Exhibit R-2, RDT&E Budget Item Justification: PB 2016 Navy											Date: February 2015	
Appropriation/Budget Activity 1319: *Research, Development, Test & Evaluation, Navy I* BA 7: *Operational Systems Development*					R-1 Program Element (Number/Name) PE 0206313M *I Marine Corps Comms Systems*							
COST ($ in Millions)	**Prior Years**	**FY 2014**	**FY 2015**	**FY 2016 Base**	**FY 2016 OCO**	**FY 2016 Total**	**FY 2017**	**FY 2018**	**FY 2019**	**FY 2020**	**Cost To Complete**	**Total Cost**
Total Program Element	1,104.767	157.438	73.982	67.763	-	67.763	78.512	74.120	76.391	76.885	Continuing	Continuing
2270: *Exp Indirect Fire Gen Supt Wpn Sys*	193.056	31.143	27.422	24.226	-	24.226	26.687	27.427	27.064	27.628	Continuing	Continuing
2273: *Air Ops Cmd & Control (C2) Sys*	339.085	66.090	8.767	7.772	-	7.772	11.076	5.702	8.950	9.128	Continuing	Continuing
2274: *Command & Control Warfare Sys*	17.198	7.919	7.053	8.951	-	8.951	6.769	8.233	8.347	7.156	Continuing	Continuing
2275: *Marine Corps Tactical Radio Systems*	21.120	15.188	4.007	3.384	-	3.384	5.012	2.765	2.747	2.810	Continuing	Continuing
2276: *Comms Switching and Control Sys*	31.185	8.992	3.697	2.434	-	2.434	2.698	3.120	3.163	3.232	Continuing	Continuing
2277: *System Engineering and Integration*	27.412	12.101	5.117	5.161	-	5.161	4.921	4.921	4.922	5.322	Continuing	Continuing
2278: *Air Defense Weapons System*	37.701	3.580	3.453	1.721	-	1.721	1.821	1.826	2.919	2.967	Continuing	Continuing
2510: *MAGTF CSSE & SE*	268.552	3.120	4.124	3.031	-	3.031	2.372	1.228	0.946	0.977	Continuing	Continuing
3099: *Radar System*	169.458	9.305	10.342	11.083	-	11.083	17.156	18.898	17.333	17.665	Continuing	Continuing
Program MDAP/MAIS Code: **Project MDAP/MAIS Code(s):** 582												

A. Mission Description and Budget Item Justification

This program element provides funding to develop the command and control (C2) support and information infrastructures for the Fleet Marine Force and supporting establishment. Doctrinally, the C2 support system and the information infrastructure form two parts of a triad of capabilities which permits command and control systems to be transformed into a complete operating system. The third element of the triad is command and control organization and is not covered in this program element. USMC command and control is divided into seven functional areas and one supporting functional area as follows: intelligence C2, fire support C2, air operations C2, radio systems C2, combat service support C2, warfare C2, radar systems C2, and C2 support (information processing and communications).

Within this program element, subprojects have been grouped by C2 functional area for more efficient planning. Air defense weapons systems have been added to facilitate planning and a separate project is used for systems assigned to the supporting establishment. Subprojects which support the Commander's decision processes

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have been collected into the Command Post Systems project since these systems must work in close cooperation to ensure effective C2 of Marine Air Ground Task Forces.

B. Program Change Summary ($ in Millions)	FY 2014	FY 2015	FY 2016 Base	FY 2016 OCO	FY 2016 Total
Previous President's Budget	160.773	77.398	75.412	-	75.412
Current President's Budget	157.438	73.982	67.763	-	67.763
Total Adjustments	-3.335	-3.416	-7.649	-	-7.649
• Congressional General Reductions	-	-0.276			
• Congressional Directed Reductions	-	-3.140			
• Congressional Rescissions	-	-			
• Congressional Adds	-	-			
• Congressional Directed Transfers	-	-			
• Reprogrammings	-3.333	-			
• SBIR/STTR Transfer	-	-			
• Program Adjustments	-	-	2.577	-	2.577
• Rate/Misc Adjustments	-0.002	-	-10.226	-	-10.226

Change Summary Explanation

The funding decrease from FY14 to FY15 can be attributed to the Common Aviation Command and Control System (CAC2S) program moving into PE 0206335M, other programs transitioning beyond RDT&E needs, and the realignment of resources to other Marine Corps priorities. The funding decrease from PB15 in FY16 can be attributed to the completion of RDT&E efforts for some programs, and the realignment of resources to other Marine Corps priorities, and extending the development timeline in programs such as MAGTF Command and Control Systems.

Exhibit R-2A, RDT&E Project Justification: PB 2016 Navy											Date: February 2015	
Appropriation/Budget Activity 1319 / 7					R-1 Program Element (Number/Name) PE 0206313M / *Marine Corps Comms Systems*				Project (Number/Name) 2270 / *Exp Indirect Fire Gen Supt Wpn Sys*			
COST ($ in Millions)	**Prior Years**	**FY 2014**	**FY 2015**	**FY 2016 Base**	**FY 2016 OCO**	**FY 2016 Total**	**FY 2017**	**FY 2018**	**FY 2019**	**FY 2020**	**Cost To Complete**	**Total Cost**
2270: *Exp Indirect Fire Gen Supt Wpn Sys*	193.056	31.143	27.422	24.226	-	24.226	26.687	27.427	27.064	27.628	Continuing	Continuing
Quantity of RDT&E Articles		-	-	-	-	-	-	-	-	-		

A. Mission Description and Budget Item Justification

Marine Air Ground Task Force (MAGTF) Command and Control (C2) Systems and Applications (MAGTF C2 SA) - MAGTF C2 SA merges the development, integration and testing of 45 existing C2 systems and applications into one common enterprise capability. They reside in all Combat Operations Centers (COCs) and related USMC C2 platforms. This effort provides greater economies of scale/affordability with system developers, technical design agents, integration agents and individual program offices. MAGTF C2S efforts are in alignment with the combat developers requirements for: Net-Centric systems, Development of reusable Open Architecture components, Data exposure, Enhancing the Warfighter's Situational Awareness and Increasing/Maximizing the Commander's decision space.

Joint Battle Command - Platform (JBC-P) Family of Systems (FoS) - JBC-P FoS is an Army led ACAT II program of JRCO interest, formerly known as the Blue Force Tracker (BFT) FoS. It is comprised of L-Band SATCOM and is a digital, battle command information FoS that provides integrated, on the move, timely, relevant Command and Control Situational Awareness (C2SA) information to tactical combat, combat support and combat service support commanders, leaders, and key C2 nodes. JBC-P FoS will provide JROC mandated C2SA convergence across aircraft, ground vehicles and dismounted personnel.

Global Command and Control System - Tactical Command Operations System (GCCS-TCO) - GCCS-TCO is the principal tool within the Marine Air Ground Task Force (MAGTF) for situational awareness through distribution of the Common Tactical Picture (CTP). It supports tactical operations providing information via high speed computer systems in a timely manner and includes the Intel Operations Workstations/Servers. R&D funds provide science and technology advanced concepts to be applied to the system for an increase in functional capabilities to the warfighter, to include Joint Command and Control (JC2) development efforts within Tactical Service Oriented Architecture (TSOA).

Identity Dominance System-MC (IDS-MC) - IDS-MC is a multi-modal (fingerprint, iris and face) biometric collection system that provides the USMC a reliable and effective capability to collect, share, match, access, verify and store identity information. IDS-MC will enable the Marine to collect appropriate biometric, biographical and reference information on an individual and match this locally developed information with pre-existing information available to the expeditionary force. The system will display match results with linkage to the respective individual's biographical and reference information as well as help analyze the response, update records as appropriate, create reports and disseminate updated information in accordance with current MAGTF policy. The primary mission of IDS-MC is to provide the MAGTF with the means to identify persons encountered in the battle space. While IDS-MC is not an intelligence analysis system, it does provide identification information in support of military intelligence and law enforcement operations by providing positive identification of persons of interest. IDS-MC is an enabler in the areas of detainee management and questioning, base access, counterintelligence screening, border control, law enforcement, displaced persons' management and aiding in humanitarian assistance missions. IDS-MC supports the tactical application of identity dominance and fully supports a forward presence, crisis response and contingency response capability.

Exhibit R-2A, RDT&E Project Justification: PB 2016 Navy		Date: February 2015
Appropriation/Budget Activity 1319 / 7	**R-1 Program Element (Number/Name)** PE 0206313M / *Marine Corps Comms Systems*	**Project (Number/Name)** 2270 / *Exp Indirect Fire Gen Supt Wpn Sys*

Advanced Field Artillery Tactical Data Family of Systems (AFATDS FoS) - AFATDS FoS consists of three programs, AFATDS, Back Up Computer System (BUCS) and Mobile Tactical Shelter (MTS). The AFATDS automates the fire planning, tactical fire direction, and fire support coordination required to support maneuver from the sea and subsequent operations ashore. AFATDS integrates all supporting arms assets within the MAGTF such as mortars, cannon artillery, rockets and missiles, close air support, and naval surface fire support systems. BUCS is a hand-held computer system designed to provide a backup to the AFATDS in computing ballistic firing solutions, as well as provide survey and Meteorological functions in support of artillery. Additionally BUCS is the primary ballistic firing solution system during Ship To Objective Maneuver (STOM) and for the Expeditionary Fire Support System (EFSS). The MTS is a Lightweight Multi-purpose Shelter mounted on a High Mobility Multipurpose Wheeled Vehicle (HMMWV) which protects both the AFATDS and operators from the environment. MTS enables rapid emplacement and displacement of fire support elements and provides networked communications on the move.

Target Hand-Off System (THS) - The THS addressed a Marine Corps operational requirement for a lightweight, handheld, and accurate target acquisition engagement coordination system. THS provides MAGTF Commanders with the only man-portable target location capability that allows Air Officers and Fire Support Coordinators to prosecute identified targets. The THS' advance interoperability capability provides the MAGTF Commander with the only portable target acquisition system able to interoperate with all target prosecution platforms available in the battlefield. The THS is designed for the Forward Air Controllers (FACs), Forward Observers (FOs), Fire Support Teams (FSTs), Firepower Control Teams (FCTs), Tactical Air Control Parties (TACPs) and Reconnaissance Teams to quickly acquire targets in day, night and near-all-weather visibility conditions, in order to conduct precise, rapid indirect surface fire support, Naval Surface Fire Support (NSFS) and Close Air Support (CAS).

Handheld Command and Control (H2C2) - This is a new start for FY2015. H2C2 project vision outlines a collective and efficient mobile computing Acquisition Strategy to ensure economies of scale and scope. The H2C2 portfolio consists of two specific capabilities - secure wireless access to multiple networks and handheld communication platforms. The handheld capability provides low cost (commercially available) platforms (smartphones and tablets) for use on every network regardless of the operational environment. The emerging technologies will enable access to both classified and unclassified systems on a single device. The secure wireless capability enables Marines burdened by wired implementations an option to leverage wireless mediums. This capability provides wireless communication between a variety of devices.

The funding decrease from FY15 to FY16 can be attributed to the Marine Air Ground Task Force (MAGTF) Command and Control (C2) (MAGT C2S) increase to product development schedule and the Target Hand-Off System (THS) completion of Analysis of Alternative (AoA) activities.

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2014	FY 2015	FY 2016 Base	FY 2016 OCO	FY 2016 Total
Title: MAGTF C2: Product Development	11.205	8.017	5.340	-	5.340
Articles:	-	-	-	-	-
FY 2014 Accomplishments: -Completed the improved and enhanced MAGTF interoperability using the service oriented architecture provided by the TSOA. This greatly enhanced the efficiency of data distribution between architecturally disparate tactical data systems.					

Exhibit R-2A, RDT&E Project Justification: PB 2016 Navy		Date: February 2015
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B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2014	FY 2015	FY 2016 Base	FY 2016 OCO	FY 2016 Total
-Continued developing presentation layer applications in conjunction with Warfighter input using the Rapid Response and Integration (R2I) process. -Completed transition of selected Command and Control Personal Computer (C2PC)/Joint Common Operational Picture Tactical Workstation (JTCW) application functionality into services hosted on the TSOA framework and C2 software packages. -Continued research and development for transfer of legacy stove-piped MAGTF C2 systems to modern interoperable applications resulting in a more efficient Joint and Coalition C2 environment for the MAGTF. ***FY 2015 Plans:*** -Complete Deployment of build 6 and initiate and deploy build 7, continuing to improve and enhance MAGTF interoperability by reducing inefficiencies between disparate tactical data systems by linking them via the TSOA. -Continue presentation layer application development in conjunction with Warfighter input via the Rapid Response and Integration (R2I) process. -Continue Select Command and Control Personal Computer (C2PC)/Joint Common Operational Picture Tactical Workstation (JTCW) application functionality to be transitioned into services hosted on the Tactical Service Oriented Architecture framework and C2 software packages. -Continue research and development to transfer legacy stove-piped MAGTF C2 systems and functionality to interoperable applications in order to create more efficient Joint and Coalition C2 environment for the MAGTF. JTCW support, development, improvement and transition to TSOA environment. ***FY 2016 Base Plans:*** -Continue improving and enhancing MAGTF interoperability using the service oriented architecture provided by the TSOA. This greatly enhances the efficiency of data distribution between architecturally disparate tactical data systems. -Continue developing presentation layer applications in conjunction with Warfighter input using the Rapid Response and Integration (R2I) process. -Complete transition of selected Command and Control Personal Computer (C2PC)/Joint Common Operational Picture Tactical Workstation (JTCW) application functionality into services hosted on the TSOA framework and C2 software packages. -Continue research and development for transfer of legacy stove-piped MAGTF C2 systems to modern interoperable applications resulting in a more efficient Joint and Coalition C2 environment for the MAGTF. The					

Exhibit R-2A, RDT&E Project Justification: PB 2016 Navy		Date: February 2015
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B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2014	FY 2015	FY 2016 Base	FY 2016 OCO	FY 2016 Total
decrease in funding from FY15 to FY16 is attributed to stretching product development. Funding will provide for the development of one major release and one R2I application. ***FY 2016 OCO Plans:*** N/A					
Title: MAGTF C2: Support Costs	2.206	1.091	1.022	-	1.022
Articles:	-	-	-	-	-
FY 2014 Accomplishments: Continued system engineering support for system integration, configuration management and technical assessments. ***FY 2015 Plans:*** Continue system engineering support for system integration, configuration management and technical assessments. ***FY 2016 Base Plans:*** Continue system engineering support for system integration, configuration management and technical assessments. ***FY 2016 OCO Plans:*** N/A					
Title: MAGTF C2: Test and Evaluation	1.462	1.064	1.000	-	1.000
Articles:	-	-	-	-	-
FY 2014 Accomplishments: -Initiated test support for the Joint Tactical Common Operational (COP) Workstation (JTCW). -Initiated developmental testing of JTCW and Joint interoperability testing in conjunction with the Joint Interoperability Test Command (JITC). -Continued working in technical working groups in support of test and engineering. -Continued to provide technical assistance to other programs supported by Marine Corps Tactical Systems Support Activity (MCTSSA) that involve the use of these systems as well as through the Operating forces Tactical Systems Support Center (OFTSSC) trouble calls. ***FY 2015 Plans:*** -Continue test support for the Joint Tactical Common Operational (COP) Workstation (JTCW).					

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B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2014	FY 2015	FY 2016 Base	FY 2016 OCO	FY 2016 Total
-Continue conducting developmental testing of JTCW and Joint interoperability testing in conjunction with the Joint Interoperability Test Command (JITC). -Continue to participate in technical working groups in support of test and engineering. -Continue to provide technical assistance to other programs supported by Marine Corps Tactical Systems Support Activity (MCTSSA) that involve the use of these systems as well as through the Operating forces Tactical Systems Support Center (OFTSSC) trouble calls. ***FY 2016 Base Plans:*** -Continue test support for the Joint Tactical Common Operational (COP) Workstation (JTCW). -Continue conducting developmental testing of JTCW and Joint interoperability testing in conjunction with the Joint Interoperability Test Command (JITC). -Continue to participate in technical working groups in support of test and engineering. -Continue to provide technical assistance to other programs supported by Marine Corps Tactical Systems Support Activity (MCTSSA) that involve the use of these systems as well as through the Operating forces Tactical Systems Support Center (OFTSSC) trouble calls. ***FY 2016 OCO Plans:*** N/A					
Title: MAGTF C2: Management Services	2.988	1.939	1.000	-	1.000
Articles:	-	-	-	-	-
FY 2014 Accomplishments: Continued software engineering support to provide appropriate government direction in design and development of software, conduct of source code reviews and prime vendor oversight was provided by Federally Funded Research and Development Center (FFRDC). ***FY 2015 Plans:*** Continue to receive software engineering support to provide appropriate government direction in design and development of software, conduct of source code reviews and prime vendor oversight from Federally Funded Research and Development Center (FFRDC). ***FY 2016 Base Plans:*** Continue to receive software engineering support to provide appropriate government direction in design and development of software, conduct of source code reviews and prime vendor oversight from Federally					

Exhibit R-2A, RDT&E Project Justification: PB 2016 Navy		Date: February 2015
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B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2014	FY 2015	FY 2016 Base	FY 2016 OCO	FY 2016 Total
Funded Research and Development Center (FFRDC). The funding decrease from FY15 to FY16 is attributed to stretching planning for future Rapid Response and Integration (R2I) common client architectures. ***FY 2016 OCO Plans:*** N/A					
Title: GCCS-TCO: Product Development	0.507	1.066	0.650	-	0.650
Articles:	-	-	-	-	-
FY 2014 Accomplishments: Initiated and developed services linking the Common Operating Picture (COP) from GCCS-TCO to other COP viewing tools as a service inside the Combat Operations Center. The GCCS-TCO software will improve interoperability with the Tactical Service Oriented Architecture, allowing COP and Situational Awareness data to be shared between the GCCS-TCO and other C2 systems. ***FY 2015 Plans:*** Continue the development of services linking the COP from GCCS-TCO to other COP viewing tools as a service inside the Combat Operations Center. The GCCS-TCO software will improve interoperability with the Tactical Service Oriented Architecture, allowing COP and Situational Awareness data to be shared between the GCCS-TCO and other C2 systems. ***FY 2016 Base Plans:*** Continue the development of services linking the COP from GCCS-TCO to other COP viewing tools as a service inside the Combat Operations Center. The GCCS-TCO software will improve interoperability with the Tactical Service Oriented Architecture, allowing COP and Situational Awareness data to be shared between the GCCS-TCO and other C2 systems. ***FY 2016 OCO Plans:*** N/A					
Title: GCCS-TCO: Test and Evaluation	0.974	0.983	0.431	-	0.431
Articles:	-	-	-	-	-
FY 2014 Accomplishments: Continued testing and validation of advanced concepts and technologies. ***FY 2015 Plans:***					

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B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2014	FY 2015	FY 2016 Base	FY 2016 OCO	FY 2016 Total
Continue testing and validation of advanced concepts and technologies. ***FY 2016 Base Plans:*** Continue testing and validation of advanced concepts and technologies. ***FY 2016 OCO Plans:*** N/A					
Title: AFATDS: Software Development and Integration	3.247	3.798	5.834	-	5.834
Articles:	-	-	-	-	-
FY 2014 Accomplishments: Initiated and developed USMC capabilities and interface enhancments with other C2 systems. Limited interoperability testing. ***FY 2015 Plans:*** Initiate development of 6.8.1.1, adding USMC capabilities and interface enhancements with other C2 systems and initiate interoperability testing for AFATDS and Back Up Computer System (BUCS) (Centaur and Sensor Programs) software. ***FY 2016 Base Plans:*** -Initiate development of 7.0, adding USMC capabilities and interface enhancements with other C2 systems. -Initiate interoperability testing for AFATDS and BUCS (Centaur and Sensor Programs) software. ***FY 2016 OCO Plans:*** N/A					
Title: AFATDS: Test and Evaluation	0.200	0.225	0.246	-	0.246
Articles:	-	-	-	-	-
FY 2014 Accomplishments: Continued Information Assurance Certification and Accreditation activities to ensure confidentiality, integrity, and availability of AFATDS/BUCS S/W and MTS Accreditation. ***FY 2015 Plans:*** Continued Information Assurance Certification and Accreditation activities to ensure confidentiality, integrity, and availability of AFATDS/BUCS S/W and MTS Accreditation. ***FY 2016 Base Plans:***					

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B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2014	FY 2015	FY 2016 Base	FY 2016 OCO	FY 2016 Total
Initiate interoperability testing for AFATDS and BUCS software ***FY 2016 OCO Plans:*** N/A					
Title: THS: Product Development	0.731	2.570	2.843	-	2.843
Articles:	-	-	-	-	-
FY 2014 Accomplishments: -Completed StrikeLink version 1.2 software development. -Completed capability requirements analysis and validation. ***FY 2015 Plans:*** Initiate Analysis of Alternatives (AoA) of prototypes and first article test models to determine viable hardware candidates capable of hosting a future THS software application. ***FY 2016 Base Plans:*** -Initiate development of emerging requirements and incorporate software patches to improve interoperability. -Continue capability requirements analysis and validation and conduct analysis of future interoperability and capability requirements. ***FY 2016 OCO Plans:*** N/A					
Title: THS: System Engineering Support	0.272	-	-	-	-
Articles:	-	-	-	-	-
FY 2014 Accomplishments: Initiated Engineering Support to plan and document test events, provide safety testing support and provide systems engineering and software engineering support ***FY 2015 Plans:*** N/A ***FY 2016 Base Plans:*** N/A ***FY 2016 OCO Plans:***					

Exhibit R-2A, RDT&E Project Justification: PB 2016 Navy		Date: February 2015
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B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2014	FY 2015	FY 2016 Base	FY 2016 OCO	FY 2016 Total
N/A					
Title: THS: Testing and Evaluation	0.366	0.606	0.295	-	0.295
Articles:	-	-	-	-	-
FY 2014 Accomplishments: -Completed Government Assessment Testing (GAT) of StrikeLink version 1.2 software. -Completed software Certification and Accreditation activities to obtain ATO to operate new major software releases on the Marine Corps Enterprise Network (MCEN). ***FY 2015 Plans:*** Continue testing of software interoperability resolutions. ***FY 2016 Base Plans:*** -Continue interoperability testing of software on new hardware configuration. -Initiate and conduct Information Assurance Vulnerability Assessment (IAVA) activities. ***FY 2016 OCO Plans:*** N/A					
Title: THS: Management Services	0.244	0.536	-	-	-
Articles:	-	-	-	-	-
FY 2014 Accomplishments: Continued engineering support to conduct capability requirements analysis and validation provided by a Federally Funded Research and Development Center (FFRDC). ***FY 2015 Plans:*** Continue Federally Funded Research and Development Center (FFRDC) engineering support to conduct capability requirements analysis and validation. ***FY 2016 Base Plans:*** N/A ***FY 2016 OCO Plans:*** N/A					
Title: JBC-P: Software Development/Integration	0.895	0.940	1.190	-	1.190
Articles:	-	-	-	-	-

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B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2014	FY 2015	FY 2016 Base	FY 2016 OCO	FY 2016 Total
FY 2014 Accomplishments: -Continued the coordination with the software development team at the Software Engineering Directorate in Huntsville, AL in order to assist in the development and integration of the JBC-P software capability. -Continued Federally Funded Research and Development Center (FFRDC) software engineering support which provided appropriate government direction in design and development of software. Existing documentation and logistics support analyzed for supportability of JBC-P and follow on increments of the capability. ***FY 2015 Plans:*** -Continue the coordination with the software development team at the Software Engineering Directorate in Huntsville, AL and other agencies to assist in the development and integration of the JBCP and handheld/end user device (EUD) software capability and associated testing. -Continue Federally Funded Research and Development Center (FFRDC) software engineering support to provide appropriate government direction in design and development of software. Support provided to assist and serve as subject matter experts in this effort. Existing documentation and logistics support will be analyzed for supportability of JBC-P and follow on increments of the capability. ***FY 2016 Base Plans:*** -The funding increase in FY16 is to develop a training package for the handheld device. -Continue coordination with the software development team at the Software Engineering Directorate in Huntsville, AL and other agencies to assist in the development and integration of the JBCP and handheld/end user device (EUD) software capability and associated testing. -Continue Federally Funded Research and Development Center (FFRDC) software engineering support to provide appropriate government direction in design and development of software. Existing documentation and logistics support will be analyzed for supportability of JBC-P and follow on increments of the capability. ***FY 2016 OCO Plans:*** N/A					
Title: JBC-P: Test and Evaluation	2.510	1.693	1.411	-	1.411
Articles:	-	-	-	-	-
FY 2014 Accomplishments: -Continued laboratories integration with Huntsville Software Engineering Directorate (SED) and Marine Corps Tactical Systems Support Activity (MCTSSA) to facilitate test and network integration test events.					

Exhibit R-2A, RDT&E Project Justification: PB 2016 Navy		Date: February 2015
Appropriation/Budget Activity 1319 / 7	**R-1 Program Element (Number/Name)** PE 0206313M / *Marine Corps Comms Systems*	**Project (Number/Name)** 2270 / *Exp Indirect Fire Gen Supt Wpn Sys*

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2014	FY 2015	FY 2016 Base	FY 2016 OCO	FY 2016 Total
-Continued Marine Corps Operational Test & Evaluation Activity (MCOTEA) DT/OT evaluation and documentation. -Completed developmental test, and multi-service operational test and evaluation for JBC-P. -Completed information assurance activities to support certification and accreditation efforts of JBC-P software. ***FY 2015 Plans:*** -Continue laboratories integration with Huntsville SED, MCTSSA, and other agencies to facilitate test and network integration test events. -Continue MCOTEA support for developmental test (DT) and planning/support for operational test (OT)of JBC-P handheld device. -Continue information assurance activities to support certification and accreditation efforts of JBC-P software. ***FY 2016 Base Plans:*** -Continue laboratories integration with Huntsville SED, MCTSSA, and other agencies to facilitate test and network integration test events. -Continue MCOTEA support for developmental test (DT) and planning/support for operational test (OT) of the JBC-P handheld device. ***FY 2016 OCO Plans:*** N/A					
Title: JBC-P: Management Services	0.367	0.430	0.390	-	0.390
Articles:	-	-	-	-	-
FY 2014 Accomplishments: Continued to provide Engineering Support personnel and travel. ***FY 2015 Plans:*** Continue to provide Engineering Support personnel and travel. ***FY 2016 Base Plans:*** Continue to provide Engineering Support personnel and travel. ***FY 2016 OCO Plans:*** N/A					
Title: IDS: Product Development	1.256	-	0.400	-	0.400
Articles:	-	-	-	-	-

Exhibit R-2A, RDT&E Project Justification: PB 2016 Navy		Date: February 2015
Appropriation/Budget Activity 1319 / 7	**R-1 Program Element (Number/Name)** PE 0206313M / *Marine Corps Comms Systems*	**Project (Number/Name)** 2270 / *Exp Indirect Fire Gen Supt Wpn Sys*

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2014	FY 2015	FY 2016 Base	FY 2016 OCO	FY 2016 Total
FY 2014 Accomplishments: Continued software development. ***FY 2015 Plans:*** N/A ***FY 2016 Base Plans:*** Continue to provide software development and hardware integration. ***FY 2016 OCO Plans:*** N/A					
Title: IDS: Support	1.514	0.264	0.447	-	0.447
Articles:	-	-	-	-	-
FY 2014 Accomplishments: Continued to utilize NAVSEA PMS-408 and NSWC for product support. ***FY 2015 Plans:*** Continue to utilize NAVSEA PMS-408 and NSWC for product support. ***FY 2016 Base Plans:*** Continue IDS product support. ***FY 2016 OCO Plans:*** N/A					
Title: IDS: Test and Evaluation	0.199	0.500	-	-	-
Articles:	-	-	-	-	-
FY 2014 Accomplishments: Continued software development testing and validation/verification testing. ***FY 2015 Plans:*** Continue software development testing and validation/verification testing. ***FY 2016 Base Plans:*** N/A ***FY 2016 OCO Plans:***					

Exhibit R-2A, RDT&E Project Justification: PB 2016 Navy		Date: February 2015
Appropriation/Budget Activity 1319 / 7	**R-1 Program Element (Number/Name)** PE 0206313M / *Marine Corps Comms Systems*	**Project (Number/Name)** 2270 / *Exp Indirect Fire Gen Supt Wpn Sys*

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2014	FY 2015	FY 2016 Base	FY 2016 OCO	FY 2016 Total
N/A					
Title: H2C2: Integration Engineering	-	1.700	1.727	-	1.727
Articles:	-	-	-	-	-
FY 2014 Accomplishments: N/A					
FY 2015 Plans: -This is a new start for FY15. -Initiate development, design, and integration of various emerging capabilities across the H2C2 portfolio. -Initiate support for sustained engagement with various industry providers, quick look technology excursions, and experimentation demonstrations for high risk emerging technology.					
FY 2016 Base Plans: -Continue to develop, design, and integrate various emerging capabilities across the H2C2 portfolio. -Continue to provide support for sustained engagement with various industry providers, quick look technology excursions, and experimentation demonstrations for high risk emerging technology.					
FY 2016 OCO Plans: N/A					
Accomplishments/Planned Programs Subtotals	31.143	27.422	24.226	-	24.226

C. Other Program Funding Summary ($ in Millions)

Line Item	FY 2014	FY 2015	FY 2016 Base	FY 2016 OCO	FY 2016 Total	FY 2017	FY 2018	FY 2019	FY 2020	Cost To Complete	Total Cost
• PMC/6468AA: *GCCS-TCO*	0.111	0.118	-	-	-	-	-	-	-	-	0.229
• PMC/6438BB: *IDS-MC*	-	1.654	1.183	-	1.183	0.501	0.501	1.008	1.028	-	5.875
• PMC/4631CC: *GCCS-TCO*	7.963	11.692	8.456	-	8.456	6.406	5.077	9.141	9.298	Continuing	Continuing
• PMC/4630DD: *GCCS-TCO*	1.113	1.265	-	-	-	-	-	-	-	-	2.552
• PMC/4631DD: *AFATDS*	20.959	6.049	2.722	-	2.722	2.854	15.636	15.349	15.663	Continuing	Continuing
• PMC/4631FF: *JBC-P*	9.714	10.685	12.552	-	12.552	15.815	10.263	8.479	8.648	Continuing	Continuing
• PMC/4631GG: *THS*	0.509	6.427	4.001	-	4.001	-	-	2.408	2.456	Continuing	Continuing

Remarks

Exhibit R-2A, RDT&E Project Justification: PB 2016 Navy		Date: February 2015
Appropriation/Budget Activity 1319 / 7	**R-1 Program Element (Number/Name)** PE 0206313M / *Marine Corps Comms Systems*	**Project (Number/Name)** 2270 / *Exp Indirect Fire Gen Supt Wpn Sys*

D. Acquisition Strategy

MAGTF C2 SA: MAGTF C2 SA is delivering command and control capabilities through bi-annual software releases with major releases in FY14 and FY15 through multiple programs of record. In FY16 there will be one major release. Currently the initial focus is developing the Tactical Service Oriented Architecture (TSOA) software, which provides a common software infrastructure through which services and applications from other programs of record can begin the process of interfacing with in order to maximize software commonality across echelons and missions. The long term goal is a software capability that will enable data discovery and data sharing across mission areas, a common standards-based viewer, core services and applications, and access to the GIG and other Joint networks, data and services.

