainable subsystems as required for all sites. The program will replace the obsolete, diminishing supportable components of the GEODSS Sensor Controller Group (SCG) with sustainable hardware/software technology.</p> <p>PE 1203710F EO/IR WEATHER SYSTEMS</p> <p>Residual Geostationary Operational Environmental Satellite (GOES) Relocation is a Department of Defense's (DoD) weather mitigation plan to address Space-based Environmental Monitoring (SBEM) Weather Gaps 1 (Cloud Characterization) and Gap 2 (Theater Weather Imagery) requirements over the Indian Ocean region. The requirements have been validated by the Joint Requirements Oversight Council (JROC) Memo 092-14, dated 3 Sep 2014. The program will leverage a spare National Oceanic and Atmospheric Agency (NOAA) on-orbit geostationary asset for the DoD use, in order to provide timely and reliable high-quality electro-optical/infrared (EO/IR) remote sensing capability that will address the critical weather data needs over the Central Command (CENTCOM) Area of Responsibility (AoR).</p>		

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Exhibit P-40, Budget Line Item Justification: FY 2018 Air Force **Date:** May 2017

Appropriation / Budget Activity / Budget Sub Activity:
3021F: Space Procurement, Air Force / BA 01: Space Procurement, Air Force / BSA
1: Space Programs

P-1 Line Item Number / Title:
SPCMOD / Space Mods

ID Code (A=Service Ready, B=Not Service Ready): A **Program Elements for Code B Items:** 1203165F **Other Related Program Elements:** 0305614F

Line Item MDAP/MAIS Code: 166

Exhibits Schedule					Prior Years	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total
Exhibit Type	Title*	Subexhibits	ID CD	MDAP/MAIS Code	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)
P-40a	Defense Meteorological Satellite Program (SPACE)				- / -	- / 2.174	- / 0.975	- / 1.079	- / -	- / 1.079
P-3a	1 / NAVSTAR GPS-OCS COTS UPGRADE (Reliability & Maintainability)				- / -	- / 13.136	- / 7.667	- / 13.654	- / 0.000	- / 13.654
P-40a	JSPOC Mission System				- / -	- / 0.000	- / 0.000	- / 3.851	- / -	- / 3.851
P-40a	Submarine-Launched Ballistic Missile (SLBM) Radar Warning System				- / 0.000	- / 9.379	- / 0.000	- / 0.000	- / 0.000	- / 0.000
P-3a	1 / Weather Space Vehicle Relay Ground Station (No text provided.)				- / -	- / 0.000	- / 0.000	- / 18.620	- / 0.000	- / 18.620
P-40	Total Gross/Weapon System Cost				- / 0.000	- / 24.689	- / 8.642	- / 37.203	- / 0.000	- / 37.203

Exhibits Schedule					FY 2019	FY 2020	FY 2021	FY 2022	To Complete	Total
Exhibit Type	Title*	Subexhibits	ID CD	MDAP/MAIS Code	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)
P-40a	Defense Meteorological Satellite Program (SPACE)				- / -	- / -	- / -	- / -	- / -	- / -
P-3a	1 / NAVSTAR GPS-OCS COTS UPGRADE (Reliability & Maintainability)				- / -	- / -	- / -	- / -	- / -	- / -
P-40a	JSPOC Mission System				- / -	- / -	- / -	- / -	- / -	- / -
P-40a	Submarine-Launched Ballistic Missile (SLBM) Radar Warning System				- / -	- / -	- / -	- / -	- / -	- / -
P-3a	1 / Weather Space Vehicle Relay Ground Station (No text provided.)				- / -	- / -	- / -	- / -	- / -	- / -
P-40	Total Gross/Weapon System Cost				- / 99.462	- / 27.551	- / 27.830	- / 15.017	- / -	- / 240.394

*Title represents 1) the Number / Title for Items; 2) the Number / Title [DODIC] for Ammunition; and/or 3) the Number / Title (Modification Type) for Modifications. Title represents the P-40a Title when only the P-40a Summary/Total is shown.

Note: Totals in this Exhibit P-40 set may not be exact or sum exactly due to rounding.

Justification:
 This program, Space Mods P-40A Item Joint Space Operations Center Mission System, is a new start.
 This program, 1203710F Space Mods Space, P-3A Mod RGS01, Weather Space Vehicle Relay Ground Station, is a new start.

PE 1203160F DEF METEOROLOGICAL SAT PROG (SPACE)

FY18 Based on future sparing depletions or a significant change in failure rate, FY18 funding will cover any contingencies for obsolete, non-vendor supported communications and processing systems at each satellite operations center, to include but limited to, Dual Decommutator and Command processor, System Communications Unit, and Aiken switch. Continue program office and other related support activities that may include, but are not limited to studies, FFRDC, SETA, and technical analysis.

PE 1203165F NAVSTAR GPS (SPACE AND CONTROL SEGMENTS)

FY2018 GPS OCS COTS Upgrade: FY2018 funding procures GPS Architecture Evolution Plan (AEP), GPS Information Network (GIN), and Launch Anomaly Resolution and Disposal Operations (LADO) commercial equipment that has become obsolete/unsupportable or requires upgrades. Funding will procure equipment for the OCS ground sites including the Master Control Station (MCS), Alternate Master

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Exhibit P-40, Budget Line Item Justification: FY 2018 Air Force		Date: May 2017
Appropriation / Budget Activity / Budget Sub Activity: 3021F: Space Procurement, Air Force / BA 01: Space Procurement, Air Force / BSA 1: Space Programs		P-1 Line Item Number / Title: SPCMOD / Space Mods
ID Code (A=Service Ready, B=Not Service Ready): A	Program Elements for Code B Items: 1203165F	Other Related Program Elements: 0305614F
Line Item MDAP/MAIS Code: 166		
<p>Control Station (AMCS), four Ground Antennas (GAs), six Monitor Stations (MSs), a contractor lab facility, and the Telecommunications Simulator Test Set (TSTS). Modifications include required procurement, nonrecurring engineering, installation, testing, configuration management, security, quality assurance and technical documentation. Funding sustains OCS until OCX transitions to operations, to include support for GPS III and fielding of Modernized GPS User Equipment (MGUE). Continue program office and other related support activities that may include, but are not limited to studies, technical analysis, etc.</p> <p>PE 1203614F JSPOC MISSION SYSTEM</p> <p>FY 2018 funds will purchase Oracle Unlimited License Agreement (ULA) and technical refresh. Where applicable, justification for individual modifications is provided in the P-3A exhibits.</p> <p>PE 0305912F SLBM RADAR WARNING SYSTEM</p> <p>Where applicable, justification for individual modifications is provided in the P-3A exhibits.</p> <p>PE 1203940F SPACE SITUATIONAL AWARENESS OPERATIONS</p> <p>Where applicable, justification for individual modifications is provided in the P-3A exhibits.</p> <p>PE 1203710F EO/IR WEATHER SYSTEMS</p> <p>FY18 Funds systems for residual GOES relocation. Where applicable, justification for individual modifications is provided in the P-3A exhibits.</p>		

