Exhibit R-2, RDT&E Budget Item Justification: PB 2021 Air Force											Date: February 2020	
Appropriation/Budget Activity 3600: *Research, Development, Test & Evaluation, Air Force* / BA 4: *Advanced Component Development & Prototypes (ACD&P)*					R-1 Program Element (Number/Name) PE 0305236F / *Common Data Link Executive Agent (CDL EA)*							
COST ($ in Millions)	**Prior Years**	**FY 2019**	**FY 2020**	**FY 2021 Base**	**FY 2021 OCO**	**FY 2021 Total**	**FY 2022**	**FY 2023**	**FY 2024**	**FY 2025**	**Cost To Complete**	**Total Cost**
Total Program Element	-	41.880	36.910	39.293	0.000	39.293	46.885	45.167	31.800	32.386	Continuing	Continuing
641334: *Common Data Link (CDL)*	-	41.880	36.910	39.293	0.000	39.293	46.885	45.167	31.800	32.386	Continuing	Continuing
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

A. Mission Description and Budget Item Justification

Common Data Link Executive Agent (CDL EA) provides the DoD standard for interoperable, multi-service, multi-agency, Intelligence, Surveillance, and Reconnaissance (ISR) datalinks for 11,500+ DoD manned/unmanned airborne and ground platforms. As the DoD CDL EA, the Air Force is responsible for cross-service application of CDL RDT&E Military Intelligence Program (MIP) funds facilitating compliance to DoD mandates. The CDL EA develops, modifies, distributes, and maintains specifications for the CDL waveform family; ensuring design configuration control, commonality, and interoperability among ISR platforms. Additionally, funds support managing resources allocated for development, maturation, and migration of CDL technologies.

CDL EA enables compliance with OSD mandates to effectively utilize spectrum, use approved cryptographic equipment, and provide direct support to current operations. CDL is a vital link in DoD's existing and emerging communication architectures, providing flexibility to accommodate Command and Control (C2) data and myriad types of Signals Intelligence (SIGINT), Geospatial Intelligence (GEOINT), and Full-Motion Video (FMV) data. The CDL specifications permit current and future ISR asset operations worldwide by providing sensor data directly via point-to-point and broadcast to ground sites, airborne platforms and dismounted users. Also, CDL provides the capability to relay data via air-to-air or compatible satellite links when the asset and ground site are not in line-of-sight.

CDL EA's research and development activities support a broad array of tactical (including tactical data links (TDL) and high capacity backbone (HCB)), operational, and strategic ISR users and include achieving higher data rates, open architecture development, multi- access and multi-node network management, cryptographic modernization, advancements needed to operate in contested environments, terminal and antenna design enhancements, operations in other spectral bands, and improving spectrum efficiency. Further, CDL development improves large area surveillance missions while supporting continuous improvements and implementation of line-of-sight platform and CDL terminal Command and Control (C2), plus increased ISR (C2ISR) capabilities. Activities also include studies and analysis to support current and future requirements documentation, program planning and execution. CDL prototype terminal designs provide for future technology insertion and reduce non-recurring engineering and life-cycle costs to the user.

In addition, the Cryptographic Core Modernization (CCM) thrust enables CDL to develop a miniaturized gigabit rate Communications Security (COMSEC) device capable of managing CDL data. The miniaturized COMSEC device will allow faster throughput while reducing Size, Weight, and Power (SWaP) requirements.

This program element may include necessary civilian pay expenses required to manage, execute, and deliver Common Data Link weapon system capability. The use of such program funds would be in addition to the civilian pay expenses budgeted in program element 0605831F

Exhibit R-2, RDT&E Budget Item Justification: PB 2021 Air Force	Date: February 2020
Appropriation/Budget Activity 3600: *Research, Development, Test & Evaluation, Air Force* / BA 4: *Advanced Component Development & Prototypes (ACD&P)*	**R-1 Program Element (Number/Name)** PE 0305236F / *Common Data Link Executive Agent (CDL EA)*

This effort is in Budget Activity 4, Advanced Component Development and Prototypes (ACD&P), because efforts are necessary to evaluate integrated technologies, representative modes or prototype systems in a high fidelity and realistic operating environment.