JBC-P: JBC-P FoS is leveraging the Army's development of the JBC-P and handheld software, and the Marine Corps' program is contingent upon the Army's development and acquisition strategy. The Army will fund research and development for JBC-P unless there are Service unique requirements, which the Marine Corps program office will fund. The Marine Corps' program office will participate in all design and readiness reviews and joint operational testing events.

GCCS-TCO: Contracting is performed with various vendors for software test and integration, Commercial-Off-The-Shelf (COTS) evaluation and documentation to develop advanced concepts and additional functional capabilities. The Program Management Office conducts quarterly performance reviews. Specific hardware is also procured for test purposes which include environmental, shock, compatibility, and interoperability testing.

Identity Dominance System (IDS): Currently, the IDS-MC Program Office acquisition strategy is to leverage the Navy's IDS Program and provide funding to meet Marine Corps requirements. The Marine Corps' program office will participate in all design and technical reviews as well as the FOT&E activities. The long-term goal is to equip the Marine with a user-friendly biometric authentication technology that will be employed throughout DoD to deny the enemy freedom of movement within the populace and positively identify known insurgents within an Area of Responsibility (AOR). R&D efforts will be a combined effort between the S/W developers (Aware), the Navy PM and the USMC for S/W enhancement for the next planned increments of IDS-MC and for the quarterly updates.

AFATDS: AFATDS is a Cost Plus Award Fee contract through Army CECOM, Aberdeen Proving Ground, MD. R&D efforts will be a combined effort between the software developer (Raytheon), the Army PM and the USMC of software enhancements for the next planned versions of AFATDS.

THS: The acquisition of components (software/hardware) for the THS initiative will maximize the use of existing COTS, Government-Off-The-Shelf (GOTS), Non-Developmental Item (NDI), and Government Furnished Equipment (GFE). Software development is conducted utilizing a sole source small-business contract. Software must maintain compatibility with five Programs of Record (POR) and seven Operational Flight Programs (OFP).

H2C2: H2C2 will use an evolutionary approach for technology insertion. The approach will leverage and mature COTS and NDI technologies to rapidly transition a handheld data capability to other acquisition programs. H2C2 inserts mature technology into existing programs in order to fill capability gaps and requirement shortfalls. These technologies will be inserted at different times along gaining program acquisition cycles. This strategy will apply to available technology at different proposed technology insertion points for each gaining program.

E. Performance Metrics

Milestone Reviews

Exhibit R-3, RDT&E Project Cost Analysis: PB 2016 Navy			Date: February 2015
Appropriation/Budget Activity 1319 / 7	R-1 Program Element (Number/Name) PE 0206313M / *Marine Corps Comms Systems*	Project (Number/Name) 2270 / *Exp Indirect Fire Gen Supt Wpn Sys*	

Product Development ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2014 Cost	FY 2014 Award Date	FY 2015 Cost	FY 2015 Award Date	FY 2016 Base Cost	FY 2016 Base Award Date	FY 2016 OCO Cost	FY 2016 OCO Award Date	FY 2016 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
MAGTF C2	C/CPFF	SPAWAR : Charleston, SC	41.679	2.992	Jan 2014	2.961	Jan 2015	1.217	Nov 2015	-		1.217	Continuing	Continuing	Continuing
MAGTF C2	WR	NSWC : Panama City, FL	0.460	0.276	Nov 2013	-		0.250	Nov 2015	-		0.250	Continuing	Continuing	Continuing
MAGTF C2	WR	NSWC : Dahlgren, VA	4.275	3.322	Nov 2013	1.148	Feb 2015	1.500	Jan 2016	-		1.500	Continuing	Continuing	Continuing
MAGTF C2	C/CPFF	SPAWAR : San Diego, CA	1.063	2.048	May 2014	2.677	Jan 2015	1.123	Mar 2016	-		1.123	Continuing	Continuing	Continuing
MAGTF C2	WR	SSC A : Charleston, SC	1.262	1.917	Nov 2013	1.231	Mar 2015	1.250	Nov 2015	-		1.250	Continuing	Continuing	Continuing
MAGTF C2	WR	ARL : Washington, DC	0.000	0.650	Sep 2014	-		-		-		-	-	0.650	-
GCCS-TCO	C/CPFF	SPAWAR : Charleston, SC	4.743	0.507	Jan 2015	1.066	Jun 2015	0.650	Mar 2016	-		0.650	Continuing	Continuing	Continuing
AFATDS	MIPR	PM Mission Cmd (Army) : Aberdeen Proving Ground, MD	24.672	3.247	Jan 2014	4.023	Jan 2015	5.834	Jan 2016	-		5.834	Continuing	Continuing	Continuing
THS	SS/CPFF	Stauder Tech : St. Louis, MO	23.037	0.732	Feb 2014	1.042	Feb 2015	1.250	Feb 2016	-		1.250	Continuing	Continuing	Continuing
THS	C/CPFF	MCSC : Quantico, VA	0.000	-		1.148	Mar 2015	1.313	Mar 2016	-		1.313	Continuing	Continuing	Continuing
THS	WR	NSWC : Dahlgren, VA	0.000	-		0.380	Nov 2014	0.280	Nov 2015	-		0.280	-	0.660	-
JBC-P	WR	SPAWAR : Charleston, SC	2.481	0.230	Nov 2013	0.273	Feb 2015	0.490	Feb 2016	-		0.490	Continuing	Continuing	Continuing
JBC-P	C/CPFF	SPAWAR2 : Charleston, SC	0.000	0.665	Feb 2014	0.667	Jun 2015	0.700	Dec 2015	-		0.700	-	2.032	-
IDS	MIPR	NAVSEA/PMS-408 : Washington, DC	0.715	1.256	Nov 2013	-		0.400	Nov 2015	-		0.400	Continuing	Continuing	Continuing
Prior Years Cumulative Funding	Various	Various : Various	64.782	-		-		-		-		-	Continuing	Continuing	Continuing
		Subtotal	169.169	17.842		16.616		16.257		-		16.257	-	-	-

Exhibit R-3, RDT&E Project Cost Analysis: PB 2016 Navy			Date: February 2015
Appropriation/Budget Activity 1319 / 7	R-1 Program Element (Number/Name) PE 0206313M / *Marine Corps Comms Systems*	Project (Number/Name) 2270 / *Exp Indirect Fire Gen Supt Wpn Sys*	

Product Development ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2014 Cost	FY 2014 Award Date	FY 2015 Cost	FY 2015 Award Date	FY 2016 Base Cost	FY 2016 Base Award Date	FY 2016 OCO Cost	FY 2016 OCO Award Date	FY 2016 Total Cost	Cost To Complete	Total Cost	Target Value of Contract

Remarks

IDS FY14-FY16: IDS-MC will utilize NAVSEA/PMS408 to provide software development, information assurance updates and engineering change proposals in support of USMC requirements.

Support ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2014 Cost	FY 2014 Award Date	FY 2015 Cost	FY 2015 Award Date	FY 2016 Base Cost	FY 2016 Base Award Date	FY 2016 OCO Cost	FY 2016 OCO Award Date	FY 2016 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
MAGTF C2	WR	SPAWAR : San Diego, CA	0.905	2.126	May 2014	1.091	Mar 2015	1.022	Mar 2016	-		1.022	Continuing	Continuing	Continuing
MAGTF C2	WR	DLA : Philadelphia, PA	0.000	0.080	May 2014	-		-		-		-	-	0.080	-
THS	WR	NSWC Crane : Crane, IN	0.000	0.272	Feb 2014	-		-		-		-	-	0.272	-
IDS	WR	NAVSEA-PMS408 : Washington-DC	0.173	0.158	Sep 2014	0.158	Mar 2015	-		-		-	-	0.489	-
IDS	WR	NSWC Dahlgren : Dahlgren, VA	1.322	1.356	Jan 2014	0.106	May 2015	0.447	May 2016	-		0.447	-	3.231	-
H2C2 Integration Eng	WR	SPAWAR : Charleston, SC	0.000	-		1.039	Jan 2015	1.053	Jan 2016	-		1.053	Continuing	Continuing	Continuing
H2C2 Integration Eng	C/FFP	SPAWAR : Charleston, SC	0.000	-		0.661	Jan 2015	0.674	Jan 2016	-		0.674	Continuing	Continuing	Continuing
Prior Years Cumulative Funding	Various	Various : Various	4.983	-		-		-		-		-	-	4.983	-
		Subtotal	7.383	3.992		3.055		3.196		-		3.196	-	-	-

Remarks

IDS FY14-FY16: IDS-MC will utilize NSWC Dahlgren to provide engineering support, research studies, validation and verification of software and engineering change proposals.

Exhibit R-3, RDT&E Project Cost Analysis: PB 2016 Navy			Date: February 2015
Appropriation/Budget Activity 1319 / 7	R-1 Program Element (Number/Name) PE 0206313M / *Marine Corps Comms Systems*	Project (Number/Name) 2270 / *Exp Indirect Fire Gen Supt Wpn Sys*	

Test and Evaluation ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2014 Cost	FY 2014 Award Date	FY 2015 Cost	FY 2015 Award Date	FY 2016 Base Cost	FY 2016 Base Award Date	FY 2016 OCO Cost	FY 2016 OCO Award Date	FY 2016 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
MAGTF C2	WR	NRL : Washington, DC	0.879	0.530	Mar 2014	0.414	Apr 2015	0.250	Dec 2015	-		0.250	Continuing	Continuing	Continuing
MAGTF C2	C/ FFPLOE	MCTSAA : Camp Pendleton, CA	0.910	0.932	Dec 2013	0.650	Dec 2014	0.750	Dec 2015	-		0.750	Continuing	Continuing	Continuing
GCCS-TCO	C/CPFF	SSC-Lant : Charleston, SC	0.325	0.957	Sep 2014	0.798	Jun 2015	-		-		-	Continuing	Continuing	Continuing
GCCS-TCO	MIPR	DISA/JITC : Ft. Huachuca, AZ	0.675	-		0.150	Apr 2015	-		-		-	Continuing	Continuing	Continuing
GCCS-TCO	WR	SPAWAR : Charleston, SC	0.000	0.017	Jun 2014	0.035	May 2015	0.431	Mar 2016	-		0.431	Continuing	Continuing	Continuing
AFATDS	WR	SPAWAR : Charleston, SC	2.786	0.200	Dec 2013	-		0.246	Dec 2015	-		0.246	Continuing	Continuing	Continuing
THS	WR	SPAWAR : Charleston, SC	2.080	0.208	Dec 2013	-		-		-		-	Continuing	Continuing	Continuing
THS	MIPR	DISA/JITC : Ft. Huachuca, AZ	0.373	0.115	Feb 2014	0.240	Feb 2015	0.035	Feb 2016	-		0.035	Continuing	Continuing	Continuing
THS	WR	NAWCD China Lake : China Lake, CA	0.153	0.008	Apr 2014	-		-		-		-	Continuing	Continuing	Continuing
THS	WR	46th Test Squadron : Eglin AFB, FL	0.039	0.034	Apr 2014	-		-		-		-	Continuing	Continuing	Continuing
THS	WR	NSWC : Dahlgren, VA	0.000	-		-		0.260	Nov 2015	-		0.260	-	0.260	-
THS	WR	NSWC : Crane, IN	0.000	-		0.366	Oct 2014	-		-		-	-	0.366	-
JBC-P	C/CPFF	MCTSAA : Camp Pendleton, CA	0.121	0.324	Feb 2014	0.434	Nov 2014	0.400	Dec 2015	-		0.400	Continuing	Continuing	Continuing
JBC-P	WR	SPAWAR : Charleston, SC	1.554	0.100	Dec 2013	0.173	Feb 2015	0.235	Dec 2015	-		0.235	Continuing	Continuing	Continuing
JBC-P	MIPR	DISA/JITC : Ft Huachuca, AZ	0.025	0.105	Mar 2014	0.088	Mar 2015	0.105	Mar 2016	-		0.105	Continuing	Continuing	Continuing
JBC-P	MIPR	EPG : Ft. Huachuca, AZ	0.195	0.137	Mar 2014	-		-		-		-	Continuing	Continuing	Continuing

Exhibit R-3, RDT&E Project Cost Analysis: PB 2016 Navy		Date: February 2015
Appropriation/Budget Activity 1319 / 7	**R-1 Program Element (Number/Name)** PE 0206313M / *Marine Corps Comms Systems*	**Project (Number/Name)** 2270 / *Exp Indirect Fire Gen Supt Wpn Sys*

Test and Evaluation ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2014 Cost	FY 2014 Award Date	FY 2015 Cost	FY 2015 Award Date	FY 2016 Base Cost	FY 2016 Base Award Date	FY 2016 OCO Cost	FY 2016 OCO Award Date	FY 2016 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
JBC-P	C/CPFF	MCOTEA : Quantico, VA	0.889	0.151	Dec 2013	-		0.080	Dec 2015	-		0.080	Continuing	Continuing	Continuing
JBC-P	C/CPFF	SPAWAR2 : Charleston, SC	0.000	0.250	Jul 2014	0.118	Dec 2014	-		-		-	-	0.368	-
JBC-P	MIPR	TSMO : Redstone Aresenal, AL	0.000	0.391	Apr 2014	-		-		-		-	-	0.391	-
JBC-P	MIPR	OTC/CTS : Ft Hood, TX	0.000	0.137	Mar 2014	-		-		-		-	-	0.137	-
JBC-P	MIPR	ARL : Aberdeen Proving Ground, MD	0.000	0.110	Mar 2014	-		-		-		-	-	0.110	-
JBC-P	Various	MCSC2 : Quantico, VA	0.000	0.142	Sep 2014	-		-		-		-	-	0.142	-
JBC-P	WR	NSWC Crane : Crane, IN	0.000	0.663	May 2014	0.880	Apr 2015	0.591	Dec 2015	-		0.591	-	2.134	-
IDS	C/FFP	NAVSEA : Washington, DC	2.252	0.199	Nov 2013	0.500	Mar 2015	-		-		-	-	2.951	-
		Subtotal	13.256	5.710		4.846		3.383		-		3.383	-	-	-

Remarks

IDS FY14-15: IDS-MC will utilize NAVSEA/COTF to conduct DT&E and IOT&E

Management Services ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2014 Cost	FY 2014 Award Date	FY 2015 Cost	FY 2015 Award Date	FY 2016 Base Cost	FY 2016 Base Award Date	FY 2016 OCO Cost	FY 2016 OCO Award Date	FY 2016 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
MAGTF C2	C/CPFF	CECOM, LCMC : APG, Maryland	1.746	2.988	Nov 2013	1.939	Jan 2015	1.000	Dec 2015	-		1.000	Continuing	Continuing	Continuing
THS	C/CPFF	CECOM/MITRE : Ft. Monmouth, NJ	0.000	0.244	Nov 2013	0.536	Nov 2014	-		-		-	Continuing	Continuing	Continuing
JBC-P	C/CPFF	CECOM/MITRE : Ft. Monmouth, NJ	1.258	-		0.430	Jan 2015	0.290	Jan 2016	-		0.290	Continuing	Continuing	Continuing

Exhibit R-3, RDT&E Project Cost Analysis: PB 2016 Navy			Date: February 2015
Appropriation/Budget Activity 1319 / 7	R-1 Program Element (Number/Name) PE 0206313M / *Marine Corps Comms Systems*	Project (Number/Name) 2270 / *Exp Indirect Fire Gen Supt Wpn Sys*	

Management Services ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2014 Cost	FY 2014 Award Date	FY 2015 Cost	FY 2015 Award Date	FY 2016 Base Cost	FY 2016 Base Award Date	FY 2016 OCO Cost	FY 2016 OCO Award Date	FY 2016 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
JBC-P	Various	MCSC : Quantico, VA	0.169	0.367	Sep 2014	-		0.100	Mar 2016	-		0.100	Continuing	Continuing	Continuing
Prior Years Cumulative Funding	Various	Various : Various	0.075	-		-		-		-		-	-	0.075	-
		Subtotal	3.248	3.599		2.905		1.390		-		1.390	-	-	-

	Prior Years	FY 2014		FY 2015		FY 2016 Base		FY 2016 OCO		FY 2016 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	193.056	31.143		27.422		24.226		-		24.226	-	-	-

Remarks

Exhibit R-4, RDT&E Schedule Profile: PB 2016 Navy		Date: February 2015
Appropriation/Budget Activity 1319 / 7	**R-1 Program Element (Number/Name)** PE 0206313M / *Marine Corps Comms Systems*	**Project (Number/Name)** 2270 / *Exp Indirect Fire Gen Supt Wpn Sys*

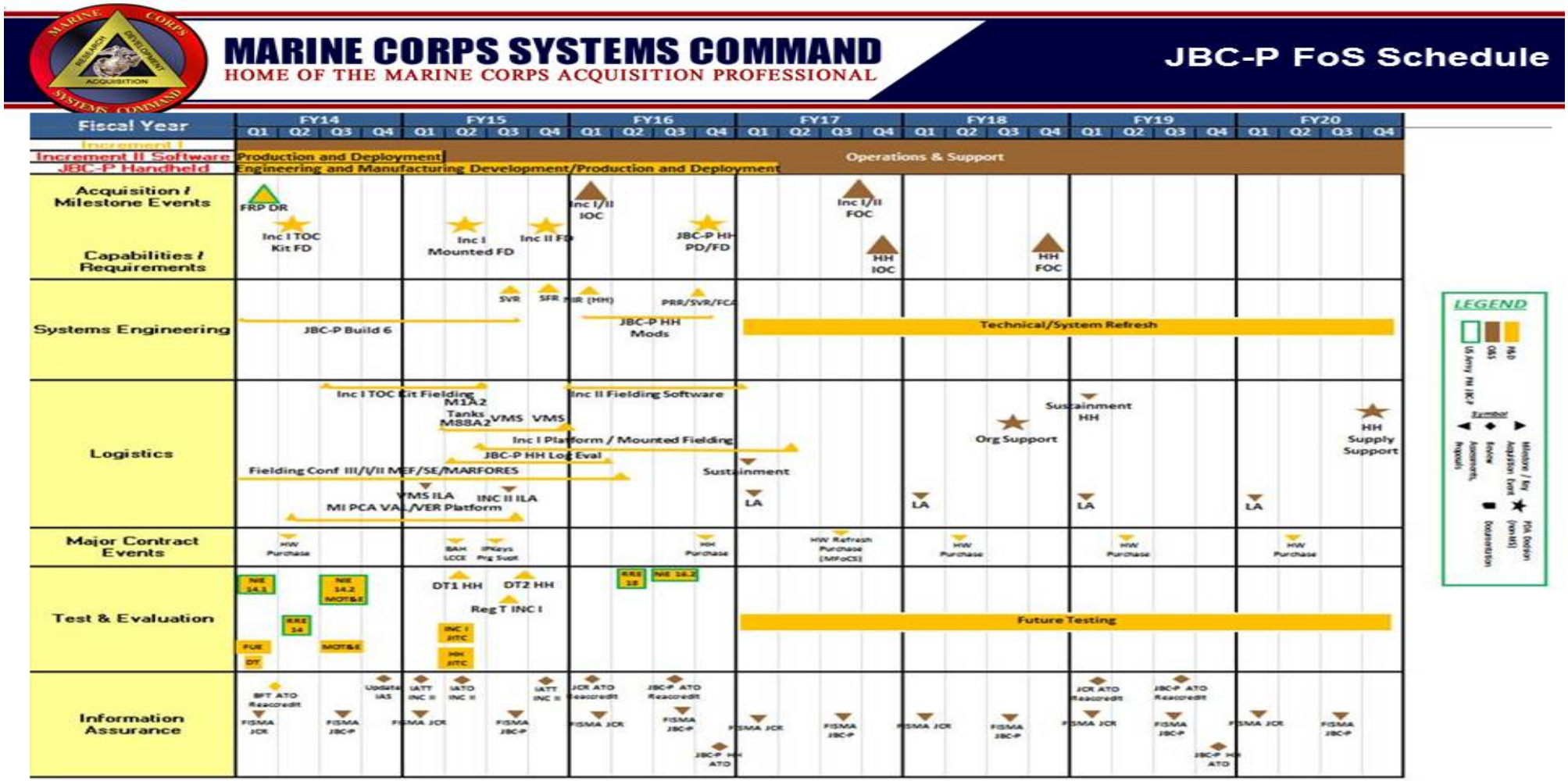

Exhibit R-4, RDT&E Schedule Profile: PB 2016 Navy		Date: February 2015
Appropriation/Budget Activity 1319 / 7	**R-1 Program Element (Number/Name)** PE 0206313M / *Marine Corps Comms Systems*	**Project (Number/Name)** 2270 / *Exp Indirect Fire Gen Supt Wpn Sys*

IDS-MC SCHEDULE

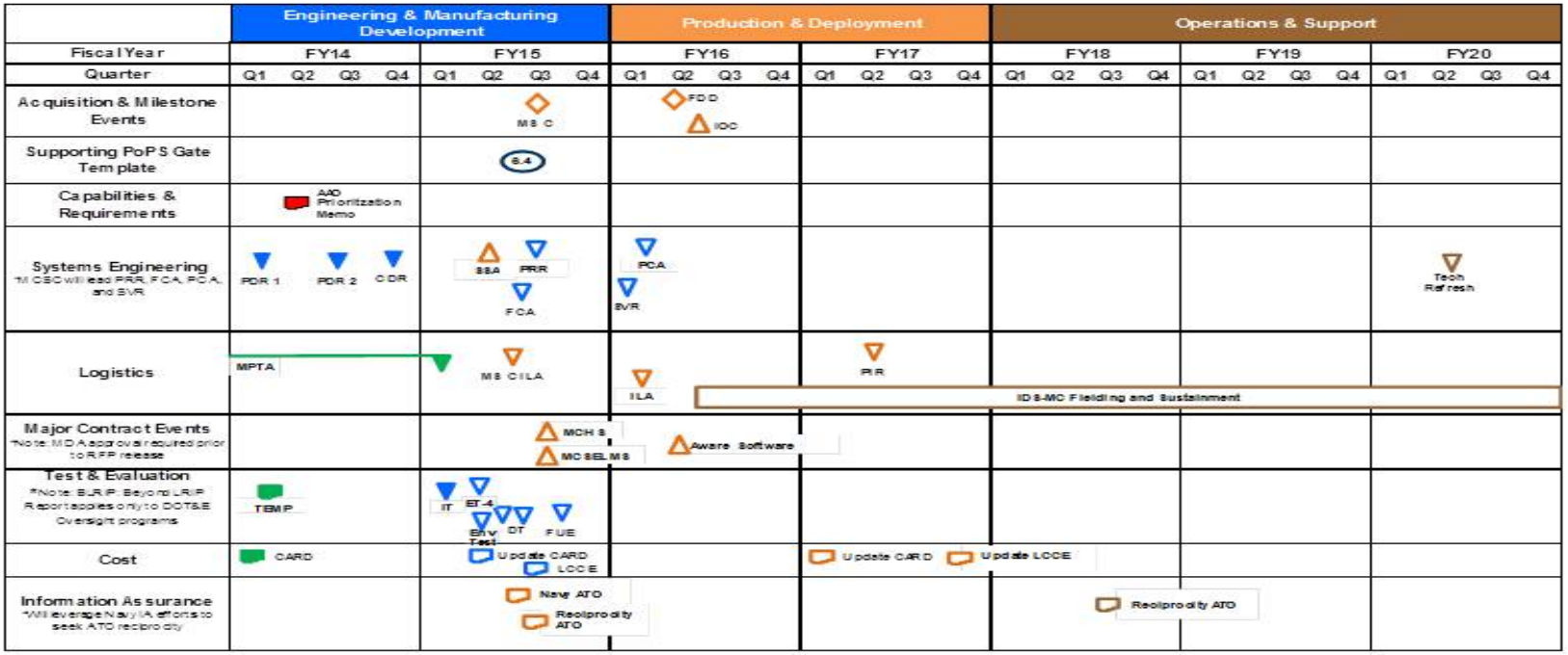

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Exhibit R-4, RDT&E Schedule Profile: PB 2016 Navy		Date: February 2015
Appropriation/Budget Activity 1319 / 7	**R-1 Program Element (Number/Name)** PE 0206313M / *Marine Corps Comms Systems*	**Project (Number/Name)** 2270 / *Exp Indirect Fire Gen Supt Wpn Sys*

Program Schedule H2C2

Date Updated: 19 Jun 2014

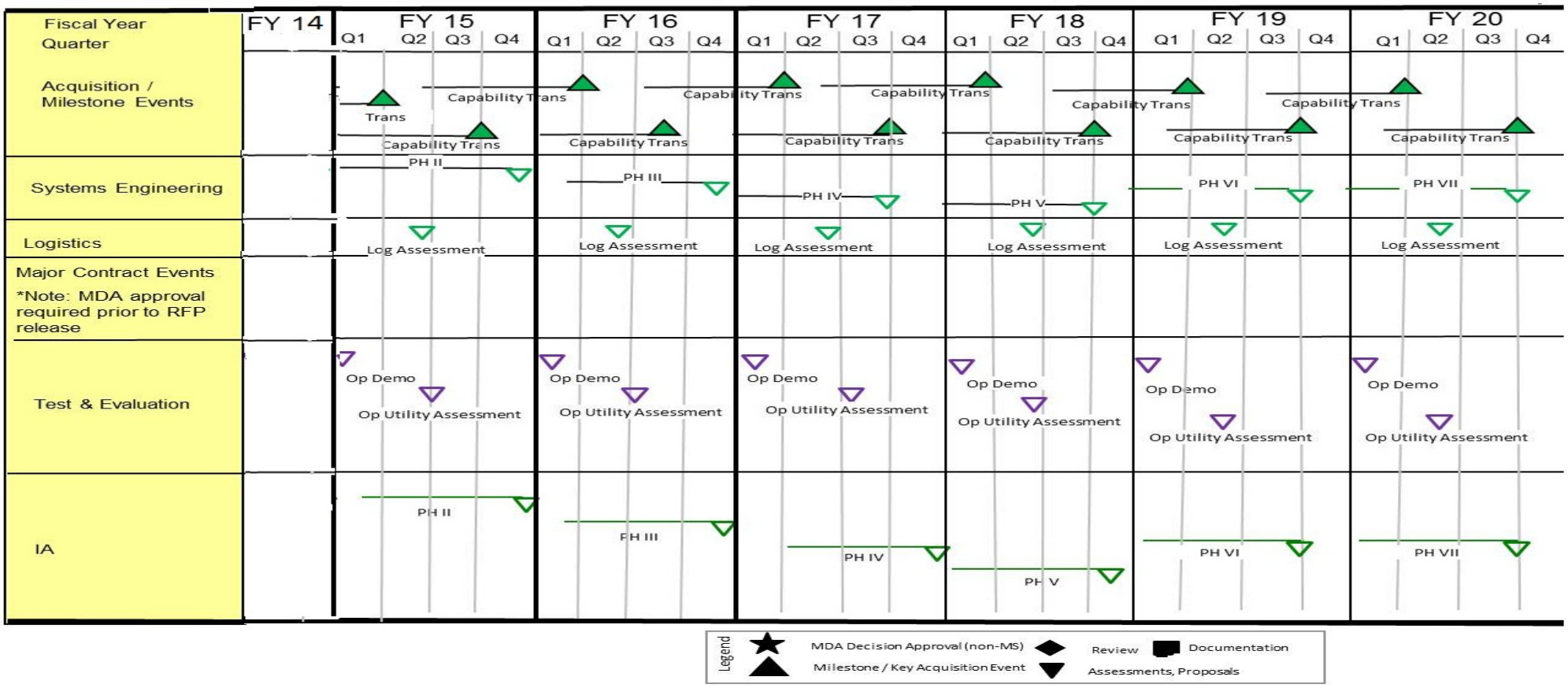

Exhibit R-4, RDT&E Schedule Profile: PB 2016 Navy		Date: February 2015
Appropriation/Budget Activity 1319 / 7	**R-1 Program Element (Number/Name)** PE 0206313M / *Marine Corps Comms Systems*	**Project (Number/Name)** 2270 / *Exp Indirect Fire Gen Supt Wpn Sys*

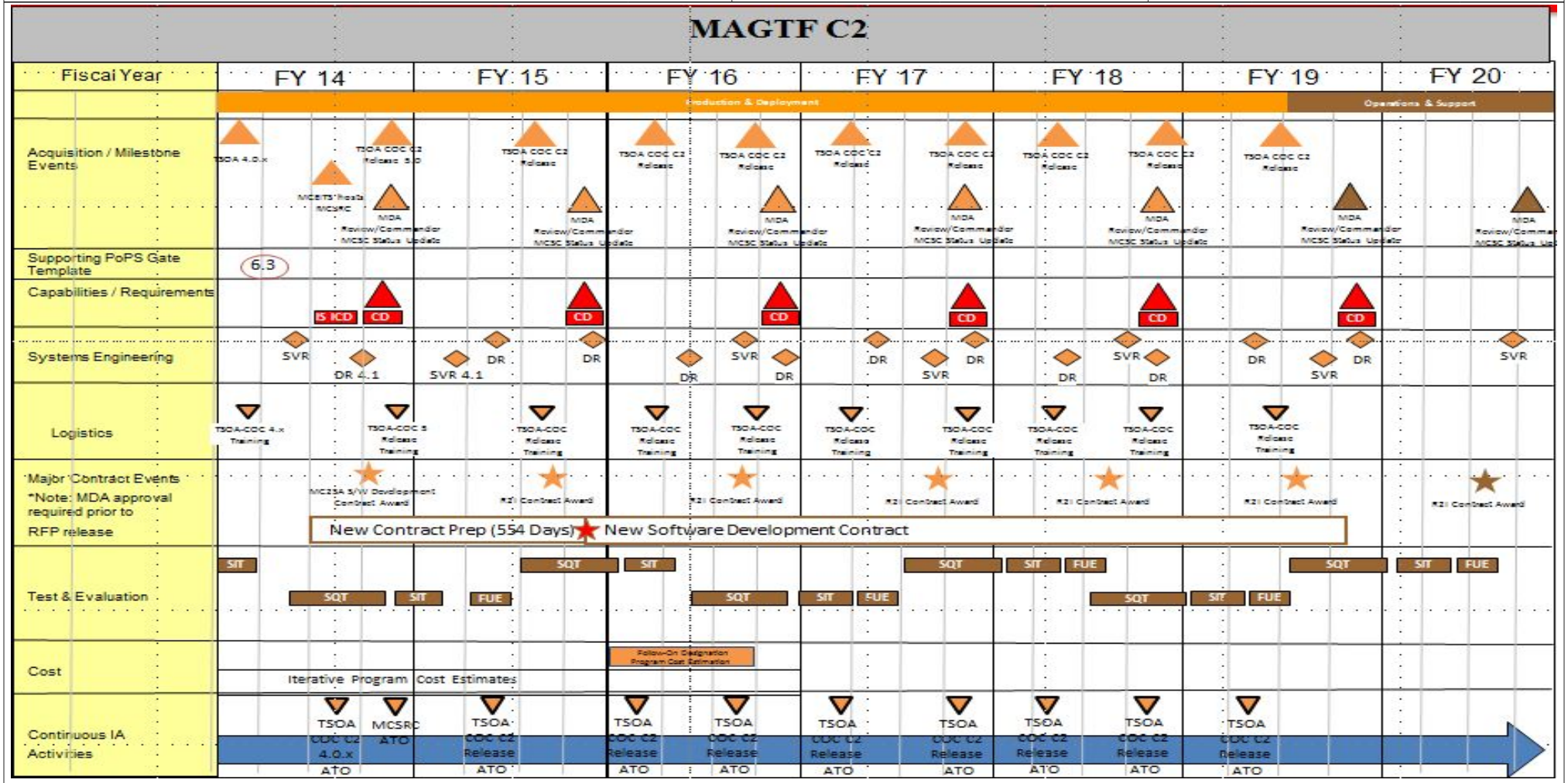

Exhibit R-4, RDT&E Schedule Profile: PB 2016 Navy		Date: February 2015
Appropriation/Budget Activity 1319 / 7	**R-1 Program Element (Number/Name)** PE 0206313M / *Marine Corps Comms Systems*	**Project (Number/Name)** 2270 / *Exp Indirect Fire Gen Supt Wpn Sys*