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Exhibit P-40a, Budget Item Justification For Aggregated Items: FY 2018 Air Force															Date: May 2017				
Appropriation / Budget Activity / Budget Sub Activity: 3021F / 01 / 1							P-1 Line Item Number / Title: SPCMOD / Space Mods							Aggregated Items Title: Defense Meteorological Satellite Program (SPACE)					

Item Number / Title [DODIC]	ID CD	MDAP/MAIS Code	Prior Years			FY 2016			FY 2017			FY 2018 Base			FY 2018 OCO			FY 2018 Total		
			Unit Cost (\$ M)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ M)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ M)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ M)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ M)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ M)	Qty (Each)	Total Cost (\$ M)
Uncategorized																				
Telemetry and Commanding System	A		-	-	-	-	-	1.074	-	-	0.221	-	-	0.000	-	-	-	-	-	0.000
Mission Plan/Schedule	A		-	-	-	-	-	1.100	-	-	0.000	-	-	0.000	-	-	-	-	-	0.000
Communications	A		-	-	-	-	-	0.000	-	-	0.754	-	-	1.079	-	-	-	-	-	1.079
Subtotal: Uncategorized			-	-	-	-	-	2.174	-	-	0.975	-	-	1.079	-	-	-	-	-	1.079
Total			-	-	-	-	-	2.174	-	-	0.975	-	-	1.079	-	-	-	-	-	1.079

Note: Subtotals or Totals in this Exhibit P-40a may not be exact or sum exactly, due to rounding.

Remarks:

FY18 Based on future sparing depletions or a significant change in failure rate, FY18 funding will cover any contingencies for obsolete, non-vendor supported communications and processing systems at each satellite operations center, to include but limited to, Dual Decommutator and Command processor, System Communications Unit, and Aiken switch. Continue program office and other related support activities that may include, but are not limited to studies, FFRDC, SETA, and technical analysis.

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Exhibit P-3a, Individual Modification: FY 2018 Air Force		Date: May 2017
Appropriation / Budget Activity / Budget Sub Activity: 3021F / 01 / 1	P-1 Line Item Number / Title: SPCMOD / Space Mods	Modification Number / Title: 1 / NAVSTAR GPS-OCS COTS UPGRADE

ID Code (A=Service Ready, B=Not Service Ready) : _____ **MDAP/MAIS Code:** _____

Resource Summary	Prior Years	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total	FY 2019	FY 2020	FY 2021	FY 2022	To Complete	Total
Procurement Quantity (<i>Units in Each</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost (<i>\$ in Millions</i>)	-	13.136	7.667	13.654	0.000	13.654	-	-	-	-	-	-
Less PY Advance Procurement (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) (<i>\$ in Millions</i>)	-	13.136	7.667	13.654	0.000	13.654	-	-	-	-	-	-
Plus CY Advance Procurement (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority (<i>\$ in Millions</i>)	-	13.136	7.667	13.654	0.000	13.654	-	-	-	-	-	-
<i>(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)</i>												
Initial Spares (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-

Description:

Funding procures GPS Architecture Evolution Plan (AEP), GPS Information Network (GIN), and Launch Anomaly Resolution and Disposal Operations (LADO) commercial equipment that has become obsolete/ un-supportable or requires upgrades. Funding will procure equipment for the OCS ground sites including the Master Control Station (MCS), Alternate Master Control Station (AMCS), four Ground Antennas (GAs), six Monitor Control Stations(MCS), Contractor Lab Facility and Telecommunications Simulator Test Set (TSTS). Modifications include required procurement, non-recurring engineering, installation, testing, configuration management, security, quality assurance and technical documentation. Funding sustains OCS until OCX transitions to operations, to include support for GPS III and fielding of Modernized GPS User Equipment (MGUE). If not funded, down time and maintenance costs associated with repair or failed equipment will increase, lowering system operational availability.

Milestone/Development Status

Development funding for the OCS is in PE 0305165F. Program complete in FY2013.

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Exhibit P-3a, Individual Modification: FY 2018 Air Force											Date: May 2017	
Appropriation / Budget Activity / Budget Sub Activity: 3021F / 01 / 1				P-1 Line Item Number / Title: SPCMOD / Space Mods				Modification Number / Title: 1 / NAVSTAR GPS-OCS COTS UPGRADE				
ID Code (A=Service Ready, B=Not Service Ready) :							MDAP/MAIS Code:					
Models of Systems Affected: GPS-OCS			Modification Type: Reliability & Maintainability				Related RDT&E PEs:					
Financial Plan	Prior Years	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total	FY 2019	FY 2020	FY 2021	FY 2022	To Complete	Total
	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)
Procurement												
<i>Modification Item 1 of 1: Install Kits</i>												
A Kits												
Recurring												
Install Kits:INSTALL KITS Group A (Active)	- / -	14 / 4.820	14 / 2.820	14 / 6.820	- / -	14 / 6.820	- / -	- / -	- / -	- / -	- / -	- / -
<i>Subtotal: Recurring</i>	- / -	- / 4.820	- / 2.820	- / 6.820	- / -	- / 6.820	- / -	- / -	- / -	- / -	- / -	- / -
B Kits												
Recurring												
Install Kits:EQUIPMENT Group B (Active)	- / -	14 / 1.720	14 / 1.413	14 / 1.413	- / -	14 / 1.413	- / -	- / -	- / -	- / -	- / -	- / -
<i>Subtotal: Recurring</i>	- / -	- / 1.720	- / 1.413	- / 1.413	- / -	- / 1.413	- / -	- / -	- / -	- / -	- / -	- / -
<i>Subtotal: Install Kits</i>	- / -	- / 6.540	- / 4.233	- / 8.233	- / -	- / 8.233	- / -	- / -	- / -	- / -	- / -	- / -
<i>Subtotal: Procurement, All Modification Items</i>	- / -	- / 6.540	- / 4.233	- / 8.233	- / -	- / 8.233	- / -	- / -	- / -	- / -	- / -	- / -
Support (All Modification Items)												
GROUP A: TOTAL NONRECURRING												
Data	- / -	- / 1.342	- / 0.385	- / 2.344	- / -	- / 2.344	- / -	- / -	- / -	- / -	- / -	- / -
SUPPORT-EQUIP	- / -	- / 0.397	- / 0.397	- / 0.377	- / -	- / 0.377	- / -	- / -	- / -	- / -	- / -	- / -
<i>Subtotal: Support</i>	- / -	- / 4.593	- / 1.402	- / 3.389	- / -	- / 3.389	- / -	- / -	- / -	- / -	- / -	- / -
Installation												
<i>Modification Item 1 of 1: Install Kits</i>												
<i>Subtotal: Installation</i>	- / -	14 / 2.003	14 / 2.032	14 / 2.032	- / -	14 / 2.032	- / -	- / -	- / -	- / -	- / -	- / -
Total												
Total Cost (Procurement + Support + Installation)	-	13.136	7.667	13.654	0.000	13.654	-	-	-	-	-	-

