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Exhibit R-2, RDT&E Budget Item Justification: PB 2024 Air Force **Date:** March 2023

Appropriation/Budget Activity 3600: <i>Research, Development, Test & Evaluation, Air Force I BA 7: Operational Systems Development</i>	R-1 Program Element (Number/Name) PE 0304260F / <i>Airborne SIGINT Enterprise</i>
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COST (\$ in Millions)	Prior Years	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total	FY 2025	FY 2026	FY 2027	FY 2028	Cost To Complete	Total Cost
Total Program Element	-	88.645	109.528	108.947	0.000	108.947	89.499	94.518	96.560	100.054	Continuing	Continuing
675180: <i>RC-135 (Airborne SIGINT Development - RC-135 Rivet Joint)</i>	-	42.774	42.439	43.443	0.000	43.443	41.843	45.673	46.714	48.404	Continuing	Continuing
675183: <i>Common Development (Airborne SIGINT Development - Common Development)</i>	-	24.148	39.849	47.902	0.000	47.902	29.657	30.396	31.019	32.141	0.000	235.112
675185: <i>COMPASS BRIGHT</i>	-	14.194	12.313	9.495	0.000	9.495	9.709	9.953	10.157	10.525	Continuing	Continuing
675186: <i>Special Programs (Airborne SIGINT Development - Special Platforms)</i>	-	7.529	14.927	8.107	0.000	8.107	8.290	8.496	8.670	8.984	Continuing	Continuing

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 to meet emerging ISR threats 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 decision advantage through all ranges of military operations, to include highly contested environments (HCEs).

ASE Program funds are distributed to projects based on the development priorities established by the USAF SIGINT Capabilities Working Group (SCWG), which 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.

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Exhibit R-2, RDT&E Budget Item Justification: PB 2024 Air Force	Date: March 2023
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Appropriation/Budget Activity 3600: <i>Research, Development, Test & Evaluation, Air Force I BA 7: Operational Systems Development</i>	R-1 Program Element (Number/Name) PE 0304260F / <i>Airborne SIGINT Enterprise</i>
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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.

This program element may include necessary civilian pay expenses required to manage, execute, and deliver emergent or unanticipated weapon system capability. The use of such programs funds would be in addition to the civilian pay expenses budgeted in program element 0605827F. In FY22 0.643M was expended for civilian pay expenses in this program element, and in FY23 0.779M is forecasted for civilian pay expenses in this program element.

The FY24 funding request was reduced by 11.267 to account for the availability of prior year execution balances.

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 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total
Previous President's Budget	93.546	108.528	120.214	0.000	120.214
Current President's Budget	88.645	109.528	108.947	0.000	108.947
Total Adjustments	-4.901	1.000	-11.267	0.000	-11.267
• 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	-4.901	1.000	-11.267	0.000	-11.267

Change Summary Explanation

The FY24 funding was reduced by 11.267 to account for the availability of prior year execution balances.

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Exhibit R-2A, RDT&E Project Justification: PB 2024 Air Force										Date: March 2023		
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 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total	FY 2025	FY 2026	FY 2027	FY 2028	Cost To Complete	Total Cost
675180: RC-135 (Airborne SIGINT Development - RC-135 Rivet Joint)	-	42.774	42.439	43.443	0.000	43.443	41.843	45.673	46.714	48.404	Continuing	Continuing
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. Funding also supports innovation activities to include studies, analyses, requirements definition, and quick-reaction capability prototypes/demonstrations to accelerate planning for technology transition, technology insertion and future acquisition programs. 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 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total
Title: RC-135 SIGINT Development	42.774	42.439	43.443	-	43.443
Description: Non-Recurring Engineering for the RC-135 signals intelligence systems. See Classified Budget Exhibits (PE 0305207F)					
FY 2023 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/A200 (704) 614-7317.					
FY 2024 Base 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/A200 (704) 614-7317.					
FY 2023 to FY 2024 Increase/Decrease Statement: Minor increase due to inflation					
Accomplishments/Planned Programs Subtotals	42.774	42.439	43.443	-	43.443

