Exhibit R-2, RDT&E Budget Item Justification: PB 2022 Air Force											Date: May 2021	
Appropriation/Budget Activity 3600: *Research, Development, Test & Evaluation, Air Force* / BA 7: *Operational Systems Development*					R-1 Program Element (Number/Name) PE 0304260F / *Airborne SIGINT Enterprise*							
COST ($ in Millions)	**Prior Years**	**FY 2020**	**FY 2021**	**FY 2022 Base**	**FY 2022 OCO**	**FY 2022 Total**	**FY 2023**	**FY 2024**	**FY 2025**	**FY 2026**	**Cost To Complete**	**Total Cost**
Total Program Element	-	85.157	127.876	97.546	0.000	97.546	-	-	-	-	-	-
675180: *RC-135 (Airborne SIGINT Development - RC-135 Rivet Joint)*	-	33.396	45.066	45.274	0.000	45.274	-	-	-	-	-	-
675183: *Common Development (Airborne SIGINT Development - Common Development)*	-	17.338	54.841	30.198	0.000	30.198	-	-	-	-	-	-
675185: *COMPASS BRIGHT*	-	25.289	20.484	14.545	0.000	14.545	-	-	-	-	-	-
675186: *Special Programs (Airborne SIGINT Development - Special Platforms)*	-	9.134	7.485	7.529	0.000	7.529	-	-	-	-	-	-

Note

Project 675185, (COMPASS BRIGHT), changed from (Non-Traditional SIGINT (NTS))

A. Mission Description and Budget Item Justification

This program funds multi-domain, multi-Intelligence, Surveillance and Reconnaissance (ISR) research, development, test and evaluation (RDT&E) efforts in support of the National Defense Strategy (NDS), as applied by the Air Force in the Next Generation ISR Dominance Flight Plan. Specifically, Program Element (PE) 0304260F provides authorized and appropriated funding to Signals Intelligence (SIGINT) RDT&E efforts for utilization on airborne platforms.

The future ISR portfolio will consist of multi-domain, multi-intelligence systems and remain confident across the entire conflict spectrum. The Airborne SIGINT Enterprise (ASE) PE is integral to developing the SIGINT component of the multi-domain, multi-ISR system capable of maintaining the warfighter's decisive advantage through all ranges of military operations, to include highly contested environments (HCE).

ASE Program funds are distributed to projects based on the development priorities established by the USAF SIGINT Capabilities Working Group (SCWG). The SCWG is chartered to guide the ASE capability investment. When required, the USAF may move funds between ASE projects, developing the highest priority projects in response to urgent (e.g., JUON) and emerging (e.g., JEON) warfighter needs.

The ASE Program participates in the development, integration, testing, and implementation of International and Air Force standards (e.g., North Atlantic Treaty Organization (NATO) standardization) to ensure Joint, Allied, and Coalition interoperability with ASE fielded systems. ASE funds lead the modernization efforts including existing airborne platform sensors, and where appropriate, their interfaces with the Air Force Distributed Common Ground System (AF DCGS). The ASE Program approach is a synergistic development effort providing Air Force-wide ISR capabilities consistent with the NDS.

Exhibit R-2, RDT&E Budget Item Justification: PB 2022 Air Force	Date: May 2021
Appropriation/Budget Activity 3600: *Research, Development, Test & Evaluation, Air Force* / BA 7: *Operational Systems Development*	**R-1 Program Element (Number/Name)** PE 0304260F / *Airborne SIGINT Enterprise*

ASE will use the Air Force SIGINT Architecture (AFSA) for planning and decision-making. AFSA is focused on employing open architecture standards whenever possible, to allow maximum effectiveness, efficiency and flexibility of development upgrades with multi-domain interoperability. The primary goal is to produce an open system architecture-based, capability-focused SIGINT investment strategy for the USAF.

Funds in any project may be utilized to cover activities to include studies and analysis activities, supporting both current program planning and execution and future program planning. This program element may include necessary civilian pay expenses required to manage, execute, and deliver technology and sensor capabilities. The use of such program funds would be in addition to civilian pay expenses budgeted in program element 0605831F. In FY20 0.177M expended and in FY21 0.246M is forecasted for civilian pay expenses in this program element.

This program is in Budget Activity 7, Operational System Development because this budget activity includes development efforts to upgrade systems that have been fielded or have received approval for full rate production and anticipate production funding in the current or subsequent fiscal year.

B. Program Change Summary ($ in Millions)	FY 2020	FY 2021	FY 2022 Base	FY 2022 OCO	FY 2022 Total
Previous President's Budget	85.157	128.110	135.043	0.000	135.043
Current President's Budget	85.157	127.876	97.546	0.000	97.546
Total Adjustments	0.000	-0.234	-37.497	0.000	-37.497
• Congressional General Reductions	0.000	0.000			
• Congressional Directed Reductions	0.000	0.000			
• Congressional Rescissions	0.000	0.000			
• Congressional Adds	0.000	0.000			
• Congressional Directed Transfers	0.000	0.000			
• Reprogrammings	0.000	0.000			
• SBIR/STTR Transfer	0.000	0.000			
• Other Adjustments	0.000	-0.234	-37.497	0.000	-37.497