B. Program Change Summary ($ in Millions)	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total
Previous President's Budget	41.880	36.910	43.537	0.000	43.537
Current President's Budget	41.880	36.910	39.293	0.000	39.293
Total Adjustments	0.000	0.000	-4.244	0.000	-4.244
• 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	0.000	-4.244	0.000	-4.244

Change Summary Explanation

The FY2021 funding request was reduced by $4.244M to account for the availability of prior year execution balances.

C. Accomplishments/Planned Programs ($ in Millions)	FY 2019	FY 2020	FY 2021
Title: Common Data Link (CDL) Technology Advancement	10.165	16.010	11.375
Description: CDL evolutionary concept development, exploratory prototyping, advanced technology demonstrations, and studies of emerging technologies and capability gaps. ***FY 2020 Plans:*** - Continue research and development of new LPI/LPD/AJ waveform capability to support operations in the contested airspace. - Continue to research and evaluate technology developments for enhancing the CDL enterprise networking architecture, to include network management devices, applications and advanced algorithms. - Continue to research, evaluate and develop more spectrally efficient waveforms to support Combatant Command demand for higher bandwidth transmission and improved jam resistant capabilities. - Continue to research, evaluate and develop improvements to CDL waveforms to lower probability of detection and interception to support Combatant Command demand for improved covertness of ground and airborne forces. - Continue development of enhanced, CDL-based Intelligence, Surveillance and Reconnaissance (ISR) communication capabilities across multiple platforms and echelons among U.S and allied partners.			

Exhibit R-2, RDT&E Budget Item Justification: PB 2021 Air Force	Date: February 2020
Appropriation/Budget Activity 3600: *Research, Development, Test & Evaluation, Air Force* / BA 4: *Advanced Component Development & Prototypes (ACD&P)*	**R-1 Program Element (Number/Name)** PE 0305236F / *Common Data Link Executive Agent (CDL EA)*

C. Accomplishments/Planned Programs ($ in Millions)	FY 2019	FY 2020	FY 2021
- Continue development of a collaborative CDL modeling and simulation environment using Navy Research Lab's Extendable Mobile Ad-Hoc Network Emulator (EMANE) framework for CDL performance analysis and waveform advancements. The CDL EMANE environment will be the baseline for joint Service and vendor collaboration as the community modernizes CDL for the future fight. - Continue waveform analysis of current CDL capabilities and future enhancements on their ability to achieve mission success in National Defense Strategy (NDS) derived scenarios to focus future CDL modernization efforts to update the CDL specifications. - Commence evaluation, analysis and study of multi-beam antenna technology to further improve CDL networking and Low Probability of Interception / Low Probability of Detection / Anti-Jam (LPI/LPD/AJ) capabilities. - Continue to research, evaluate and develop an Open Systems Architecture to improve CDL enterprise interoperability and terminal design flexibility. - Commence exploratory prototyping efforts and advanced technology demonstrations in support of emerging communication backbone architecture development across air, space and terrestrial layers, to include agile high capacity data transport, assured communications and multi-mode access network. - Commence research and develop upgrades to support improved CDL operations by delivering a flexible profile and configuration management capability that delivers flexible waveform modes to support high data rates, antenna configuration, network management, fast network reconfiguration, and improve jam resistant capabilities. - Commence research and evaluate developing Artificial Intelligence (AI) technologies to support faster correlation and fusion of ISR and CDL network management processes. - Continue to research and evaluate developing technologies to minimize the National Security Agency (NSA) required certification requirements for terminals while standardizing Communications Security (COMSEC) implementation.			
FY 2021 Plans: - Will continue development and maturation of new LPI/LPD/AJ waveform capability to support operations in the contested airspace. - Will continue to research and evaluate technology developments for enhancing the CDL enterprise networking architecture, to include network management devices, applications and advanced algorithms - Will continue to research, evaluate and develop more spectrally efficient waveforms to support Combatant Command demand for higher bandwidth transmission and improved jam resistant capabilities - Will continue to research, evaluate and develop improvements to CDL waveforms to lower probability of detection and interception to support Combatant Command demand for improved covertness of ground and airborne forces. - Will continue development of enhanced, CDL-based Intelligence, Surveillance and Reconnaissance (ISR) communication capabilities across multiple platforms and echelons among U.S and allied partners. - Will continue development of a collaborative CDL modeling and simulation environment using Navy Research Lab's Extendable Mobile Ad-Hoc Network Emulator (EMANE) framework for CDL performance analysis and waveform advancements. The CDL			