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Exhibit P-3a, Individual Modification: FY 2018 Air Force		Date: May 2017
Appropriation / Budget Activity / Budget Sub Activity: 3021F / 01 / 1	P-1 Line Item Number / Title: SPCMOD / Space Mods	Modification Number / Title: 1 / NAVSTAR GPS-OCS COTS UPGRADE

ID Code (A=Service Ready, B=Not Service Ready) :	MDAP/MAIS Code:
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Modification Item 1 of 1: Install Kits

Manufacturer Information

Manufacturer Name: Lockheed Martin	Manufacturer Location: Various
Administrative Leadtime (in Months): 7	Production Leadtime (in Months): 2

Dates	FY 2016	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022
Contract Dates	May 2016	May 2017	May 2018				
Delivery Dates	Jul 2016	Jul 2017	Jul 2018				

Installation Information

Method of Implementation: Contract Field Team

Installation Cost	Prior Years	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total	FY 2019	FY 2020	FY 2021	FY 2022	To Complete	Total
	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)
Prior Years	- / -	0 / 0.000	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2016	- / -	14 / 2.003	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2017	- / -	- / -	14 / 2.032	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2018	- / -	- / -	- / -	14 / 2.032	- / -	14 / 2.032	- / -	- / -	- / -	- / -	- / -	- / -
FY 2019	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2020	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2021	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2022	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
Total	- / -	14 / 2.003	14 / 2.032	14 / 2.032	- / -	14 / 2.032	- / -	- / -	- / -	- / -	- / -	- / -

Installation Schedule

	PYS	FY 2016				FY 2017				FY 2018				FY 2019				FY 2020				FY 2021				FY 2022				TC	Tot
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4		
In	0	-	-	14	-	-	-	14	-	-	-	14	-	-	-	14	-	-	-	14	-	-	-	14	-	-	-	-	-	0	84
Out	0	-	-	-	14	-	-	-	14	-	-	-	14	-	-	-	14	-	-	-	14	-	-	-	14	-	-	-	-	0	84

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Exhibit P-40a, Budget Item Justification For Aggregated Items: FY 2018 Air Force **Date:** May 2017

Appropriation / Budget Activity / Budget Sub Activity: 3021F / 01 / 1	P-1 Line Item Number / Title: SPCMOD / Space Mods	Aggregated Items Title: JSPOC Mission System
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Item Number / Title [DODIC]	ID CD	MDAP/MAIS Code	Prior Years			FY 2016			FY 2017			FY 2018 Base			FY 2018 OCO			FY 2018 Total		
			Unit Cost (\$ M)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ M)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ M)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ M)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ M)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ M)	Qty (Each)	Total Cost (\$ M)
Uncategorized																				
Joint Space Operations Center Mission System	A		-	-	-	-	-	0.000	-	-	0.000	-	-	3.851	-	-	-	-	-	3.851
Subtotal: Uncategorized			-	-	-	-	-	0.000	-	-	0.000	-	-	3.851	-	-	-	-	-	3.851
Total			-	-	-	-	-	0.000	-	-	0.000	-	-	3.851	-	-	-	-	-	3.851

Note: Subtotals or Totals in this Exhibit P-40a may not be exact or sum exactly, due to rounding.

Remarks:
FY 2018 Funds will purchase Oracle Unlimited License Agreement (ULA) and technical refresh.

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Exhibit P-40a, Budget Item Justification For Aggregated Modification Items: FY 2018 Air Force														Date: May 2017					
Appropriation / Budget Activity / Budget Sub Activity: 3021F / 01 / 1							P-1 Line Item Number / Title: SPCMOD / Space Mods							Aggregated Modification Items Title: Submarine-Launched Ballistic Missile (SLBM) Radar Warning System					

Item Number / Title	ID CD	MDAP/MAIS Code	Prior Years			FY 2016			FY 2017			FY 2018 Base			FY 2018 OCO			FY 2018 Total		
			Unit Cost (\$ M)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ M)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ M)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ M)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ M)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ M)	Qty (Each)	Total Cost (\$ M)
P-3A PAVE PAWS Modifications / P-3A PAVE PAWS Modification (formerly PAVE PAWS Front End)			-	-	-	-	-	9.379	-	-	-	-	-	-	-	-	-	-	-	-
Total			-	-	0.000	-	-	9.379	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000

Note: Subtotals or Totals in this Exhibit P-40a may not be exact or sum exactly, due to rounding.

Modification Information:

Item Number / Title	Models of Systems Affected	Modification Type
P-3A PAVE PAWS Modifications / P-3A PAVE PAWS Modification (formerly PAVE PAWS Front End)	NA	Reliability & Maintainability

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Exhibit P-3a, Individual Modification: FY 2018 Air Force		Date: May 2017
Appropriation / Budget Activity / Budget Sub Activity: 3021F / 01 / 1	P-1 Line Item Number / Title: SPCMOD / Space Mods	Modification Number / Title: 1 / Weather Space Vehicle Relay Ground Station

ID Code (A=Service Ready, B=Not Service Ready) :	MDAP/MAIS Code:
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Resource Summary	Prior Years	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total
Procurement Quantity (<i>Units in Each</i>)	-	-	-	-	-	-
Gross/Weapon System Cost (<i>\$ in Millions</i>)	-	0.000	0.000	18.620	0.000	18.620
Less PY Advance Procurement (<i>\$ in Millions</i>)	-	-	-	-	-	-
Net Procurement (P-1) (<i>\$ in Millions</i>)	-	0.000	0.000	18.620	0.000	18.620
Plus CY Advance Procurement (<i>\$ in Millions</i>)	-	-	-	-	-	-
Total Obligation Authority (<i>\$ in Millions</i>)	-	0.000	0.000	18.620	0.000	18.620

(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)

Initial Spares (<i>\$ in Millions</i>)	-	-	-	-	-	-
Gross/Weapon System Unit Cost (<i>\$ in Millions</i>)	-	-	-	-	-	-

Description:

This program, 1203710F Space Mods Space, P-3A Mod RGS01, Weather Space Vehicle Relay Ground Station, is a new start. Residual GOES Relocation

Residual Geostationary Operational Environmental Satellite (GOES) Relocation is a Department of Defense's (DoD) weather mitigation plan to address Space-based Environmental Monitoring (SBEM) Weather Gaps 1 (Cloud Characterization) and Gap 2 (Theater Weather Imagery) requirements over the Indian Ocean region. The requirements have been validated by the Joint Requirements Oversight Council (JROC) Memo 092-14, dated 3 Sep 2014. The program will leverage a spare National Oceanic and Atmospheric Agency (NOAA) on-orbit geostationary asset for the DoD use, in order to provide timely and reliable high-quality electro-optical/infrared (EO/IR) remote sensing capability that will address the critical weather data needs over the Central Command (CENTCOM) Area of Responsibility (AoR).

Remarks

This is DoD's solution to address SBEM Gaps 1 & 2 needs over the Indian Ocean region. The Remote Ground System (RGS) capability procurement is planned to include deployment, operation and sustainment of the RGS capability through the satellite mission End of Life (estimated 2025).