Exhibit R-2A, RDT&E Project Justification: PB 2022 Air Force			Date: May 2021
Appropriation/Budget Activity 3600 / 7	R-1 Program Element (Number/Name) PE 0304260F / *Airborne SIGINT Enterprise*	Project (Number/Name) 675180 / *RC-135 (Airborne SIGINT Development - RC-135 Rivet Joint)*	

COST ($ in Millions)	Prior Years	FY 2020	FY 2021	FY 2022 Base	FY 2022 OCO	FY 2022 Total	FY 2023	FY 2024	FY 2025	FY 2026	Cost To Complete	Total Cost
675180: *RC-135 (Airborne SIGINT Development - RC-135 Rivet Joint)*	-	33.396	45.066	45.274	0.000	45.274	-	-	-	-	-	-
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

A. Mission Description and Budget Item Justification

This project supports design studies, engineering analysis, non-recurring engineering, and other efforts associated with the integration and modification of the RC-135 SIGINT sensors and their associated air and ground components. Through extensive utilization of commercial-off-the-shelf (COTS) based solutions to field needed capabilities, it also incurs a need for continuous identification of suitable replacements for components affected by Diminishing Manufacturing Sources and integration efforts consistent with the COTS technology cycle. These efforts provide required engineering for preliminary assessments of technical feasibility, operability, or military utility as well as specific engineering implementations integrated into the various baseline modifications. These funds will be disbursed among the RC-135V/W RIVET JOINT, the RC-135U COMBAT SENT, and the RC-135S COBRA BALL programs. Funding reflects the SCWG priorities and the accomplishment of other Airborne SIGINT Enterprise initiatives.

B. Accomplishments/Planned Programs ($ in Millions)	FY 2020	FY 2021	FY 2022
Title: RC-135 SIGINT Development	33.396	45.066	45.274
Description: Non-Recurring Engineering for the RC-135 signals intelligence systems. See Classified Budget Exhibits (PE 0305207F)			
FY 2021 Plans: - Developing SIGINT efforts for the RC-135 fleet to include new signal sets and upgrades to current capabilities. See PE 0305207F for classified details. Classified requirements POC is HAF AF/A2OO (704) 614-7317.			
FY 2022 Plans: - Will continue SIGINT development efforts for the RC-135 fleet to include new signal sets and upgrades to current capabilities. See PE 0305207F for classified details. Classified requirements POC is HAF AF/A2OO (704) 614-7317.			
FY 2021 to FY 2022 Increase/Decrease Statement: Minor increase due to inflation.			
Accomplishments/Planned Programs Subtotals	33.396	45.066	45.274

Exhibit R-2A, RDT&E Project Justification: PB 2022 Air Force		Date: May 2021
Appropriation/Budget Activity 3600 / 7	**R-1 Program Element (Number/Name)** PE 0304260F / *Airborne SIGINT Enterprise*	**Project (Number/Name)** 675180 / *RC-135 (Airborne SIGINT Development - RC-135 Rivet Joint)*

C. Other Program Funding Summary ($ in Millions)

Line Item	FY 2020	FY 2021	FY 2022 Base	FY 2022 OCO	FY 2022 Total	FY 2023	FY 2024	FY 2025	FY 2026	Cost To Complete	Total Cost
• APAF 05 Line Item DARP01: *RC-135*	227.673	191.332	207.596	-	207.596	-	-	-	-	-	-

Remarks

The funds within Program 0305207F procure all necessary aircraft modifications for the RC-135 program and include those funds necessary to field SIGINT capabilities developed under Project 675180 of the ASE. Not all procurement funds in #DARPO1: RC-135 are for ASE SIGINT projects.

D. Acquisition Strategy

Aircraft, aircraft sensor systems, and associated ground support system modifications planned include the procurement, fielding and logistical support for future RC-135V/W RIVET JOINT, RC-135U COMBAT SENT and RC-135S COBRA BALL baseline configurations. Development and integration is managed by the Big Safari Systems Group. They employ evolutionary acquisition approaches to field incremental capability improvements.

Exhibit R-3, RDT&E Project Cost Analysis: PB 2022 Air Force		Date: May 2021
Appropriation/Budget Activity 3600 / 7	**R-1 Program Element (Number/Name)** PE 0304260F / *Airborne SIGINT Enterprise*	**Project (Number/Name)** 675180 / *RC-135 (Airborne SIGINT Development - RC-135 Rivet Joint)*

Product Development ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2020 Cost	FY 2020 Award Date	FY 2021 Cost	FY 2021 Award Date	FY 2022 Base Cost	FY 2022 Base Award Date	FY 2022 OCO Cost	FY 2022 OCO Award Date	FY 2022 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
RC-135 SIGINT Development	SS/ Various	L3Harris : Greenville, TX	-	33.396	Jan 2020	45.066	Jan 2021	45.274	Jan 2022	-		45.274	-	-	-
		Subtotal	-	33.396		45.066		45.274		-		45.274	-	-	N/A

Remarks

Above contract method/type will be CPFF and FFP

	Prior Years	FY 2020		FY 2021		FY 2022 Base		FY 2022 OCO		FY 2022 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	-	33.396		45.066		45.274		-		45.274	-	-	N/A