Exhibit R-2, RDT&E Budget Item Justification: PB 2021 Air Force	Date: February 2020
Appropriation/Budget Activity 3600: *Research, Development, Test & Evaluation, Air Force* / BA 4: *Advanced Component Development & Prototypes (ACD&P)*	**R-1 Program Element (Number/Name)** PE 0305236F / *Common Data Link Executive Agent (CDL EA)*

C. Accomplishments/Planned Programs ($ in Millions)	FY 2019	FY 2020	FY 2021
EMANE environment will be the baseline for joint Service and vendor collaboration as the community modernizes CDL for the future fight. - Will continue waveform analysis of current CDL capabilities and future enhancements on their ability to achieve mission success in National Defense Strategy (NDS) derived scenarios to focus future CDL modernization efforts to update the CDL specifications. - Will commence evaluation, analysis and study of multi-beam antenna technology to further improve CDL networking and Low Probability of Interception / Low Probability of Detection / Anti-Jam (LPI/LPD/AJ) capabilities. - Will continue to research, evaluate and develop an Open Systems Architecture to improve CDL enterprise interoperability and terminal design flexibility. - Will commence exploratory prototyping efforts and advanced technology demonstrations in support of emerging communication backbone architecture, including HCB development, across air, space and terrestrial layers, to include agile high capacity data transport, assured communications and multi-mode access network. - Will commence research and develop upgrades to support improved CDL operations by delivering a flexible profile and configuration management capability that delivers flexible waveform modes to support high data rates, antenna configuration, network management, fast network reconfiguration, and improve jam resistant capabilities. - Will commence research and evaluate developing Artificial Intelligence (AI) technologies to support faster correlation and fusion of ISR and CDL network management processes. - Will continue to research and evaluate developing technologies to minimize the National Security Agency (NSA) required certification requirements for terminals while standardizing Communications Security (COMSEC) implementation. ***FY 2020 to FY 2021 Increase/Decrease Statement:*** The overall decrease in spending for the Technology Advancement activity between 2020 and 2021 is due to the CDL cycle of producing the system Specifications during the odd years (e.g. 2021), which cyclically calls for a decrease in spending efforts for Technology Advancement and inversely increasing spending efforts for Specification Development activities during 2021. Conversely, during the even years (e.g. 2020) Technology Advancement receives a higher spending effort while inversely lowering specification efforts for Specification Development.			
Title: Common Data Link (CDL) Specification Development, Validation, Test and Maintenance	24.715	13.800	20.318
Description: Systems engineering lifecycle for CDL and NATO STANAG 7085 specification development: requirement decomposition, specification development (modeling, maturation, documentation), specification validation (and associated component prototyping), testing, configuration management, and process maintenance. ***FY 2020 Plans:*** - Continue development and maturation of new LPI/LPD/AJ waveform capability to support operations in the contested airspace.			