The SBEM Analysis of Alternatives (AoA), completed in Sep 2013, concluded that the Weather Gaps 1 & 2 can be met by increased reliance on civil/international partnerships for the necessary data. With recent European announcement to de-commission/de-orbit MeteoSat-7 in FY17, DoD requires a replenishment geostationary EO/IR sensing capability to continue providing necessary weather data to warfighters in the CENTCOM AOR. EUMETSAT has provided a short-term solution by relocating MeteoSat-8 for partial coverage of Indian Ocean region, but its designed mission End of Life (EoL) is 2019. For the long-term solution, with agreement from NOAA, the AF will take ownership of one or more residual GOES assets. NOAA will drift the satellite(s) to a location over the Indian Ocean region to provide required cloud characterization and theater weather imagery data. The AF will award a contract to establish, operate and maintain the remote ground infrastructure and use the existing NOAA Satellite Operational Facility (NSOF) at Suitland, MD for Command & Control and anomaly resolution.

Ground infrastructure will include:

- 1) Procurement of 2x GOES antennae for data downlink at a Remote Ground Station (RGS) in the Indian Ocean region
- 2) Integration of GOES antenna into RGS and set up communication link to transmit data back to Weather Centrals for processing
- 3) Set up C2 ground station for daily Telemetry, Tracking and Commanding (TT&C) and proportionally reimburse NOAA for residual GOES operations during the drift planning and implementation phases

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Exhibit P-3a, Individual Modification: FY 2018 Air Force		Date: May 2017
Appropriation / Budget Activity / Budget Sub Activity: 3021F / 01 / 1	P-1 Line Item Number / Title: SPCMOD / Space Mods	Modification Number / Title: 1 / Weather Space Vehicle Relay Ground Station

ID Code (A=Service Ready, B=Not Service Ready) :	MDAP/MAIS Code:
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Models of Systems Affected: No text provided.	Modification Type: No text provided.	Related RDT&E PEs:
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Financial Plan	Prior Years	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total
	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)
Procurement						
<i>Modification Item 1 of 1:</i> Weather Relay Ground Station						
A Kits						
Recurring						
Weather Relay Ground Station:INSTALL KITS Group A (Active)	- / -	- / 0.000	- / 0.000	1 / 18.620	- / 0.000	1 / 18.620
<i>Subtotal: Recurring</i>	- / -	- / 0.000	- / 0.000	- / 18.620	- / 0.000	- / 18.620
<i>Subtotal: Weather Relay Ground Station</i>	- / -	- / 0.000	- / 0.000	- / 18.620	- / 0.000	- / 18.620
<i>Subtotal: Procurement, All Modification Items</i>	- / -	- / 0.000	- / 0.000	- / 18.620	- / 0.000	- / 18.620
Installation						
<i>Subtotal: Installation</i>	- / -	- / -	- / -	- / -	- / -	- / -
Total						
Total Cost (Procurement + Support + Installation)	-	0.000	0.000	18.620	0.000	18.620

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Exhibit P-3a, Individual Modification: FY 2018 Air Force		Date: May 2017	
Appropriation / Budget Activity / Budget Sub Activity: 3021F / 01 / 1		P-1 Line Item Number / Title: SPCMOD / Space Mods	
		Modification Number / Title: 1 / Weather Space Vehicle Relay Ground Station	
ID Code (A=Service Ready, B=Not Service Ready) :		MDAP/MAIS Code:	
Modification Item 1 of 1: Weather Relay Ground Station			
Manufacturer Information			
Manufacturer Name: Unknown		Manufacturer Location: Unknown	
Administrative Leadtime (in Months): 0		Production Leadtime (in Months): 0	
Dates	FY 2016	FY 2017	FY 2018
Contract Dates			Jan 2018
Delivery Dates			Jan 2018
Installation Information			
Method of Implementation (Organic): Org/Intermediate		Installation Quantity: 0	

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Exhibit P-40, Budget Line Item Justification: FY 2018 Air Force **Date:** May 2017

Appropriation / Budget Activity / Budget Sub Activity:
3021F: Space Procurement, Air Force / BA 01: Space Procurement, Air Force / BSA
1: Space Programs

P-1 Line Item Number / Title:
SPRNGE / Spacelift Range System Space

ID Code (A=Service Ready, B=Not Service Ready): A **Program Elements for Code B Items:** 0305182F **Other Related Program Elements:** 1203182F

Line Item MDAP/MAIS Code: N/A

Resource Summary	Prior Years	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total	FY 2019	FY 2020	FY 2021	FY 2022	To Complete	Total
Procurement Quantity (<i>Units in Each</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost (<i>\$ in Millions</i>)	0.000	103.275	123.088	113.874	0.000	113.874	133.474 ^(a)	123.248 ^(b)	110.325 ^(c)	112.580 ^(d)	-	819.864 ^(e)
Less PY Advance Procurement (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) (<i>\$ in Millions</i>)	0.000	103.275	123.088	113.874	0.000	113.874	133.474	123.248	110.325	112.580	-	819.864
Plus CY Advance Procurement (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority (<i>\$ in Millions</i>)	0.000	103.275	123.088	113.874	0.000	113.874	133.474	123.248	110.325	112.580	-	819.864

(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)

Initial Spares (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Flyaway Unit Cost (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-

Description:

The Spacelift Range System (SLRS), also known as the Launch and Test Range System (LTRS), provides public safety and assured access to space. SLRS operates at the Eastern Range (ER) at Patrick AFB/ Cape Canaveral AFS, FL and the Western Range (WR) at Vandenberg AFB, CA. SLRS provides tracking, telemetry, communications, flight safety, and other capabilities to support launch of national security space (NSS), civil and commercial space payloads, Intercontinental and Sea Launched ballistic missile and missile defense evaluations, and aeronautical and guided weapon tests. SLRS enables national security, civil, and commercial spacelift operations to be conducted safely. Together with national security space launch capability, SLRS provides assured access to space for the nation. The ER and WR are designated as Department of Defense Major Range and Test Facility Bases (MRTFB). SLRS is comprised of twelve subsystems that together provide this capability to the ranges. The Range Safety and Command Destruct subsystems provide the capability to destroy an errant rocket, if necessary to protect public safety. These subsystems rely on the Telemetry, Radar, and Optics subsystems to provide tracking data. The Weather and Surveillance subsystems allow range operators and customers to determine if conditions are safe for launch. The Communications, Data Handling, and Timing & Sequencing subsystems ensure critical data is expeditiously routed from remote sensors (e.g., radars, optics) to range operators and customers. Finally, the Planning and Scheduling subsystem ensures all assets are available when needed for a launch or test operation. The Air Force prioritizes procurement funds to ensure aging range equipment is modernized to support mission requirements and the evolving Space Warfighter Construct (SWC) in response to the Space Enterprise Vision (SEV). Sustainment trends are continuously analyzed and assessed across all twelve subsystems and procurement funds are used to modernize the most critical mission equipment and procure replacement components.