Remarks

FY20: RC-135 projects decreased to support higher Air Force priorities

Exhibit R-4, RDT&E Schedule Profile: PB 2022 Air Force		Date: May 2021
Appropriation/Budget Activity 3600 / 7	**R-1 Program Element (Number/Name)** PE 0304260F / *Airborne SIGINT Enterprise*	**Project (Number/Name)** 675180 / *RC-135 (Airborne SIGINT Development - RC-135 Rivet Joint)*

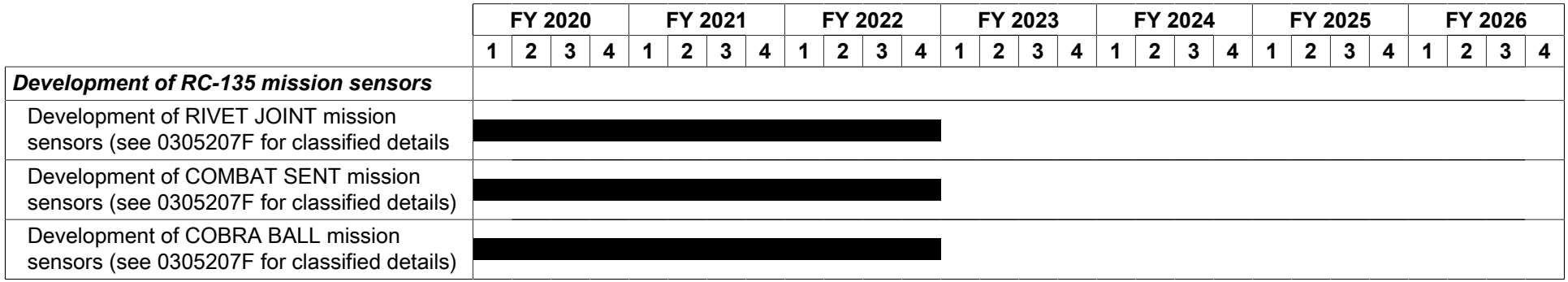

Exhibit R-4A, RDT&E Schedule Details: PB 2022 Air Force		Date: May 2021
Appropriation/Budget Activity 3600 / 7	**R-1 Program Element (Number/Name)** PE 0304260F / *Airborne SIGINT Enterprise*	**Project (Number/Name)** 675180 / *RC-135 (Airborne SIGINT Development - RC-135 Rivet Joint)*

Schedule Details

	Start		End	
Events by Sub Project	**Quarter**	**Year**	**Quarter**	**Year**
Development of RC-135 mission sensors				
Development of RIVET JOINT mission sensors (see 0305207F for classified details	1	2020	4	2022
Development of COMBAT SENT mission sensors (see 0305207F for classified details)	1	2020	4	2022
Development of COBRA BALL mission sensors (see 0305207F for classified details)	1	2020	4	2022

Note

Requirements documentation is classified. Classified requirements POC is HAF AF/A2/6UO (703) 614-7317

Exhibit R-2A, RDT&E Project Justification: PB 2022 Air Force			Date: May 2021
Appropriation/Budget Activity 3600 / 7	R-1 Program Element (Number/Name) PE 0304260F / *Airborne SIGINT Enterprise*	Project (Number/Name) 675183 / *Common Development (Airborne SIGINT Development - Common Development)*	

COST ($ in Millions)	Prior Years	FY 2020	FY 2021	FY 2022 Base	FY 2022 OCO	FY 2022 Total	FY 2023	FY 2024	FY 2025	FY 2026	Cost To Complete	Total Cost
675183: *Common Development (Airborne SIGINT Development - Common Development)*	-	17.338	54.841	30.198	0.000	30.198	-	-	-	-	-	-
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

A. Mission Description and Budget Item Justification

The Common Development project supports airborne SIGINT design studies, engineering analysis, non-recurring engineering (NRE), program management, and other efforts associated with support to the fielded Airborne Signals Intelligence Payload (ASIP) and the development of follow-on SIGINT sensors and their associated air and ground components. The Common Development project also supports the development and integration of new sensor capabilities, quick reaction capabilities, and replacement components affected by Diminishing Manufacturing Sources and Material Shortages (DMSMS).

Development supports the ASIP system and follow-on SIGINT sensors to include Global High-altitude Open-system Sensor Technology (GHOST). The ASIP sensor provides a common SIGINT system, allowing for maximum coverage of the electromagnetic spectrum through the use of an integrated high and low band system. The GHOST sensor is being developed as a platform agnostic SIGINT sensor to replace ASIP through the use of rapid acquisition strategies, implementation of open architecture concepts, and rapid integration of new signals of interests. GHOST will be designed to address the NDS and Next Generation ISR Dominance Flight Plan identified needs for multi-ISR systems in order to sustain SIGINT operations in a highly contested environment.

This project also supports overarching Airborne SIGINT Enterprise Program common development to include, but not limited to, the Air Force SIGINT Architecture maintenance, SIGINT modeling and simulation efforts, and technology development and risk reduction through the Air Force Research Lab managed Open Architecture Technology Lab (OATL). Capability improvements needed to exploit service identified signals of interest will be identified as priorities by the Air Force SCWG. This project provides the warfighter increased SIGINT combat capability via rapid acquisition. Capability enhancements are implemented as soon as the ASE technology achieves satisfactory risk levels. ASE developed Sensors will be integrated and tested on available platforms, funding permitting.