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Exhibit R-2A, RDT&E Project Justification: PB 2024 Air Force		Date: March 2023
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)

<u>Line Item</u>	<u>FY 2022</u>	<u>FY 2023</u>	<u>FY 2024</u>	<u>FY 2024</u>	<u>FY 2024</u>	<u>FY 2025</u>	<u>FY 2026</u>	<u>FY 2027</u>	<u>FY 2028</u>	<u>Cost To</u>	
			<u>Base</u>	<u>OCO</u>	<u>Total</u>					<u>Complete</u>	<u>Total Cost</u>
• APAF 05 Line Item DARPO1: RC-135	207.596	213.428	220.138	-	220.138	222.554	225.912	231.006	235.814	Continuing	Continuing

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.

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2024 Air Force **Date:** March 2023

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)
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Product Development (\$ in Millions)				FY 2022		FY 2023		FY 2024 Base		FY 2024 OCO		FY 2024 Total	Cost To Complete	Total Cost	Target Value of Contract
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
RC-135 SIGINT Development	SS/ Various	L3 Harris : Greenville, TX	-	42.774	Jan 2022	42.439	Jan 2023	43.443	Jan 2024	-		43.443	Continuing	Continuing	-
Subtotal			-	42.774		42.439		43.443		-		43.443	Continuing	Continuing	N/A

Remarks
Above contract method/type will be CPFF and FFP

	Prior Years	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	-	42.774	42.439	43.443	-	43.443	Continuing	Continuing	N/A

Remarks

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Exhibit R-4, RDT&E Schedule Profile: PB 2024 Air Force		Date: March 2023
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)

FY 2022				FY 2023				FY 2024				FY 2025				FY 2026				FY 2027				FY 2028			
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

Development of RC-135 mission sensors	
Development of RIVET JOINT mission sensors (see 0305207F for classified details)	
Development of COMBAT SENT mission sensors (see 0305207F for classified details)	
Development of COBRA BALL mission sensors (see 0305207F for classified details)	

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Exhibit R-4A, RDT&E Schedule Details: PB 2024 Air Force		Date: March 2023
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

Events by Sub Project	Start		End	
	Quarter	Year	Quarter	Year
Development of RC-135 mission sensors				
Development of RIVET JOINT mission sensors (see 0305207F for classified details)	1	2022	4	2028
Development of COMBAT SENT mission sensors (see 0305207F for classified details)	1	2022	4	2028
Development of COBRA BALL mission sensors (see 0305207F for classified details)	1	2022	4	2028

Note

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

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Exhibit R-2A, RDT&E Project Justification: PB 2024 Air Force										Date: March 2023		
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 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total	FY 2025	FY 2026	FY 2027	FY 2028	Cost To Complete	Total Cost
675183: Common Development (Airborne SIGINT Development - Common Development)	-	24.148	39.849	47.902	0.000	47.902	29.657	30.396	31.019	32.141	0.000	235.112
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, risk reduction, and other efforts associated with support to fielded 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 capabilities to address emerging needs as identified by the SIGINT Capabilities Working Group (SCWG). Finally, the Common Development project supports replacement components affected by Diminishing Manufacturing Sources and Material Shortages (DMSMS).

Future SIGINT sensors are being developed through the implementation of open architecture concepts that enable the rapid integration of new signals of interests. Future SIGINT sensor efforts will address needs identified in the National Defense Strategy, and SECAF Operational Imperatives, and Next Generation ISR Dominance Flight Plan in order to sustain SIGINT operations in a highly contested environment. The efforts include, but are not limited to, demonstrating SIGINT capabilities using a CI-6 family of systems sensor on a current USAF platform, demonstrating integration of a CI-6 family of systems sensor with the Distributed Common Ground System (DCGS), conducting trade studies and integration planning for CI-6 family of systems sensor improvements, developing Low-Cost UAS Sensor Technology (LOCUST), and furthering the development of CRESTONE to counter emerging threats.