- 1) SLRS Interim Supply Support: Provides peculiar and common support material, required re-procurement data, and interim supply support management.
- 2) SLRS Support Services: FY 2018 funds pay for FFRDC mission assurance activities to ensure all twelve subsystems are compatible with mission rules and do not pose a risk to safe and cost-effective satellite launches. Funds are also used for Systems Engineering and Integration (SE&I) to ensure baseline documentation and modernization activities remain synchronized with the sustainment baseline.
- 3) SLRS Commodity Procurement: The Air Force will use various contract vehicles to procure, configure, install and checkout replacement commercial-off-the-shelf (COTS) commodity equipment to address the highest priority requirements. Obsolescence and sustainment "worst actors" in all twelve subsystems are prioritized annually in order of their criticality to the mission; priority is driven by likelihood of causing a launch delay/scrub.
- 4) Range Communications Facility (RCF): Relocate communications capabilities from the Eastern Range XY building to a new RCF, resolving building degradation, code non-compliance, and high risk off loading. The Air Force will either move existing equipment or procure new COTS equipment if necessary, to meet system requirements and minimize impacts to scheduled launches.

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Exhibit P-40, Budget Line Item Justification: FY 2018 Air Force		Date: May 2017
Appropriation / Budget Activity / Budget Sub Activity: 3021F: Space Procurement, Air Force / BA 01: Space Procurement, Air Force / BSA 1: Space Programs		P-1 Line Item Number / Title: SPRNGE / Spacelift Range System Space
ID Code (A=Service Ready, B=Not Service Ready): A	Program Elements for Code B Items: 0305182F	Other Related Program Elements: 1203182F
Line Item MDAP/MAIS Code: N/A		
<p>5) Range Command Destruct Modernization (RCDM): Modernizes the Eastern and Western Range Command Destruct Systems. The Range Command Destruct modernization will provide the capability to use a new secure Command Destruct code, the Enhanced Flight Termination System (EFTS), mandated by the NSA for cyber security on both the Eastern and Western Ranges. The Eastern Range Command Destruct system will replace a sustainment "worst actor" that has been the cause of an expensive launch scrub as well as several near scrubs. The Western Range effort will replace the outdated command destruct codes with the new EFTS capability and meet the NSA mandate.</p> <p>6) Modernization of Eastern Range Network (MEN): Upgrades the communications subsystem on the Eastern Range from outdated Asynchronous Transfer Mode (ATM) technology to Internet Protocol (IP) version 4/6 (IPV4/IPV6). MEN resolves obsolescence issues facing the program starting in FY 2020, addresses high-priority sustainment issues, and provides improved cyber security for range operations. The contract was awarded as a small business set aside.</p> <p>7) Western Range Modernization of Network (WMN): Upgrades the communications subsystem on the Western Range from Asynchronous Transfer Mode (ATM) technology to IPV6. WMN resolves remaining ATM obsolescence issues, numerous high-priority sustainment issues, and provides improved cyber security for range operations. The WMN contract was awarded in FY 2016 as a small business set aside.</p> <p>This exhibit will display values in FY 2016 and beyond. Total OPAF/SPAF procurement funding is \$891.861M.</p> <p>Recapitalization Projects are reclassified as commodity buys instead of modifications, because they do not change form, fit, function of a fielded system or subsystem. Therefore, associated funding for these commodities is described on a P-40a exhibit instead of a P3-a exhibit for this budget submission.</p> <p>Funding in this exhibit is budgeted in PE 1205182F.</p>		

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Exhibit P-40, Budget Line Item Justification: FY 2018 Air Force **Date:** May 2017

Appropriation / Budget Activity / Budget Sub Activity: 3021F: Space Procurement, Air Force / BA 01: Space Procurement, Air Force / BSA 1: Space Programs **P-1 Line Item Number / Title:** SPRNGE / Spacelift Range System Space

ID Code (A=Service Ready, B=Not Service Ready): A **Program Elements for Code B Items:** 0305182F **Other Related Program Elements:** 1203182F

Line Item MDAP/MAIS Code: N/A

Exhibits Schedule					Prior Years	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total
Exhibit Type	Title*	Subexhibits	ID CD	MDAP/MAIS Code	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)
P-40a	0305182F SPRNGE				- / 0.000	- / 13.827	- / 46.698	- / 10.890	- / 0.000	- / 10.890
P-3a	1 / Range Command Destruct Modernization (RCDM) (Reliability & Maintainability)				- / 0.000	- / 2.839	- / 3.117	- / 42.127	- / 0.000	- / 42.127
P-3a	2 / Range Communications Facility (RCF) (Capability Improvement)				- / -	- / 0.000	- / 8.000	- / 20.099	- / 0.000	- / 20.099
P-40a	0305182F SPRNGE				- / -	- / 50.387	- / 26.261	- / 3.013	- / -	- / 3.013
P-5	1203182F SPRNGE		A		- / -	- / 36.222	- / 39.012	- / 37.745	- / -	- / 37.745
P-40	Total Gross/Weapon System Cost				- / 0.000	- / 103.275	- / 123.088	- / 113.874	- / 0.000	- / 113.874

Exhibits Schedule					FY 2019	FY 2020	FY 2021	FY 2022	To Complete	Total
Exhibit Type	Title*	Subexhibits	ID CD	MDAP/MAIS Code	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)
P-40a	0305182F SPRNGE				- / -	- / -	- / -	- / -	- / -	- / -
P-3a	1 / Range Command Destruct Modernization (RCDM) (Reliability & Maintainability)				- / -	- / -	- / -	- / -	- / -	- / -
P-3a	2 / Range Communications Facility (RCF) (Capability Improvement)				- / -	- / -	- / -	- / -	- / -	- / -
P-40a	0305182F SPRNGE				- / -	- / -	- / -	- / -	- / -	- / -
P-5	1203182F SPRNGE		A		- / -	- / -	- / -	- / -	- / -	- / -
P-40	Total Gross/Weapon System Cost				- / 133.474	- / 123.248	- / 110.325	- / 112.580	- / -	- / 819.864

*Title represents 1) the Number / Title for Items; 2) the Number / Title [DODIC] for Ammunition; and/or 3) the Number / Title (Modification Type) for Modifications. Title represents the P-40a Title when only the P-40a Summary/Total is shown.

Note: Totals in this Exhibit P-40 set may not be exact or sum exactly due to rounding.

Justification:
 Spacelift Range System Space: For SLRS Interim Supply Support, FY18 funds will pay for interim supply support, to include supplies and associated interim supply support management. For SLRS SUPPORT SERVICES, FY18 funds pay for FFRDC mission assurance activities to ensure all twelve subsystems are compatible with mission rules and do not pose a risk to safe and cost-effective satellite launches. Funds are also used for Enterprise SE&I to ensure baseline documentation and modernization activities remain synchronized with the sustainment baseline. Spacelift Range System Commodity Procurement (P40a) FY18 funds procure the most urgently needed capital equipment replacements for items that exceed the O&M dollar threshold.

MEN, WMN,RCDM, and RCF (P-3As): FY18 funds for these modifications are required to enable the safe conduct of national security, civil, and commercial launches at the Eastern and Western Ranges. Further, they ensure continued support to test range customers.

FY18 funds continue program office and other related support activities that may include, but not limited to studies, technical analysis etc.