Exhibit R-2, RDT&E Budget Item Justification: PB 2021 Air Force	Date: February 2020
Appropriation/Budget Activity 3600: *Research, Development, Test & Evaluation, Air Force* / BA 4: *Advanced Component Development & Prototypes (ACD&P)*	**R-1 Program Element (Number/Name)** PE 0305236F / *Common Data Link Executive Agent (CDL EA)*

C. Accomplishments/Planned Programs ($ in Millions)	FY 2019	FY 2020	FY 2021
- Continue development of vendor and government owner reference implementation of the new LPI/LPD/AJ waveform to performance future validation to ensure the CDL specification is accurate and can be built by multiple vendors in the future, therefore keeping the market space open. - Continue evaluation, analysis and study of network management devices, network and waveform configuration tool development; transition improved technologies into CDL Specification baseline that increases data sharing across Service-specific networks. - Continue validation of Bandwidth Efficient CDL's (BE-CDL) new Direct Sequence Spread Spectrum (DSSS) capability that improves CDL data transmissions rates at lower power levels. - Continue development and advancement of dynamical control algorithms to enable terminals to more efficiently use CDL spectrum. This work will also continue to validate the CDL Common Control Interface. - Continue to work with CDL industry partners and DoD Services and Agencies to document, validate and implement common terminal control interfaces through use of commercially recognized standards. - Continue configuration control of the CDL architecture, standards, specifications and reference artifacts to support open interoperability and open competition. - Continue development of CDL test equipment capable of compliance testing to the latest, validated version of CDL specifications.			
FY 2021 Plans: - Will continue development and maturation of new LPI/LPD/AJ waveform capability to support operations in the contested airspace. - Will continue development of vendor and government owner reference implementation of the new LPI/LPD/AJ waveform to performance future validation to ensure the CDL specification is accurate and can be built by multiple vendors in the future, therefore keeping the market space open. - Will continue evaluation, analysis and study of network management devices, network and waveform configuration tool development; transition improved technologies into CDL Specification baseline that increases data sharing across Service-specific networks. - Will continue validation of Bandwidth Efficient CDL's (BE-CDL) new Direct Sequence Spread Spectrum (DSSS) capability that improves CDL data transmissions rates at lower power levels. - Will continue development and advancement of dynamical control algorithms to enable terminals to more efficiently use CDL spectrum. This work will also Will continue to validate the CDL Common Control Interface. - Will continue to work with CDL industry partners and DoD Services and Agencies to document, validate and implement common terminal control interfaces through use of commercially recognized standards. - Will continue configuration control of the CDL architecture, standards, specifications and reference artifacts to support open interoperability and open competition.			

Exhibit R-2, RDT&E Budget Item Justification: PB 2021 Air Force	Date: February 2020
Appropriation/Budget Activity 3600: *Research, Development, Test & Evaluation, Air Force* / BA 4: *Advanced Component Development & Prototypes (ACD&P)*	**R-1 Program Element (Number/Name)** PE 0305236F / *Common Data Link Executive Agent (CDL EA)*