THS (MCPC 240498) - Schedule

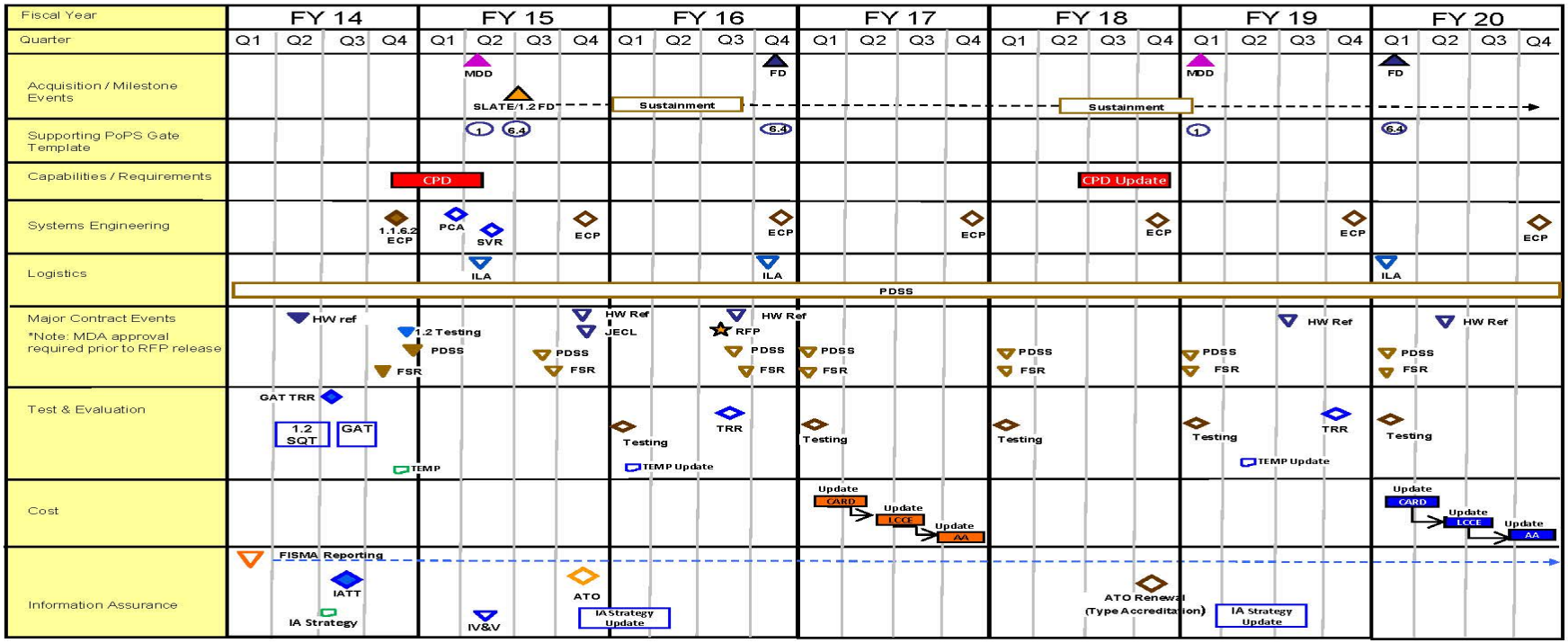

Exhibit R-4, RDT&E Schedule Profile: PB 2016 Navy		Date: February 2015
Appropriation/Budget Activity 1319 / 7	**R-1 Program Element (Number/Name)** PE 0206313M / *Marine Corps Comms Systems*	**Project (Number/Name)** 2270 / *Exp Indirect Fire Gen Supt Wpn Sys*

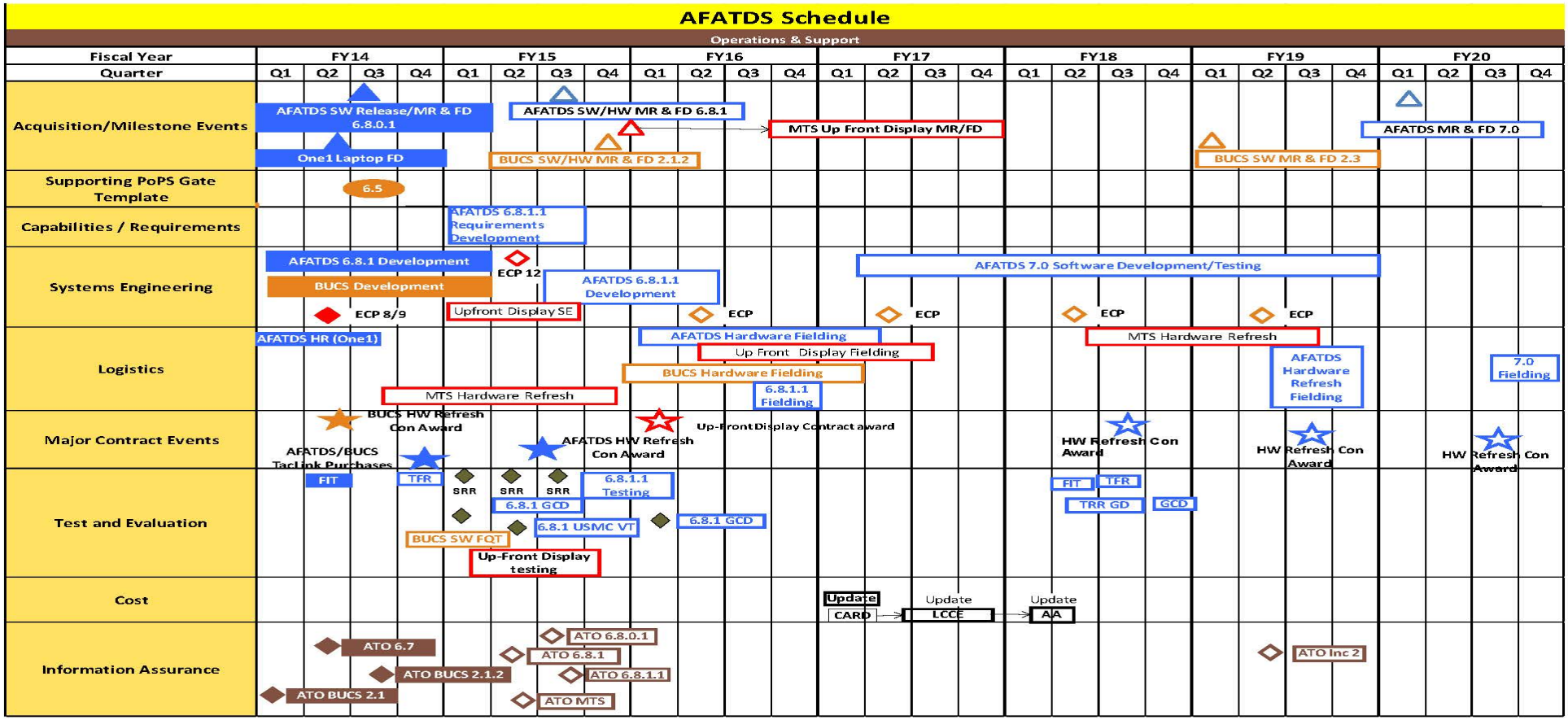

Exhibit R-4, RDT&E Schedule Profile: PB 2016 Navy		Date: February 2015
Appropriation/Budget Activity 1319 / 7	**R-1 Program Element (Number/Name)** PE 0206313M / *Marine Corps Comms Systems*	**Project (Number/Name)** 2270 / *Exp Indirect Fire Gen Supt Wpn Sys*

Program Schedule – GCCS-TCO

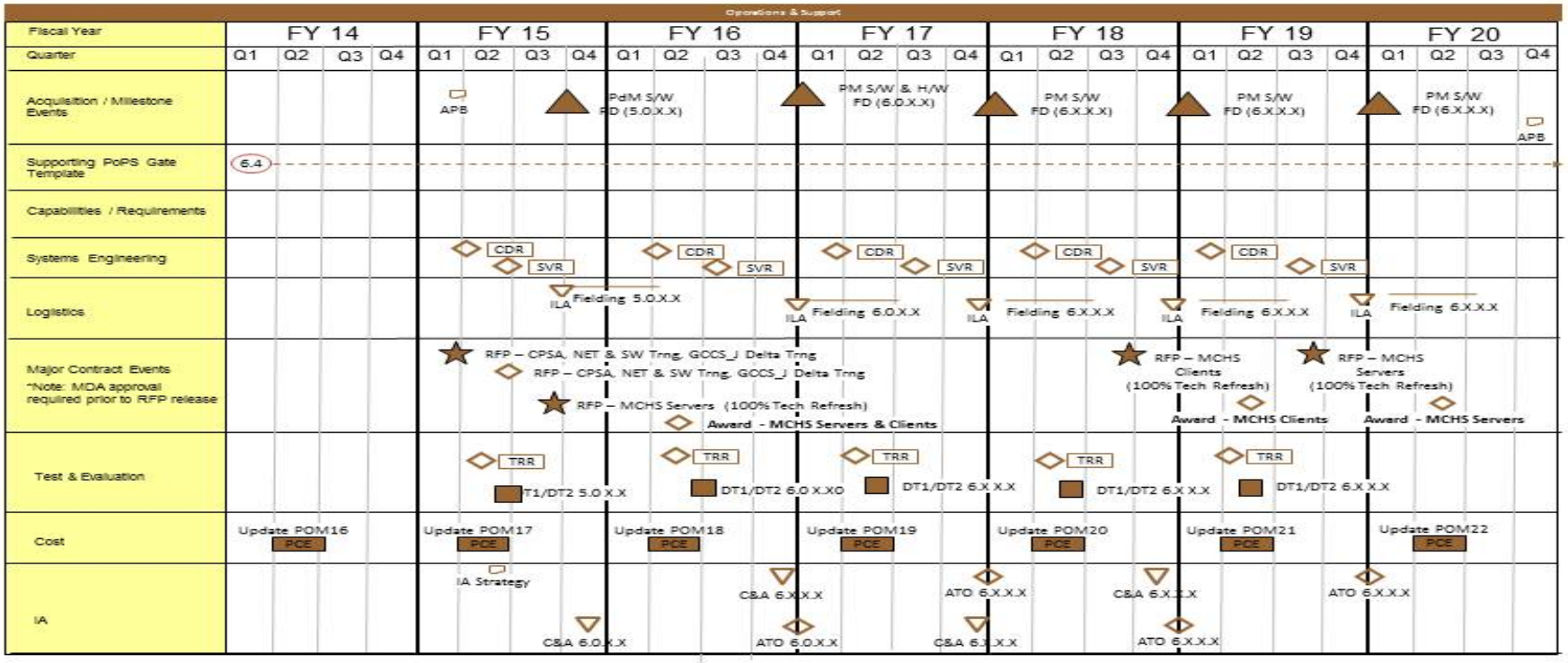

Exhibit R-4A, RDT&E Schedule Details: PB 2016 Navy		Date: February 2015
Appropriation/Budget Activity 1319 / 7	**R-1 Program Element (Number/Name)** PE 0206313M / *Marine Corps Comms Systems*	**Project (Number/Name)** 2270 / *Exp Indirect Fire Gen Supt Wpn Sys*

Schedule Details

	Start		End	
Events by Sub Project	**Quarter**	**Year**	**Quarter**	**Year**
Proj 2270				
MAGTF C2 SA TSOA Release 4	1	2014	1	2014
MAGTF C2 SA TSOA Release 5	4	2014	4	2014
MAGTF C2 SA TSOA Release 6	3	2015	3	2015
MAGTF C2 SA TSOA Release 7	1	2016	1	2016
GCCS-TCO SW FD (5.0.0.0)	4	2015	1	2016
GCCS-TCO SW/HW FD (6.0.0.0)	1	2017	2	2017
AFATDS MTS Fielding	3	2014	4	2015
AFATDS BUCS Fielding	4	2015	1	2017
AFATDS HW Fielding	1	2016	2	2017
THS 1.2 S/W Fielding Decision	3	2015	3	2015
THS HW Refresh Fielding Decision	3	2016	3	2016
JBC-P FoS Inc I TOC Kit Fielding Decision	2	2014	2	2014
JBC-P FoS Operational Test NIE 14.2	3	2014	3	2014
JBC-P FoS Inc I Platform Fielding Decision	2	2015	2	2015
JBC-P FoS Inc II Software Fielding Decision	4	2015	4	2015
JBC-P FoS HH Procurement Decision/Fielding Decision	4	2016	4	2016
H2C2 Transition (POR) 1	3	2015	3	2015
H2C2 Transition (POR) 2	3	2016	3	2016
IDS-MC Milestone C	3	2015	3	2015
IDS-MC DevelopmentalTesting (DT)	3	2015	3	2015

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COST ($ in Millions)	**Prior Years**	**FY 2014**	**FY 2015**	**FY 2016 Base**	**FY 2016 OCO**	**FY 2016 Total**	**FY 2017**	**FY 2018**	**FY 2019**	**FY 2020**	**Cost To Complete**	**Total Cost**
2273: *Air Ops Cmd & Control (C2) Sys*	339.085	66.090	8.767	7.772	-	7.772	11.076	5.702	8.950	9.128	Continuing	Continuing
Quantity of RDT&E Articles		-	-	-	-	-	-	-	-	-		

Project MDAP/MAIS Code: 582

Note

Funding for the Common Aviation Command and Control System (CAC2S) program was moved to PE 0206335M Common Aviation Command and Control System (CAC2S), Project 3373 beginning in FY15. Prior Year funding and FY14 funding is located in PE 0206313M Marine Corps Comms Systems, Project 2273 Air Ops Cmd & Control (C2) Sys.

A. Mission Description and Budget Item Justification

Common Aviation Command and Control System (CAC2S) - A coordinated modernization effort to replace the existing aviation command and control equipment of the Marine Air Command and Control System (MACCS) and to provide the Aviation Combat Element (ACE) with the necessary hardware, software, equipment, and facilities to effectively command, control, and coordinate aviation operations. The CAC2S system will accomplish the MACCS missions with a suite of operationally scalable modules to support the Marine Air Ground Task Force (MAGTF), Joint, and Coalition Forces. The CAC2S integrates the functions of aviation command and control into an interoperable system that will support the core competencies of all Marine Corps warfighting concepts. The CAC2S, in conjunction with MACCS organic sensors and weapons systems, supports the tenets of Expeditionary Maneuver Warfare and fosters joint interoperability. CAC2S Increment I will replace legacy aviation command and control systems in the following Marine aviation agencies: Direct Air Support Center (DASC), Tactical Air Command Center (TACC), and Tactical Air Operations Center (TAOC). CAC2S Funding for FY15 through the FYDP is in PE 0206335M, Project 3373.

Theater Battle Management Core System (TBMCS) - Joint mandated Air War planning tool for the generation, dissemination and execution of the Air Tasking Order (ATO). TBMCS is an Air Force led program, which provides the automated tools necessary to manage tactical air operations, execute area air defense and airspace management in the tactical area of operation, and coordinate operations with components of other military services. TBMCS is located at the Tactical Air Command Center (TACC), with remotes located throughout the Marine Air Ground Task Force (MAGTF). It is scalable, allowing for joint, coalition and service specific operations. It is an evolutionary acquisition program.

Composite Tracking Network (CTN) - Provides the Marine Air Ground Task Force (MAGTF) Commander a ground based sensor netting solution that significantly improves situational awareness by correlating sensor measurement data (target position, speed, heading, Identification Friend and Foe (IFF), etc.) from local and remote radars in the Cooperative Engagement Capability (CEC) network, which is then provided to the warfighter in the form of composite, real-time, air surveillance tracks. AN/MSQ-143A (V)I - funding will allow CTN to execute transportability testing and conduct a Field User Evaluation (FUE) of this system configuration. These events will complete the testing for this configuration and allow the CTN Program Office to go to the Milestone Decision Authority (MDA) for a fielding decision for this system configuration.

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The Marine Air Command and Control System (MACCS) Sustainment - Consists of various command and control agencies designed to provide the Aviation Combat Element (ACE) commander with the ability to monitor, supervise and influence the application of Marine aviation assets in support of Marine Air Ground Task Force (MAGTF) operations. The MACCS Sustainment provides funding to keep these fielded systems ready, relevant and capable until their functions are replaced by the Common Aviation Command and Control System (CAC2S). The funding decrease ($0.995) from FY15 to FY16 is due to the completion of the MACCS Mobile Tactical Air Operations Module (MTAOM) Commercial off the Shelf (COTS) refresh.

Combat Operations Center (COC) - AN/TSQ-239 (V)1/2/3/4 are a deployable, self-contained, modular, centralized and scalable facility ((V)1 MEF-size, (V)2 MSC/Div-size, (V)3 Regiment-size, (V)4 Ballatlion-size) which provides digital, shared Command and Control/Situational Awareness functionalities to enhance the Common Operational Picture (COP) for the Command Element, Ground Command Element, Air Combat Element, and Logistics Combat Element. It is a commercial-off-the-shelf integrated hardware solution using unit provided radios, re-hosted tactical data systems, and available Marine Corps prime movers to transport the system. Funds support testing and Information Assurance (IA) certification activities, integration of emerging technology, and On The Move (OTM) capabilities. The increase of $1.920M from FY15 to FY16 will fund market research, test and software integration efforts needed to align with other C2 systems.

Remote Video Viewing Terminal (RVVT) - Consists of Commercial Off-The-Shelf (COTS) Video Down-Link (VDL) products such as the VideoScout Mobile Configuration 2 (VS-MC/2), VideoScout Mobile Configuration 3 (VS-MC/3), Man Portable Video Down-Link (MPVDL), and RVVT (Future System) that allow for the viewing and exploitation of Full Motion Video (FMV) from Intelligence, Surveillance and Reconnaissance (ISR) assets. VDL systems are mission critical for Command and Control, coordination of direct and indirect fires and the prevention of fratricide. These systems provide the warfighter with video and metadata from all USMC manned and unmanned aircraft to include but not limited to Raven B, Puma, Micro-UAS, Shadow, Predator, Fire Scout, and Litening Pod on P-3, AV8-B, and F/A-18. Data is displayed to Forward Observers (FO), Joint Terminal Attack Coordinators (JTAC), and Forward Air Controller (FAC).

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2014	FY 2015	FY 2016 Base	FY 2016 OCO	FY 2016 Total
Title: CAC2S - Product Development	31.160	-	-	-	-
Articles:	-	-	-	-	-
FY 2014 Accomplishments: -Continued development and integration of the Aviation Command and Control Subsystem -Continued EDM data and information fusion -Initiated system validation and verification of the four (4) Engineering and Development Models (EDMs)					
FY 2015 Plans: N/A					
FY 2016 Base Plans: N/A					
FY 2016 OCO Plans:					

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B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2014	FY 2015	FY 2016 Base	FY 2016 OCO	FY 2016 Total
N/A					
Title: CAC2S - Support and Management Services	9.789	-	-	-	-
Articles:	-	-	-	-	-
FY 2014 Accomplishments: Continued program management support including business support, engineering support, and logistical support. ***FY 2015 Plans:*** N/A ***FY 2016 Base Plans:*** N/A ***FY 2016 OCO Plans:*** N/A					
Title: CAC2S - Test and Evaluation	6.248	-	-	-	-
Articles:	-	-	-	-	-
FY 2014 Accomplishments: Continued support of phase 2 in Information Assurance certification test scans and initiate CAC2S developmental testing of the Engineering and Develpment Models (EDMs). ***FY 2015 Plans:*** N/A ***FY 2016 Base Plans:*** N/A ***FY 2016 OCO Plans:*** N/A					
Title: COC: Continued Capability Solution	3.375	1.619	3.517	-	3.517
Articles:	-	-	-	-	-
FY 2014 Accomplishments:					

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B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2014	FY 2015	FY 2016 Base	FY 2016 OCO	FY 2016 Total
Continued to conduct analysis of technologies for integration in COC Baseline. Performed analysis to support Size Weight Power Reduction efforts. ***FY 2015 Plans:*** Continue to conduct analysis of technologies and software interoperability for integration in COC Baseline. ***FY 2016 Base Plans:*** Initiate market research, test and software integration efforts needed to align with other C2 systems. ***FY 2016 OCO Plans:*** N/A					
Title: Composite Tracking Network (CTN): Support and Management Services	4.972	0.960	0.458	-	0.458
Articles:	-	-	-	-	-
FY 2014 Accomplishments: - Initiated S/W Maintenance Support. - Initiated USG-4B Analysis/Extraction Updates, Data Analysis, Safety, System Engineering. - Completed Wrap Around Simulation Program (WASP) S/W Updates, Data Analysis, Safety, System Engineering. - Continued Data Collection and Analysis. - Continued travel, engineering support, test support, and S/W support. - Continued systems engineering and updates to the S/W baseline.					
FY 2015 Plans: - Complete USG-4B Analysis/Extraction - Continue S/W Maintenance Support, USG-4B Analysis/Extraction, Data Analysis, Safety, System Engineering. - Continue Data Collection and Analysis. - Continue systems engineering and updates to the software baseline. - Continue travel, engineer support, test support, and S/W support.					
FY 2016 Base Plans: - Continue Software Maintenance Support. - Continue Data Collection and Analysis. - Continue systems engineering and updates to the software baseline.					

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B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2014	FY 2015	FY 2016 Base	FY 2016 OCO	FY 2016 Total
- Continue travel, engineer support, and test support. ***FY 2016 OCO Plans:*** N/A					
Title: Composite Tracking Network (CTN): Certification of Interfaces	0.626	0.220	0.150	-	0.150
Articles:	-	-	-	-	-
FY 2014 Accomplishments: - Initiated Common Array Block - Expeditionary (CAB-E) testing/verification support. - Continued to support testing/verification/updates for Accelerated Mid-term Interoperability Improvement Program - Initiated ramp up System-to-System engineering to support interface with CAC2S and G/ATOR. ***FY 2015 Plans:*** - Continue Common Array Block (CAB-E) testing/verification/updates - Continue to support updates for Accelerated Mid-term Interoperability Improvement Program - Continue System-to-System developmental engineering to support interface with CAC2S and G/ATOR. ***FY 2016 Base Plans:*** - Continue Common Array Block (CAB-E) testing/verification/updates - Continue to support updates for Accelerated Mid-term Interoperability Improvement Program - Continue System-to-System developmental engineering to support interface with CAC2S and G/ATOR. ***FY 2016 OCO Plans:*** N/A					
Title: Composite Tracking Network (CTN): Engineering Development Model	3.024	1.188	0.686	-	0.686
Articles:	-	-	-	-	-
FY 2014 Accomplishments: - Initiated Common Array Block - Expeditionary (CAB-E) Antenna Development for USMC under USN CAB Joint Program. - Initiated Network Status Display development for G/ATOR. - Initiated integration and developmental testing with CAC2S and G/ATOR. - Initiated Systems Engineering for AN/USG-4B, TPN-59 regression testing and Information Assurance. - Continued Information Assurance (IA) developmental activities.					

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B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2014	FY 2015	FY 2016 Base	FY 2016 OCO	FY 2016 Total
- Completed WASP Software development. ***FY 2015 Plans:*** - Continue CAB-E Antenna Developmental Activities. - Continue integration and developmental testing with CAC2S and G/ATOR. - Continue Information Assurance (IA) developmental activities ***FY 2016 Base Plans:*** - Continue Common Array Block-Expeditionary (CAB-E) antenna testing/verification/updates and developmental Activities. - Continue integration and developmental testing with CAC2S and G/ATOR. - Continue Information Assurance (IA) developmental activities ***FY 2016 OCO Plans:*** N/A					
Title: Marine Air Command and Control System (MACCS) Service Life Extension Program (SLEP)/Sustainment: Product Development, Support and Mgmt Services, and T&E	3.755	1.266	0.494	-	0.494
Articles:	-	-	-	-	-
FY 2014 Accomplishments: - Continued TACC and TAOC Life Cycle Support through ongoing Post Development Software Support (PDSS) activities. - Continued active refresh of obsolete hardware items. - Continued to develop and procure ECPs for MTAOM. - Initiated Commercial off the Shelf (COTS) refresh for MTAOM to include completion of a Production Ready Model and Developmental Testing. - Initiated Information Assurance updates (tri-annual drops). ***FY 2015 Plans:*** - Continue TACC and TAOC Life Cycle Support through ongoing Post Development Software Support (PDSS) activities. - Continue active refresh of obsolete hardware items from MACCS systems. - Complete production of COTS Refresh kit for the Mobile Tactical Air Operations Module (MTAOM) and fielding to the Operational Forces. - Complete the Operational Assessment for the MTAOMs COTS refresh activities.					

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B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2014	FY 2015	FY 2016 Base	FY 2016 OCO	FY 2016 Total
- Initiate and complete software updates including delivery of new OS. - Continue Information Assurance updates (tri-annual drops). ***FY 2016 Base Plans:*** - Continue TACC and TAOC Life Cycle Support through ongoing Post Development Software Support (PDSS) activities. - Continue active refresh of obsolete hardware items from MACCS systems. - Continue Information Assurance updates (tri-annual drops). ***FY 2016 OCO Plans:*** N/A					
Title: RVVT: Preparation	-	1.090	1.183	-	1.183
Articles:	-	-	-	-	-
FY 2014 Accomplishments: N/A ***FY 2015 Plans:*** Initiate Analysis of Alternatives (AOA) and development for the next generation of a RVVT COC static variant. ***FY 2016 Base Plans:*** Complete Analysis of Alternatives (AOA) for future RVVT systems. ***FY 2016 OCO Plans:*** N/A					
Title: RVVT: Support and Management Services	0.207	-	-	-	-
Articles:	-	-	-	-	-
FY 2014 Accomplishments: Developed engineering documentation in support of Engineer Change Proposal to upgrade the VideoScout MC/2 host Operating System (OS) from Microsoft Windows XP to Microsoft Windows 7. ***FY 2015 Plans:*** N/A ***FY 2016 Base Plans:***					

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B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2014	FY 2015	FY 2016 Base	FY 2016 OCO	FY 2016 Total
N/A ***FY 2016 OCO Plans:*** N/A					
Title: TBMCS - Test and Evaluation and Management Services	2.934	2.424	1.284	-	1.284
Articles:	-	-	-	-	-
FY 2014 Accomplishments: - Continued test and evaluation support for TBMCS upgrades for Joint Interoperability. - Initiated development and fielding of software and hardware engineering change proposals for Information Assurance (IA). ***FY 2015 Plans:*** -Continue test and evaluation support for TBMCS upgrades for Joint Interoperability. ***FY 2016 Base Plans:*** - Continue test and evaluation support for TBMCS upgrades for Joint Interoperability. ***FY 2016 OCO Plans:*** N/A					
Accomplishments/Planned Programs Subtotals	66.090	8.767	7.772	-	7.772

C. Other Program Funding Summary ($ in Millions)

Line Item	FY 2014	FY 2015	FY 2016 Base	FY 2016 OCO	FY 2016 Total	FY 2017	FY 2018	FY 2019	FY 2020	Cost To Complete	Total Cost
• PMC/4640CT: *CTN*	0.304	1.494	0.015	-	0.015	-	-	-	-	-	51.041
• PMC/4640CU: *MACCS Sustainment*	7.223	0.916	0.884	-	0.884	0.283	0.062	0.050	0.051	Continuing	Continuing
• PMC/4640DX: *TBMCS*	4.420	3.837	2.417	-	2.417	3.362	3.552	3.609	3.622	Continuing	Continuing
• PMC/419000: *COC*	13.480	9.178	13.109	8.221	21.330	15.183	1.403	13.831	9.794	Continuing	Continuing
• PMC/464023: *RVVT*	5.842	1.755	0.204	-	0.204	10.531	10.636	8.135	8.297	Continuing	Continuing
• PMC/4640DY: *CAC2S*	2.246	-	-	-	-	-	-	-	-	-	92.311
• PMC/4630DX: *TBMCS*	0.855	-	-	-	-	-	-	-	-	-	0.855
• PMC/700000: *CAC2S*	-	1.698	-	-	-	-	-	-	-	-	1.698
• PMC/4630CU: *MACCS*	-	0.079	-	-	-	-	-	-	-	-	8.718

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C. Other Program Funding Summary ($ in Millions)

Line Item	FY 2014	FY 2015	FY 2016 Base	FY 2016 OCO	FY 2016 Total	FY 2017	FY 2018	FY 2019	FY 2020	Cost To Complete	Total Cost
• PMC/464400: *CAC2S*	-	12.272	35.147	-	35.147	61.184	52.769	53.722	54.809	Continuing	Continuing
• 0206335M/3373: *CAC2S*	-	32.495	13.431	-	13.431	10.629	3.323	3.403	3.483	Continuing	Continuing

Remarks

D. Acquisition Strategy

CAC2S will employ an evolutionary acquisition strategy utilizing an incremental and phased approach for development and fielding of the CAC2S. The Capability Production Document (CPD) identifies two increments to achieve the full requirements of CAC2S. The current acquisition strategy addresses Increment I of the CAC2S development process and focuses on the requirements that will modernize the assault and air support, air defense and control, and Aviation Combat Element (ACE) battle management capabilities of the Marine Air Command and Control System (MACCS). Increment I of the CAC2S will be accomplished through a two phased approach. Phase 1 will address the requirements to establish the baseline CAC2S capabilities for the MACCS and improve Air Command and Control (AC2) performance and effectiveness. Phase 2 will address the requirements for remaining ACE Battle Management Command & Control (BMC2) requirements. Funding for FY15 through the FYDP is contained in PE 0206335M and Project 3373.