Efforts with funding starting in FY 2019 through FY 2022 are summarized on the P-40. Not all details of this funding are included in this P-40 exhibit set. A summary of the excepted details is as follows:

(a) FY 2019 Cost Delta: 133.474 million

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Exhibit P-40, Budget Line Item Justification: FY 2018 Air Force		Date: May 2017
Appropriation / Budget Activity / Budget Sub Activity: 3021F: Space Procurement, Air Force / BA 01: Space Procurement, Air Force / BSA 1: Space Programs		P-1 Line Item Number / Title: SPRNGE / Spacelift Range System Space
ID Code (A=Service Ready, B=Not Service Ready): A	Program Elements for Code B Items: 0305182F	Other Related Program Elements: 1203182F
Line Item MDAP/MAIS Code: N/A		

- (b) FY 2020 Cost Delta: 123.248 million
- (c) FY 2021 Cost Delta: 110.325 million
- (d) FY 2022 Cost Delta: 112.580 million
- (e) FY Total Cost Delta: 819.864 million

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Exhibit P-40a, Budget Item Justification For Aggregated Modification Items: FY 2018 Air Force **Date:** May 2017

Appropriation / Budget Activity / Budget Sub Activity: 3021F / 01 / 1	P-1 Line Item Number / Title: SPRNGE / Spacelift Range System Space	Aggregated Modification Items Title: 0305182F SPRNGE
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Item Number / Title	ID CD	MDAP/ MAIS Code	Prior Years			FY 2016			FY 2017			FY 2018 Base			FY 2018 OCO			FY 2018 Total		
			Unit Cost (\$ M)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ M)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ M)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ M)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ M)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ M)	Qty (Each)	Total Cost (\$ M)
01-MEN / Modernization of Eastern Range Network (MEN)			-	-	-	-	-	1.048	-	-	5.499	-	-	3.000	-	-	-	-	-	3.000
02-WMN / Western Range Modernization of Network (WMN)			-	-	-	-	-	12.779	-	-	41.199	-	-	7.890	-	-	-	-	-	7.890
Total			-	-	0.000	-	-	13.827	-	-	46.698	-	-	10.890	-	-	0.000	-	-	10.890

Note: Subtotals or Totals in this Exhibit P-40a may not be exact or sum exactly, due to rounding.

Modification Information:

Item Number / Title	Models of Systems Affected	Modification Type
01-MEN / Modernization of Eastern Range Network (MEN)	Spacelift Range System Space	Capability Improvement
02-WMN / Western Range Modernization of Network (WMN)	Spacelift Range System Space	Capability Improvement

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Exhibit P-3a, Individual Modification: FY 2018 Air Force		Date: May 2017
Appropriation / Budget Activity / Budget Sub Activity: 3021F / 01 / 1	P-1 Line Item Number / Title: SPRNGE / Spacelift Range System Space	Modification Number / Title: 1 / Range Command Destruct Modernization (RCDM)

ID Code (A=Service Ready, B=Not Service Ready) :	MDAP/MAIS Code:
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Resource Summary	Prior Years	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total	FY 2019	FY 2020	FY 2021	FY 2022	To Complete	Total
Procurement Quantity (<i>Units in Each</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost (<i>\$ in Millions</i>)	0.000	2.839	3.117	42.127	0.000	42.127	-	-	-	-	-	-
Less PY Advance Procurement (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) (<i>\$ in Millions</i>)	0.000	2.839	3.117	42.127	0.000	42.127	-	-	-	-	-	-
Plus CY Advance Procurement (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority (<i>\$ in Millions</i>)	0.000	2.839	3.117	42.127	0.000	42.127	-	-	-	-	-	-

(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)

Initial Spares (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-

Description:

Range Command Destruct Modernization (RCDM): Modernizes the Eastern and Western Range Command Destruct Systems. The Range Command Destruct modernization will provide the capability to use a new secure Command Destruct code, the Enhanced Flight Termination System (EFTS), mandated by the NSA for cyber security on both the Eastern and Western Ranges. The Eastern Range (ER) Command Destruct system will replace a sustainment "worst actor" that has been the cause of an expensive launch scrub as well as several near scrubs. The Western Range (WR) effort will replace the outdated command destruct codes with the new EFTS capability; one or more transmitter sites will also be renovated or upgraded to support this capability. The Air Force intends to award two separate contracts, one for the ER (awarded) and one for the WR (planned award in FY 2018). However, both the ER and WR contracts are expected to use similar hardware and software.

NOTE: Kit costs include all recurring, non-recurring and installation costs.

Milestone/Development Status

Eastern Range: Awarded; Western Range: Pre-Award

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Exhibit P-3a, Individual Modification: FY 2018 Air Force		Date: May 2017
Appropriation / Budget Activity / Budget Sub Activity: 3021F / 01 / 1	P-1 Line Item Number / Title: SPRNGE / Spacelift Range System Space	Modification Number / Title: 1 / Range Command Destruct Modernization (RCDM)

ID Code (A=Service Ready, B=Not Service Ready) :	MDAP/MAIS Code:
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Models of Systems Affected: Spacelift Range System Space	Modification Type: Reliability & Maintainability	Related RDT&E PEs:
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Financial Plan	Prior Years	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total	FY 2019	FY 2020	FY 2021	FY 2022	To Complete	Total
	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)

Procurement												
<i>Modification Item 1 of 1:</i> Range Command Destruct Modernization (RCDM)												
B Kits												
Recurring												
Range Command Destruct Modernization (RCDM):EQUIPMENT Group B (Active)	- / -	1 / 2.839	1 / 3.117	1 / 42.127	- / -	1 / 42.127	- / -	- / -	- / -	- / -	- / -	- / -
<i>Subtotal: Recurring</i>	<i>- / -</i>	<i>- / 2.839</i>	<i>- / 3.117</i>	<i>- / 42.127</i>	<i>- / -</i>	<i>- / 42.127</i>	<i>- / -</i>	<i>- / -</i>	<i>- / -</i>	<i>- / -</i>	<i>- / -</i>	<i>- / -</i>
<i>Subtotal: Range Command Destruct Modernization (RCDM)</i>	<i>- / -</i>	<i>- / 2.839</i>	<i>- / 3.117</i>	<i>- / 42.127</i>	<i>- / -</i>	<i>- / 42.127</i>	<i>- / -</i>	<i>- / -</i>	<i>- / -</i>	<i>- / -</i>	<i>- / -</i>	<i>- / -</i>
<i>Subtotal: Procurement, All Modification Items</i>	<i>- / -</i>	<i>- / 2.839</i>	<i>- / 3.117</i>	<i>- / 42.127</i>	<i>- / -</i>	<i>- / 42.127</i>	<i>- / -</i>	<i>- / -</i>	<i>- / -</i>	<i>- / -</i>	<i>- / -</i>	<i>- / -</i>

Installation												
<i>Subtotal: Installation</i>	<i>- / -</i>	<i>- / -</i>	<i>- / -</i>	<i>- / -</i>	<i>- / -</i>	<i>- / -</i>	<i>- / -</i>	<i>- / -</i>	<i>- / -</i>	<i>- / -</i>	<i>- / -</i>	<i>- / -</i>