C. Accomplishments/Planned Programs ($ in Millions)	FY 2019	FY 2020	FY 2021
- Will continue development of CDL test equipment capable of compliance testing to the latest, validated version of CDL specifications. ***FY 2020 to FY 2021 Increase/Decrease Statement:*** The overall decrease in spending for the Technology Advancement activity between 2020 and 2021 is due to the CDL cycle of producing the system Specifications during the odd years (e.g. 2021), which cyclically calls for a decrease in spending efforts for Technology Advancement and inversely increasing spending efforts for Specification Development activities during 2021. Conversely, during the even years (e.g. 2020) Technology Advancement receives a higher spending effort while inversely lowering specification efforts for Specification Development.			
Title: Common Data Link (CDL) Cryptographic Modernization ***Description:*** Phased development effort to modernize CDL Communications Security (COMSEC) devices and standards to maximize performance and reduce SWaP requirements while supporting interoperability, commonality, modularity, portability, remote management, multi-level security and releasability. ***FY 2020 Plans:*** - Continue to research and evaluate developing technologies to minimize the National Security Agency (NSA) required certification requirements for terminals while standardizing Communications Security (COMSEC) implementation. - Continue software and firmware upgrades for generation two (Gen 2) Nano and Mini cryptographic core modernization (CCM) modules for US and NATO release. - Submit Engineering Change Proposals (ECP) for Nano and Mini CCM Security Validation Testing (SVT) and subsequent National Security Agency (NSA) information assurance (IA) certification. - Continue to ensure CDL family of waveforms meet developing transportation security (TRANSEC) requirements as outlined by the Office of Secretary of Defense Chief Information Officer (DoD CIO). - Continue development of multi-channel, gigabit data rate (Mega) cryptographic cores with Gen 2 advances. - Continue development and design of common End Cryptographic Units (ECUs) for use with medium- and large-sized ISR terminals. -Commence development of a reference ECU using the Mega CCM crypto core for hardware/software and interface documentation validation. - Continue advancement of standardized CCM interface specifications for modularity to ease future systems upgrades, facilitate competitive terminal procurements, promote innovation, and maintain backward compatibility with existing Intelligence, Surveillance and Reconnaissance (ISR) systems. - Continue development, advancement and instantiation of CCM algorithms to support FIVE EYE (FVEY), North Atlantic Treaty Organization (NATO), and Coalition operations for secure encrypted and interoperable ISR data exchange among allied and partner nations.	7.000	7.100	7.600

Exhibit R-2, RDT&E Budget Item Justification: PB 2021 Air Force	Date: February 2020
Appropriation/Budget Activity 3600: *Research, Development, Test & Evaluation, Air Force* / BA 4: *Advanced Component Development & Prototypes (ACD&P)*	**R-1 Program Element (Number/Name)** PE 0305236F / *Common Data Link Executive Agent (CDL EA)*

C. Accomplishments/Planned Programs ($ in Millions)	FY 2019	FY 2020	FY 2021
- Continue participating in FVEY, NATO and Coalition forums, testing venues and exercises (including live-fly) to ensure secure encrypted and interoperable ISR data exchange among allied and partner nations. ***FY 2021 Plans:*** - Will continue to research and evaluate developing technologies to minimize the National Security Agency (NSA) required certification requirements for terminals while standardizing Communications Security (COMSEC) implementation. - Will continue software and firmware upgrades for generation two (Gen 2) Nano and Mini cryptographic core modernization (CCM) modules for US and NATO release. - Will continue preparing Engineering Change Proposals (ECP) for Nano and Mini CCM Security Validation Testing (SVT) and subsequent National Security Agency (NSA) information assurance (IA) certification. - Will continue to ensure CDL family of waveforms meet developing transportation security (TRANSEC) requirements as outlined by the Office of Secretary of Defense Chief Information Officer (DoD CIO). - Will continue development of multi-channel, gigabit data rate (Mega) cryptographic cores with Gen 2 advances. - Will continue development and design of common End Cryptographic Units (ECUs) for use with medium- and large-sized ISR terminals. -Will Continue development of a reference ECU using the Mega CCM crypto core for hardware/software and interface documentation validation. - Will continue advancement of standardized CCM interface specifications for modularity to ease future systems upgrades, facilitate competitive terminal procurements, promote innovation, and maintain backward compatibility with existing Intelligence, Surveillance and Reconnaissance (ISR) systems. - Will continue development, advancement and instantiation of CCM algorithms to support FIVE EYE (FVEY), North Atlantic Treaty Organization (NATO), and Coalition operations for secure encrypted and interoperable ISR data exchange among allied and partner nations. - Will continue participating in FVEY, NATO and Coalition forums, testing venues and exercises (including live-fly) to ensure secure encrypted and interoperable ISR data exchange among allied and partner nations. ***FY 2020 to FY 2021 Increase/Decrease Statement:*** The overall increase between 2020 and 2021 is minimal and inflationary; spending is nearly constant for this activity every year.			
Accomplishments/Planned Programs Subtotals	41.880	36.910	39.293