TBMCS is an ACAT III, USAF Program with joint interest/oversight. It was mandated by the Chairman, Joint Chiefs of Staff in July 93 for Air Tasking Order (ATO) Interoperability among all services. USMC will continue following the USAF lead when fielding only the joint modules of TBMCS. As USMC unique requirements are identified the USMC will deviate accordingly when required to sufficiently sustain systems. Over the course of the FYDP, TBMCS is to separately manage the development and fielding of software and hardware engineering change proposals for Information Assurance (IA) and functionality updates to ensure daily direct support of the Air Battle Plan in joint theaters of operation.

MACCS SUSTAINMENT - The acquisition strategy implemented by the MACCS Sustainment Program Office is to maintain the readiness, relevance, and capabilities of the portfolio of post-Milestone C systems through Post Deployment Software Support (PDSS) activities, active refresh of obsolete hardware items, and the implementation of system improvements/modifications in accordance with approved systems engineering processes. Engineering changes to the systems make maximum use of Commercial Off-The-Shelf (COTS), Government Off-The-Shelf (GOTS), and Non-Developmental Items (NDI) in order to decrease risk, leverage developed capabilities and support apparatus, and minimize investment expenditures. These activities are performed by Original Equipment Manufacturer (OEM) commercial entities under contract to Marine Corps Systems Command (MCSC) or by Naval Surface Warfare Center (NSWC) Crane as the MACCS Sustainment Program In-Service Engineering Agent (ISEA). The next major milestone for the MACCS Sustainment Programs is Phase-out or Disposal as the replacement Common Aviation Command and Control System (CAC2S) reaches full operational capability.

CTN - The USMC's CTN acquisition strategy is to participate in the USN's Cooperative Engagement Capability (CEC) program procurement and testing, making necessary modifications to support the Marine Corps' requirement. The next major milestones is the development of the Common Array Block-Expeditionary (CAB-E) Antenna to replace the Composite Solid State Antenna (CSSA), which will become obsolete in FY18, and complete interfaces to Ground/Air Task Oriented Radar (G/ATOR).

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RVVT - The RVVT acquisition strategy is to continually improve the Video Down-Link (VDL) products by enhancing the encryption, range, and reducing the power and weight requirements through competition. Long term efforts are to initiate an Analysis of Alternatives (AOA) beginning FY15 for a competitive solution for the next generation RVVT. The future RVVT system will be procured via a full and open competition and will provide the USMC with mutually supporting COC and dismounted VDL variants.

COC - The COC AN/TSQ-239 (V)2/3/4 is the foundation of USMC C2, meeting near term communications and network requirements across the OpFor and supports pre-deployment training requirements in support of OEF. There is a continuing developmental effort to evolve the COC into a fully integrated MAGTF C2 capability. FY15 supports continual tech refresh, technology insertion, modernization and software upgrade releases and alignment with associated Command and Control programs as required by OpFor Commanders.

E. Performance Metrics

N/A

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Product Development ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2014 Cost	FY 2014 Award Date	FY 2015 Cost	FY 2015 Award Date	FY 2016 Base Cost	FY 2016 Base Award Date	FY 2016 OCO Cost	FY 2016 OCO Award Date	FY 2016 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Prior Years Cumulative Funding	Various	VARIOUS : VARIOUS	93.783	-		-		-		-		-	-	93.783	-
CAC2S	WR	NSWC : Crane, IN	23.615	1.615	Nov 2013	-		-		-		-	-	25.230	-
CAC2S	WR	NSWC : Dahlgren, VA	35.601	6.584	Nov 2013	-		-		-		-	-	42.185	-
CAC2S	C/FPIF	General Dynamics - Phase 2 Contractor : Scottsdale, AZ	60.312	21.527	Nov 2013	-		-		-		-	-	81.839	-
CAC2S	MIPR	NAVSEA : Washington, DC	0.756	1.434	Mar 2014	-		-		-		-	-	2.190	-
CTN	C/CPFF	NAVSEA PEO IWS : Washington, DC	10.110	3.024	Feb 2014	1.188	Feb 2015	0.686	Feb 2016	-		0.686	Continuing	Continuing	Continuing
MACCS Sustainment	WR	NSWC : Crane, IN	2.111	0.029	Jan 2014	0.200	Nov 2014	-		-		-	-	2.340	-
MACCS Sustainment	C/FFP	KATMAI : Van Nuys, CA	3.581	2.585	Aug 2014	-		-		-		-	-	6.166	-
COC	WR	NSWC : Dahlgren,VA	4.448	0.587	Jan 2014	0.200	Feb 2015	0.585	Jan 2016	-		0.585	-	5.820	-
COC	C/FFP	NSWC : Dahlgren, VA	0.000	-		-		1.147	Jan 2016	-		1.147	-	1.147	-
COC	WR	NSWC : Panama City, FL	1.451	0.310	Dec 2013	-		-		-		-	-	1.761	-
COC	C/FFP	NSWC : Panama City, FL	0.000	0.070	Apr 2014	-		-		-		-	-	0.070	-
COC Energy Initiatives	C/FFP	NSWC : Crane, IN	0.000	0.036	Apr 2014	-		0.300	Apr 2016	-		0.300	-	0.336	-
COC Energy Initiatives	WR	NSWC : Crane, IN	0.000	0.312	Jan 2014	-		0.545	Jan 2016	-		0.545	-	0.857	-
COC	WR	SSC-LANT : Charleston, SC	0.000	-		1.229	Dec 2014	0.700	Dec 2015	-		0.700	-	1.929	-
COC SIM/STIM	C/FFP	NSWC : Dahlgren, VA	0.000	0.180	Mar 2014	-		0.240	Mar 2016	-		0.240	-	0.420	-
COC Test Plan	WR	NSWC : Dahlgren, VA	0.000	0.202	Jun 2014	0.190	Feb 2015	-		-		-	-	0.392	-

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Product Development ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2014 Cost	FY 2014 Award Date	FY 2015 Cost	FY 2015 Award Date	FY 2016 Base Cost	FY 2016 Base Award Date	FY 2016 OCO Cost	FY 2016 OCO Award Date	FY 2016 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
RVVT	MIPR	ARDEC : Picatinny, NJ	0.000	-		1.090	Mar 2015	1.183	Dec 2015	-		1.183	Continuing	Continuing	Continuing
		Subtotal	235.768	38.495		4.097		5.386		-		5.386	-	-	-

Support ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2014 Cost	FY 2014 Award Date	FY 2015 Cost	FY 2015 Award Date	FY 2016 Base Cost	FY 2016 Base Award Date	FY 2016 OCO Cost	FY 2016 OCO Award Date	FY 2016 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Prior Years Cumulative Funding	Various	VARIOUS : VARIOUS	24.485	-		-		-		-		-	-	24.485	-
CAC2S	WR	Travel-TAD : Various	1.276	0.765	Sep 2014	-		-		-		-	-	2.041	-
CAC2S	C/CPAF	AMSSA : APG, Maryland	0.260	0.330	Nov 2013	-		-		-		-	-	0.590	-
CAC2S	WR	SPAWAR : Charleston, SC	0.110	0.559	Nov 2013	-		-		-		-	-	0.669	-
CAC2S	WR	JITC : Fort Huachuca, AZ	1.016	0.100	Apr 2014	-		-		-		-	-	1.116	-
CAC2S	WR	MCTSSA : Camp Pendleton, CA	2.778	0.387	Nov 2013	-		-		-		-	-	3.165	-
CAC2S	WR	NSWC Corona : Corona, CA	3.462	1.715	Nov 2013	-		-		-		-	-	5.177	-
CAC2S	Allot	MCSC - Safety : Quantico, VA	0.482	0.528	Feb 2014	-		-		-		-	-	1.010	-
CAC2S	MIPR	Redstone : Redstone Arsenal, AL	0.000	0.320	Feb 2014	-		-		-		-	-	0.320	-
CTN	WR	NSWC : Dahlgren, VA	1.913	2.644	Jan 2014	0.800	Jan 2015	0.231	Jan 2016	-		0.231	Continuing	Continuing	Continuing
CTN	WR	NSWC : PHD, CA	0.259	0.118	Dec 2013	0.138	Feb 2015	0.054	Feb 2016	-		0.054	Continuing	Continuing	Continuing
CTN	WR	NSWC : Crane, IN	0.400	0.801	Feb 2014	-		0.150	Nov 2015	-		0.150	-	1.351	-
CTN	Various	Travel-TAD : Not Specified	0.955	0.100	Sep 2014	0.022	Sep 2015	0.023	Sep 2016	-		0.023	Continuing	Continuing	Continuing

Exhibit R-3, RDT&E Project Cost Analysis: PB 2016 Navy			Date: February 2015
Appropriation/Budget Activity 1319 / 7	R-1 Program Element (Number/Name) PE 0206313M / *Marine Corps Comms Systems*	Project (Number/Name) 2273 / *Air Ops Cmd & Control (C2) Sys*	

Support ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2014 Cost	FY 2014 Award Date	FY 2015 Cost	FY 2015 Award Date	FY 2016 Base Cost	FY 2016 Base Award Date	FY 2016 OCO Cost	FY 2016 OCO Award Date	FY 2016 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
CTN	WR	SPAWAR : Charleston, SC	0.435	0.192	Nov 2013	-		-		-		-	-	0.627	-
CTN	C/CPFF	NAVSEA PEO IWS : Washington DC	1.243	1.117	Apr 2014	-		-		-		-	-	2.360	-
MACCS Sustainment	WR	NSWC : Crane, IN	1.038	-		0.300	Nov 2014	0.031	Nov 2015	-		0.031	Continuing	Continuing	Continuing
MACCS Sustainment	Reqn	NGES : Woodland Hills, CA	1.300	0.584	Sep 2014	0.400	Sep 2015	0.364	Sep 2016	-		0.364	Continuing	Continuing	Continuing
MACCS Sustainment	C/FFP	SPAWAR Charleston : Charleston, SC	0.963	0.036	Jul 2014	0.246	Nov 2014	0.076	Nov 2015	-		0.076	Continuing	Continuing	Continuing
		Subtotal	42.375	10.296		1.906		0.929		-		0.929	-	-	-

Test and Evaluation ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2014 Cost	FY 2014 Award Date	FY 2015 Cost	FY 2015 Award Date	FY 2016 Base Cost	FY 2016 Base Award Date	FY 2016 OCO Cost	FY 2016 OCO Award Date	FY 2016 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Prior Years Cumulative Funding	Various	VARIOUS : VARIOUS	10.567	-		-		-		-		-	-	10.567	-
CAC2S	WR	NSWC Port Hueneme : Port Hueneme, CA	0.712	1.622	Nov 2013	-		-		-		-	-	2.334	-
CAC2S	WR	MCOTEA : Quantico, VA	7.421	1.500	Apr 2014	-		-		-		-	-	8.921	-
CAC2S	WR	MACS-2 : Cherry Point, NC	0.000	2.201	Apr 2014	-		-		-		-	-	2.201	-
CAC2S	C/FFP	APX : Wahington, DC	0.000	0.750	May 2014	-		-		-		-	-	0.750	-
CAC2S	MIPR	NAWX : Patuxent River, MD	0.000	0.175	Jul 2014	-		-		-		-	-	0.175	-
TBMCS	C/FFP	Lockheed Martin : Colorado Springs, CO	2.564	2.545	Jul 2014	2.082	Mar 2015	1.067	Mar 2016	-		1.067	Continuing	Continuing	Continuing

Exhibit R-3, RDT&E Project Cost Analysis: PB 2016 Navy			Date: February 2015
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Test and Evaluation ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2014 Cost	FY 2014 Award Date	FY 2015 Cost	FY 2015 Award Date	FY 2016 Base Cost	FY 2016 Base Award Date	FY 2016 OCO Cost	FY 2016 OCO Award Date	FY 2016 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
TBMCS	MIPR	Englin AFB : Englin AFB, FL	0.504	-		0.342	Jun 2015	0.217	Jun 2016	-		0.217	Continuing	Continuing	Continuing
TBMCS	MIPR	DTIC : Fort Belvoir, VA	0.000	0.225	Apr 2014	-		-		-		-	-	0.225	-
CTN	C/BA	JITC : PHD, CA	0.000	0.033	Mar 2014	-		-		-		-	-	0.033	-
CTN	WR	NSWC Corona : Corona, CA	1.424	0.133	Nov 2013	-		-		-		-	-	1.557	-
CTN	WR	NSWC DD : Dahlgren, VA	1.262	-		0.220	Jan 2015	0.150	Jan 2016	-		0.150	-	1.632	-
CTN	C/CPFF	NAVSEA PEO IWS : Washington DC	0.333	-		-		-	Nov 2015	-		-	-	0.333	-
CTN	WR	JITC : Fort Huachuca, AZ	0.058	0.060	Dec 2013	-		-		-		-	-	0.118	-
CTN	WR	MCOTEA : Quantico VA	1.344	0.200	Aug 2014	-		-		-		-	-	1.544	-
CTN	WR	MCSC : Quantico, VA	3.876	0.200	Nov 2013	-		-		-		-	Continuing	Continuing	Continuing
MACCS Sustainment	Reqn	NGES : Woodland Hills, CA	3.419	0.500	Sep 2014	0.100	Sep 2015	-		-		-	Continuing	Continuing	Continuing
MACCS Sustainment	MIPR	DISA : Washington, DC	0.737	0.021	Jan 2014	0.020	Jan 2015	0.023	Jan 2016	-		0.023	-	0.801	-
RVVT	WR	SPAWAR : Charleston, SC	1.952	-		-		-		-		-	Continuing	Continuing	Continuing
		Subtotal	36.173	10.165		2.764		1.457		-		1.457	-	-	-

Management Services ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2014 Cost	FY 2014 Award Date	FY 2015 Cost	FY 2015 Award Date	FY 2016 Base Cost	FY 2016 Base Award Date	FY 2016 OCO Cost	FY 2016 OCO Award Date	FY 2016 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Prior Years Cumulative Funding	Various	VARIOUS : VARIOUS	5.556	-		-		-		-		-	-	5.556	-

Exhibit R-3, RDT&E Project Cost Analysis: PB 2016 Navy		Date: February 2015
Appropriation/Budget Activity 1319 / 7	**R-1 Program Element (Number/Name)** PE 0206313M / *Marine Corps Comms Systems*	**Project (Number/Name)** 2273 / *Air Ops Cmd & Control (C2) Sys*

Management Services ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2014 Cost	FY 2014 Award Date	FY 2015 Cost	FY 2015 Award Date	FY 2016 Base Cost	FY 2016 Base Award Date	FY 2016 OCO Cost	FY 2016 OCO Award Date	FY 2016 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
CAC2S	C/FFP	QNA: Stafford, VA : Quantico, VA	15.150	5.085	Nov 2013	-		-		-		-	-	20.235	-
TBMCS	C/FFP	QNA: Stafford, VA : Quantico, VA	2.309	0.164	Apr 2014	-		-		-		-	-	2.473	-
RVVT	WR	NSWC Dahlgren : Dahlgren, VA	0.200	0.207	Nov 2013	-		-		-		-	-	0.407	-
COC Engineering Support	FFRDC	U.S. Army, MITRE : Stafford, VA	1.554	1.678	Jan 2014	-		-		-		-	-	3.232	-
		Subtotal	24.769	7.134		-		-		-		-	-	31.903	-

	Prior Years	FY 2014		FY 2015		FY 2016 Base		FY 2016 OCO		FY 2016 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	339.085	66.090		8.767		7.772		-		7.772	-	-	-

Remarks

Exhibit R-4, RDT&E Schedule Profile: PB 2016 Navy		Date: February 2015
Appropriation/Budget Activity 1319 / 7	**R-1 Program Element (Number/Name)** PE 0206313M / *Marine Corps Comms Systems*	**Project (Number/Name)** 2273 / *Air Ops Cmd & Control (C2) Sys*

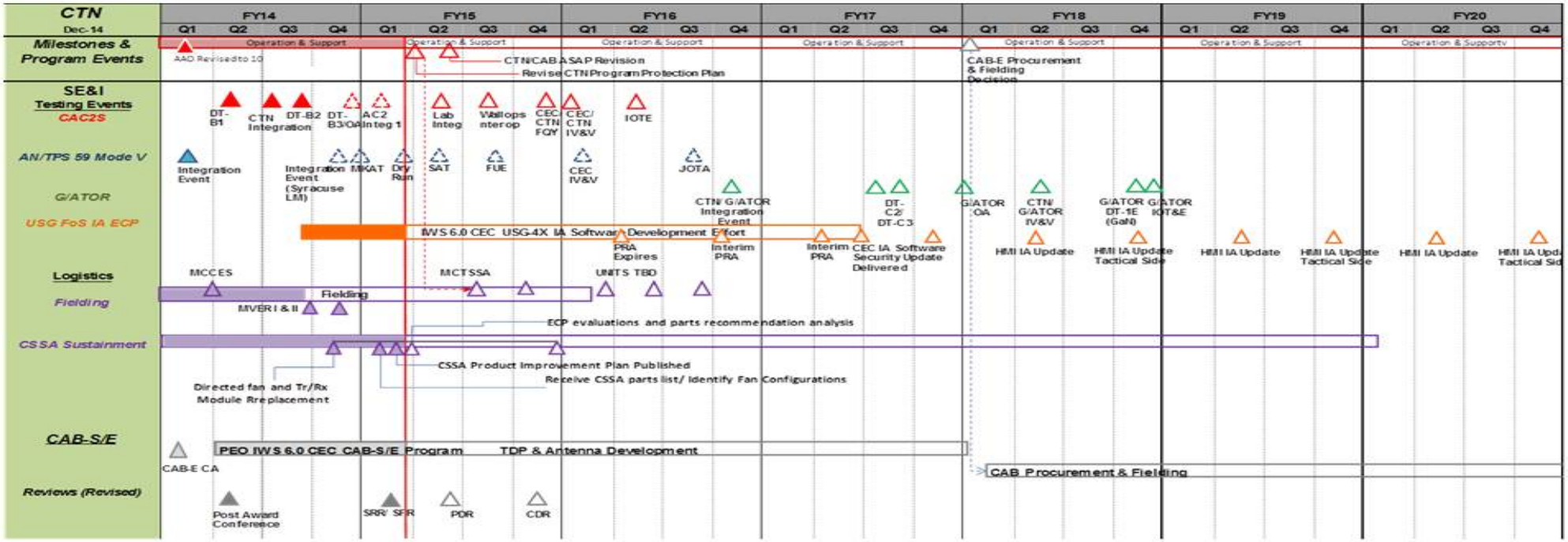

Exhibit R-4, RDT&E Schedule Profile: PB 2016 Navy		Date: February 2015
Appropriation/Budget Activity 1319 / 7	**R-1 Program Element (Number/Name)** PE 0206313M / *Marine Corps Comms Systems*	**Project (Number/Name)** 2273 / *Air Ops Cmd & Control (C2) Sys*

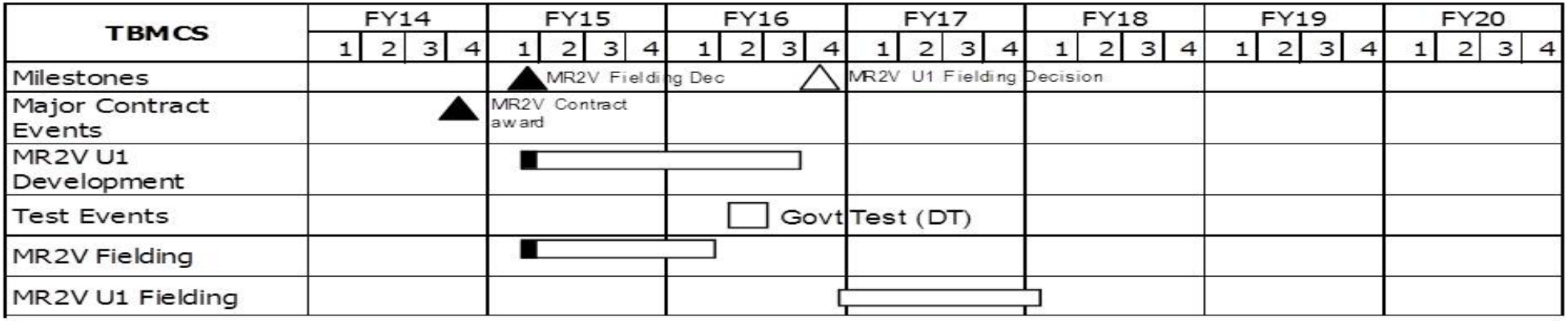

Exhibit R-4, RDT&E Schedule Profile: PB 2016 Navy		Date: February 2015
Appropriation/Budget Activity 1319 / 7	**R-1 Program Element (Number/Name)** PE 0206313M / *Marine Corps Comms Systems*	**Project (Number/Name)** 2273 / *Air Ops Cmd & Control (C2) Sys*

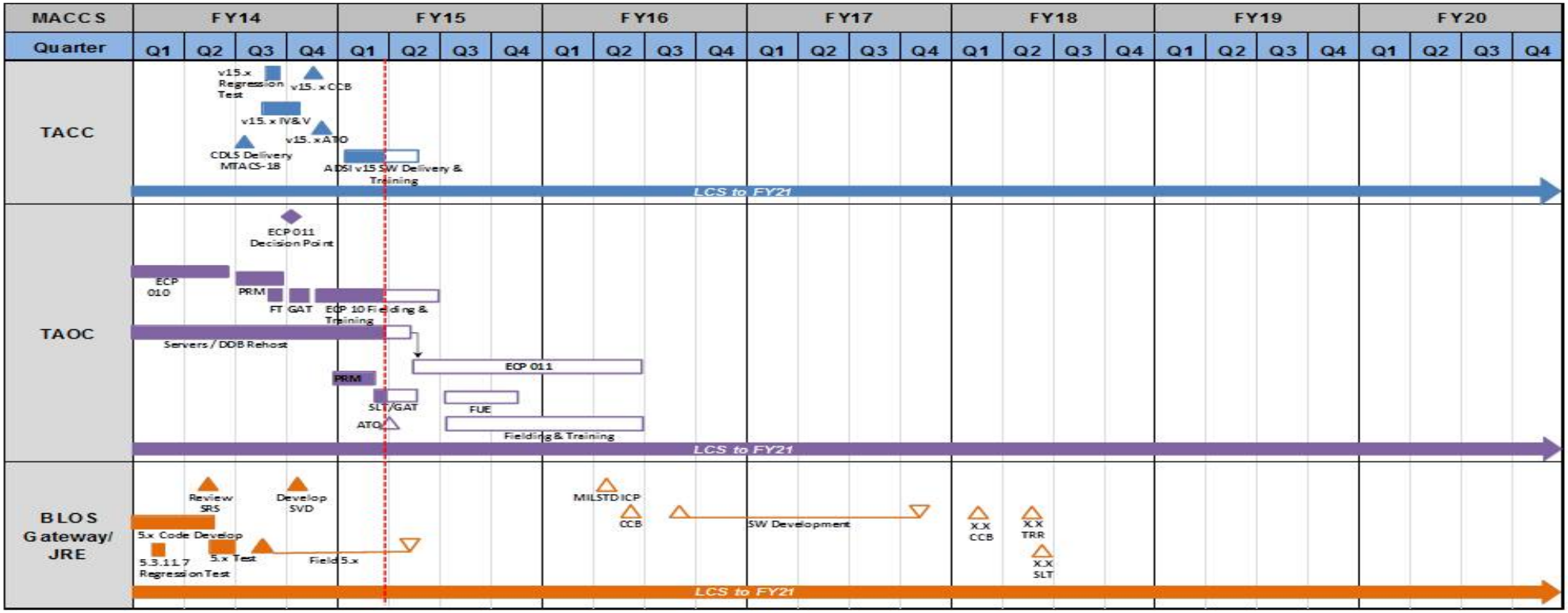

Exhibit R-4, RDT&E Schedule Profile: PB 2016 Navy		Date: February 2015
Appropriation/Budget Activity 1319 / 7	**R-1 Program Element (Number/Name)** PE 0206313M / *Marine Corps Comms Systems*	**Project (Number/Name)** 2273 / *Air Ops Cmd & Control (C2) Sys*

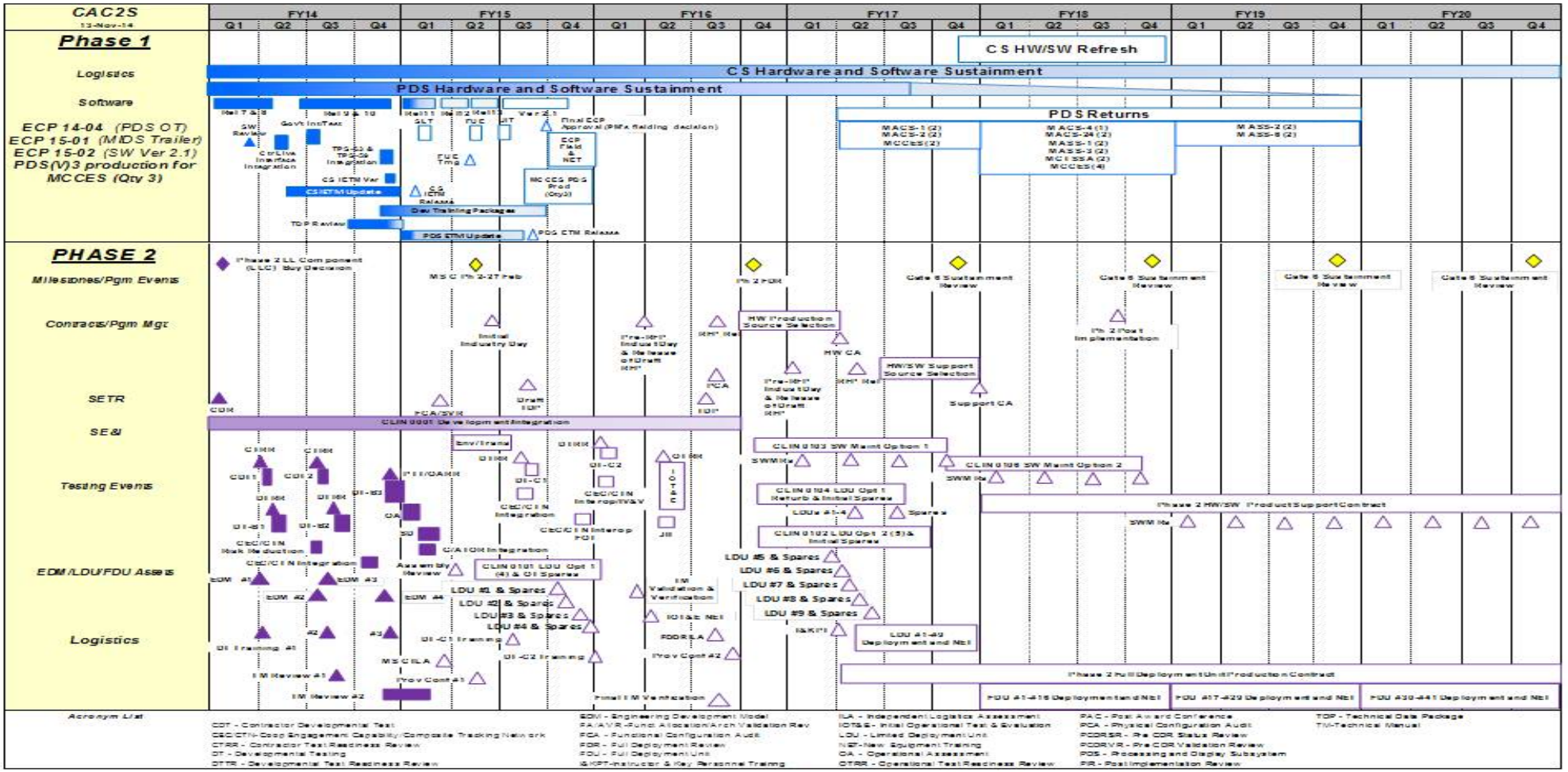

Exhibit R-4, RDT&E Schedule Profile: PB 2016 Navy		Date: February 2015
Appropriation/Budget Activity 1319 / 7	**R-1 Program Element (Number/Name)** PE 0206313M / *Marine Corps Comms Systems*	**Project (Number/Name)** 2273 / *Air Ops Cmd & Control (C2) Sys*

COC Program Schedule

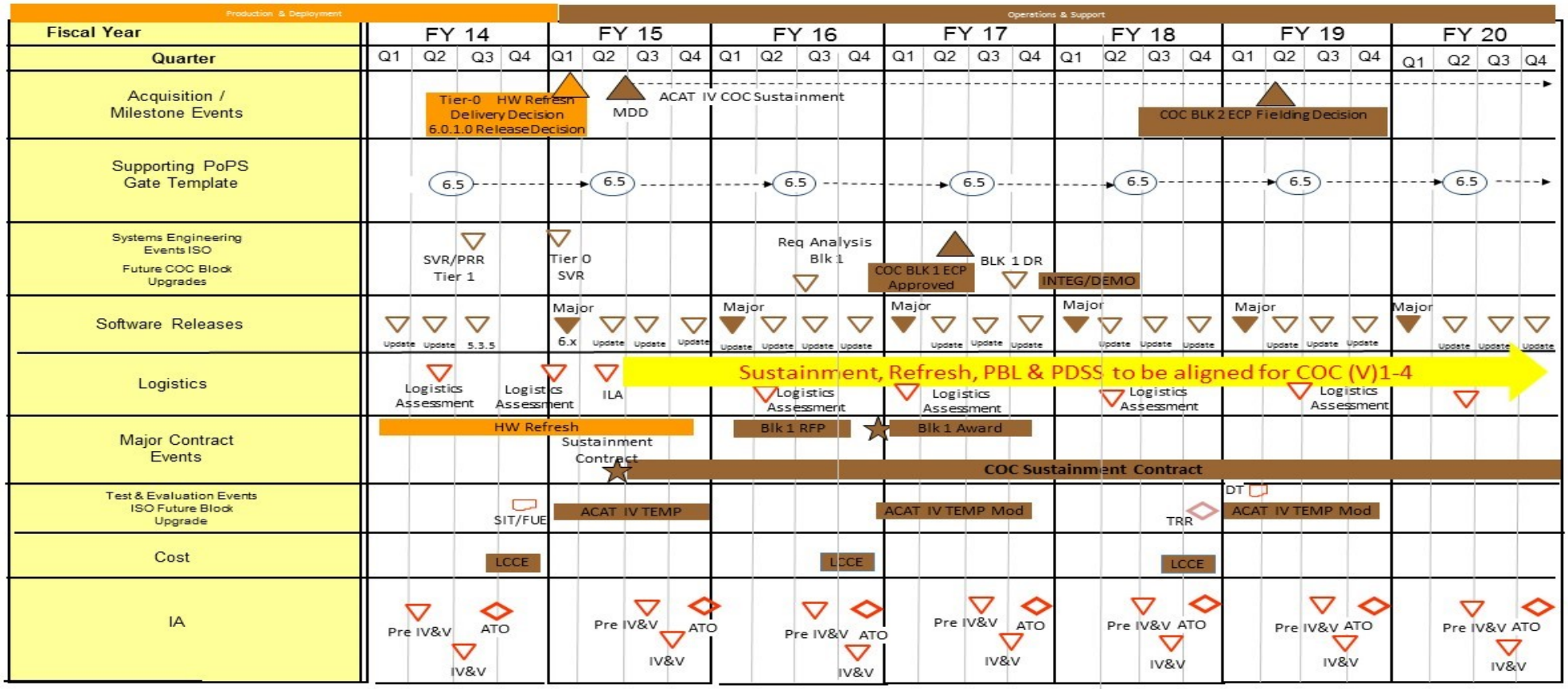

Exhibit R-4, RDT&E Schedule Profile: PB 2016 Navy		Date: February 2015
Appropriation/Budget Activity 1319 / 7	**R-1 Program Element (Number/Name)** PE 0206313M / *Marine Corps Comms Systems*	**Project (Number/Name)** 2273 / *Air Ops Cmd & Control (C2) Sys*