This program element may include necessary civilian pay expenses required to manage, execute, and deliver technology and sensor capabilities. The use of such program funds would be in addition to civilian pay expenses budgeted in program element 0605831F. In FY19 $0.075M and in FY20 $0.177M was expended for civilian pay expenses in this program element.

B. Accomplishments/Planned Programs ($ in Millions)	FY 2020	FY 2021	FY 2022
Title: Common SIGINT Development	17.338	54.841	30.198

Exhibit R-2A, RDT&E Project Justification: PB 2022 Air Force		Date: May 2021
Appropriation/Budget Activity 3600 / 7	**R-1 Program Element (Number/Name)** PE 0304260F / *Airborne SIGINT Enterprise*	**Project (Number/Name)** 675183 / *Common Development (Airborne SIGINT Development - Common Development)*

B. Accomplishments/Planned Programs ($ in Millions)	FY 2020	FY 2021	FY 2022
Description: Develop and test common open architecture compliant SIGINT system for multiple SIGINT platforms, to include ASIP support and follow-on SIGINT sensors using an open system architecture to the maximum extent possible. Additionally, will advance testing capabilities through the Open Architecture Technology Lab for current and future SIGINT sensors. ***FY 2021 Plans:*** - Develop new signals capabilities and enhancements. Details are classified. - Enhance OATL infrastructure to support future SIGINT sensor development and testing. - Leverage sensor development activities to support GHOST prototype efforts by multiple vendors. - Evaluate open architecture compliance of GHOST prototypes in the OATL. ***FY 2022 Plans:*** - Will continue to develop new signals capabilities and enhancements. Details are classified. - Will continue to enhance OATL infrastructure to support future SIGINT sensor development and testing. - Will Leverage sensor development activities to support GHOST prototype efforts by multiple vendors. - Will continue to evaluate open architecture compliance of GHOST prototypes in the OATL. ***FY 2021 to FY 2022 Increase/Decrease Statement:*** Decrease in FY22 due to GHOST Phase 1 completion and GHOST Phase 2 contract award for prototype Development, integration, and flight testing.			
Accomplishments/Planned Programs Subtotals	17.338	54.841	30.198

C. Other Program Funding Summary ($ in Millions)

Line Item	FY 2020	FY 2021	FY 2022 Base	FY 2022 OCO	FY 2022 Total	FY 2023	FY 2024	FY 2025	FY 2026	Cost To Complete	Total Cost
• APAF 05 Line Item HAWK00: *RQ-4 Mods*	4.851	126.340	117.382	-	117.382	-	-	-	-	-	-
• RDTE 07 0305202F: *Dragon U-2*	0.550	1.840	3.920	-	3.920	-	-	-	-	-	-

Remarks

Not all Other Program Funding is associated with SIGINT.

D. Acquisition Strategy

SIGINT capabilities will be developed and integrated onto various platforms using an evolutionary acquisition approach to field incremental capability improvements, leveraging the OATL to incorporate platform agnostic, open system architecture. Requirements as validated and prioritized by the SCWG, will be executed through

Exhibit R-2A, RDT&E Project Justification: PB 2022 Air Force		Date: May 2021
Appropriation/Budget Activity 3600 / 7	**R-1 Program Element (Number/Name)** PE 0304260F / *Airborne SIGINT Enterprise*	**Project (Number/Name)** 675183 / *Common Development (Airborne SIGINT Development - Common Development)*

acquisition strategies employing maximum use of Middle Tier Acquisition (MTA) authorities to include Section 804 rapid prototyping. The GHOST System will evolve rapidly starting with demonstrations of open architecture compliance on representative prototype hardware in the OATL before successively progressing to a testing program of a flyable prototype system and eventually production system. Such capabilities will be acquired and delivered by contracting with the appropriate vendor(s) while encouraging competition where possible and leveraging any existing USG capabilities that have already been developed.

Exhibit R-3, RDT&E Project Cost Analysis: PB 2022 Air Force			Date: May 2021
Appropriation/Budget Activity 3600 / 7	**R-1 Program Element (Number/Name)** PE 0304260F / *Airborne SIGINT Enterprise*	**Project (Number/Name)** 675183 / *Common Development (Airborne SIGINT Development - Common Development)*	

Product Development ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2020 Cost	FY 2020 Award Date	FY 2021 Cost	FY 2021 Award Date	FY 2022 Base Cost	FY 2022 Base Award Date	FY 2022 OCO Cost	FY 2022 OCO Award Date	FY 2022 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
ASIP Global Hawk Increment 1	SS/CPFF	Northrop Grumman : San Jose, CA	-	0.000		0.000		0.000		-		0.000	-	-	-
ASIP Upgrades Increment 2 - Build A; SIL / Cyber Support	SS/CPIF	Northrop Grumman : San Jose, CA	-	4.029	Sep 2020	-		-		-		-	-	-	-
Open Architecture Technology Lab (OATL)	Various	Various : Various	-	6.011	Feb 2020	7.870	Mar 2021	2.000	Mar 2022	-		2.000	-	-	-
Global High-Altitude Open-system Sensor Technology (GHOST)	Various	Various : Various	-	3.710	Dec 2020	41.368	Mar 2021	20.678	Apr 2022	-		20.678	-	-	-
Air Force SIGINT Architecture (AFSA)	Various	AECOM : Annapolis Junction, MD	-	2.879	Mar 2020	4.042	Feb 2021	4.000	Dec 2021	-		4.000	-	-	-
		Subtotal	-	16.629		53.280		26.678		-		26.678	-	-	N/A