This project also supports overarching Airborne SIGINT Enterprise (ASE) 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 0605827F. In PY23 \$0.843M and in CY24 \$0.861M was expended for civilian pay expenses in this program element.

B. Accomplishments/Planned Programs (\$ in Millions)

	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total
Title: Common SIGINT Development	24.148	39.849	47.902	-	47.902

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Exhibit R-2A, RDT&E Project Justification: PB 2024 Air Force		Date: March 2023
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 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total
<p>Description: Develop and test common open architecture compliant SIGINT systems to include but not limited to CI-6, LOCUST, and CRESTONE. Additionally, will advance testing capabilities through the Open Architecture Technology Lab for current and future SIGINT sensors.</p> <p>FY 2023 Plans:</p> <ul style="list-style-type: none"> - Continue to develop new signals capabilities and enhancements. Details are classified. - Continue to enhance OATL infrastructure to support future SIGINT sensor development and testing. - Demonstration, development, and integration activities for the CI-6 family of systems. - Continue to evaluate open architecture compliance of SIGINT sensor prototypes in the OATL. - Develop capabilities that address emerging needs, as identified by the SCWG, such as LOCUST. <p>FY 2024 Base Plans:</p> <ul style="list-style-type: none"> - 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 pursue necessary follow-on efforts to CI-6 studies and demonstrations conducted in FY22 and FY23. - Will continue to evaluate open architecture compliance of SIGINT sensor prototypes in the OATL. - Will continue to develop capabilities that address emerging needs, as identified by the SCWG. <p>FY 2023 to FY 2024 Increase/Decrease Statement: Increase from FY23 to FY24 due to ramp up of CI-6 trade studies, development, and integration activities as well as the ramp up of LOCUST development activities.</p>					
Accomplishments/Planned Programs Subtotals	24.148	39.849	47.902	-	47.902

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

Line Item	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total	FY 2025	FY 2026	FY 2027	FY 2028	Cost To Complete	Total Cost
• APAF 05 Line Item HAWK00: RQ-4 Mods	117.382	0.000	-	-	-	-	-	-	-	167.265	284.647
• RDTE 07 PE 0305202F: Dragon U-2	3.920	0.000	-	-	-	-	-	-	-	0.000	3.920

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Exhibit R-2A, RDT&E Project Justification: PB 2024 Air Force		Date: March 2023
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)

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

<u>Line Item</u>	<u>FY 2022</u>	<u>FY 2023</u>	<u>FY 2024</u> <u>Base</u>	<u>FY 2024</u> <u>OCO</u>	<u>FY 2024</u> <u>Total</u>	<u>FY 2025</u>	<u>FY 2026</u>	<u>FY 2027</u>	<u>FY 2028</u>	<u>Cost To</u> <u>Complete</u>	<u>Total Cost</u>
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 agile, open system architecture. Attributable platforms and sensors will be evaluated as solutions to some requirements. Requirements are validated and prioritized by the SCWG (SIGINT Capability Working Group).

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2024 Air Force **Date:** March 2023

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)
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Product Development (\$ in Millions)				FY 2022		FY 2023		FY 2024 Base		FY 2024 OCO		FY 2024 Total	Cost To Complete	Total Cost	Target Value of Contract
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
Open Architecture Technology Lab (OATL)	Various	AFRL / VTS / BRSC / NPD : Rome, NY	-	2.792	Jul 2022	2.000	Apr 2023	2.000	Apr 2024	-		2.000	Continuing	Continuing	-
CI-6 Sensor SW Development/Support	C/CPFF	BAE Systems : Hudson, NH	-	5.678	Jul 2022	15.900	May 2023	14.833	May 2024	-		14.833	Continuing	Continuing	-
CI-6 Ground SW Support/ Demo	C/CPFF	LM RMS : Littleton, CO	-	3.550	Jul 2022	4.025	May 2023	5.000	May 2024	-		5.000	Continuing	Continuing	-
CI-6 Aircraft Integration/ Demo	C/CPFF	LMA : Palmdale, CA	-	6.000	Jul 2022	7.000	May 2023	8.000	May 2024	-		8.000	Continuing	Continuing	-
Air Force SIGINT Architecture (AFSA)	Various	AECOM : Annapolis Junction, MD	-	3.720	May 2022	2.798	Jan 2023	4.000	Jan 2024	-		4.000	Continuing	Continuing	-
CRESTONE	Various	DOE / SNL : Albuquerque, NM	-	-		-		3.000	Jun 2024	-		3.000	Continuing	Continuing	-
LOCUST	Various	AFRL / VTS / BRSC / NPD : Rome, NY	-	-		2.131	Apr 2023	5.689	Mar 2024	-		5.689	Continuing	Continuing	-
Subtotal			-	21.740		33.854		42.522		-		42.522	Continuing	Continuing	N/A