Remote Video Viewing Terminal Program Schedule

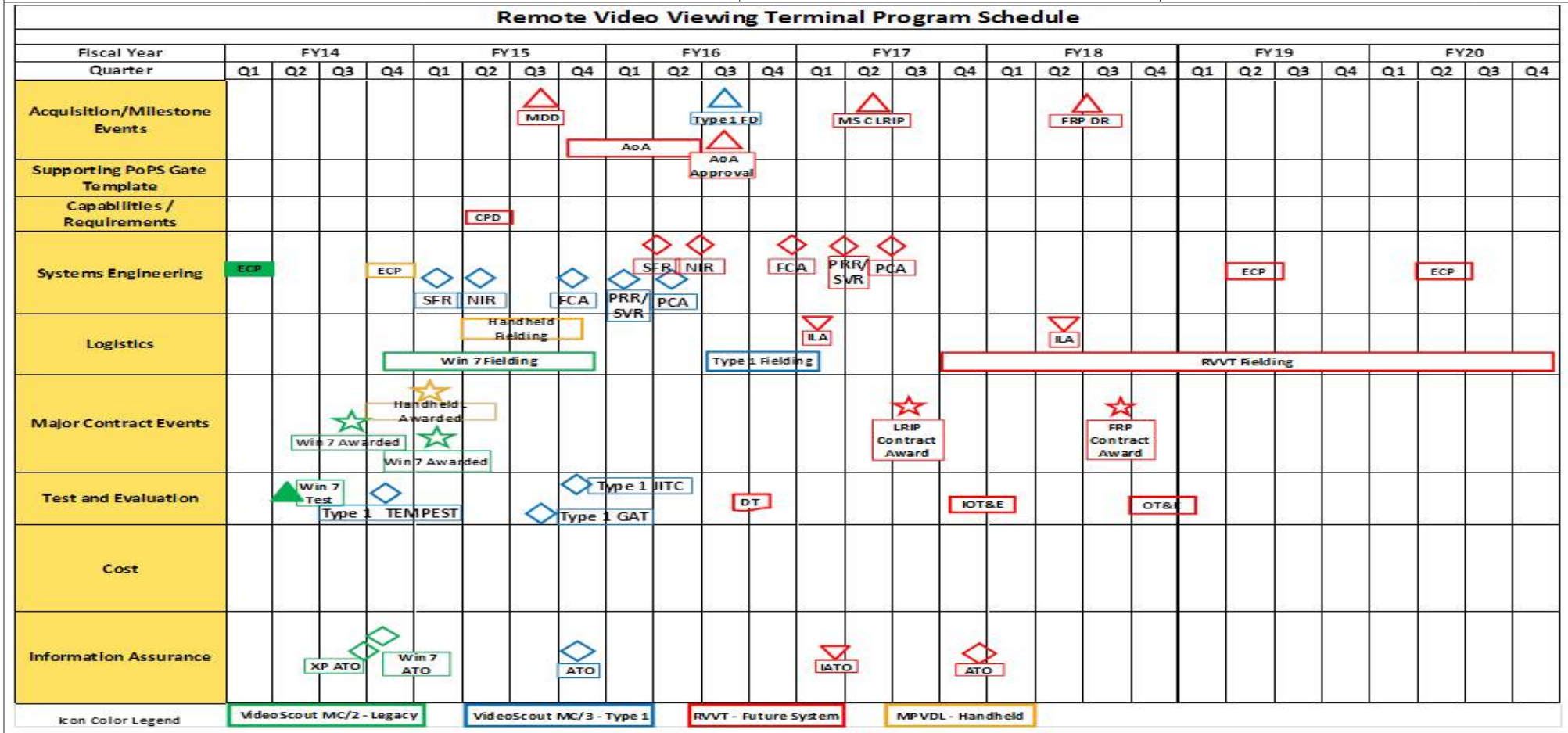

Exhibit R-4A, RDT&E Schedule Details: PB 2016 Navy		Date: February 2015
Appropriation/Budget Activity 1319 / 7	**R-1 Program Element (Number/Name)** PE 0206313M / *Marine Corps Comms Systems*	**Project (Number/Name)** 2273 / *Air Ops Cmd & Control (C2) Sys*

Schedule Details

	Start		End	
Events by Sub Project	**Quarter**	**Year**	**Quarter**	**Year**
Proj 2273				
COC Block 1 Engineering Change Proposal (ECP) Approved	2	2017	2	2017
RVVT MC/3 Government Acceptance Test (GAT)	3	2015	3	2015
RVVT Analysis of Alternatives Approved	3	2016	3	2016
RVVT MC/3 Fielding Decision (FD)	3	2016	3	2016
RVVT Future System Developmental Test (DT)	3	2016	4	2016
RVVT Future System Milestone C	2	2017	2	2017
CAC2S: CLIN 0001 Development/Integration	1	2014	3	2016
CAC2S: Critical Design Review	1	2014	1	2014
CAC2S: Developmental Test - B1	2	2014	2	2014
CAC2S: Developmental Test - B2	3	2014	3	2014
CAC2S: Developmental Test - B3	4	2014	4	2014
CAC2S: Operational Assessment	1	2015	1	2015
CAC2S: Milestone C	2	2015	2	2015
CAC2S: Coop Engagement Capability/Composite Tracking Network Certification	2	2015	2	2015
CAC2S: Limited Deployment Units (LDU) Build (PMC BL 464400)	2	2015	1	2016
CAC2S: Developmental Test Readiness Review	3	2015	3	2015
CAC2S: Developmental Test - C1	3	2015	3	2015
CAC2S: Developmental Test - C2	1	2016	1	2016
CAC2S: Operational Test Readiness Review	2	2016	2	2016
CAC2S: Initial Operational Test and Evaluation	2	2016	2	2016
CAC2S: Full Deployment Review	4	2016	4	2016

Exhibit R-2A, RDT&E Project Justification: PB 2016 Navy			Date: February 2015
Appropriation/Budget Activity 1319 / 7	R-1 Program Element (Number/Name) PE 0206313M / *Marine Corps Comms Systems*	Project (Number/Name) 2274 / *Command & Control Warfare Sys*	

COST ($ in Millions)	Prior Years	FY 2014	FY 2015	FY 2016 Base	FY 2016 OCO	FY 2016 Total	FY 2017	FY 2018	FY 2019	FY 2020	Cost To Complete	Total Cost
2274: *Command & Control Warfare Sys*	17.198	7.919	7.053	8.951	-	8.951	6.769	8.233	8.347	7.156	Continuing	Continuing
Quantity of RDT&E Articles		-	-	-	-	-	-	-	-	-		

A. Mission Description and Budget Item Justification

COUNTER RADIO-CONTROLLED IMPROVISED EXPLOSIVE DEVICE (RCIED) ELECTRONIC WARFARE (USMC CREW) SYSTEMS are vehicle mounted and dismounted modular programmable multi-band radio frequency jammers designed to deny enemy use of selected portions of the radio frequency spectrum in the vicinity of the jammer to counter the RCIED threat. The mounted and dismounted systems provide Marines in vehicle convoys and on foot with the necessary protection from the continued and evolving threat of deadly RCIEDs. Legacy CREW systems are currently deployed to meet threats in the multiple theaters of operation and fielded to selected MEUs in support of worldwide deployment. To continue to support the various worldwide missions, each CREW unit receives customized programming (load-sets) to counter the area's RCIED threats. The testing, programming development, and product improvement research are funded with the CREW's RDTE,N funding and prioritized to meet the demand of all deployed CREW assets. The increase of $1.877M from FY15 to FY16 will fund development and testing of additional software waveform load sets.

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2014	FY 2015	FY 2016 Base	FY 2016 OCO	FY 2016 Total
Title: *USMC CREW - Product Development	1.937	2.706	3.360	-	3.360
Articles:	-	-	-	-	-
FY 2014 Accomplishments: -Continued development of waveform load sets for the Modi system while continuing the development of waveform/load sets for all other existing CREW systems. Increased the Universal Test Set (UTS) waveform development to include the Modi system and updated its current programming for all improvement to legacy CREW systems. -Continued support efforts to provide custom load sets for each type of CREW systems for MEU/Marine Expeditionary Force (MEF) to counter RCIED technology around the globe. -Continued to develop custom vehicle installation kits for the CVRJ(V)2 upgrade in order to support the integration and installation of the upgrade kits onto Marine Corps vehicle platform. -Completed the design changes to improve the Modi transportability issues that minimizes the Marine's fatigue during deployment.					
FY 2015 Plans: -Continue the development of waveform load sets will include the development of the CREW MEU mounted and dismounted system's waveform load sets into the group of required CREW systems to support. The increase in					

Exhibit R-2A, RDT&E Project Justification: PB 2016 Navy		Date: February 2015
Appropriation/Budget Activity 1319 / 7	**R-1 Program Element (Number/Name)** PE 0206313M / *Marine Corps Comms Systems*	**Project (Number/Name)** 2274 / *Command & Control Warfare Sys*

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2014	FY 2015	FY 2016 Base	FY 2016 OCO	FY 2016 Total
system variants will also result in the need to continue the development of waveform/load sets for UTS across multiple deployment theaters. -Continue to develop vehicle installation kits for the MEU(SOC) Phase II and MARCENT mounted systems in order to support the integration and installation of the upgrade kits into Marine Corps vehicle platform while completing the development of the CVRJ(V)2 integration kits. ***FY 2016 Base Plans:*** -Continue development of software waveform load sets including CREW MEU mounted and dismounted system's waveform load sets. -Continue software waveform load sets for Universal Test Sets (UTS) across multiple deployment theaters. -Continue the development of the CVRJ(V)2 mounted and Thor III dismounted system's waveform threat load sets in support of CREW MEU systems to support. -Continue development of additional software threat loads to defeat evolving RCIED threats world wide. -Continue to develop vehicle installation kits for the CREW MEU mounted systems in order to support the integration and installation of the upgrade kits into Marine Corps vehicle platform while completing the development of additional CVRJ(V)2 integration kits for new vehicle platforms. ***FY 2016 OCO Plans:*** N/A					
Title: *USMC CREW - Support	0.500	0.595	0.622	-	0.622
Articles:	-	-	-	-	-
FY 2014 Accomplishments: -Continued to conduct necessary systems engineering and integration support required for the mounted CREW, CVRJ (V)1 and (V)2 integrations into Marine Expeditionary Units (MEU)/Marine Expeditionary Force (MEF) mission profiles by developing vehicle installation kits for the CVRJ units. -Continued system support for CVRJ (V)1 and (V)2, Thor III, Modi systems and the Universal Test Sets by analyzing CREW performance impacts resulting from compatibility and environmental risk impacts. ***FY 2015 Plans:*** -Continue to conduct systems engineering and integration support required for the mounted CREW integrations into Marine Expeditionary Units (MEU)/Marine Expeditionary Force (MEF) mission profiles by developing vehicle installation kits for these mounted units.					

Exhibit R-2A, RDT&E Project Justification: PB 2016 Navy		Date: February 2015
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B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2014	FY 2015	FY 2016 Base	FY 2016 OCO	FY 2016 Total
-Continue system support for CVRJ (V)1 and (V)2, Thor III, CREW MEU, Modi systems, and the Universal Test Sets by analyzing CREW performance impacts resulting from compatibility and environmental risk impacts. ***FY 2016 Base Plans:*** -Continue to conduct systems engineering and integration support required for the mounted CREW, CVRJ (V)2, and MEU(SOC) integrations into Marine Expeditionary Units (MEU)/Marine Expeditionary Force (MEF) mission profiles by developing vehicle installation kits for these mounted units. -Continue system support for CVRJ (V)2, Thor III, MEU(SOC) Modi systems, MARCENT systems and the Universal Test Sets by analyzing CREW performance impacts resulting from compatibility and environmental risk impacts. ***FY 2016 OCO Plans:*** N/A					
Title: *USMC CREW - Test and Evaluation	3.479	0.420	1.472	-	1.472
Articles:	-	-	-	-	-
FY 2014 Accomplishments: -Continued to conduct test events in support of the CVRJ (V)1 and (V)2, Thor III, CREW MEU, Modi and Universal Test Set (UTS) systems regarding its ability to defeat the RCIED threat in multiple worldwide locations. Tested the Modi dismounted and MEU production units that will be fielded for MEU use. -Completed compatibility testing against USMC devices to ensure Marine Corps CREW systems maintained required performance capabilities. -Completed Characterized operational limitations regarding the CREW systems and standoff restrictions for its operation. -Completed Modi carriage improvements testing to distinguish possible design limitations that can be improved to optimize the Marine use of the system. -Completed validating alternate testing methods to reduce test cost of multiple waveform across all CREW systems. ***FY 2015 Plans:*** -Continue to conduct test events in support of the CVRJ (V)1 and (V)2, Thor III, CREW MEU, Modi and Universal Test Set (UTS) systems regarding its ability to defeat the RCIED threat in multiple worldwide locations. -Complete the testing of the CREW MEU production units that will be fielded for MEU use. -Continue to conduct compatibility testing against USMC and other services devices to ensure Marine Corps CREW systems maintained required performance capabilities.					

Exhibit R-2A, RDT&E Project Justification: PB 2016 Navy		Date: February 2015
Appropriation/Budget Activity 1319 / 7	**R-1 Program Element (Number/Name)** PE 0206313M / *Marine Corps Comms Systems*	**Project (Number/Name)** 2274 / *Command & Control Warfare Sys*

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2014	FY 2015	FY 2016 Base	FY 2016 OCO	FY 2016 Total
-Continue to characterize operational limitations regarding the CREW systems and standoff restrictions for its operation. -Complete mounted and dismounted CREW improvements testing to distinguish possible design limitations that can be improved to optimize the Marine use of the system. ***FY 2016 Base Plans:*** -Continue test events in support of the CVRJ (V)2, Thor III, CREW MEU, Modi and Universal Test Set (UTS) systems regarding its ability to defeat the RCIED threat in multiple worldwide locations. -Continue testing of the mounted and dismounted CREW production units that will be fielded for MEU use. -Continue compatibility testing against USMC and other services devices to ensure Marine Corps CREW systems maintained required performance capabilities. -Complete characterizing operational limitations regarding the CREW systems and standoff restrictions for its operation. -Complete mounted and dismounted CREW improvements testing to distinguish possible design limitations that can be improved to optimize the Marine use of the system. ***FY 2016 OCO Plans:*** N/A					
Title: *USMC CREW - Management	2.003	3.332	3.497	-	3.497
Articles:	-	-	-	-	-
FY 2014 Accomplishments: -Continued to manage the new techniques, improve capabilities, enhance software and upgrades to counter the evolving threat and prevent technology obsolescence for CVRJ (V)1 and (V)2, Thor III, CREW MEU, Modi, and Universal Test Set systems. ***FY 2015 Plans:*** -Continue to manage the new techniques, improve capabilities, enhance software and upgrades to counter the evolving threat and prevent technology obsolescence for CVRJ (V)1 and (V)2, Thor III, Modi, CREW MEU mounted/dismounted systems, and the Universal Test Set systems. ***FY 2016 Base Plans:***					

Exhibit R-2A, RDT&E Project Justification: PB 2016 Navy		Date: February 2015
Appropriation/Budget Activity 1319 / 7	**R-1 Program Element (Number/Name)** PE 0206313M / *Marine Corps Comms Systems*	**Project (Number/Name)** 2274 / *Command & Control Warfare Sys*

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2014	FY 2015	FY 2016 Base	FY 2016 OCO	FY 2016 Total
-Continue to manage the new techniques, improve capabilities, enhance software and upgrades to counter the evolving threat and prevent technology obsolescence for CVRJ (V)2, Thor III, Modi, CREW MEU mounted/ dismounted systems, and the Universal Test Set systems. ***FY 2016 OCO Plans:*** N/A					
Accomplishments/Planned Programs Subtotals	7.919	7.053	8.951	-	8.951

C. Other Program Funding Summary ($ in Millions)

N/A

Remarks

D. Acquisition Strategy

COUNTER RADIO-CONTROLLED IMPROVISED EXPLOSIVE DEVICE (RCIED) ELECTRONIC WARFARE (USMC CREW): CREW mounted and dismounted systems provide Marines in vehicle convoys and on foot with the necessary protection from the continued and evolving threat of deadly RCIEDs in all current and future operations. The program will continue to develop new techniques, improve capabilities, enhance software and develop upgrades to counter evolving threats and prevent technology obsolescence. Activities include waveform development, non-recurring engineering for system enhancements, capability upgrades, and installation kits, integration of the enhancements/Vehicle Installation Kits (VIKs) and the tests/government studies required to support these changes. 3100 CVRJ(V1) mounted systems were upgraded to a Band C (V2) capability beginning in FY12 and are being fielded to selected MEU units starting in FY13. The Thor III are dismounted systems fielded to OEF in FY12 and are also being fielded to selected MEU units starting in FY13. The Modi is a dismounted system which commences initial replacement of the Thor III. 40 Modi were procured in FY13 with partial delivery in FY14 and the remaining expected in early FY15. The CREW MEU program consists of 150 mounted and 360 dismounted systems and was initiated as an ongoing effort to develop new techniques, improve capabilities, enhance software and develop waveform load sets to counter evolving threats and prevent technology obsolescence for both mounted and dismounted systems. The 150 mounted and 360 dismounted systems are planned to be procured in FY15 with expected delivery in FY16.

E. Performance Metrics

Milestone Reviews

Exhibit R-3, RDT&E Project Cost Analysis: PB 2016 Navy		Date: February 2015
Appropriation/Budget Activity 1319 / 7	**R-1 Program Element (Number/Name)** PE 0206313M / *Marine Corps Comms Systems*	**Project (Number/Name)** 2274 / *Command & Control Warfare Sys*

Product Development ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2014 Cost	FY 2014 Award Date	FY 2015 Cost	FY 2015 Award Date	FY 2016 Base Cost	FY 2016 Base Award Date	FY 2016 OCO Cost	FY 2016 OCO Award Date	FY 2016 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
USMC CREW	MIPR	ARL/MILTECH : WRIGHT-PATTERSON, OH	0.571	0.300	Jan 2014	-		-		-		-	-	0.871	-
USMC CREW	WR	NSWC CD : CRANE IN	1.058	1.322	Nov 2013	1.656	Jun 2015	2.487	Feb 2016	-		2.487	Continuing	Continuing	Continuing
USMC CREW	SS/FFP	NAVSEA : BALTIMORE, MD	5.089	0.100	Jul 2014	0.600	Jan 2015	0.423	Jan 2016	-		0.423	Continuing	Continuing	Continuing
USMC CREW	WR	SSC-A : CHARLESTON, SC	0.763	0.215	Jul 2014	0.450	Jun 2015	0.450	Feb 2016	-		0.450	Continuing	Continuing	Continuing
		Subtotal	7.481	1.937		2.706		3.360		-		3.360	-	-	-

Remarks

USMC CREW FY14 - FY16: USMC CREW utilized NSWC CRANE (CRANE, IN) and NAVSEA (Johns Hopkins University Applied Physics Laboratories) to develop waveform load sets for all CREW systems to continue to counter the evolving RCIED Threats.
USMC CREW FY14 - FY16: USMC CREW Will utilize SSC-A (SPAWAR, Charleston) to develop mounting solutions in order to integrate mounted systems into Marine Corps Vehicle platforms.
USMC CREW FY14 - FY16: USMC CREW will utilize NSWC CRANE (Crane, IN) to design, develop and contract engineering changes to the CREW systems via the Original Equipment Manufacturer (OEM)

Support ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2014 Cost	FY 2014 Award Date	FY 2015 Cost	FY 2015 Award Date	FY 2016 Base Cost	FY 2016 Base Award Date	FY 2016 OCO Cost	FY 2016 OCO Award Date	FY 2016 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
USMC CREW	WR	SSC-A : CHARLESTON, SC	0.258	0.295	Nov 2013	0.295	Jan 2015	0.308	Jan 2016	-		0.308	Continuing	Continuing	Continuing
USMC CREW	WR	NSWC DD : DAHLGREN, VA	0.803	0.205	Nov 2013	0.300	Jan 2015	0.314	Jan 2016	-		0.314	Continuing	Continuing	Continuing
Prior Years Cumulative Funding	MIPR	VARIOUS : VARIOUS	3.800	-		-		-		-		-	-	3.800	-
		Subtotal	4.861	0.500		0.595		0.622		-		0.622	-	-	-

Remarks

USMC CREW NSWC Dahlgren: RADHAZ (Radio Hazard) Studies and Configuration Management Support

Exhibit R-3, RDT&E Project Cost Analysis: PB 2016 Navy		Date: February 2015
Appropriation/Budget Activity 1319 / 7	**R-1 Program Element (Number/Name)** PE 0206313M / *Marine Corps Comms Systems*	**Project (Number/Name)** 2274 / *Command & Control Warfare Sys*

Support ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2014 Cost	FY 2014 Award Date	FY 2015 Cost	FY 2015 Award Date	FY 2016 Base Cost	FY 2016 Base Award Date	FY 2016 OCO Cost	FY 2016 OCO Award Date	FY 2016 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
USMC CREW SSC-Atlantic: System Engineering and validation and verification															

Test and Evaluation ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2014 Cost	FY 2014 Award Date	FY 2015 Cost	FY 2015 Award Date	FY 2016 Base Cost	FY 2016 Base Award Date	FY 2016 OCO Cost	FY 2016 OCO Award Date	FY 2016 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
USMC CREW	WR	SSC-A : CHARLESTON, SC	1.115	0.030	Nov 2013	0.020	Nov 2014	0.013	Apr 2016	-		0.013	-	1.178	-
USMC CREW	MIPR	YPG : YUMA, AZ	1.754	2.067	Jan 2014	0.400	Dec 2014	1.100	Apr 2016	-		1.100	-	5.321	-
USMC CREW	WR	NSWC CD : CRANE, IN	0.000	0.162	Aug 2014	-		-		-		-	-	0.162	-
USMC CREW	MIPR	APG : ABERDEEN PROVING GROUND, MD	0.000	0.007	Apr 2014	-		-		-		-	-	0.007	-
USMC CREW	TBD	VARIOUS : TBD	0.000	1.090	Aug 2014	-		0.359	Apr 2016	-		0.359	-	1.449	-
USMC CREW	WR	PMS 408 : INDIAN HEAD, MD	0.000	0.055	May 2014	-		-		-		-	-	0.055	-
USMC CREW	WR	NSWC DD : DAHLGREN, VA	0.000	0.068	May 2014	-		-		-		-	-	0.068	-
Prior Years Cumulative Funding	Various	VARIOUS : VARIOUS	0.819	-		-		-		-		-	-	0.819	-
		Subtotal	3.688	3.479		0.420		1.472		-		1.472	-	9.059	-

Remarks

USMC CREW FY14 - FY16: USMC CREW utilized YPG (Yuma Proving Grounds, AZ) to provide test ranges and results analysis for all CREW systems.
USMC CREW FY14 - FY16: USMC CREW will utilize SSC-A (SPAWAR, Charleston) to provide test ranges and results analysis for all CREW systems.
USMC CREW FY14 - FY16: USMC CREW will utilize NSWC CD to provide results analysis and validation and verification tasks for all CREW Systems.

Exhibit R-3, RDT&E Project Cost Analysis: PB 2016 Navy		Date: February 2015
Appropriation/Budget Activity 1319 / 7	**R-1 Program Element (Number/Name)** PE 0206313M / *Marine Corps Comms Systems*	**Project (Number/Name)** 2274 / *Command & Control Warfare Sys*

Management Services ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2014 Cost	FY 2014 Award Date	FY 2015 Cost	FY 2015 Award Date	FY 2016 Base Cost	FY 2016 Base Award Date	FY 2016 OCO Cost	FY 2016 OCO Award Date	FY 2016 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
USMC CREW	WR	NSWC CD : CRANE, IN	1.168	1.168	Jan 2014	2.635	Jan 2015	2.769	Jan 2016	-		2.769	Continuing	Continuing	Continuing
USMC CREW	WR	NSWC DD : DAHLGREN, VA	0.000	0.480	Feb 2014	0.697	Dec 2014	0.728	Jan 2016	-		0.728	Continuing	Continuing	Continuing
USMC CREW	WR	SSC-A : CHARLESTON, SC	0.000	0.355	Dec 2013	-		-		-		-	-	0.355	-
		Subtotal	1.168	2.003		3.332		3.497		-		3.497	-	-	-

	Prior Years	FY 2014 Cost	FY 2014 Award Date	FY 2015 Cost	FY 2015 Award Date	FY 2016 Base Cost	FY 2016 Base Award Date	FY 2016 OCO Cost	FY 2016 OCO Award Date	FY 2016 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	17.198	7.919		7.053		8.951		-		8.951	-	-	-

Remarks

Exhibit R-4, RDT&E Schedule Profile: PB 2016 Navy		Date: February 2015
Appropriation/Budget Activity 1319 / 7	**R-1 Program Element (Number/Name)** PE 0206313M / *Marine Corps Comms Systems*	**Project (Number/Name)** 2274 / *Command & Control Warfare Sys*

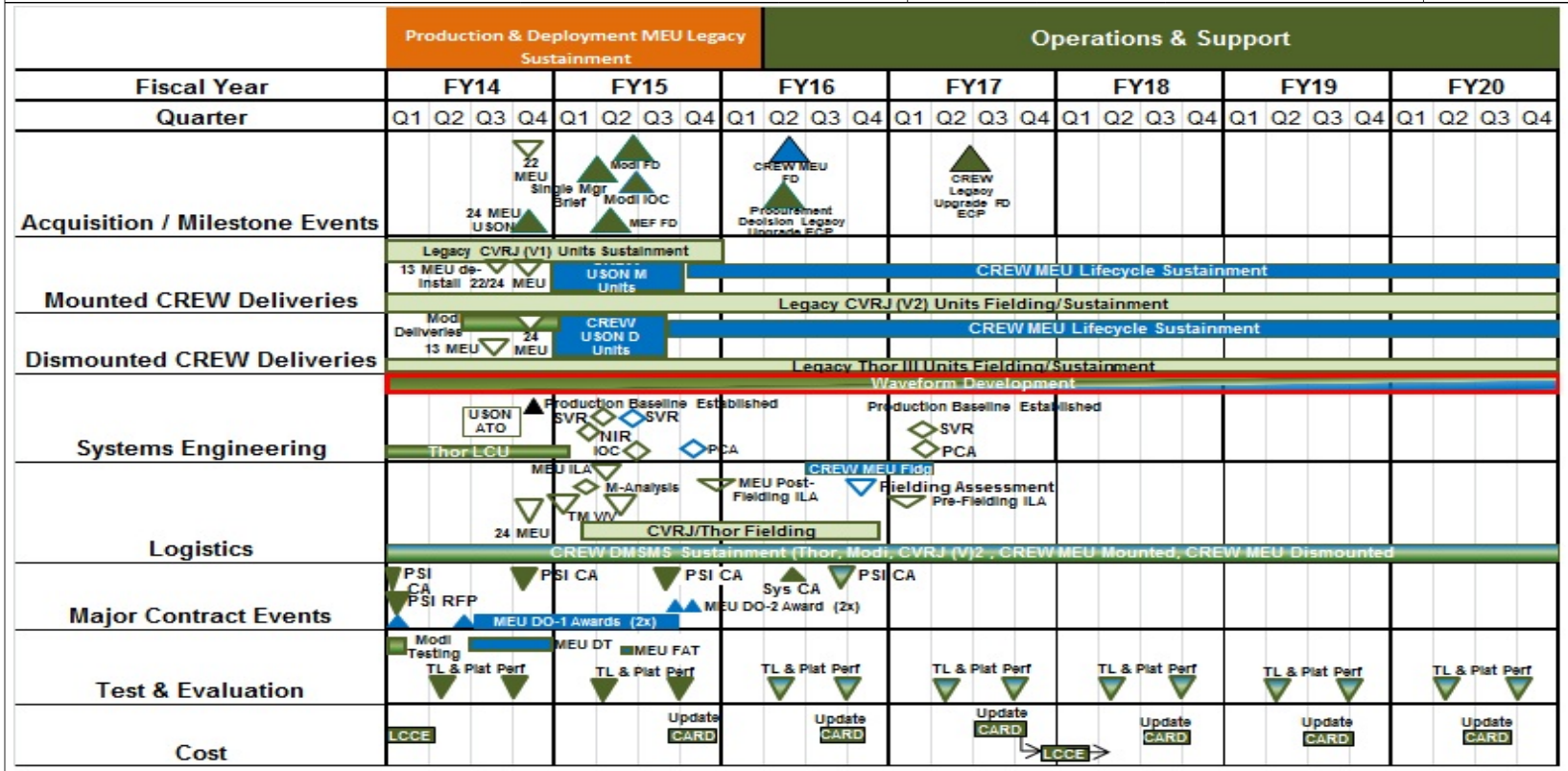

Exhibit R-4A, RDT&E Schedule Details: PB 2016 Navy		Date: February 2015
Appropriation/Budget Activity 1319 / 7	**R-1 Program Element (Number/Name)** PE 0206313M / *Marine Corps Comms Systems*	**Project (Number/Name)** 2274 / *Command & Control Warfare Sys*

Schedule Details

	Start		End	
Events by Sub Project	**Quarter**	**Year**	**Quarter**	**Year**
Proj 2274				
USMC CREW Waveform Development	1	2014	4	2020
USMC CREW MODI IOC	2	2015	2	2015
USMC CREW MEU(SOC) FIELDING DECISION	2	2016	2	2016
CREW MEF Fielding Decision	2	2015	2	2015

Exhibit R-2A, RDT&E Project Justification: PB 2016 Navy											Date: February 2015	
Appropriation/Budget Activity 1319 / 7					R-1 Program Element (Number/Name) PE 0206313M / *Marine Corps Comms Systems*				Project (Number/Name) 2275 / *Marine Corps Tactical Radio Systems*			
COST ($ in Millions)	**Prior Years**	**FY 2014**	**FY 2015**	**FY 2016 Base**	**FY 2016 OCO**	**FY 2016 Total**	**FY 2017**	**FY 2018**	**FY 2019**	**FY 2020**	**Cost To Complete**	**Total Cost**
2275: *Marine Corps Tactical Radio Systems*	21.120	15.188	4.007	3.384	-	3.384	5.012	2.765	2.747	2.810	Continuing	Continuing
Quantity of RDT&E Articles		-	-	-	-	-	-	-	-	-		

A. Mission Description and Budget Item Justification

(U) Tactical Communications Modernization (TCM): TCM was established to procure interim radio systems to bridge the gap between legacy systems and forecasted deliveries from the Joint Tactical Radio System (JTRS) program. The program schedule and budget profile for TCM procures leading edge radio systems to support the primary operational voice and data communications requirements for mounted and dismounted forces. TCM procurements enable an initial joint networking capability and support National Security Agency (NSA) Communications Security (COMSEC) Modernization requirements. Funding provides engineering and test support for both the Mobile User Objective System (MUOS) requirement, and AN/MRC-145B service life extension program. The decrease in RDT&E funds by $1.1M from FY14 to FY15 is due to finalizing the development, testing and evaluation of the Tactical Radio Manager for the MUOS capability in FY14. Additional testing and evaluation of the MUOS capability is planned 4QFY15 - 1QFY16.