D. Other Program Funding Summary ($ in Millions)

N/A

Remarks

Exhibit R-2, RDT&E Budget Item Justification: PB 2021 Air Force	Date: February 2020
Appropriation/Budget Activity 3600: *Research, Development, Test & Evaluation, Air Force* / BA 4: *Advanced Component Development & Prototypes (ACD&P)*	**R-1 Program Element (Number/Name)** PE 0305236F / *Common Data Link Executive Agent (CDL EA)*

E. Acquisition Strategy

The Air Force serves as the DoD Common Data Link Executive Agent, with support from each Service's designated CDL lead and the Airborne Network Division (AFLCMC/HNA). The CDL EA develops interoperable ISR data links mandated for use by DoD CIO policy. Once CDL technology development matures and a specification is published, services are responsible for CDL compliant platform and terminal procurement; National Security Agency (NSA) and Joint Interoperability Test Command (JITC) ensure compliance certifications; integration; and installation. Acquisition strategy varies by contract. Whenever possible, contracts are awarded under full and open competition.

Exhibit R-3, RDT&E Project Cost Analysis: PB 2021 Air Force		Date: February 2020
Appropriation/Budget Activity 3600 / 4	**R-1 Program Element (Number/Name)** PE 0305236F / *Common Data Link Executive Agent (CDL EA)*	**Project (Number/Name)** 641334 / *Common Data Link (CDL)*

Product Development ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2019 Cost	FY 2019 Award Date	FY 2020 Cost	FY 2020 Award Date	FY 2021 Base Cost	FY 2021 Base Award Date	FY 2021 OCO Cost	FY 2021 OCO Award Date	FY 2021 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Cryptographic Modernization	MIPR	NSA : Ft Meade, MD	-	7.154	Dec 2018	7.100	Jan 2020	7.600	Jun 2021	-		7.600	Continuing	Continuing	-
Generic ECU	C/Various	MIT/LL : TBD	-	4.400	Jan 2019	1.250	Dec 2019	1.300	Dec 2020	-		1.300	Continuing	Continuing	-
CDL Network Modernization	MIPR	Air Force : Various	-	2.352	Nov 2018	3.800	Jan 2020	3.905	Oct 2020	-		3.905	Continuing	Continuing	-
Fielded Terminals Database	C/CPFF	Booze Allen : McClean, VA	-	0.700	Jan 2019	0.700	Jan 2020	0.750	Feb 2021	-		0.750	Continuing	Continuing	-
Compliance Test Tool	C/Various	Various : Various	-	1.976	Feb 2019	1.525	Apr 2020	2.600	Nov 2020	-		2.600	Continuing	Continuing	-
A2AD Waveform Advancement	C/CPAF	Army : Various	-	7.650	May 2019	3.800	Apr 2020	4.100	Apr 2021	-		4.100	Continuing	Continuing	-
CDL Multi Beam Survey and Demonstration	C/Various	Navy : Various	-	1.500	Feb 2019	1.200	Dec 2019	1.275	Jun 2021	-		1.275	Continuing	Continuing	-
BE-CDL SDR	C/Various	AFRL : Various	-	0.895	Feb 2019	0.200	Dec 2019	0.225	Oct 2020	-		0.225	Continuing	Continuing	-
CDL Resource Management and Bridging Network	C/CPAF	Navy : Various	-	0.000		1.100	Dec 2019	1.100	Oct 2020	-		1.100	Continuing	Continuing	-
CDL Performance Analysis	SS/FP	JHU/APL : Various	-	0.000		0.400	Dec 2019	1.000	Oct 2020	-		1.000	Continuing	Continuing	-
CDL Life Cycle Cost Analysis	C/CPAF	Various : Various	-	-		0.250	Dec 2019	0.250	Dec 2020	-		0.250	Continuing	Continuing	-
		Subtotal	-	26.627		21.325		24.105		-		24.105	Continuing	Continuing	N/A