Management Services (\$ in Millions)				FY 2022		FY 2023		FY 2024 Base		FY 2024 OCO		FY 2024 Total	Cost To Complete	Total Cost	Target Value of Contract
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
PMA	Various	Various : Dayton, OH	-	2.408	May 2022	5.995	Jan 2023	5.380	Jan 2024	-		5.380	Continuing	Continuing	-
Subtotal			-	2.408		5.995		5.380		-		5.380	Continuing	Continuing	N/A

	Prior Years	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals		-	24.148	39.849	47.902	47.902	Continuing	Continuing	N/A

Remarks

- FY23 funding increased due to ramping up CI-6 and future SIGINT programs.
- Open Architecture Technology Lab (OATL) technology development and risk reduction efforts will continue to demonstrate rapid technology insertion.

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Exhibit R-4, RDT&E Schedule Profile: PB 2024 Air Force		Date: March 2023
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)

FY 2022				FY 2023				FY 2024				FY 2025				FY 2026				FY 2027				FY 2028			
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 Common Development	
Open Architecture Technology Lab (OATL)	[REDACTED]
Future SIGINT Programs	[REDACTED]
CI-6	[REDACTED]
Air Force SIGINT Architecture (AFSA)	[REDACTED]
CRESTONE	[REDACTED]
LOCUST	[REDACTED]

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Exhibit R-4A, RDT&E Schedule Details: PB 2024 Air Force		Date: March 2023
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

Events by Sub Project	Start		End	
	Quarter	Year	Quarter	Year
<i>SIGINT Common Development</i>				
Open Architecture Technology Lab (OATL)	1	2022	4	2028
Future SIGINT Programs	1	2022	4	2028
CI-6	3	2022	4	2028
Air Force SIGINT Architecture (AFSA)	3	2022	4	2028
CRESTONE	3	2023	4	2028
LOCUST	4	2022	2	2026

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Exhibit R-2A, RDT&E Project Justification: PB 2024 Air Force										Date: March 2023		
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 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total	FY 2025	FY 2026	FY 2027	FY 2028	Cost To Complete	Total Cost
675185: COMPASS BRIGHT	-	14.194	12.313	9.495	0.000	9.495	9.709	9.953	10.157	10.525	Continuing	Continuing
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 and MULTI-INT 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). Compass Bright will pursue MULTI-INT capabilities such as but not limited to, cross-cue and fusion from other INTs such as GEOINT, in order to create a holistic ISR picture for the warfighter and the IC. 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.

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 0605827F.

B. Accomplishments/Planned Programs (\$ in Millions)

	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total
Title: COMPASS BRIGHT Tech Development	14.194	12.313	9.495	-	9.495
Description: Develops projects in the SIGINT and MASINT areas for transition to the RC-135 fleet, other intelligence, surveillance, and reconnaissance platforms.					
FY 2023 Plans: - Initiate, continue, and complete various SIGINT projects to include enhanced ELINT exploitation, COMINT, Audio exploitation, signals of interest prosecution, and NTISR. - FY24 Project selection process initiated.					
FY 2024 Base Plans: - Will initiate, continue, and complete various SIGINT projects to include enhanced ELINT exploitation, COMINT, Audio exploitation, signals of interest prosecution, and NTISR.					