(U) Networking on the Move (NOTM): NOTM provides a robust command and control (C2) capability by integrating tactical data systems with on the move satellite communications (SATCOM) for beyond line-of-sight ability that allows battlefield commanders to have uninterrupted two-way access to digital data, anywhere on the battlefield. NOTM provides MAGTF commanders and staffs with full Common Operational Picture (COP) access, virtually unlimited situational awareness and a powerful ability to issue digital orders (fires, maneuver, planning) to GCE, ACE and LCE units at all echelons while on-the-move or at-the-halt. NOTM also provides Marine units the capability to link with and extend Defense Information System Network (DISN) services; SIPRNet, NIPRNet, and Defense Switched Networks (DSN). Integrated full motion video (receipt and retransmission), tactical voice communications plus three options for secure wireless local area network (LAN) connectivity between staff members makes this amphibious capability a crucial asset to all elements of the MAGTF. NOTM achieved initial operational capability at I MEF in March 2013 and continued fielding a total of 56 systems at I MEF, II MEF, III MEF and the support establishment through August 2014. The decrease in funding of $0.141M from FY15 to FY16 due to reduction of SWaP development efforts.

(U) Very Small Aperture Terminal (VSAT): VSAT is an integrated Commercial Off-the-Shelf (COTS) satellite communications terminal with a modular architecture that supports drop and insert architecture through scalable and flexible applications. VSAT uses commercial Ku and military Ka frequency bands to provide beyond line-of-sight (BLOS) connectivity to support intra-Marine Air-Ground Task Force (MAGTF) communications (NIPRNET, SIPRNET, and telephony) down to the battalion/ squadron level. The VSAT Family of Systems (FoS) comes in three modular variants, dependent on MAGTF-size and mission. The increase of $0.035M from FY15 to FY16 aligns funds with efforts to complete the SATCOM transition.

(U) Lightweight Multiband Satellite Terminal (LMST)/PHOENIX are quad-band Super High Frequency (SHF) satellite terminals mounted in transit cases and High Mobility Multipurpose Wheeled Vehicles (HMMWVs) and can be used as either the hub or spoke terminal in a SATCOM network. LMST/PHOENIX provide SHF SATCOM transmissions to any size MAGTF and can be deployed as a "first in" communications source across the entire spectrum of conflict via various deployment configurations. With the signing of the SATCOM Collapse (20 May 2011), the Marine Corps will consolidate three programs: Lightweight Multiband Satellite Terminal

Exhibit R-2A, RDT&E Project Justification: PB 2016 Navy		Date: February 2015
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(LMST), Phoenix Tactical SHF Satellite Terminal (TSST), and the Very Small Aperture Terminal Large (VSAT-L) into one requirement defined as the Universal Satellite Access Tactical Terminal (USATT). RDT&E funding will be utilized to research/integrate VSAT X-Band development during the SATCOM Collapse transition process.

(U) Secure Mobile Anti-Jam Reliable Tactical-Terminal (SMART-T): SMART-T provides tactical users with protected data and voice via Advanced Extremely High Frequency (AEHF) satellite communications. The SMART-T system is transported on High Mobility Multipurpose Wheeled Vehicles (HMMWVs), providing MAGTF Commanders a secure, survivable, long-haul, low/medium data rate communications link not subject to terrain masking and horizon limitations. The SMART-T is also capable of operation when removed from the HMMWV. SMART-T is currently undergoing an upgrade to be interoperable with the new Advanced Extremely High Frequency (AEHF) constellation and will require certification testing and a Multi-service Operational Test and Evaluation (MOT&E). FY16 funding supports development and testing of a tech refresh.

(U) Terrestrial Wideband Transmission Systems (TWTS) is a capabilities portfolio of terrestrial based wideband transmission systems (formerly known as an TRC-170). Portfolio includes Beyond Line Of Sight (BLOS) system (AN/TRC-170) and Line Of Sight (LOS) systems (AN/MRC-142 Family of Systems (FOS), and Wireless Point-to-Point-Link version D (WPPL-D)). The AN/TRC-170 is a transportable BLOS, terrestrial, self-enclosed troposcatter terminal (multichannel) capable of transmitting and receiving digital data over varying distances up to 100 miles. AN/MRC-142 FoS consists of the AN/MRC-142B (ship to shore) and C variants to provide LOS, two-way, secure voice and data communications up to 35 miles. WPPL-D is an integrated communications system consisting of Commercial Off-the-Shelf (COTS) radios, antennas, and IP networking equipment that provides NIPR/SIPRNet data connectivity, voice and video services. TEAMS is a 34-meter telescopic mast system, extending support to various organic LOS systems (AN/MRC-142 and TSSR) by increasing operational reach by overcoming obstacles to communications. The decrease of $.242M from FY14 to FY15 reflects completion of research and development of the MRC-142 Engineering Change Proposal (ECP). The decrease of $0.515M from FY15 to FY16 reflects a reduction in obsolescence and research studies for the TRC-170 system.

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2014	FY 2015	FY 2016 Base	FY 2016 OCO	FY 2016 Total
Title: TCM:Product Development	0.741	-	-	-	-
Articles:	-	-	-	-	-
FY 2014 Accomplishments: Completed. Funding supported development of the Tactical Radio Manager (TRM) and MRC-145B A kit. ***FY 2015 Plans:*** N/A ***FY 2016 Base Plans:*** N/A ***FY 2016 OCO Plans:*** N/A					
Title: TCM Engineering Program Support	0.412	-	-	-	-

Exhibit R-2A, RDT&E Project Justification: PB 2016 Navy		Date: February 2015
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B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2014	FY 2015	FY 2016 Base	FY 2016 OCO	FY 2016 Total
Articles:	-	-	-	-	-
FY 2014 Accomplishments: Completed. Funding provided for Engineering and Program Support. ***FY 2015 Plans:*** N/A ***FY 2016 Base Plans:*** N/A ***FY 2016 OCO Plans:*** N/A					
Title: TCM: Test and Evaluation Support	0.451	0.500	0.500	-	0.500
Articles:	-	-	-	-	-
FY 2014 Accomplishments: Completed test and evaluation support for the MRC-145B. ***FY 2015 Plans:*** Initiate test and evaluation support for the Mobile User Objective System (MUOS). ***FY 2016 Base Plans:*** Complete test and evaluation support for the Mobile User Objective System (MUOS) and initiate engineering and test and evaluation support for the High Frequency Modernization. ***FY 2016 OCO Plans:*** N/A					
Title: NOTM: Product Development	6.858	0.397	-	-	-
Articles:	-	-	-	-	-
FY 2014 Accomplishments: Continued product development to reduce Size, Weight, and Power (SWaP) and incorporated Engineering Change Proposals (ECPs) that will provide system efficiencies. ***FY 2015 Plans:***					

Exhibit R-2A, RDT&E Project Justification: PB 2016 Navy		Date: February 2015
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B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2014	FY 2015	FY 2016 Base	FY 2016 OCO	FY 2016 Total
Continue product development to reduce Size, Weight, and Power (SWaP) and incorporated Engineering Change Proposals (ECPs) that will provide system efficiencies for shipboard integration. ***FY 2016 Base Plans:*** N/A ***FY 2016 OCO Plans:*** N/A					
Title: NOTM: Engineering and Program Support	1.549	-	-	-	-
Articles:	-	-	-	-	-
FY 2014 Accomplishments: Initiated product improvements/Engineering Change Proposals (ECPs) and engineering support. ***FY 2015 Plans:*** N/A ***FY 2016 Base Plans:*** N/A ***FY 2016 OCO Plans:*** N/A					
Title: NOTM: Test and Evaluation Support	2.264	0.370	0.626	-	0.626
Articles:	-	-	-	-	-
FY 2014 Accomplishments: Initiated test and evaluation support and testing. ***FY 2015 Plans:*** Continue test and evaluation support and testing. ***FY 2016 Base Plans:*** Continue test and evaluation support and testing. ***FY 2016 OCO Plans:*** N/A					
Title: VSAT: Engineering and Program Support	-	0.681	0.716	-	0.716
Articles:	-	-	-	-	-

Exhibit R-2A, RDT&E Project Justification: PB 2016 Navy		Date: February 2015
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B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2014	FY 2015	FY 2016 Base	FY 2016 OCO	FY 2016 Total
FY 2014 Accomplishments: N/A ***FY 2015 Plans:*** Initiate support for Engineering Change Proposals (ECP) to include X-band capability in addition to upgrading ancillary subsystems and ensuring interoperable with US Army, and continues Information Assurance support. ***FY 2016 Base Plans:*** Initiate support for ECPs that include interoperable with US Army, modem modernization and continued Information Assurance support. ***FY 2016 OCO Plans:*** N/A					
Title: VSAT: Test and Evaluation	0.337	-	-	-	-
Articles:	-	-	-	-	-
FY 2014 Accomplishments: Completed the development of Window 7 Graphic User Interface and MRT and Shock/drop testing in support of the SATCOM Consolidation. ***FY 2015 Plans:*** N/A ***FY 2016 Base Plans:*** N/A ***FY 2016 OCO Plans:*** N/A					
Title: LMST: Engineering Program Support	0.289	-	-	-	-
Articles:	-	-	-	-	-
FY 2014 Accomplishments: Completed engineering analysis during the SATCOM Collapse (20 May 2011), the Marine Corps will consolidate three programs: Lightweight Multiband Satellite Terminal (LMST), Phoenix Tactical SHF Satellite Terminal					

Exhibit R-2A, RDT&E Project Justification: PB 2016 Navy		Date: February 2015
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B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2014	FY 2015	FY 2016 Base	FY 2016 OCO	FY 2016 Total
(TSST), and the Very Small Aperture Terminal Large (VSAT-L) into one requirement defined as the Universal Satellite Access Tactical Terminal (USATT). ***FY 2015 Plans:*** N/A ***FY 2016 Base Plans:*** N/A ***FY 2016 OCO Plans:*** N/A					
Title: SMART-T: Engineering and Program Support	0.100	0.193	0.191	-	0.191
Articles:	-	-	-	-	-
FY 2014 Accomplishments: Initiated support of engineering and technical analysis for SMART-T system upgrades that included upgrades of the new Advanced Extremely High Frequency (AEHF) constellation and required certification testing and a Multi-service Operational Test and Evaluation (MOT&E). ***FY 2015 Plans:*** -Continue technical support for SMART-T system upgrades that include the Handheld Terminal Unit (HTU) and the Remote Operator Unit (ROU). -Continue Information Assurance support through Army CECOM. ***FY 2016 Base Plans:*** Initiate support of the SMART-T Engineering Change Proposals (ECP) that include Fiber Optic interface modification to ensure interoperability with other Agencies equipment and USMC equipment, and continued Information Assurance. ***FY 2016 OCO Plans:*** N/A					
Title: SMART-T: Test and Evaluation Support	0.079	-	-	-	-
Articles:	-	-	-	-	-
FY 2014 Accomplishments: Completed the Multi-service Operational Test and Evaluation (MOT&E) for the Advanced Extremely High Frequency					

Exhibit R-2A, RDT&E Project Justification: PB 2016 Navy		Date: February 2015
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B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2014	FY 2015	FY 2016 Base	FY 2016 OCO	FY 2016 Total
(AEHF) upgrade at PM WIN-T in Abeerden, MD. ***FY 2015 Plans:*** N/A ***FY 2016 Base Plans:*** N/A ***FY 2016 OCO Plans:*** N/A					
Title: TWTS: Product Development	-	-	0.950	-	0.950
Articles:	-	-	-	-	-
FY 2014 Accomplishments: N/A ***FY 2015 Plans:*** N/A ***FY 2016 Base Plans:*** Initiate development of a Next Generation Tropo (NGT) prototype. ***FY 2016 OCO Plans:*** N/A					
Title: TWTS: Engineering and Program Support	2.108	0.978	0.200	-	0.200
Articles:	-	-	-	-	-
FY 2014 Accomplishments: Initiated engineering support for the AN/MRC-142 to develop a multiplexer bypass cable and reconfiguring transit cases to reduce size and weight. ***FY 2015 Plans:*** Continue to provide engineering support to finalize and approve engineering change proposals (ECPs) for AN/MRC-142. ***FY 2016 Base Plans:***					

Exhibit R-2A, RDT&E Project Justification: PB 2016 Navy		Date: February 2015
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B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2014	FY 2015	FY 2016 Base	FY 2016 OCO	FY 2016 Total
Initiate engineering support for the Next Generation Tropo (NGT). ***FY 2016 OCO Plans:*** N/A					
Title: TWTS: Test and Evalution Support	-	0.888	0.201	-	0.201
Articles:	-	-	-	-	-
FY 2014 Accomplishments: N/A ***FY 2015 Plans:*** Complete test and evaluation for the AN/MRC-142 ECP to verify operational capability of the multiplexer bypass cable. ***FY 2016 Base Plans:*** Initiate Next Generation Tropo (NGT) prototype testing. ***FY 2016 OCO Plans:*** N/A					
Accomplishments/Planned Programs Subtotals	15.188	4.007	3.384	-	3.384

C. Other Program Funding Summary ($ in Millions)

Line Item	FY 2014	FY 2015	FY 2016 Base	FY 2016 OCO	FY 2016 Total	FY 2017	FY 2018	FY 2019	FY 2020	Cost To Complete	Total Cost
• PMC/4633-1: *LMST*	1.430	-	-	-	-	-	-	0.001	-	-	15.601
• PMC/4633-2: *VSAT*	2.915	7.271	2.004	-	2.004	2.010	1.069	3.080	3.155	Continuing	Continuing
• PMC/4633-3: *TCM*	59.052	49.215	69.593	-	69.593	31.725	23.053	40.259	55.315	Continuing	Continuing
• PMC/4633-4: *SMART-T*	1.621	0.417	0.491	-	0.491	0.544	0.555	0.577	0.599	Continuing	Continuing
• PMC/4633-5: *TWTS*	2.181	6.046	7.400	-	7.400	9.017	9.901	3.011	3.089	Continuing	Continuing
• PMC/4631: *NOTM*	18.547	3.229	1.418	-	1.418	1.418	1.488	1.644	1.677	Continuing	Continuing
• PMC/7000: *SMART-T Spares*	0.174	0.197	0.198	-	0.198	0.201	0.205	0.209	0.213	Continuing	Continuing

Remarks

Exhibit R-2A, RDT&E Project Justification: PB 2016 Navy		Date: February 2015
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D. Acquisition Strategy

(U) Tactical Communications Modernization (TCM): Will be testing and evaluating the next generation tactical radio systems supporting: MUOS terminals and the High Frequency Radios. TCM will continue to procure and field MRC-145B's. Additionally, TCM will be procuring AN/PRC-148A(V)3 to replace the existing and obsolete AN/PRC-148A(V)1. Finally, TCM will be replacing the existing ENM laptop to be Windows 7 compliant. All other systems are currently in sustainment.

(U) Networking on the Move (NOTM): NOTM will use an evolutionary acquisition strategy and pursue a competitive contract that leverages Commercial-Off-The-Shelf (COTS) and Government-Off-The-Shelf (GOTS) technology to procure, sustain and meet emerging requirements. The design of the system provides for internal growth capability through an open system architecture enabling technology refresh to extend the system's life, maintain interoperability, Information Assurance (IA) compliance, and reduce costs due to Diminishing Manufacturing Sources and Material Shortages (DMSMS). It is envisioned that technology refresh will occur on the NOTM hardware and software periodically due to component obsolescence, user-driven requests for improvements, IA compliance, and mission-related requirements. Refresh will include investments to incorporate evolving capability to ensure compatibility with other systems, create lighter more efficient equipment, and keep pace with evolving software requirements. End-of-life equipment refresh is expected throughout the program's life cycle and may be managed through kit purchases, replacement through Engineering Change Proposals (ECPs), or as replacement parts as equipment is repaired.

(U) Very Small Aperture Terminal (VSAT): VSAT systems are currently in fielding and sustainment phases. VSAT systems primarily support operations on costly commercial SATCOM bandwidth. Some additional military SATCOM frequencies (Ka-band) have already been incorporated into the large, trailer mounted VSAT systems to alleviate reliance on commercial SATCOM bandwidth procurements. Additional military Ka-band upgrades to smaller variants of VSAT systems are pending. Additionally, VSAT systems have been recently identified as the platform required to support operations on military X-band SATCOM frequencies as other X-band capable systems reach obsolescence. In order to subsume the capabilities lost in the phase out of the obsolete systems, VSAT systems require ECPs to incorporate X-band capability in addition to upgrading ancillary subsystems. ECPs will involve procurement of COTS upgrade kits that are designed and integrated in accordance with government owned drawings and specifications. Contract delivery orders will be awarded to competent bidders on US Army PM Warfighter Information Network-Tactical multi-award IDIQ contracts on a FFP basis. The majority of candidate upgrade kits and components exist as previously awarded CLINs on current contracts. Upon determination of final configuration of upgraded SATCOM terminal, program office will use the same U.S. Army contracting vehicles to procure the approved quantity of new terminals to replace the obsolete terminals being phased out.

(U) Lightweight Multiband Satellite Terminal (LMST)/PHOENIX: With the signing of the SATCOM Collapse (20 May 2011), the Marine Corps will consolidate three programs: Lightweight Multiband Satellite Terminal (LMST), Phoenix Tactical SHF Satellite Terminal (TSST), and the Very Small Aperture Terminal Large (VSAT-L) into one requirement defined as the Universal Satellite Access Tactical Terminal (USATT). The acquisition strategy for the Lightweight Multi-band Satellite Terminal (LMST) and Phoenix program is to sustain terminals to maintain joint interoperability through FY17.

(U) Secure Mobile Anti-Jam Reliable Tactical-Terminal (SMART-T): SMART-T is an Army led, ACAT II program. The Marine Corps SMART-T has fielded the full Authorized Acquisition Objective (AAO) of 42 terminals and 32 AN/PSQ-17 Network Planning tools. SMART-T will be upgraded for compatibility with Advanced Extremely High Frequency (AEHF) waveforms and data rates and will replace the legacy SMART-T terminals. Out of warranty repair for legacy components will be executed, when necessary, using the Army National Maintenance Contract.

Exhibit R-2A, RDT&E Project Justification: PB 2016 Navy		Date: February 2015
Appropriation/Budget Activity 1319 / 7	**R-1 Program Element (Number/Name)** PE 0206313M / *Marine Corps Comms Systems*	**Project (Number/Name)** 2275 / *Marine Corps Tactical Radio Systems*

(U) Tactical Wideband Communication Systems (TWTS): Funding provides for obsolescence mitigation of the TRC-170 and the MRC-142 systems. Developmental activities include durability (life), interoperability, performance and operational testing for the TRC-170 and MRC-142.

E. Performance Metrics

N/A

Exhibit R-3, RDT&E Project Cost Analysis: PB 2016 Navy			Date: February 2015
Appropriation/Budget Activity 1319 / 7	R-1 Program Element (Number/Name) PE 0206313M / *Marine Corps Comms Systems*	Project (Number/Name) 2275 / *Marine Corps Tactical Radio Systems*	

Product Development ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2014 Cost	FY 2014 Award Date	FY 2015 Cost	FY 2015 Award Date	FY 2016 Base Cost	FY 2016 Base Award Date	FY 2016 OCO Cost	FY 2016 OCO Award Date	FY 2016 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Prior Year Cumulative Funding	Various	Various : Various	1.243	-		-		-		-		-	-	1.243	-
NOTM Development	C/FFP	SSC-LANT : Charleston, SC	0.000	1.101	May 2014	-		-		-		-	-	1.101	-
NOTM Development CBT Modules	C/FFP	MCSC, Patricio : Stafford, VA	2.180	0.030	Jun 2014	-		-		-		-	-	2.210	-
NOTM-Product Improvements	C/FFP	SSC-Pacific : San Diego, CA	0.984	1.550	Mar 2014	0.090	Mar 2015	-		-		-	-	2.624	-
NOTM Development	WR	SSC-LANT : Charleston, SC	0.000	1.871	Nov 2013	-		-		-		-	-	1.871	-
NOTM	WR	NSWC : Dahlgren, VA	0.000	0.108	Nov 2013	-		-		-		-	-	0.108	-
NOTM	C/FFP	NSWC : Dahlgren, VA	0.000	0.726	Jan 2014	-		-		-		-	-	0.726	-
NOTM Research and Development	WR	NAWCAD : Patuxent River, MD	0.000	0.031	Dec 2013	-		-		-		-	-	0.031	-
NOTM Research and Development	C/FFP	NAWCAD : Patuxent River, MD	0.000	0.607	Jan 2014	-		-		-		-	-	0.607	-
NOTM	MIPR	DTIC : Fort Belvoir	0.000	0.178	Jul 2014	-		-		-		-	-	0.178	-
NOTM SWAP Reduction	WR	NSWC : Indian Head, MD	0.000	0.027	Apr 2014	-		-		-		-	-	0.027	-
NOTM SWAP Reduction Initiatives	C/FFP	NSWC : Indian Head, MD	0.000	0.629	Jun 2014	0.307	Mar 2015	-		-		-	-	0.936	-
TWTS (NGT)	TBD	TBD : TBD	0.000	-		-		0.950	Feb 2016	-		0.950	-	0.950	-
TCM Software Development	C/FFP	SSC-LANT : Charleston, SC	0.000	0.555	Nov 2014	-		-		-		-	-	0.555	-
TCM MRC 145B A Kit	C/FFP	SSC-LANT : Charleston, SC	0.000	0.186	Jan 2015	-		-		-		-	-	0.186	-
		Subtotal	4.407	7.599		0.397		0.950		-		0.950	-	13.353	-

Exhibit R-3, RDT&E Project Cost Analysis: PB 2016 Navy		Date: February 2015
Appropriation/Budget Activity 1319 / 7	**R-1 Program Element (Number/Name)** PE 0206313M / *Marine Corps Comms Systems*	**Project (Number/Name)** 2275 / *Marine Corps Tactical Radio Systems*

Support ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2014 Cost	FY 2014 Award Date	FY 2015 Cost	FY 2015 Award Date	FY 2016 Base Cost	FY 2016 Base Award Date	FY 2016 OCO Cost	FY 2016 OCO Award Date	FY 2016 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Prior Year Cumulative Funding	Various	Various : Various	3.819	-		-		-		-		-	-	3.819	-
NOTM Program Management	WR	SSC-LANT : Charleston, SC	0.352	0.185	Mar 2014	-		-		-		-	-	0.537	-
NOTM Support	C/FFP	NSWC Dahlgren : Dahlgren, VA	0.023	0.020	Apr 2014	-		-		-		-	-	0.043	-
NOTM Support	WR	NSWC : Dahlgren, VA	0.000	0.213	Feb 2014	-		-		-		-	-	0.213	-
VSAT IA Support	MIPR	CECOM : Aberdeen, MD	0.000	-		0.400	Aug 2015	0.400	Aug 2016	-		0.400	-	0.800	-
SMART-T Support	WR	SSC-LANT : Charleston, SC	0.000	-		0.100	Feb 2015	0.100	Feb 2016	-		0.100	-	0.200	-
TCM Support	WR	SSC-LANT : Charleston, SC	0.000	0.412	Apr 2014	-		-		-		-	-	0.412	-
TWTS Support	WR	SSC-LANT : Charleston, SC	0.000	0.538	Feb 2014	0.978	Feb 2015	0.200	Feb 2016	-		0.200	-	1.716	-
TWTS Support	WR	NSWC Dahlgren : Dahlgren, VA	0.000	0.030	May 2014	-		-		-		-	-	0.030	-
TWTS AoA Support	C/FFP	SSC-LANT : Charleston, SC	0.000	1.144	May 2014	-		-		-		-	-	1.144	-
TWTS BLOS Support	C/FFP	NSWC Dahlgren : Dahlgren, VA	0.000	0.146	Jun 2014	-		-		-		-	-	0.146	-
TWTS Engineering Support	WR	SSC-LANT : Charleston, SC	0.000	0.250	Oct 2014	-		-		-		-	-	0.250	-
		Subtotal	4.194	2.938		1.478		0.700		-		0.700	-	9.310	-

Test and Evaluation ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2014 Cost	FY 2014 Award Date	FY 2015 Cost	FY 2015 Award Date	FY 2016 Base Cost	FY 2016 Base Award Date	FY 2016 OCO Cost	FY 2016 OCO Award Date	FY 2016 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Prior Year Cumulative Funding	Various	Various : Various	3.135	-		-		-		-		-	-	3.135	-

Exhibit R-3, RDT&E Project Cost Analysis: PB 2016 Navy			Date: February 2015
Appropriation/Budget Activity 1319 / 7	R-1 Program Element (Number/Name) PE 0206313M / *Marine Corps Comms Systems*	Project (Number/Name) 2275 / *Marine Corps Tactical Radio Systems*	

Test and Evaluation ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2014 Cost	FY 2014 Award Date	FY 2015 Cost	FY 2015 Award Date	FY 2016 Base Cost	FY 2016 Base Award Date	FY 2016 OCO Cost	FY 2016 OCO Award Date	FY 2016 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
TCM MRC-145B Testing	MIPR	Aberdeen : Aberdeen, Md	0.000	0.238	Apr 2014	-		-		-		-	-	0.238	-
TCM MUOS Testing	WR	SSC-Lant : Charleston, SC	0.000	-		0.500	Jun 2015	0.250	Jun 2016	-		0.250	-	0.750	-
TCM Test Support	WR	MCTSSA : Camp Pendleton,California	0.000	0.139	Apr 2014	-		-		-		-	-	0.139	-
TCM EMI Testing	WR	NSWC Dahlgren : Dahlgren, VA	0.000	0.074	Aug 2014	-		-		-		-	-	0.074	-
TCM-HF Testing	Various	SSC-LANT : Charleston, SC	0.000	-		-		0.250	Jun 2016	-		0.250	-	0.250	-
NOTM Environmental Testing	C/CPFF	SSC-LANT : Charleston, SC	0.000	2.000	Sep 2014	-		-		-		-	-	2.000	-
NOTM Test Support	Allot	MCTSSA : Camp Pendleton, CA	0.514	0.264	Mar 2014	-		-		-		-	-	0.778	-
NOTM Vehicle Integration Testing	WR	SSC-LANT : Charleston, SC	0.000	-		0.291	Apr 2015	0.626	Jan 2016	-		0.626	-	0.917	-
NOTM Tech Insertion	WR	SSC-PAC : San Diego, CA	0.000	-		0.079	Oct 2014	-		-		-	-	0.079	-
SMART-T	MIPR	US Army, PM WIN-T : Aberdeen, MD	0.000	0.079	Mar 2014	-		-		-		-	-	0.079	-
TWTS (NGT)	TBD	TBD : TBD	0.000	-		-		0.201	May 2016	-		0.201	-	0.201	-
TWTS (MRC-142)	MIPR	SSC-LANT : Charleston, SC	0.000	-		0.888	May 2015	-		-		-	-	0.888	-
VSAT	WR	SSC-LANT : Charleston, SC	0.000	0.186	Aug 2014	-		-		-		-	-	0.186	-
VSAT	MIPR	US Army, CECOM : Aberdeen, MD	0.000	0.151	Dec 2014	-		-		-		-	-	0.151	-
		Subtotal	3.649	3.131		1.758		1.327		-		1.327	-	9.865	-

Exhibit R-3, RDT&E Project Cost Analysis: PB 2016 Navy		Date: February 2015
Appropriation/Budget Activity 1319 / 7	**R-1 Program Element (Number/Name)** PE 0206313M / *Marine Corps Comms Systems*	**Project (Number/Name)** 2275 / *Marine Corps Tactical Radio Systems*

Management Services ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2014 Cost	FY 2014 Award Date	FY 2015 Cost	FY 2015 Award Date	FY 2016 Base Cost	FY 2016 Base Award Date	FY 2016 OCO Cost	FY 2016 OCO Award Date	FY 2016 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
LMST Engineering Support	FFRDC	US Army, MITRE : Stafford, VA	2.617	0.289	Dec 2013	-		-		-		-	Continuing	Continuing	Continuing
SMART-T Engineering Suppor	FFRDC	US Army, MITRE : Stafford, VA	0.286	0.100	Dec 2013	0.093	Sep 2015	0.091	Sep 2016	-		0.091	Continuing	Continuing	Continuing
VSAT Engineering Support	FFRDC	US Army, MITRE : Stafford, VA	4.692	-		0.281	Sep 2015	0.316	Sep 2016	-		0.316	Continuing	Continuing	Continuing
NOTM Engineering Support	FFRDC	US Army, MITRE : Stafford, VA	1.275	1.131	Dec 2013	-		-		-		-	Continuing	Continuing	Continuing
		Subtotal	8.870	1.520		0.374		0.407		-		0.407	-	-	-

	Prior Years	FY 2014		FY 2015		FY 2016 Base		FY 2016 OCO		FY 2016 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	21.120	15.188		4.007		3.384		-		3.384	-	-	-

Remarks

Exhibit R-4, RDT&E Schedule Profile: PB 2016 Navy		Date: February 2015
Appropriation/Budget Activity 1319 / 7	**R-1 Program Element (Number/Name)** PE 0206313M / *Marine Corps Comms Systems*	**Project (Number/Name)** 2275 / *Marine Corps Tactical Radio Systems*