Support ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2019 Cost	FY 2019 Award Date	FY 2020 Cost	FY 2020 Award Date	FY 2021 Base Cost	FY 2021 Base Award Date	FY 2021 OCO Cost	FY 2021 OCO Award Date	FY 2021 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Service Tech Support & Spec Development	MIPR	Various : Various	-	5.148	Dec 2018	4.535	Dec 2019	4.266	Dec 2020	-		4.266	Continuing	Continuing	-
Joint Staff CDL Requirements Support	MIPR	Joint Staff - J6 : Arlington, VA	-	0.225	Oct 2019	0.225	Oct 2019	0.225	Oct 2020	-		0.225	Continuing	Continuing	-
NATO STANAG 7085 Support	MIPR	Air Force : Various	-	0.225	Oct 2019	0.225	Oct 2019	0.225	Oct 2020	-		0.225	Continuing	Continuing	-

Exhibit R-3, RDT&E Project Cost Analysis: PB 2021 Air Force			Date: February 2020
Appropriation/Budget Activity 3600 / 4	**R-1 Program Element (Number/Name)** PE 0305236F / *Common Data Link Executive Agent (CDL EA)*	**Project (Number/Name)** 641334 / *Common Data Link (CDL)*	

Support ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2019 Cost	FY 2019 Award Date	FY 2020 Cost	FY 2020 Award Date	FY 2021 Base Cost	FY 2021 Base Award Date	FY 2021 OCO Cost	FY 2021 OCO Award Date	FY 2021 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
		Subtotal	-	5.598		4.985		4.716		-		4.716	Continuing	Continuing	N/A

Test and Evaluation ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2019 Cost	FY 2019 Award Date	FY 2020 Cost	FY 2020 Award Date	FY 2021 Base Cost	FY 2021 Base Award Date	FY 2021 OCO Cost	FY 2021 OCO Award Date	FY 2021 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Joint Interoperability Test Command Support	Various	Not specified. : TBD	-	0.810	May 2019	0.800	May 2020	0.800	May 2021	-		0.800	Continuing	Continuing	-
46 Test Squadron	PO	46 TS/OGEX : Eglin AFB, FL	-	0.369	Nov 2018	0.000		0.000		-		0.000	Continuing	Continuing	-
CDL Exercise Support	MIPR	Various : Various	-	0.000		0.500	Dec 2019	0.500	Dec 2020	-		0.500	Continuing	Continuing	-
		Subtotal	-	1.179		1.300		1.300		-		1.300	Continuing	Continuing	N/A

Management Services ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2019 Cost	FY 2019 Award Date	FY 2020 Cost	FY 2020 Award Date	FY 2021 Base Cost	FY 2021 Base Award Date	FY 2021 OCO Cost	FY 2021 OCO Award Date	FY 2021 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
PMO/Service- MITRE Engineering Direct Mission Support (FFRDC)	SS/CPFF	MITRE Corp. : Bedford, MA	-	6.029	Nov 2018	5.800	Oct 2019	5.750	Oct 2020	-		5.750	Continuing	Continuing	-
PMA - PMO Support (A&AS)	C/CPFF	Various : Various, MA	-	2.083	Nov 2018	3.500	Nov 2019	3.422	Nov 2020	-		3.422	Continuing	Continuing	-
PMA - Under Threshold Program Mgmt/Tech Support	Various	Various : Various	-	0.364	Dec 2018	0.000		0.000		-		0.000	Continuing	Continuing	-
		Subtotal	-	8.476		9.300		9.172		-		9.172	Continuing	Continuing	N/A

	Prior Years	FY 2019		FY 2020		FY 2021 Base		FY 2021 OCO		FY 2021 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	-	41.880		36.910		39.293		-		39.293	Continuing	Continuing	N/A

Exhibit R-3, RDT&E Project Cost Analysis: PB 2021 Air Force			Date: February 2020
Appropriation/Budget Activity 3600 / 4	R-1 Program Element (Number/Name) PE 0305236F / *Common Data Link Executive Agent (CDL EA)*	Project (Number/Name) 641334 / *Common Data Link (CDL)*	