Management Services ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2020 Cost	FY 2020 Award Date	FY 2021 Cost	FY 2021 Award Date	FY 2022 Base Cost	FY 2022 Base Award Date	FY 2022 OCO Cost	FY 2022 OCO Award Date	FY 2022 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
PMA	Various	Various : Dayton, OH	-	0.709	Mar 2020	1.561	Feb 2021	3.520	Feb 2022	-		3.520	-	-	-
		Subtotal	-	0.709		1.561		3.520		-		3.520	-	-	N/A

	Prior Years	FY 2020		FY 2021		FY 2022 Base		FY 2022 OCO		FY 2022 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	-	17.338		54.841		30.198		-		30.198	-	-	N/A

Remarks

- Funding increase from FY20 to FY21 due to returning to normal funding levels and supports GHOST follow-on SIGINT sensor prototyping efforts ramping up in FY21.
- ASIP Global Hawk Increment 1 completed development efforts in FY19.
- ASIP Increment 2 Build A development efforts and support efforts to maintain the ASIP Systems Integration Lab (SIL) and cybersecurity authority to operate were ended in FY20, and will transition to the airborne platforms.

Exhibit R-3, RDT&E Project Cost Analysis: PB 2022 Air Force			Date: May 2021
Appropriation/Budget Activity 3600 / 7	R-1 Program Element (Number/Name) PE 0304260F / *Airborne SIGINT Enterprise*	Project (Number/Name) 675183 / *Common Development (Airborne SIGINT Development - Common Development)*	

	Prior Years	FY 2020	FY 2021	FY 2022 Base	FY 2022 OCO	FY 2022 Total	Cost To Complete	Total Cost	Target Value of Contract

- Open Architecture Technology Lab (OATL) technology development and risk reduction efforts will continue in FY21 and FY22 to demonstrate rapid technology insertion and support GHOST prototyping efforts.

Exhibit R-4, RDT&E Schedule Profile: PB 2022 Air Force		Date: May 2021
Appropriation/Budget Activity 3600 / 7	**R-1 Program Element (Number/Name)** PE 0304260F / *Airborne SIGINT Enterprise*	**Project (Number/Name)** 675183 / *Common Development (Airborne SIGINT Development - Common Development)*

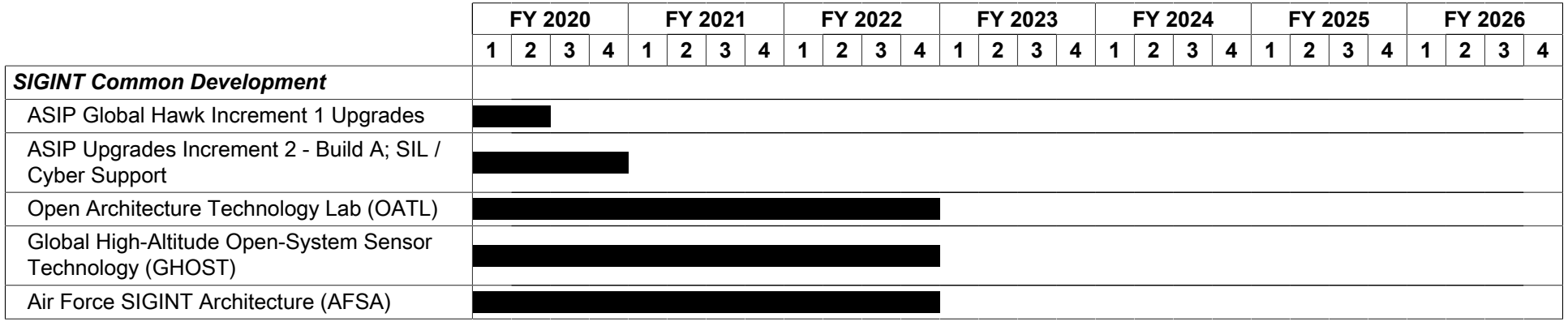

Exhibit R-4A, RDT&E Schedule Details: PB 2022 Air Force		Date: May 2021
Appropriation/Budget Activity 3600 / 7	**R-1 Program Element (Number/Name)** PE 0304260F / *Airborne SIGINT Enterprise*	**Project (Number/Name)** 675183 / *Common Development (Airborne SIGINT Development - Common Development)*

Schedule Details

	Start		End	
Events by Sub Project	**Quarter**	**Year**	**Quarter**	**Year**
SIGINT Common Development				
ASIP Global Hawk Increment 1 Upgrades	1	2020	2	2020
ASIP Upgrades Increment 2 - Build A; SIL / Cyber Support	1	2020	4	2020
Open Architecture Technology Lab (OATL)	1	2020	4	2022
Global High-Altitude Open-System Sensor Technology (GHOST)	1	2020	4	2022
Air Force SIGINT Architecture (AFSA)	1	2020	4	2022