Program Schedule-SMART-T

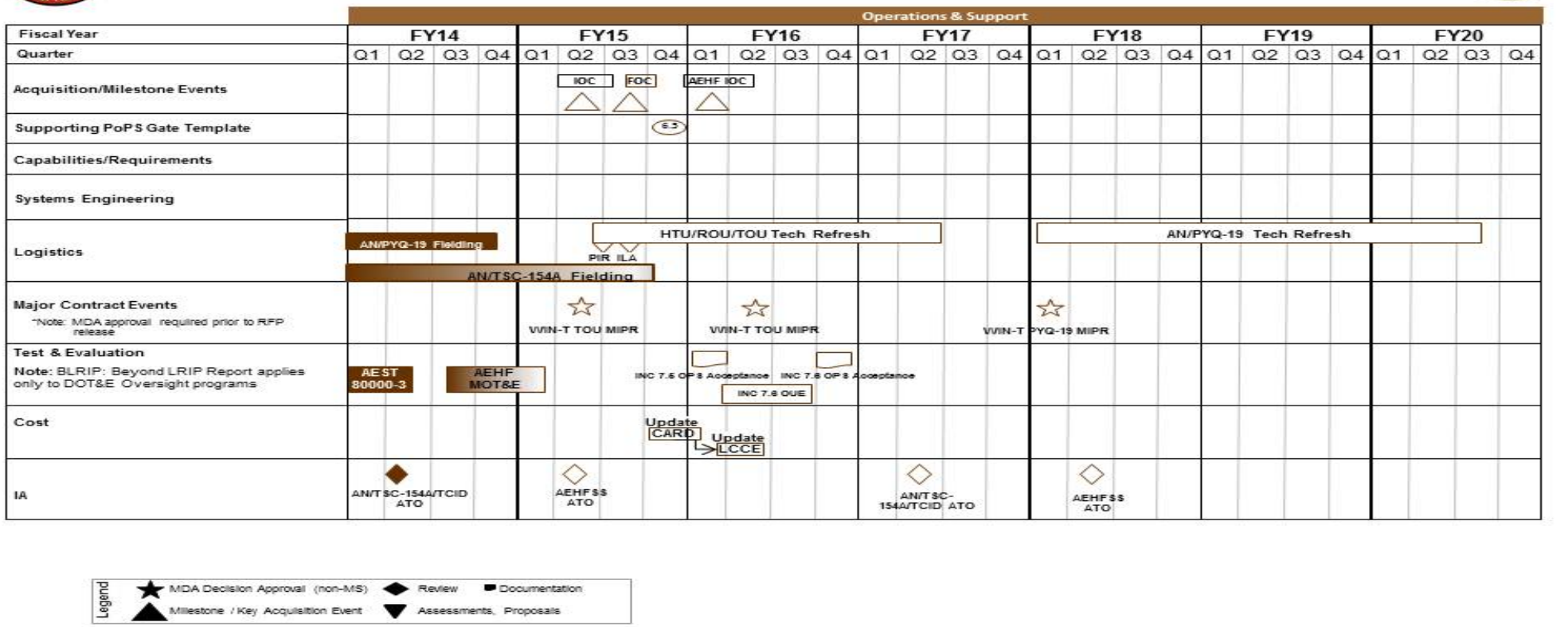

Exhibit R-4, RDT&E Schedule Profile: PB 2016 Navy		Date: February 2015
Appropriation/Budget Activity 1319 / 7	**R-1 Program Element (Number/Name)** PE 0206313M / *Marine Corps Comms Systems*	**Project (Number/Name)** 2275 / *Marine Corps Tactical Radio Systems*

MARINE CORPS SYSTEMS COMMAND

EQUIPPING THE WARFIGHTER TO WIN

Networking On-The-Move (NOTM) Schedule

Updated 12 Jun 2014

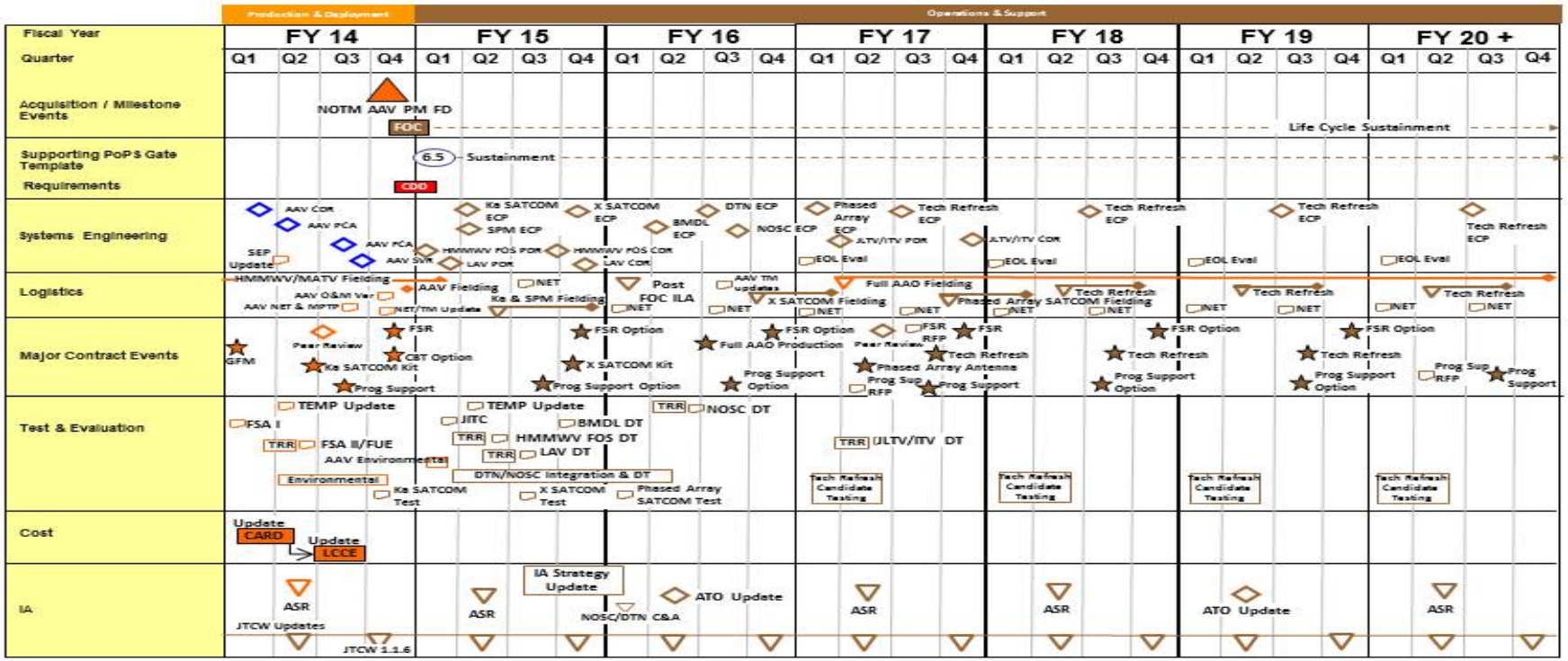

Exhibit R-4, RDT&E Schedule Profile: PB 2016 Navy		Date: February 2015
Appropriation/Budget Activity 1319 / 7	**R-1 Program Element (Number/Name)** PE 0206313M / *Marine Corps Comms Systems*	**Project (Number/Name)** 2275 / *Marine Corps Tactical Radio Systems*

Very Small Aperture Terminal Schedule

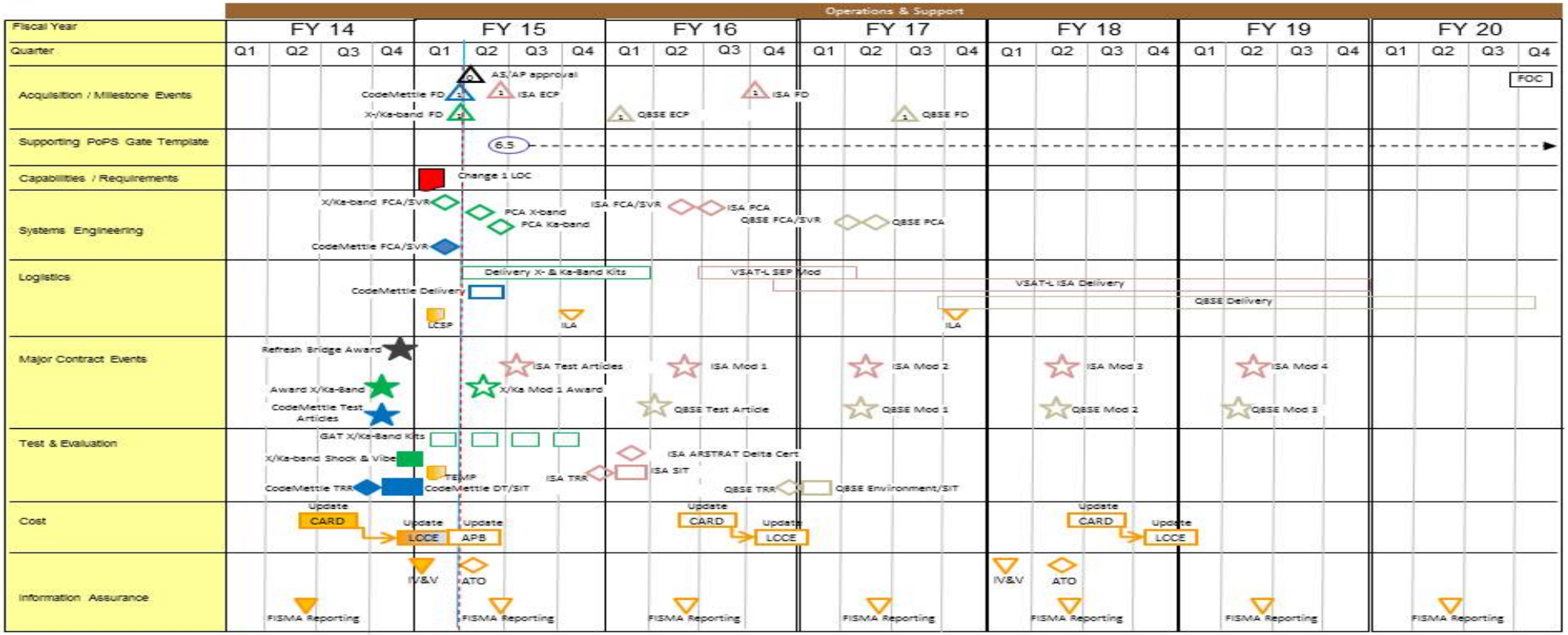

Exhibit R-4, RDT&E Schedule Profile: PB 2016 Navy		Date: February 2015
Appropriation/Budget Activity 1319 / 7	**R-1 Program Element (Number/Name)** PE 0206313M / *Marine Corps Comms Systems*	**Project (Number/Name)** 2275 / *Marine Corps Tactical Radio Systems*

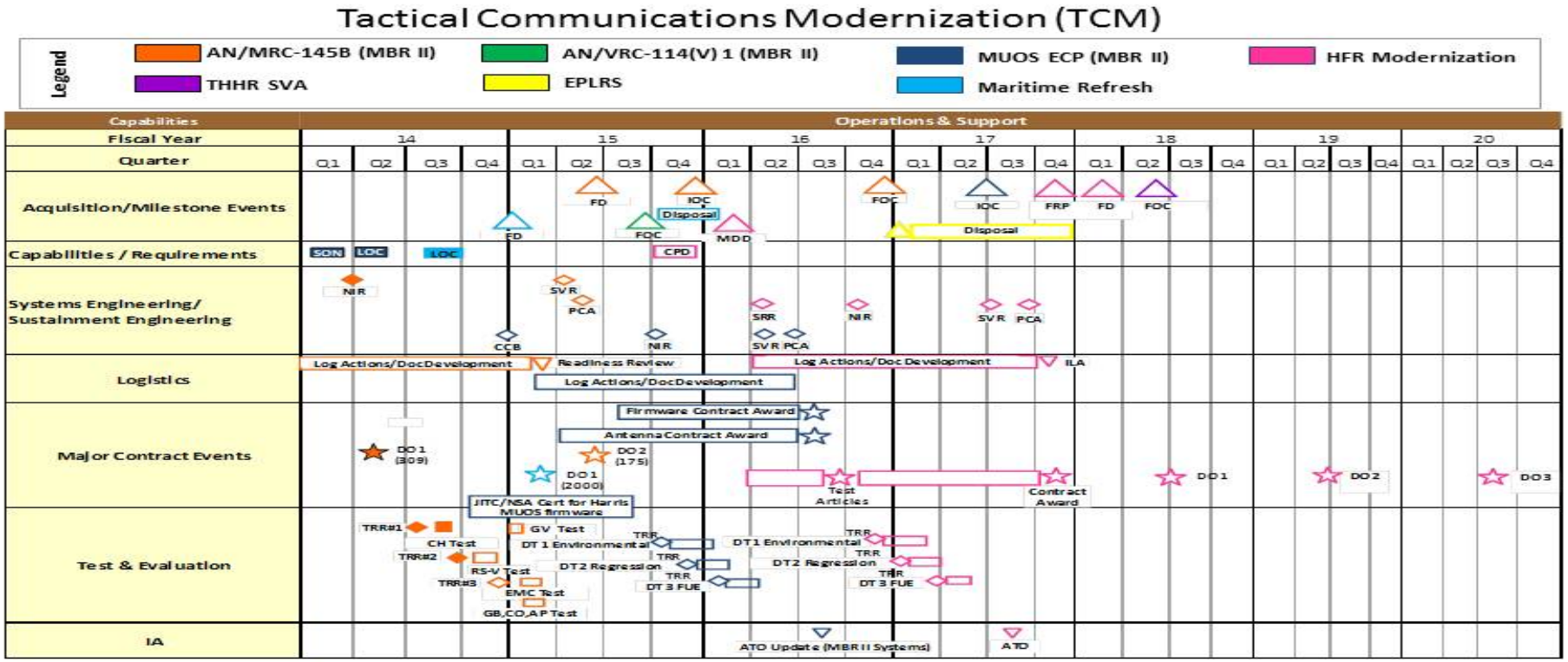

Exhibit R-4, RDT&E Schedule Profile: PB 2016 Navy		Date: February 2015
Appropriation/Budget Activity 1319 / 7	**R-1 Program Element (Number/Name)** PE 0206313M / *Marine Corps Comms Systems*	**Project (Number/Name)** 2275 / *Marine Corps Tactical Radio Systems*

Program Schedule-LMST/Phoenix

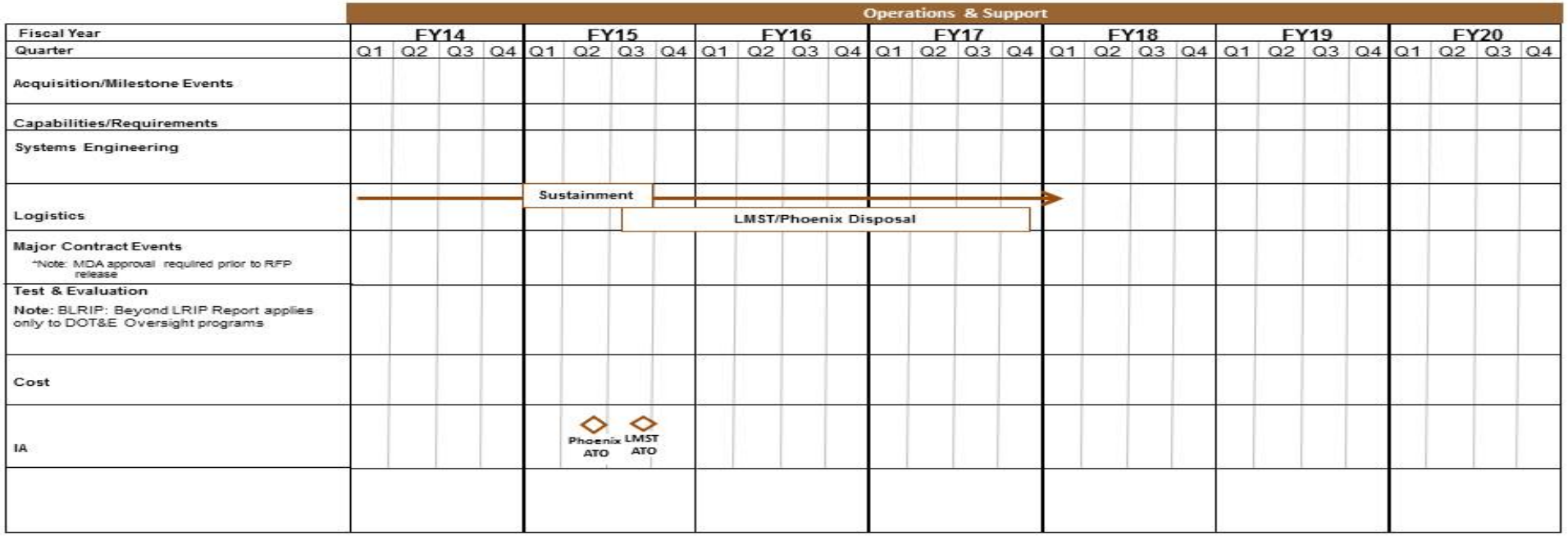

Exhibit R-4, RDT&E Schedule Profile: PB 2016 Navy		Date: February 2015
Appropriation/Budget Activity 1319 / 7	**R-1 Program Element (Number/Name)** PE 0206313M / *Marine Corps Comms Systems*	**Project (Number/Name)** 2275 / *Marine Corps Tactical Radio Systems*

TWTS Portfolio Schedule

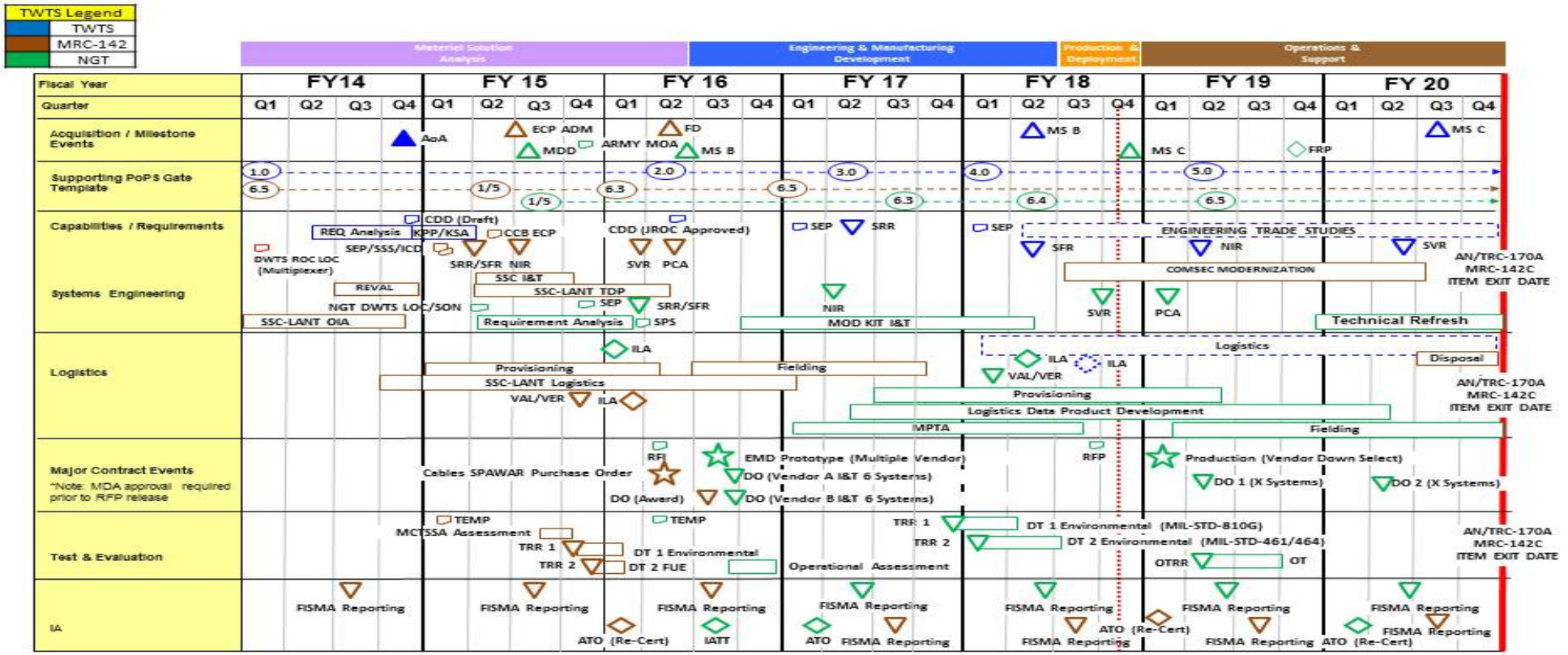

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Exhibit R-4A, RDT&E Schedule Details: PB 2016 Navy		Date: February 2015
Appropriation/Budget Activity 1319 / 7	**R-1 Program Element (Number/Name)** PE 0206313M / *Marine Corps Comms Systems*	**Project (Number/Name)** 2275 / *Marine Corps Tactical Radio Systems*

Schedule Details

	Start		End	
Events by Sub Project	**Quarter**	**Year**	**Quarter**	**Year**
Proj 2275				
SMART-T MOT&E AEHF	3	2014	1	2015
VSAT FOC	4	2020	4	2020
TCM MRC-145B Fielding Decision	2	2015	2	2015
TCM Maritime FOC	4	2015	4	2015
TCM MRC-145B IOC	4	2015	4	2015
TCM MRC-145B FOC	4	2016	4	2016
TCM VRC-114V1 FOC	3	2015	3	2015
NOTM USON FOC	4	2014	4	2014
NOTM Ka SATCOM ECP	2	2015	2	2015
NOTM LAV Developmental Test (DT)	3	2015	3	2015
NOTM Phase Array SATCOM Test	1	2016	1	2016
NOTM FY17 Tech Refresh ECP	3	2017	3	2017
NOTM FY18 Tech Refresh ECP	3	2018	3	2018
NOTM FY19 Tech Refresh ECP	3	2019	3	2019
TWTS AoA	4	2014	1	2020
TWTS MRC-142 ADM	2	2015	1	2020
TWTS NGT MDD	3	2015	1	2020
TWTS MRC-142 FD	2	2016	1	2020
TWTS NGT MS B	2	2016	1	2020

Exhibit R-2A, RDT&E Project Justification: PB 2016 Navy			Date: February 2015
Appropriation/Budget Activity 1319 / 7	R-1 Program Element (Number/Name) PE 0206313M / *Marine Corps Comms Systems*	Project (Number/Name) 2276 / *Comms Switching and Control Sys*	

COST ($ in Millions)	Prior Years	FY 2014	FY 2015	FY 2016 Base	FY 2016 OCO	FY 2016 Total	FY 2017	FY 2018	FY 2019	FY 2020	Cost To Complete	Total Cost
2276: *Comms Switching and Control Sys*	31.185	8.992	3.697	2.434	-	2.434	2.698	3.120	3.163	3.232	Continuing	Continuing
Quantity of RDT&E Articles		-	-	-	-	-	-	-	-	-		

A. Mission Description and Budget Item Justification

(U) Network Planning & Management (NPM), is a portfolio of communications planning and Network Management applications for use throughout the Marine Air-Ground Task Force (MAGTF). NPM consists of items such as the Systems Planning Engineering and Evaluation Device (SPEED). NPM provides the Marine Forces (MARFOR) component planners with the ability to conduct high-level planning; detailed planning and engineering; monitoring; control and reconfiguration; and spectrum planning and management in support of Combatant Commander (COCOM) and Commander, Joint Task Force (CJTF) operations. SPEED provides High Frequency (HF) predictions, Line of Site (LOS) propagation, Radio Coverage Analysis (RCA), Satellite planning, Command and Control Personal Computer (C2PC) track interface, interference and de-confliction analysis, spectrum management, Radio Guard Charts, Comm-On-The-Move (COTM), and T/E (training & education) and force structure management. Decrease of $0.016M from FY14 to FY15 is due to completion of added capabilities and functional improvements. FY15 and FY16 funds will support software development to continue providing the newest version of the SPEED software to the user community.

(U) Tactical Voice Switching System (TVSS): Formerly known as Transition Switch Module (TSM), TVSS consists of three systems that provide a flexible Unit Level Switch that replaces legacy Tri-Tac switches with current commercial technology, providing maneuver elements with improved voice/data switching, data transport and bandwidth management capabilities. This program maintains USMC joint interoperability as all Services transition to Commercial Off-The-Shelf (COTS) switching technologies.

(U) Expeditionary Command and Control Suite (ECCS): Provides reach back capability to the Global Information Grid (GIG) to access the Defense Switch Network (DSN), Defense Information System Network (DISN) Secret Internet Protocol Router Network (SIPRNET), Non-secure Internet Protocol Router Network (NIPRNET), and DISN Video Services (DVS), enabling a small advance force/liaison team to communicate with a Marine Air-Ground Task Force (MAGTF), Joint Task Force (JTF) or other Joint Force Commander, and to maintain situational awareness. ECCS is not funded after FY14 due to program cancellation.

(U) Tactical Data Network (TDN) Data Distribution System - Modular (DDS-M): The DDS-M provides the Commander a modular, integrated, and interoperable Internet Protocol (IP)- based LAN and WAN data networking capability that forms the data communications backbone and data communications support to organizations within a MAGTF. The DDS-M provides extension of the Defense Information System Network (DISN), Secret Internet Protocol Router Network (SIPRNet), and Sensitive But Unclassified (SBU) Non-secure Internet Protocol Router Network (NIPRNet) as well as a Coalition networking capability and access to strategic, supporting establishments, joint and other service component tactical data networks for Marine Corps Tactical Data Systems (TDSs) and other DDS-Ms. The DDS-M provides Marine Corps maneuver elements with a modular and scalable IP data transport capability that will replace, supplement and be used with existing legacy data systems through the integration of computers, routers, data switches and cabling, Enhanced Position Location and Reporting System (EPLRS) radio net interface units, MODEMS, link encryption devices, and patch panels. Uninterrupted Power Supplies (UPS) provide for emergency power and continuity of operations. The DDS-M can operate from the SBU up to the TOP SECRET/SENSITIVE COMPARTMENTED INFORMATION (TS/SCI) level and contains integral In-line Network Encryption

Exhibit R-2A, RDT&E Project Justification: PB 2016 Navy		Date: February 2015
Appropriation/Budget Activity 1319 / 7	**R-1 Program Element (Number/Name)** PE 0206313M / *Marine Corps Comms Systems*	**Project (Number/Name)** 2276 / *Comms Switching and Control Sys*

(INE) device supporting IP Security (IPSec) and Virtual Private Networking (VPN). Decrease of $2.941M from FY14 to FY15 is a result of completion of research and development for the Session Boundary Controller in FY14.

(U) Joint Enhanced Core Communications System (JECCS): Formerly known as First In Command and Control System (FICCS). JECCS is the Joint Task Force (JTF) enabler "first in" integrated, processor-controlled communications and management system that provides C2 capabilities supporting a Marine Expeditionary Unit (MEU) deployment ashore of the early phases of a deployment by a larger command element such as a Marine Air-Ground Task Force (MAGTF) or JTF Commander's mission into an Area of Operation. The JECCS is easily scalable and capable of "fly-away" deployment. It is a system of systems composed of Commercial Off-the-Shelf (COTS) and Government Off-the-Shelf (GOTS) equipment. It provides the primary interface between subscriber equipment/systems and the long-haul multi-channel transmission systems. The JECCS facilitates secure and non-secure voice and data communications, switching functions, network routing, and management functions. The JECCS augments the current and planned communications architectures and provides technical control and network management services for the broad range of switching and radio connectivity requirements. JECCS is not funded beyond FY15 due to program cancellation.

(U) Digital Technical Control (DTC): DTC and other communications are a switch network infrastructure which provides voice, SIPR, NIPR, coalition, data, and video services. DTC provides the deployed warfighter with a standard data and voice architecture that is interoperable with joint and other services' communications systems. DTC is not funded beyond FY14 due to program cancellation.