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Exhibit R-2A, RDT&E Project Justification: PB 2024 Air Force **Date:** March 2023

Appropriation/Budget Activity 3600 / 7	R-1 Program Element (Number/Name) PE 0304260F / Airborne SIGINT Enterprise	Project (Number/Name) 675185 / COMPASS BRIGHT
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B. Accomplishments/Planned Programs (\$ in Millions)	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total
- FY25 Project selection process will be initiated.					
<i>FY 2023 to FY 2024 Increase/Decrease Statement:</i> Decrease down to normal levels of funding after having budget zero'd out in 2019 and increased over FY20-23.					
Accomplishments/Planned Programs Subtotals	14.194	12.313	9.495	-	9.495

C. Other Program Funding Summary (\$ in Millions)											
<u>Line Item</u>	<u>FY 2022</u>	<u>FY 2023</u>	<u>FY 2024 Base</u>	<u>FY 2024 OCO</u>	<u>FY 2024 Total</u>	<u>FY 2025</u>	<u>FY 2026</u>	<u>FY 2027</u>	<u>FY 2028</u>	<u>Cost To Complete</u>	<u>Total Cost</u>
• APAF 05 Line Item DARP01: RC-135	207.596	212.828	219.499	-	219.499	220.967	224.045	228.860	-	Continuing	Continuing
• APAF 06 Line Item DARP01: RC-135	51.305	25.661	55.452	-	55.452	55.903	56.741	57.970	-	Continuing	Continuing

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.

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2024 Air Force **Date:** March 2023

Appropriation/Budget Activity 3600 / 7	R-1 Program Element (Number/Name) PE 0304260F / Airborne SIGINT Enterprise	Project (Number/Name) 675185 / COMPASS BRIGHT
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Product Development (\$ in Millions)				FY 2022		FY 2023		FY 2024 Base		FY 2024 OCO		FY 2024 Total	Cost To Complete	Total Cost	Target Value of Contract
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
COMPASS BRIGHT	Various	Multiple : Various	-	2.872	Nov 2021	2.313	Nov 2022	3.345	Nov 2023	-		3.345	Continuing	Continuing	-
AFRL/RI Projects	C/CPFF	Multiple : Rome/Griffiss	-	8.443	Nov 2022	8.223	Nov 2022	4.250	Nov 2023	-		4.250	Continuing	Continuing	-
Subtotal			-	11.315		10.536		7.595		-		7.595	Continuing	Continuing	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)				FY 2022		FY 2023		FY 2024 Base		FY 2024 OCO		FY 2024 Total	Cost To Complete	Total Cost	Target Value of Contract
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
Compass Bright PMA	Various	Various : Various, OH	-	2.879	Apr 2022	1.777	Jan 2023	1.900	Jan 2024	-		1.900	Continuing	Continuing	-
Subtotal			-	2.879		1.777		1.900		-		1.900	Continuing	Continuing	N/A

Project Cost Totals	Prior Years	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total	Cost To Complete	Total Cost	Target Value of Contract
	-	14.194	12.313	9.495	-	9.495	Continuing	Continuing	N/A

Remarks

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Exhibit R-4, RDT&E Schedule Profile: PB 2024 Air Force **Date:** March 2023

Appropriation/Budget Activity 3600 / 7	R-1 Program Element (Number/Name) PE 0304260F / Airborne SIGINT Enterprise	Project (Number/Name) 675185 / COMPASS BRIGHT
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FY 2022				FY 2023				FY 2024				FY 2025				FY 2026				FY 2027				FY 2028			
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	
- ELINT Programs	
- COMINT Programs	
- Special Signals Programs	
- Audio Programs	
- Analytics Programs	

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Exhibit R-4A, RDT&E Schedule Details: PB 2024 Air Force **Date:** March 2023

Appropriation/Budget Activity 3600 / 7	R-1 Program Element (Number/Name) PE 0304260F / Airborne SIGINT Enterprise	Project (Number/Name) 675185 / COMPASS BRIGHT
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Schedule Details

Events by Sub Project	Start		End	
	Quarter	Year	Quarter	Year
COMPASS BRIGHT				
SIGINT Technologies	1	2022	4	2028
- ELINT Programs	1	2022	4	2028
- COMINT Programs	1	2022	4	2028
- Special Signals Programs	1	2022	4	2028
- Audio Programs	1	2022	4	2028
- Analytics Programs	1	2022	4	2028

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.