Total												
Total Cost (Procurement + Support + Installation)	0.000	2.839	3.117	42.127	0.000	42.127	-	-	-	-	-	-

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Exhibit P-3a, Individual Modification: FY 2018 Air Force		Date: May 2017
Appropriation / Budget Activity / Budget Sub Activity: 3021F / 01 / 1	P-1 Line Item Number / Title: SPRNGE / Spacelift Range System Space	Modification Number / Title: 1 / Range Command Destruct Modernization (RCDM)

ID Code (A=Service Ready, B=Not Service Ready) :	MDAP/MAIS Code:
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Modification Item 1 of 1: Range Command Destruct Modernization (RCDM)

Manufacturer Information

Manufacturer Name: Harris Corp.	Manufacturer Location: Melbourne, FL
Administrative Leadtime (in Months): 0	Production Leadtime (in Months): 0

Dates	FY 2016	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022
Contract Dates							
Delivery Dates							

Installation Information

Method of Implementation: Contract Field Team

Installation Schedule

	PYS	FY 2016				FY 2017				FY 2018				FY 2019				FY 2020				FY 2021				FY 2022				TC	Tot
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4		
In	0	-	-	-	-	-	-	-	-	-	1	-	-	-	1	-	-	-	-	-	-	1	-	-	-	-	-	-	-	0	3
Out	0	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	1	-	-	-	1	-	-	-	0	3

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Exhibit P-3a, Individual Modification: FY 2018 Air Force		Date: May 2017
Appropriation / Budget Activity / Budget Sub Activity: 3021F / 01 / 1	P-1 Line Item Number / Title: SPRNGE / Spacelift Range System Space	Modification Number / Title: 2 / Range Communications Facility (RCF)

ID Code (A=Service Ready, B=Not Service Ready) :			MDAP/MAIS Code:			
Resource Summary	Prior Years	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total
Procurement Quantity <i>(Units in Each)</i>	-	-	-	-	-	-
Gross/Weapon System Cost <i>(\$ in Millions)</i>	-	0.000	8.000	20.099	0.000	20.099
Less PY Advance Procurement <i>(\$ in Millions)</i>	-	-	-	-	-	-
Net Procurement (P-1) <i>(\$ in Millions)</i>	-	0.000	8.000	20.099	0.000	20.099
Plus CY Advance Procurement <i>(\$ in Millions)</i>	-	-	-	-	-	-
Total Obligation Authority <i>(\$ in Millions)</i>	-	0.000	8.000	20.099	0.000	20.099
<i>(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)</i>						
Initial Spares <i>(\$ in Millions)</i>	-	-	-	-	-	-
Gross/Weapon System Unit Cost <i>(\$ in Millions)</i>	-	-	-	-	-	-

Description:

Range Communications Facility (RCF): Relocate communications capabilities from the Eastern Range XY Building to a new RCF, resolving building degradation, code non-compliance, and high risk of flooding.

NOTE: Procurement totals include all kits and installation costs.

Milestone/Development Status

Pre-Award

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Exhibit P-3a, Individual Modification: FY 2018 Air Force					Date: May 2017	
Appropriation / Budget Activity / Budget Sub Activity: 3021F / 01 / 1			P-1 Line Item Number / Title: SPRNGE / Spacelift Range System Space		Modification Number / Title: 2 / Range Communications Facility (RCF)	
ID Code (A=Service Ready, B=Not Service Ready) :				MDAP/MAIS Code:		
Models of Systems Affected: Spacelift Range System Space		Modification Type: Capability Improvement		Related RDT&E PEs:		
Financial Plan	Prior Years	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total
	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)
Procurement						
<i>Modification Item 1 of 1:</i> Range Communication Facility (RCF)						
B Kits						
Recurring						
Range Communication Facility (RCF):EQUIPMENT Group B (Active)	- / -	- / -	1 / 8.000	1 / 20.099	- / -	1 / 20.099
<i>Subtotal: Recurring</i>	- / -	- / -	- / 8.000	- / 20.099	- / -	- / 20.099
<i>Subtotal: Range Communication Facility (RCF)</i>	- / -	- / -	- / 8.000	- / 20.099	- / -	- / 20.099
<i>Subtotal: Procurement, All Modification Items</i>	- / -	- / -	- / 8.000	- / 20.099	- / -	- / 20.099
Installation						
<i>Subtotal: Installation</i>	- / -	- / -	- / -	- / -	- / -	- / -
Total						
Total Cost (Procurement + Support + Installation)	-	0.000	8.000	20.099	0.000	20.099

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Exhibit P-3a, Individual Modification: FY 2018 Air Force		Date: May 2017	
Appropriation / Budget Activity / Budget Sub Activity: 3021F / 01 / 1		P-1 Line Item Number / Title: SPRNGE / Spacelift Range System Space	
		Modification Number / Title: 2 / Range Communications Facility (RCF)	
ID Code (A=Service Ready, B=Not Service Ready) :		MDAP/MAIS Code:	
Modification Item 1 of 1: Range Communication Facility (RCF)			
Manufacturer Information			
Manufacturer Name: N/A		Manufacturer Location: N/A	
Administrative Leadtime (in Months): 0		Production Leadtime (in Months): 0	
Dates	FY 2016	FY 2017	FY 2018
Contract Dates			
Delivery Dates			
Installation Information			
Method of Implementation (Organic): Org/Intermediate		Installation Quantity: 5	

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Exhibit P-40a, Budget Item Justification For Aggregated Items: FY 2018 Air Force **Date:** May 2017

Appropriation / Budget Activity / Budget Sub Activity: 3021F / 01 / 1	P-1 Line Item Number / Title: SPRNGE / Spacelift Range System Space	Aggregated Items Title: 0305182F SPRNGE
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Item Number / Title [DODIC]	ID CD	MDAP/MAIS Code	Prior Years			FY 2016			FY 2017			FY 2018 Base			FY 2018 OCO			FY 2018 Total		
			Unit Cost (\$ M)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ M)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ M)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ M)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ M)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ M)	Qty (Each)	Total Cost (\$ M)
Spacelift Range System Commodity Procurement																				
SLRS Commodity Procurement	A		-	-	-	-	-	50.387	-	-	26.261	-	-	3.013	-	-	-	-	-	3.013
Subtotal: Spacelift Range System Commodity Procurement			-	-	-	-	-	50.387	-	-	26.261	-	-	3.013	-	-	-	-	-	3.013
Total			-	-	-	-	-	50.387	-	-	26.261	-	-	3.013	-	-	-	-	-	3.013

Note: Subtotals or Totals in this Exhibit P-40a may not be exact or sum exactly, due to rounding.

Remarks:
 SLRS Commodity Procurement: The Air Force will use various contract vehicles to procure, configure, install and checkout replacement commercial-off-the-shelf (COTS) commodity equipment to address the highest priority requirements. Obsolescence and sustainment "worst actors" in all twelve subsystems are prioritized annually in order of their criticality to the mission; priority is driven by likelihood of causing a launch delay/scrub.