Exhibit R-2A, RDT&E Project Justification: PB 2022 Air Force			Date: May 2021
Appropriation/Budget Activity 3600 / 7	R-1 Program Element (Number/Name) PE 0304260F / *Airborne SIGINT Enterprise*	Project (Number/Name) 675185 / *COMPASS BRIGHT*	

COST ($ in Millions)	Prior Years	FY 2020	FY 2021	FY 2022 Base	FY 2022 OCO	FY 2022 Total	FY 2023	FY 2024	FY 2025	FY 2026	Cost To Complete	Total Cost
675185: *COMPASS BRIGHT*	-	25.289	20.484	14.545	0.000	14.545	-	-	-	-	-	-
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

A. Mission Description and Budget Item Justification

The COMPASS BRIGHT program develops, demonstrates, and rapidly transitions advanced Air Force specific SIGINT capabilities against emerging and future target signals of interest. This program pursues SIGINT technologies for program transition, to include Communications Intelligence (COMINT), Electronic Intelligence (ELINT), Audio, Analytics, Special Signals of Interest, and Radio Frequency Measurement and Signature Intelligence (MASINT). The COMPASS BRIGHT program objective is to mature technologies for application in SIGINT and MASINT systems or subsystems. Production and integration of these developed technologies will be conducted by the appropriate programs. COMPASS BRIGHT projects are selected through a data call process, whereby the USAF evaluates proposals from the laboratories, platforms, and other government agencies, to select those projects that are most promising.

Operational Reconnaissance (Ops Recce) is part of the initiative to improve overall USAF intelligence, surveillance, and reconnaissance (ISR) capability through development and use of sensor data from non-traditional ISR platforms and innovative use of sensors. This program pursues Ops Recce capabilities for transition through development, testing, demonstration and implementation efforts across all platforms. The Ops Recce program objective is to provide increased battlespace awareness through the use of sensors/platforms to achieve effects beyond what those sensor/platforms were originally designed.

The program office authority extends to accomplishment of out-of-cycle COMPASS BRIGHT efforts. These tasks may be filtered through the SIGINT Capability Working Group (SCWG) outside the normal vetting process to expedite acquisition of high-end capabilities for the warfighter.

This program element may include necessary civilian pay expenses required to manage, execute, and deliver technology and sensor capabilities. The use of such program funds would be in addition to civilian pay expenses budgeted in program element 0605831F.

B. Accomplishments/Planned Programs ($ in Millions)	FY 2020	FY 2021	FY 2022
Title: COMPASS BRIGHT Tech Development	25.289	20.484	14.545
Description: Develops projects in the SIGINT and MASINT areas for transition to the RC-135 fleet, other intelligence, surveillance, and reconnaissance platforms and Ops Recce.			
FY 2021 Plans: - Initiate, continue, and complete various SIGINT projects to include enhanced ELINT exploitation, COMINT, Audio exploitation, Ops Recce, signals of interest prosecution, and non-traditional ISR (NTISR). - FY22 Project selection process initiated.			
FY 2022 Plans:			

Exhibit R-2A, RDT&E Project Justification: PB 2022 Air Force		Date: May 2021
Appropriation/Budget Activity 3600 / 7	**R-1 Program Element (Number/Name)** PE 0304260F / *Airborne SIGINT Enterprise*	**Project (Number/Name)** 675185 / *COMPASS BRIGHT*

B. Accomplishments/Planned Programs ($ in Millions)	FY 2020	FY 2021	FY 2022
- Will initiate, continue, and complete various SIGINT projects to include enhanced ELINT exploitation, COMINT, Audio exploitation, Ops Recce, signals of interest prosecution, and NTISR. - FY23 Project selection will be initiated. ***FY 2021 to FY 2022 Increase/Decrease Statement:*** Funding decreased due to Compass Bright returning to normal funding levels. FY20 and FY21 funding were increased as payback for FY19 realignment for higher Air Force priorities.			
Accomplishments/Planned Programs Subtotals	25.289	20.484	14.545

C. Other Program Funding Summary ($ in Millions)

Line Item	FY 2020	FY 2021	FY 2022 Base	FY 2022 OCO	FY 2022 Total	FY 2023	FY 2024	FY 2025	FY 2026	Cost To Complete	Total Cost
• APAF 05 DARP01: *RC-135*	227.673	191.332	207.596	-	207.596	-	-	-	-	-	-
• APAF 06 DARP01: *RC-135*	50.448	51.282	51.305	-	51.305	-	-	-	-	-	-

Remarks

D. Acquisition Strategy

Air Force Life Cycle Management Center/Intelligence, Surveillance, and Reconnaissance and Special Operations Forces Directorate (AFLCMC/WI) will execute COMPASS BRIGHT and Operational Reconnaissance efforts through technology development and demonstration contracts which leverage existing laboratory relationships and other existing contractual vehicles, with future development projects emphasizing full and open competition.