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Exhibit R-2A, RDT&E Project Justification: PB 2024 Air Force										Date: March 2023		
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 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total	FY 2025	FY 2026	FY 2027	FY 2028	Cost To Complete	Total Cost
675186: <i>Special Programs (Airborne SIGINT Development - Special Platforms)</i>	-	7.529	14.927	8.107	0.000	8.107	8.290	8.496	8.670	8.984	Continuing	Continuing
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.

B. Accomplishments/Planned Programs (\$ in Millions)

	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total
Title: SIGINT Development	7.529	14.927	8.107	0.000	8.107
Description: Develop, update, and test SIGINT capabilities for QRC and normalized special programs SIGINT projects.					
FY 2023 Plans: - Will continue to modernize SIGINT systems used by the MQ-9A and other platforms.					
-Congressional add will be used to accelerate development of Protected Precision Navigation and Timing (PPNT) technologies and Quick Reaction Capabilities (QRC) to address changing Combatant Commander SIGINT requirements					
FY 2024 Base Plans: - Will continue to modernize SIGINT systems used by the MQ-9A and other platforms.					
FY 2024 OCO Plans: N/A					
FY 2023 to FY 2024 Increase/Decrease Statement: Funding decrease to normal levels due to \$7M congressional mark in FY23					
Accomplishments/Planned Programs Subtotals	7.529	14.927	8.107	0.000	8.107

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Exhibit R-2A, RDT&E Project Justification: PB 2024 Air Force		Date: March 2023
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)

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.

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2024 Air Force											Date: March 2023				
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)				FY 2022		FY 2023		FY 2024 Base		FY 2024 OCO		FY 2024 Total	Cost To Complete	Total Cost	Target Value of Contract
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
Airborne SIGINT Development - Special Platforms	Various	Various : Various	-	7.209	Jan 2022	14.590	Jan 2023	7.763	Jan 2024	0.000		7.763	Continuing	Continuing	-
Subtotal			-	7.209		14.590		7.763		0.000		7.763	Continuing	Continuing	N/A

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

Test and Evaluation (\$ in Millions)				FY 2022		FY 2023		FY 2024 Base		FY 2024 OCO		FY 2024 Total	Cost To Complete	Total Cost	Target Value of Contract
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
Flight Test	Various	Various : Various	-	0.320	May 2022	0.337	May 2023	0.344	May 2024	0.000		0.344	Continuing	Continuing	-
Subtotal			-	0.320		0.337		0.344		0.000		0.344	Continuing	Continuing	N/A

Prior Years	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total	Cost To Complete	Total Cost	Target Value of Contract
-	7.529	14.927	8.107	0.000	8.107	Continuing	Continuing	N/A

Remarks

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Exhibit R-4, RDT&E Schedule Profile: PB 2024 Air Force		Date: March 2023
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 2022				FY 2023				FY 2024				FY 2025				FY 2026				FY 2027				FY 2028			
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	
MQ-9 Sensor 2 Modernization	
MQ-9 Sensor Upgrades	

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Exhibit R-4A, RDT&E Schedule Details: PB 2024 Air Force		Date: March 2023
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

Events by Sub Project	Start		End	
	Quarter	Year	Quarter	Year
SIGINT Development				
MQ-9 Sensor 1 Modernization	1	2022	4	2028
MQ-9 Sensor 2 Modernization	1	2022	4	2028
MQ-9 Sensor Upgrades	1	2022	4	2028