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Exhibit P-5, Cost Analysis: FY 2018 Air Force		Date: May 2017
Appropriation / Budget Activity / Budget Sub Activity: 3021F / 01 / 1	P-1 Line Item Number / Title: SPRNGE / Spacelift Range System Space	Item Number / Title [DODIC]: - / 1203182F SPRNGE

ID Code (A=Service Ready, B=Not Service Ready) : A	MDAP/MAIS Code:
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Resource Summary	Prior Years	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total
Procurement Quantity (Units in Each)	-	-	-	-	-	-
Gross/Weapon System Cost (\$ in Millions)	-	36.222	39.012	37.745	-	37.745
Less PY Advance Procurement (\$ in Millions)	-	-	-	-	-	-
Net Procurement (P-1) (\$ in Millions)	-	36.222	39.012	37.745	-	37.745
Plus CY Advance Procurement (\$ in Millions)	-	-	-	-	-	-
Total Obligation Authority (\$ in Millions)	-	36.222	39.012	37.745	-	37.745

(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)

Initial Spares (\$ in Millions)	-	-	-	-	-	-
Gross/Weapon System Unit Cost (\$ in Millions)	-	-	-	-	-	-

Note: Subtotals or Totals in this Exhibit P-5 may not be exact or sum exactly due to rounding.

Cost Elements	Prior Years			FY 2016			FY 2017			FY 2018 Base			FY 2018 OCO			FY 2018 Total		
	Unit Cost (\$ M)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ M)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ M)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ M)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ M)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ M)	Qty (Each)	Total Cost (\$ M)
Logistics - Logistics End Item Cost																		
Recurring Cost																		
INTERIM SUPPLY SUPPORT MATERIAL (PARTS/SUPPLIES)	-	-	-	-	-	3.018	-	-	4.152	-	-	4.121	-	-	-	-	-	4.121
INTERIM SUPPLY SUPPORT SERVICES/LABOR	-	-	-	-	-	2.500	-	-	1.675	-	-	1.725	-	-	-	-	-	1.725
SLRS ENTERPRISE SYSTEMS ENGINEERING AND INTEGRATION	-	-	-	-	-	14.174	-	-	0.000	-	-	0.000	-	-	-	-	-	0.000
TECHNICAL MISSION ANALYSIS	-	-	-	-	-	8.679	-	-	8.982	-	-	9.252	-	-	-	-	-	9.252
TEST & EVALUATION (WS)	-	-	-	-	-	1.876	-	-	0.888	-	-	0.534	-	-	-	-	-	0.534
RN ENTERPRISE SYSTEMS ENGINEERING AND INTEGRATION	-	-	-	-	-	0.000	-	-	13.791	-	-	12.794	-	-	-	-	-	12.794
<i>Subtotal: Recurring Cost</i>	-	-	-	-	-	30.247	-	-	29.488	-	-	28.426	-	-	-	-	-	28.426
<i>Subtotal: Logistics - Logistics End Item Cost</i>	-	-	-	-	-	30.247	-	-	29.488	-	-	28.426	-	-	-	-	-	28.426
Support - Support End Item Cost																		
FFRDC	-	-	-	-	-	2.943	-	-	3.119	-	-	2.995	-	-	-	-	-	2.995

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Exhibit P-5, Cost Analysis: FY 2018 Air Force												Date: May 2017					
Appropriation / Budget Activity / Budget Sub Activity: 3021F / 01 / 1						P-1 Line Item Number / Title: SPRNGE / Spacelift Range System Space						Item Number / Title [DODIC]: - / 1203182F SPRNGE					
ID Code (A=Service Ready, B=Not Service Ready) : A												MDAP/MAIS Code:					

Note: Subtotals or Totals in this Exhibit P-5 may not be exact or sum exactly due to rounding.

Cost Elements	Prior Years			FY 2016			FY 2017			FY 2018 Base			FY 2018 OCO			FY 2018 Total		
	Unit Cost (\$ M)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ M)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ M)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ M)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ M)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ M)	Qty (Each)	Total Cost (\$ M)
ADVISORY AND ASSISTANCE SERVICES (A&AS)	-	-	-	-	-	2.589	-	-	2.714	-	-	2.692	-	-	-	-	-	2.692
OTHER SUPPORT	-	-	-	-	-	0.443	-	-	3.691	-	-	3.632	-	-	-	-	-	3.632
<i>Subtotal: Support - Support End Item Cost</i>	-	-	-	-	-	5.975	-	-	9.524	-	-	9.319	-	-	-	-	-	9.319
Gross/Weapon System Cost	-	-	-	-	-	36.222	-	-	39.012	-	-	37.745	-	-	-	-	-	37.745

Remarks:

- Unit quantities and costs vary widely for multiple types and configurations of equipment being procured under modernization and sustainment project cost elements each fiscal year.

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Exhibit P-40, Budget Line Item Justification: FY 2018 Air Force **Date:** May 2017

Appropriation / Budget Activity / Budget Sub Activity: 3021F: Space Procurement, Air Force / BA 02: Spares / BSA 2: SSpares **P-1 Line Item Number / Title:** SSPARE / Initial Spares/Repair Parts

ID Code (A=Service Ready, B=Not Service Ready): **Program Elements for Code B Items:** N/A **Other Related Program Elements:** N/A

Line Item MDAP/MAIS Code: N/A

Resource Summary	Prior Years	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total	FY 2019	FY 2020	FY 2021	FY 2022	To Complete	Total
Procurement Quantity (<i>Units in Each</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost (<i>\$ in Millions</i>)	-	0.000	22.606	18.709	0.000	18.709	21.991	7.262	1.284	1.310	-	73.162
Less PY Advance Procurement (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) (<i>\$ in Millions</i>)	-	0.000	22.606	18.709	0.000	18.709	21.991	7.262	1.284	1.310	-	73.162
Plus CY Advance Procurement (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority (<i>\$ in Millions</i>)	-	0.000	22.606	18.709	0.000	18.709	21.991	7.262	1.284	1.310	-	73.162
<i>(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)</i>												
Initial Spares (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Flyaway Unit Cost (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-

Description:

Initial Spares consist of reparable components, assemblies, subassemblies, and consumable items required as initial stock (including readiness spares package requirements) in support of space acquisition programs. Requirements are determined by applying established factors against the acquisition cost of the end items. The factors are based on historical data of similar equipment, employment/deployment concepts, production schedules, and other related information.

This line contains funding for the following Major Defense Acquisition Program (MDAP):

- FAB-T Inc 1, 199
- SBIRS Baseline, 399

The funding for the following programs was transferred from the Other Procurement, Air Force appropriation to the Space Procurement, Air Force appropriation beginning in FY17:

- Family of Advanced BLoS Terminals (FAB-T)
- Information Systems Security Program
- NAVSTAR Global Positioning System (Space and Control Segments)
- Space Situation Awareness Operations

Justification:

The FY18 budget supports initial spares for the following programs: Family of Advanced BLoS Terminals (FAB-T), SBIRS Baseline, Information Systems Security Program, Space Situation Awareness Operations, and NAVSTAR Global Positioning System (Space and Control Segments).

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