On an annual basis, the SIGINT Capabilities Working Group (SCWG) reviews developmental technologies against warfighter capabilities and requirements based on strategic roadmaps. Projects advancing the technological maturity of promising sensors and processing capabilities are reviewed and prioritized into a recommended list for senior executive direction to implement for the coming fiscal year.

Exhibit R-3, RDT&E Project Cost Analysis: PB 2022 Air Force		Date: May 2021
Appropriation/Budget Activity 3600 / 7	**R-1 Program Element (Number/Name)** PE 0304260F / *Airborne SIGINT Enterprise*	**Project (Number/Name)** 675185 / *COMPASS BRIGHT*

Product Development ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2020 Cost	FY 2020 Award Date	FY 2021 Cost	FY 2021 Award Date	FY 2022 Base Cost	FY 2022 Base Award Date	FY 2022 OCO Cost	FY 2022 OCO Award Date	FY 2022 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Product Development	C/CPAF	Not specified. : TBD	-	0.000		0.000		0.000		-		0.000	-	-	-
COMPASS BRIGHT	Various	Multiple : Various	-	23.590	Nov 2019	18.492	Nov 2020	8.619	Nov 2021	-		8.619	-	-	-
Ops Recce	Various	Multiple : Various	-	0.000		0.000	Dec 2020	3.191	Jan 2022	-		3.191	-	-	-
		Subtotal	-	23.590		18.492		11.810		-		11.810	-	-	N/A

Remarks

On an annual basis, the SIGINT Capabilities Working Group (SCWG) reviews developmental technologies against warfighter capabilities and requirements based on strategic roadmaps. Projects advancing the technological maturity of promising sensors and processing capabilities are reviewed and prioritized into a recommended list for senior executive direction to implement for the coming fiscal year.

Management Services ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2020 Cost	FY 2020 Award Date	FY 2021 Cost	FY 2021 Award Date	FY 2022 Base Cost	FY 2022 Base Award Date	FY 2022 OCO Cost	FY 2022 OCO Award Date	FY 2022 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Compass Bright PMA	Various	Various : Various, OH	-	1.699	Nov 2019	1.495	Nov 2020	1.926	Jan 2022	-		1.926	-	-	-
OPS Recce PMA	C/CPAF	Not specified. : TBD	-	0.000		0.497	Jan 2021	0.809	Jan 2022	-		0.809	-	-	-
		Subtotal	-	1.699		1.992		2.735		-		2.735	-	-	N/A

	Prior Years	FY 2020 Cost	FY 2020 Award Date	FY 2021 Cost	FY 2021 Award Date	FY 2022 Base Cost	FY 2022 Base Award Date	FY 2022 OCO Cost	FY 2022 OCO Award Date	FY 2022 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	-	25.289		20.484		14.545		-		14.545	-	-	N/A

Remarks

FY20 COMPASS BRIGHT increased to restore program support levels following previous reductions.

Exhibit R-4, RDT&E Schedule Profile: PB 2022 Air Force		Date: May 2021
Appropriation/Budget Activity 3600 / 7	**R-1 Program Element (Number/Name)** PE 0304260F / *Airborne SIGINT Enterprise*	**Project (Number/Name)** 675185 / *COMPASS BRIGHT*

	FY 2020				FY 2021				FY 2022				FY 2023				FY 2024				FY 2025				FY 2026			
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
COMPASS BRIGHT																												
SIGINT Technologies	[redacted]																											
- ELINT Programs	[redacted]																											
- COMINT Programs	[redacted]																											
- Special Signals Programs	[redacted]																											
- Audio Programs	[redacted]																											
- Analytics Programs	[redacted]																											
Ops Recce Efforts	[redacted]																											

Exhibit R-4A, RDT&E Schedule Details: PB 2022 Air Force		Date: May 2021
Appropriation/Budget Activity 3600 / 7	**R-1 Program Element (Number/Name)** PE 0304260F / *Airborne SIGINT Enterprise*	**Project (Number/Name)** 675185 / *COMPASS BRIGHT*

Schedule Details

	Start		End	
Events by Sub Project	**Quarter**	**Year**	**Quarter**	**Year**
COMPASS BRIGHT				
SIGINT Technologies	1	2020	4	2022
- ELINT Programs	1	2020	4	2022
- COMINT Programs	1	2020	4	2022
- Special Signals Programs	1	2020	4	2022
- Audio Programs	1	2020	4	2022
- Analytics Programs	1	2020	4	2022
Ops Recce Efforts	1	2020	4	2022

Note

On an annual basis, the SCWG reviews developmental technologies against warfighter capabilities and requirements based on strategic roadmaps. Projects advancing the technological maturity of promising sensors and processing capabilities are reviewed and prioritized into a recommended list for senior executive direction to implement for the coming fiscal year. As a result, the USAF will move funds between projects periodically to develop the highest priority projects in response to urgent and emerging warfighter needs.