	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	Cost To Complete	Total Cost	Target Value of Contract

Remarks

Exhibit R-4, RDT&E Schedule Profile: PB 2021 Air Force		Date: February 2020
Appropriation/Budget Activity 3600 / 4	**R-1 Program Element (Number/Name)** PE 0305236F / *Common Data Link Executive Agent (CDL EA)*	**Project (Number/Name)** 641334 / *Common Data Link (CDL)*

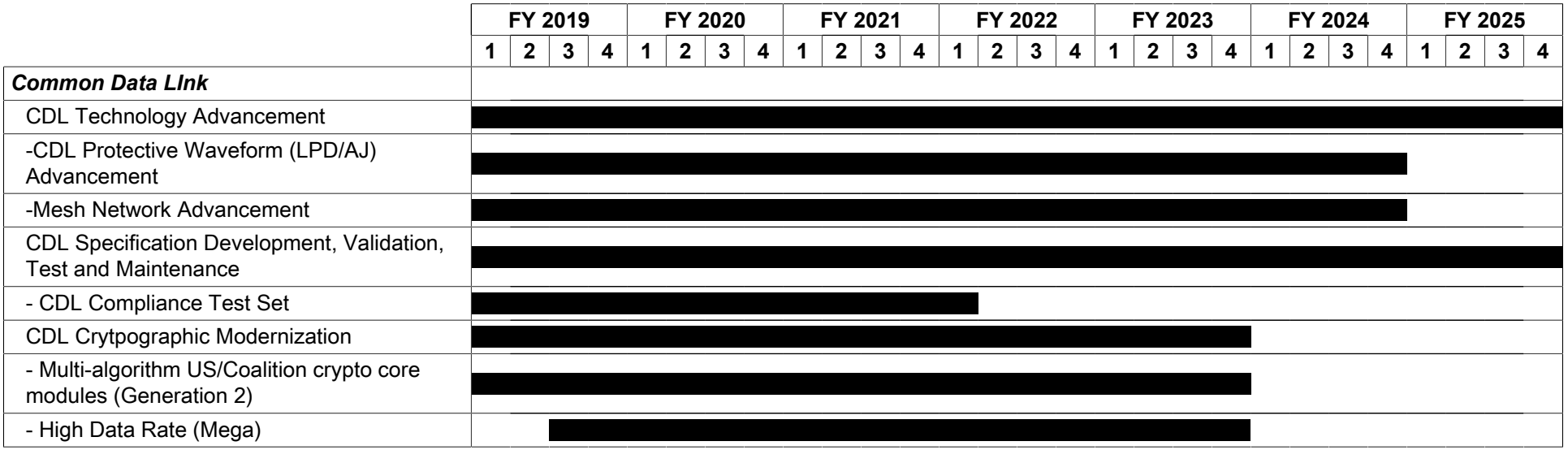

Exhibit R-4A, RDT&E Schedule Details: PB 2021 Air Force		Date: February 2020
Appropriation/Budget Activity 3600 / 4	**R-1 Program Element (Number/Name)** PE 0305236F / *Common Data Link Executive Agent (CDL EA)*	**Project (Number/Name)** 641334 / *Common Data Link (CDL)*

Schedule Details

	Start		End	
Events by Sub Project	**Quarter**	**Year**	**Quarter**	**Year**
Common Data LInk				
CDL Technology Advancement	1	2019	4	2025
-CDL Protective Waveform (LPD/AJ) Advancement	1	2019	4	2024
-Mesh Network Advancement	1	2019	4	2024
CDL Specification Development, Validation, Test and Maintenance	1	2019	4	2025
- CDL Compliance Test Set	1	2019	1	2022
CDL Crytpographic Modernization	1	2019	4	2023
- Multi-algorithm US/Coalition crypto core modules (Generation 2)	1	2019	4	2023
- High Data Rate (Mega)	3	2019	4	2023