Exhibit R-2A, RDT&E Project Justification: PB 2022 Air Force			Date: May 2021
Appropriation/Budget Activity 3600 / 7	R-1 Program Element (Number/Name) PE 0304260F / *Airborne SIGINT Enterprise*	Project (Number/Name) 675186 / *Special Programs (Airborne SIGINT Development - Special Platforms)*	

COST ($ in Millions)	Prior Years	FY 2020	FY 2021	FY 2022 Base	FY 2022 OCO	FY 2022 Total	FY 2023	FY 2024	FY 2025	FY 2026	Cost To Complete	Total Cost
675186: *Special Programs (Airborne SIGINT Development - Special Platforms)*	-	9.134	7.485	7.529	0.000	7.529	-	-	-	-	-	-
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

A. Mission Description and Budget Item Justification

This project supports special SIGINT studies as well as the development and integration of advanced SIGINT capabilities for special programs including, but not limited to: quick reaction capability sensors, the processing, exploitation, and dissemination associated with these systems, and other efforts approved by the USAF SCWG. Development efforts will include, but are not limited to: new signal sets, antenna improvements, sensitivity upgrades, and data distribution upgrades, and new/advanced deployment capabilities. This project provides the war fighter with near term combat capabilities with increased capability improvements accomplished as technologies and risks achieve satisfactory levels. Sensors will be integrated and tested on various platforms including the MQ-9A remotely piloted aircraft as funding permits.

B. Accomplishments/Planned Programs ($ in Millions)	FY 2020	FY 2021	FY 2022
Title: SIGINT Development	9.134	7.485	7.529
Description: Develop, update, and test SIGINT capabilities for QRC and normalized special programs SIGINT projects. ***FY 2021 Plans:*** - Will continue to modernize SIGINT systems used by the MQ-9A. ***FY 2022 Plans:*** - Will continue to modernize SIGINT systems used by the MQ-9A. ***FY 2021 to FY 2022 Increase/Decrease Statement:*** Funding remained the same with slight increase to account for inflation.			
Accomplishments/Planned Programs Subtotals	9.134	7.485	7.529

C. Other Program Funding Summary ($ in Millions)

N/A

Remarks

D. Acquisition Strategy

SIGINT capabilities will be integrated to various classified platforms using an evolutionary acquisition approach. Capabilities and prototypes will be developed by Other Government Agencies and transitioned to select vendors as production needs develop.

Exhibit R-3, RDT&E Project Cost Analysis: PB 2022 Air Force		Date: May 2021
Appropriation/Budget Activity 3600 / 7	**R-1 Program Element (Number/Name)** PE 0304260F / *Airborne SIGINT Enterprise*	**Project (Number/Name)** 675186 / *Special Programs (Airborne SIGINT Development - Special Platforms)*

Product Development ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2020 Cost	FY 2020 Award Date	FY 2021 Cost	FY 2021 Award Date	FY 2022 Base Cost	FY 2022 Base Award Date	FY 2022 OCO Cost	FY 2022 OCO Award Date	FY 2022 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Upgrades to SIGINT systems used by the MQ-9 Remotely piloted aircraft	Various	Various : Various	-	9.134	Jan 2020	7.265	Jan 2021	7.209	Jan 2022	-		7.209	-	-	-
		Subtotal	-	9.134		7.265		7.209		-		7.209	-	-	N/A

Remarks

Upgrades the quick reaction capability sensors already on the MQ-1/9 fleet

Test and Evaluation ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2020 Cost	FY 2020 Award Date	FY 2021 Cost	FY 2021 Award Date	FY 2022 Base Cost	FY 2022 Base Award Date	FY 2022 OCO Cost	FY 2022 OCO Award Date	FY 2022 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Flight Test	Various	Various : Various	-	-		0.220	May 2021	0.320	May 2022	-		0.320	-	-	-
		Subtotal	-	-		0.220		0.320		-		0.320	-	-	N/A

	Prior Years	FY 2020 Cost	FY 2020 Award Date	FY 2021 Cost	FY 2021 Award Date	FY 2022 Base Cost	FY 2022 Base Award Date	FY 2022 OCO Cost	FY 2022 OCO Award Date	FY 2022 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	-	9.134		7.485		7.529		-		7.529	-	-	N/A

Remarks

Exhibit R-4, RDT&E Schedule Profile: PB 2022 Air Force		Date: May 2021
Appropriation/Budget Activity 3600 / 7	**R-1 Program Element (Number/Name)** PE 0304260F / *Airborne SIGINT Enterprise*	**Project (Number/Name)** 675186 / *Special Programs (Airborne SIGINT Development - Special Platforms)*

	FY 2020				FY 2021				FY 2022				FY 2023				FY 2024				FY 2025				FY 2026			
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
SIGINT Development																												
MQ-9 Sensor 1 Modernization	[redacted]																											
MQ-9 Sensor 2 Modernization	[redacted]																											
MQ-9 Sensor Upgrades	[redacted]																											

Exhibit R-4A, RDT&E Schedule Details: PB 2022 Air Force		Date: May 2021
Appropriation/Budget Activity 3600 / 7	**R-1 Program Element (Number/Name)** PE 0304260F / *Airborne SIGINT Enterprise*	**Project (Number/Name)** 675186 / *Special Programs (Airborne SIGINT Development - Special Platforms)*

Schedule Details

	Start		End	
Events by Sub Project	**Quarter**	**Year**	**Quarter**	**Year**
SIGINT Development				
MQ-9 Sensor 1 Modernization	1	2020	4	2022
MQ-9 Sensor 2 Modernization	1	2020	4	2022
MQ-9 Sensor Upgrades	1	2020	4	2022