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2014	FY 2015	FY 2016 Base	FY 2016 OCO	FY 2016 Total
Title: NPM: Product Development	0.103	0.761	0.985	-	0.985
Articles:	-	-	-	-	-
FY 2014 Accomplishments: Continued to provide additional enhancements and capabilities within the System Planning Engineering and Evaluation Device (SPEED) software testing, and research on additional software applications to be utilized within Network Planning Mangement (NPM). ***FY 2015 Plans:*** Continue to provide additional enhancements and capabilities within the System Planning Engineering and Evaluation Device (SPEED) software testing. ***FY 2016 Base Plans:*** Continue to provide additional enhancements and capabilities within the System Planning Engineering and Evaluation Device (SPEED) software testing. ***FY 2016 OCO Plans:*** N/A					
Title: NPM: Management Services	0.993	0.319	-	-	-

Exhibit R-2A, RDT&E Project Justification: PB 2016 Navy		Date: February 2015
Appropriation/Budget Activity 1319 / 7	**R-1 Program Element (Number/Name)** PE 0206313M / *Marine Corps Comms Systems*	**Project (Number/Name)** 2276 / *Comms Switching and Control Sys*

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2014	FY 2015	FY 2016 Base	FY 2016 OCO	FY 2016 Total
Articles:	-	-	-	-	-
FY 2014 Accomplishments: Continued engineering and program support. ***FY 2015 Plans:*** Continues engineering and program support. ***FY 2016 Base Plans:*** N/A ***FY 2016 OCO Plans:*** N/A					
Title: TVSS: Management Services	0.300	0.261	0.265	-	0.265
Articles:	-	-	-	-	-
FY 2014 Accomplishments: Continued engineering and technical support. ***FY 2015 Plans:*** Continue engineering and technical support for a network migration plan. ***FY 2016 Base Plans:*** Continue engineering and technical support for a network migration plan. ***FY 2016 OCO Plans:*** N/A					
Title: ECCS: Management Services	0.844	-	-	-	-
Articles:	-	-	-	-	-
FY 2014 Accomplishments: Completed systems engineering, interoperability analysis, integration support, and development of technical data packages for VSAT as required for Satellite Communication (SATCOM) Consolidation. ECCS has no funding beyond FY14. ***FY 2015 Plans:***					

Exhibit R-2A, RDT&E Project Justification: PB 2016 Navy		Date: February 2015
Appropriation/Budget Activity 1319 / 7	**R-1 Program Element (Number/Name)** PE 0206313M / *Marine Corps Comms Systems*	**Project (Number/Name)** 2276 / *Comms Switching and Control Sys*

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2014	FY 2015	FY 2016 Base	FY 2016 OCO	FY 2016 Total
N/A ***FY 2016 Base Plans:*** N/A ***FY 2016 OCO Plans:*** N/A					
Title: DDS-M Product Development	3.193	0.436	0.418	-	0.418
Articles:	-	-	-	-	-
FY 2014 Accomplishments: Continued support of the Edge Boundary Controller initiative (DISA mandated) that provides a proxy service for real-time services which include VTC and Voice Over IP (VoIP), engineering and techical support, and testing. ***FY 2015 Plans:*** Continue to support research, development, and implementation of required hardware updates (routers and switches); software integration and regression testing (information assurance mandates). ***FY 2016 Base Plans:*** Continue to support research, development, and implementation of required hardware updates (routers and switches); software integration and regression testing (information assurance mandates). ***FY 2016 OCO Plans:*** N/A					
Title: DDS-M: Management Services	0.275	0.156	0.491	-	0.491
Articles:	-	-	-	-	-
FY 2014 Accomplishments: Continued Federally Funded Research and Development Center (FFRDC) support for systems engineering, interoperability analysis, acquisition planning, support for technology research and obsolescence, and support for the integration of the Session Boundary Controller. ***FY 2015 Plans:*** Continue FFRDC support for systems engineering, interoperability analysis, acquisition planning, support for technology research and obsolescence. ***FY 2016 Base Plans:***					

Exhibit R-2A, RDT&E Project Justification: PB 2016 Navy		Date: February 2015
Appropriation/Budget Activity 1319 / 7	**R-1 Program Element (Number/Name)** PE 0206313M / *Marine Corps Comms Systems*	**Project (Number/Name)** 2276 / *Comms Switching and Control Sys*

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2014	FY 2015	FY 2016 Base	FY 2016 OCO	FY 2016 Total
Continue FFRDC support for systems engineering, interoperability analysis, acquisition planning, support for technology research and obsolescence. ***FY 2016 OCO Plans:*** N/A					
Title: DDS-M: Engineering and Program Support	0.657	0.704	0.200	-	0.200
Articles:	-	-	-	-	-
FY 2014 Accomplishments: Continued support for systems engineering, interoperability analysis, acquisition planning, support for technology research and obsolescence, and support for the integration of the Session Boundary Controller. ***FY 2015 Plans:*** Continue to support systems engineering, interoperability analysis, acquisition planning and integration, and support for technology research and obsolescence. ***FY 2016 Base Plans:*** Continue to support systems engineering, interoperability analysis, acquisition planning and integration, and support for technology research and obsolescence. ***FY 2016 OCO Plans:*** N/A					
Title: DDS-M: Test and Evaluation Support	0.202	0.090	0.075	-	0.075
Articles:	-	-	-	-	-
FY 2014 Accomplishments: Continued testing of Defense Information Systems Network-Tactical Edge (DISN-TE) demonstration of converged voice, video, and data services over Internet Protocol (IP) using the DDS-M System (adding Quality of Service, various transmission systems, updated internal DDS-M equipment), IPv6 validation in line with updated hardware internal to DDS-M and continued joint interoperability test certification efforts demonstrated through DoD Interoperability Communication Exercises. ***FY 2015 Plans:*** Continue to support joint interoperability test certification efforts demonstrated through DoD Interoperability Communication Exercises. ***FY 2016 Base Plans:***					

Exhibit R-2A, RDT&E Project Justification: PB 2016 Navy		Date: February 2015
Appropriation/Budget Activity 1319 / 7	**R-1 Program Element (Number/Name)** PE 0206313M / *Marine Corps Comms Systems*	**Project (Number/Name)** 2276 / *Comms Switching and Control Sys*

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2014	FY 2015	FY 2016 Base	FY 2016 OCO	FY 2016 Total
Continue to support joint interoperability test certification efforts demonstrated through DoD Interoperability Communication Exercises. ***FY 2016 OCO Plans:*** N/A					
Title: JECCS: Engineering and Program Support	0.445	0.555	-	-	-
Articles:	-	-	-	-	-
FY 2014 Accomplishments: Continued engineering and program support. ***FY 2015 Plans:*** Complete engineering and program support. ***FY 2016 Base Plans:*** N/A ***FY 2016 OCO Plans:*** N/A					
Title: JECCS: Management Services	0.524	0.415	-	-	-
Articles:	-	-	-	-	-
FY 2014 Accomplishments: Continued FFRDC engineering and program support. ***FY 2015 Plans:*** Continue FFRDC engineering and program support. ***FY 2016 Base Plans:*** N/A ***FY 2016 OCO Plans:*** N/A					
Title: DTC: Engineering and Program Support	0.383	-	-	-	-
Articles:	-	-	-	-	-
FY 2014 Accomplishments:					

Exhibit R-2A, RDT&E Project Justification: PB 2016 Navy		Date: February 2015
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B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2014	FY 2015	FY 2016 Base	FY 2016 OCO	FY 2016 Total
Completed engineering and development of additional IP/Black Core routing, Engineering Change Proposals. ***FY 2015 Plans:*** N/A ***FY 2016 Base Plans:*** N/A ***FY 2016 OCO Plans:*** N/A					
Title: DTC: Management Services	1.026	-	-	-	-
Articles:	-	-	-	-	-
FY 2014 Accomplishments: Completed FFRDC engineering and technical support. ***FY 2015 Plans:*** N/A ***FY 2016 Base Plans:*** N/A ***FY 2016 OCO Plans:*** N/A					
Title: DTC: Test and Evaluation Support	0.047	-	-	-	-
Articles:	-	-	-	-	-
FY 2014 Accomplishments: Completed integration and testing. ***FY 2015 Plans:*** N/A ***FY 2016 Base Plans:*** N/A ***FY 2016 OCO Plans:***					

Exhibit R-2A, RDT&E Project Justification: PB 2016 Navy		Date: February 2015
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B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2014	FY 2015	FY 2016 Base	FY 2016 OCO	FY 2016 Total
N/A					
Accomplishments/Planned Programs Subtotals	8.992	3.697	2.434	-	2.434

C. Other Program Funding Summary ($ in Millions)

Line Item	FY 2014	FY 2015	FY 2016 Base	FY 2016 OCO	FY 2016 Total	FY 2017	FY 2018	FY 2019	FY 2020	Cost To Complete	Total Cost
• PMC/4634-1: *TVSS*	23.422	-	6.011	-	6.011	21.647	14.156	10.220	10.433	Continuing	Continuing
• PMC/4634-2: *ECCS*	10.027	-	-	-	-	-	-	-	-	-	20.603
• PMC/4634-5: *DDS-M*	13.593	59.039	57.705	-	57.705	57.824	57.138	47.548	48.521	Continuing	Continuing
• PMC/4634-6: *DTC*	3.620	1.899	1.091	-	1.091	0.347	-	-	-	-	26.934
• PMC/4634-7: *JECCS*	1.034	1.245	-	-	-	-	-	-	0.010	-	6.230
• PMC/4630-1: *TVSS/CCR*	1.151	-	-	-	-	-	-	-	-	-	1.151

Remarks

D. Acquisition Strategy

(U) Network Planning and Management (NPM): NPM will maximize use of existing COTS and GOTS products. NPM will continue to be upgraded as technology advances. Major focus will be on the incorporation of additional capabilities and functionality into the SPEED software to meet user requirements. R&D effort will focus on the development, integration, and testing of improved versions of existing capabilities.

(U) Tactical Voice Switching System (TVSS) (formerly Transition Switch Module (TSM)): TVSS will maximize use of existing COTS, GOTS, and GFE. TVSS hardware and software will continue to be upgraded and improved as technology advances. Major focus will be on interoperability and compatibility with existing systems and components in the Marine Corps, as well as Joint and Coalition forces. R&D effort will focus on integration and testing of improved versions of existing components.

(U) Expeditionary Command and Control Suite (ECCS): ECCS has been reduced in scope. FY14 funds provided for engineering support for the Network and Satellite Communications portfolio. There is no funding after FY14 due to program cancellation.

(U) TDN Data Distribution System - Modular (DDS-M): DDS-M will maximize use of existing COTS, GOTS, and GFE. DDS-M hardware and software will continue to be upgraded and improved as technology advances. Major focus will be on interoperability and compatibility with existing systems and components in the Marine Corps, as well as Joint and Coalition forces. R&D effort will focus on integration and testing of improved versions of existing components. DDS-M may reuse other Services' development and utilize external contracts that satisfy requirements and analysis of alternatives.

Exhibit R-2A, RDT&E Project Justification: PB 2016 Navy		Date: February 2015
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(U) Joint Enhanced Core Communications System-Refresh (JECCS): JECCS will use existing funds to retrograde and dispose of all systems in the inventory. Select components will be de-integrated and reused elsewhere in the networking portfolio. In May 2014 the Program Office was relieved of the requirement to maintain the JECCS capability by the end of FY15.

(U) Digital Technical Control (DTC): DTC will use existing funds to retrograde and dispose of all systems in the inventory. Select components will be de-integrated and reused elsewhere in the networking portfolio. The DTC capability will not be maintained beyond FY17.

E. Performance Metrics

N/A

Exhibit R-3, RDT&E Project Cost Analysis: PB 2016 Navy		Date: February 2015
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Product Development ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2014 Cost	FY 2014 Award Date	FY 2015 Cost	FY 2015 Award Date	FY 2016 Base Cost	FY 2016 Base Award Date	FY 2016 OCO Cost	FY 2016 OCO Award Date	FY 2016 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
NPM (SPEED S/W Development)	WR	SPAWAR : Charleston, SC	8.934	0.103	Dec 2013	-		-		-		-	Continuing	Continuing	Continuing
NPM (SPEED S/W Development)	C/FFP	MCSC : TBD	0.000	-		0.761	Sep 2015	0.985	Jan 2016	-		0.985	Continuing	Continuing	Continuing
DDS-M CARD	RO	SSC-LANT : Charleston, SC	0.000	0.046	Feb 2014	-		-		-		-	-	0.046	-
DDS-M Amphibious	RO	NSWC : Indian Head, MD	0.000	0.966	Jul 2014	-		-		-		-	-	0.966	-
DDS-M Amphibious Integration	WR	NAVAIR : Patuxent River, MD	0.000	1.200	Aug 2014	-		-		-		-	-	1.200	-
DDS-M Amphibious Integration Support	RO	NAVAIR : Patuxent River, MD	0.000	0.566	Sep 2014	-		-		-		-	-	0.566	-
DDS-M ECP	RO	SSC-LANT : Charleston, SC	1.360	0.415	Oct 2014	0.436	Feb 2015	0.418	Apr 2016	-		0.418	-	2.629	-
Prior Year Cumulative Funding	Various	Various : Various	14.338	-		-		-		-		-	-	14.338	-
		Subtotal	24.632	3.296		1.197		1.403		-		1.403	-	-	-

Support ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2014 Cost	FY 2014 Award Date	FY 2015 Cost	FY 2015 Award Date	FY 2016 Base Cost	FY 2016 Base Award Date	FY 2016 OCO Cost	FY 2016 OCO Award Date	FY 2016 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
DDS-M technical support	WR	SSC-LANT : Charleston, SC	0.000	0.382	Feb 2014	-		-		-		-	-	0.382	-
DDS-M Engineering and Program Support	WR	SSC-LANT : Charleston, SC	2.256	0.275	Sep 2014	0.704	May 2015	0.200	May 2016	-		0.200	-	3.435	-
JECCS Engineering and Program Support	WR	SSC-LANT : Charleston, SC	0.000	0.261	Dec 2014	0.555	Feb 2015	-		-		-	-	0.816	-
JECCS Support	Various	Various : Various	0.000	0.184	Sep 2014	-		-		-		-	-	0.184	-
DTC Engineering and Program Support	WR	SSC-LANT : Charleston, SC	0.141	0.383	Dec 2013	-		-		-		-	-	0.524	-

Exhibit R-3, RDT&E Project Cost Analysis: PB 2016 Navy			Date: February 2015
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Support ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2014 Cost	FY 2014 Award Date	FY 2015 Cost	FY 2015 Award Date	FY 2016 Base Cost	FY 2016 Base Award Date	FY 2016 OCO Cost	FY 2016 OCO Award Date	FY 2016 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Prior Year Cumulative Funding	Various	Various : Various	0.750	-		-		-		-		-	-	0.750	-
		Subtotal	3.147	1.485		1.259		0.200		-		0.200	-	6.091	-

Test and Evaluation ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2014 Cost	FY 2014 Award Date	FY 2015 Cost	FY 2015 Award Date	FY 2016 Base Cost	FY 2016 Base Award Date	FY 2016 OCO Cost	FY 2016 OCO Award Date	FY 2016 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
DDS-M Testing	MIPR	JSEC : Aberdeen Proving Ground, MD	0.000	0.043	Sep 2014	-		-		-		-	-	0.043	-
DDS-M T&E	MIPR	JITC : Ft. Huachuca, AZ	0.117	0.159	Apr 2014	0.090	Mar 2015	0.075	Mar 2016	-		0.075	-	0.441	-
DTC T&E	MIPR	JITC : Ft. Huachuca, AZ	0.000	0.047	Apr 2014	-		-		-		-	-	0.047	-
Prior Year Cumulative Funding	Various	Various : Various	1.266	-		-		-		-		-	-	1.266	-
		Subtotal	1.383	0.249		0.090		0.075		-		0.075	-	1.797	-

Management Services ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2014 Cost	FY 2014 Award Date	FY 2015 Cost	FY 2015 Award Date	FY 2016 Base Cost	FY 2016 Base Award Date	FY 2016 OCO Cost	FY 2016 OCO Award Date	FY 2016 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
NPM Engineering Support	FFRDC	MITRE : Stafford, VA	0.000	0.993	Oct 2014	0.319	Aug 2015	-		-		-	-	1.312	-
TVSS Engineering Support	FFRDC	MITRE : Stafford, VA	0.734	0.300	Oct 2014	0.261	Feb 2015	0.265	Dec 2015	-		0.265	-	1.560	-
DDS-M Engineering Support	FFRDC	MITRE : Stafford, VA	0.000	0.275	Oct 2014	0.156	Feb 2015	0.491	Dec 2015	-		0.491	-	0.922	-
ECCS Engineering Support	FFRDC	MITRE : Stafford, VA	0.409	0.844	Dec 2013	-		-		-		-	-	1.253	-
JECCS Engineering Support	FFRDC	MITRE : Stafford, VA	0.035	0.524	Oct 2014	0.415	Feb 2015	-		-		-	-	0.974	-
DTC Engineering Support	FFRDC	MITRE : Stafford, VA	0.000	1.026	Oct 2014	-		-		-		-	-	1.026	-

Exhibit R-3, RDT&E Project Cost Analysis: PB 2016 Navy			Date: February 2015
Appropriation/Budget Activity 1319 / 7	R-1 Program Element (Number/Name) PE 0206313M / *Marine Corps Comms Systems*	Project (Number/Name) 2276 / *Comms Switching and Control Sys*	

Management Services ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2014 Cost	FY 2014 Award Date	FY 2015 Cost	FY 2015 Award Date	FY 2016 Base Cost	FY 2016 Base Award Date	FY 2016 OCO Cost	FY 2016 OCO Award Date	FY 2016 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Prior Year Cumulative Funding	Various	Various : Various	0.845	-		-		-		-		-	-	0.845	-
		Subtotal	2.023	3.962		1.151		0.756		-		0.756	-	7.892	-

	Prior Years	FY 2014		FY 2015		FY 2016 Base		FY 2016 OCO		FY 2016 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	31.185	8.992		3.697		2.434		-		2.434	-	-	-

Remarks

Exhibit R-4, RDT&E Schedule Profile: PB 2016 Navy		Date: February 2015
Appropriation/Budget Activity 1319 / 7	**R-1 Program Element (Number/Name)** PE 0206313M / *Marine Corps Comms Systems*	**Project (Number/Name)** 2276 / *Comms Switching and Control Sys*

Program Schedule-ECCS RRK

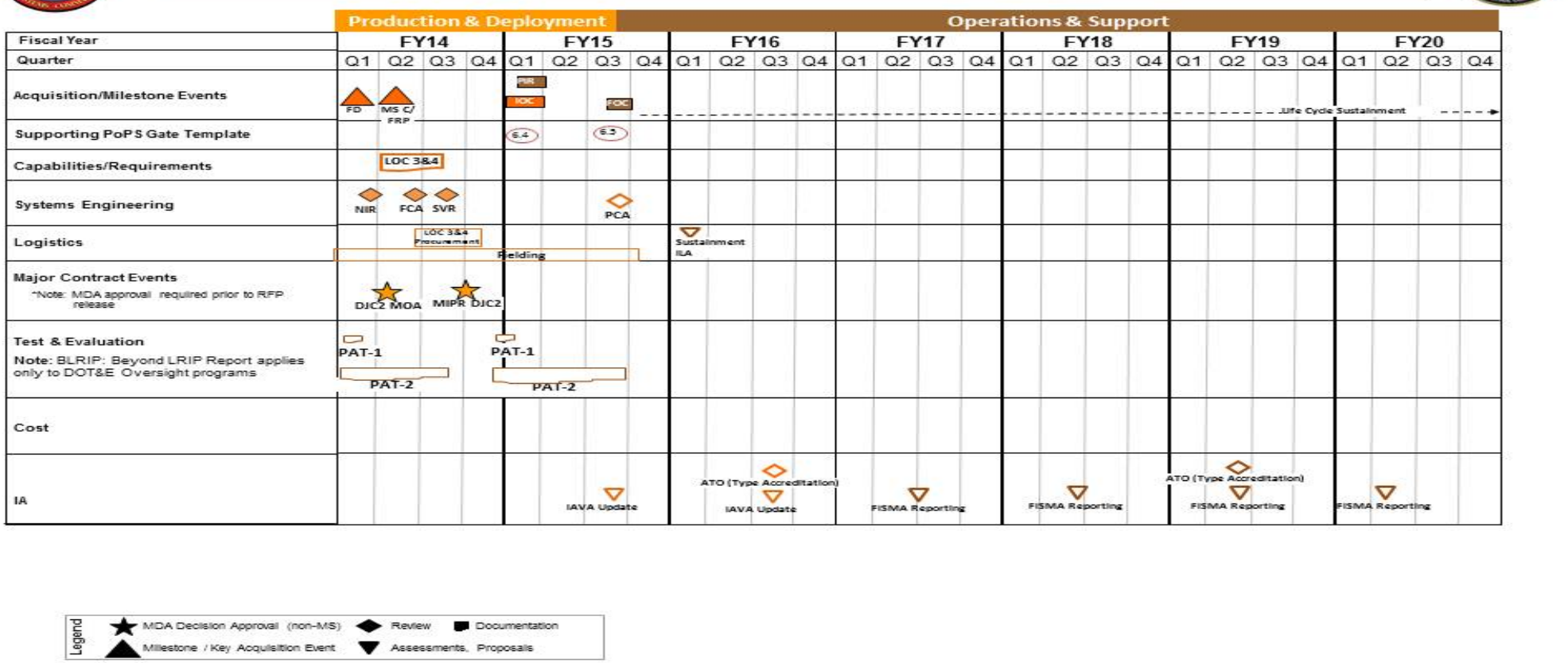

Exhibit R-4, RDT&E Schedule Profile: PB 2016 Navy		Date: February 2015
Appropriation/Budget Activity 1319 / 7	**R-1 Program Element (Number/Name)** PE 0206313M / *Marine Corps Comms Systems*	**Project (Number/Name)** 2276 / *Comms Switching and Control Sys*

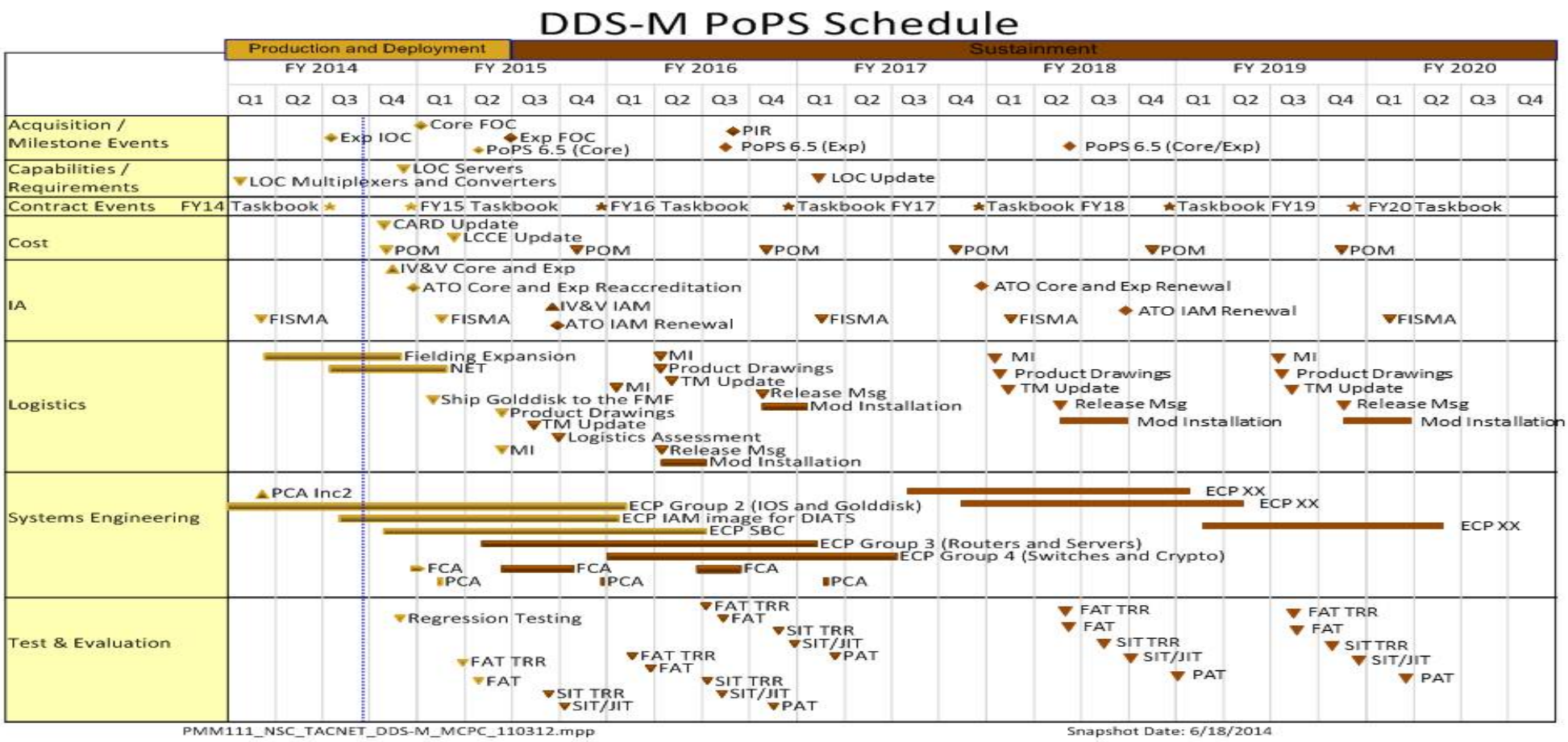

Exhibit R-4, RDT&E Schedule Profile: PB 2016 Navy		Date: February 2015
Appropriation/Budget Activity 1319 / 7	**R-1 Program Element (Number/Name)** PE 0206313M / *Marine Corps Comms Systems*	**Project (Number/Name)** 2276 / *Comms Switching and Control Sys*

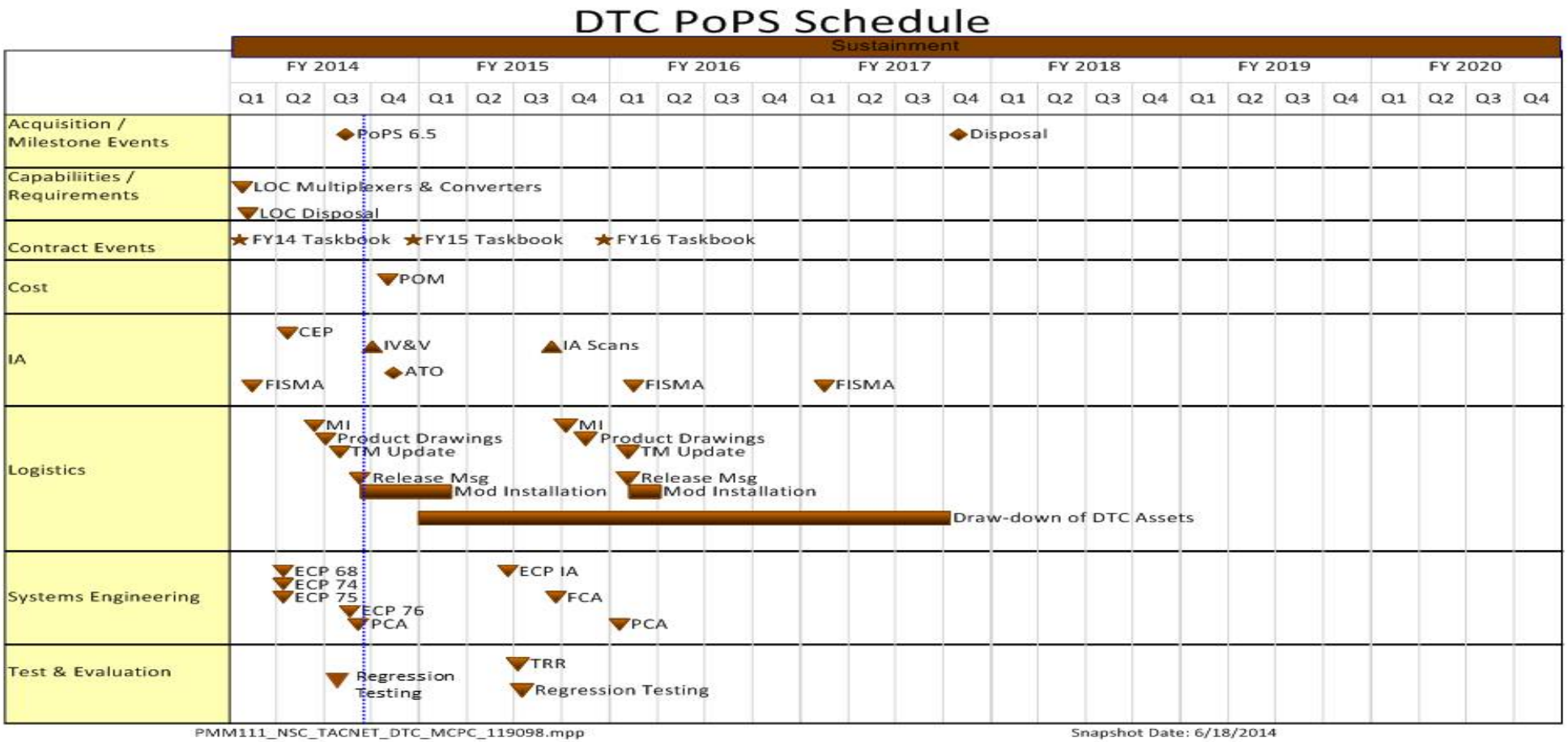

Exhibit R-4, RDT&E Schedule Profile: PB 2016 Navy		Date: February 2015
Appropriation/Budget Activity 1319 / 7	**R-1 Program Element (Number/Name)** PE 0206313M / *Marine Corps Comms Systems*	**Project (Number/Name)** 2276 / *Comms Switching and Control Sys*

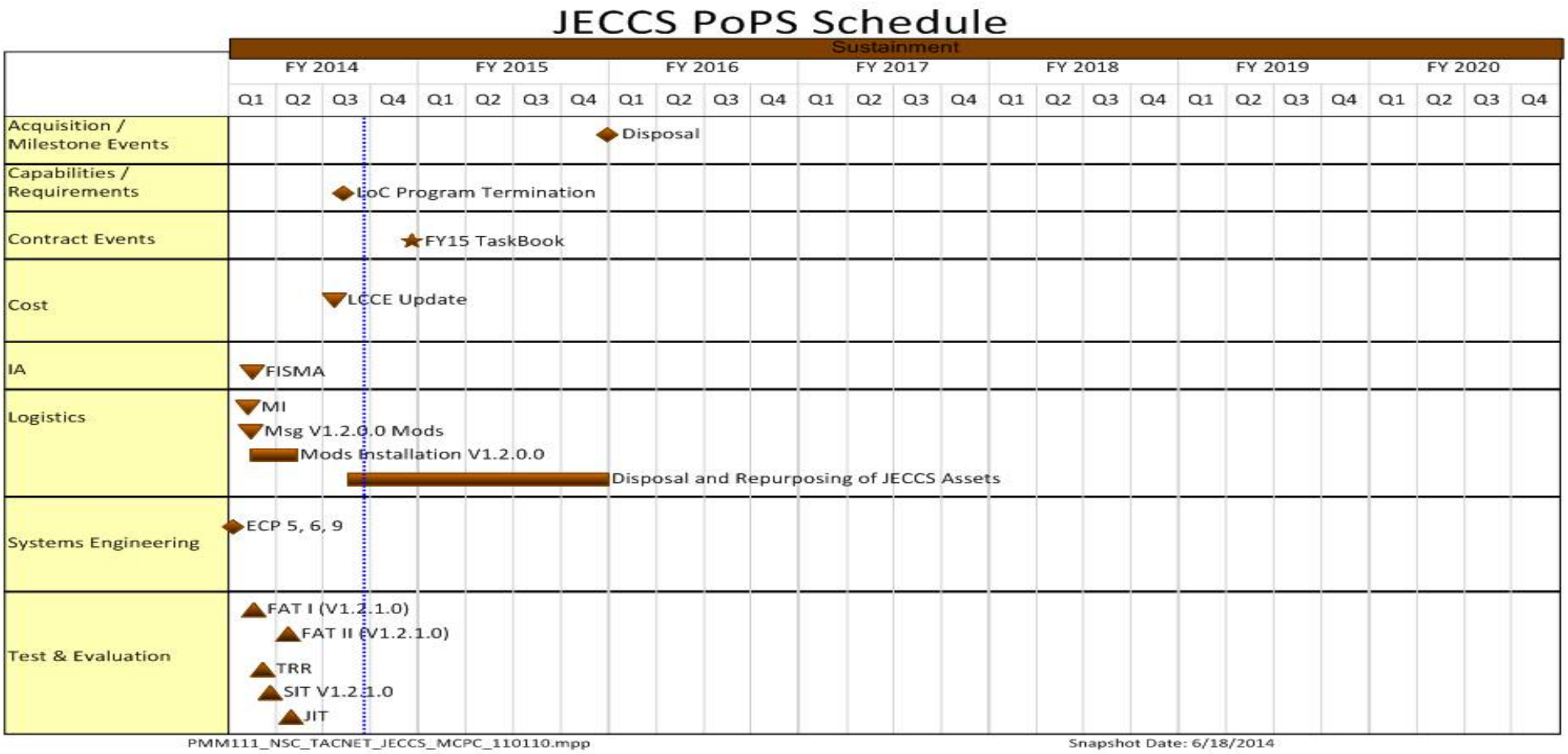

Exhibit R-4, RDT&E Schedule Profile: PB 2016 Navy		Date: February 2015
Appropriation/Budget Activity 1319 / 7	**R-1 Program Element (Number/Name)** PE 0206313M / *Marine Corps Comms Systems*	**Project (Number/Name)** 2276 / *Comms Switching and Control Sys*

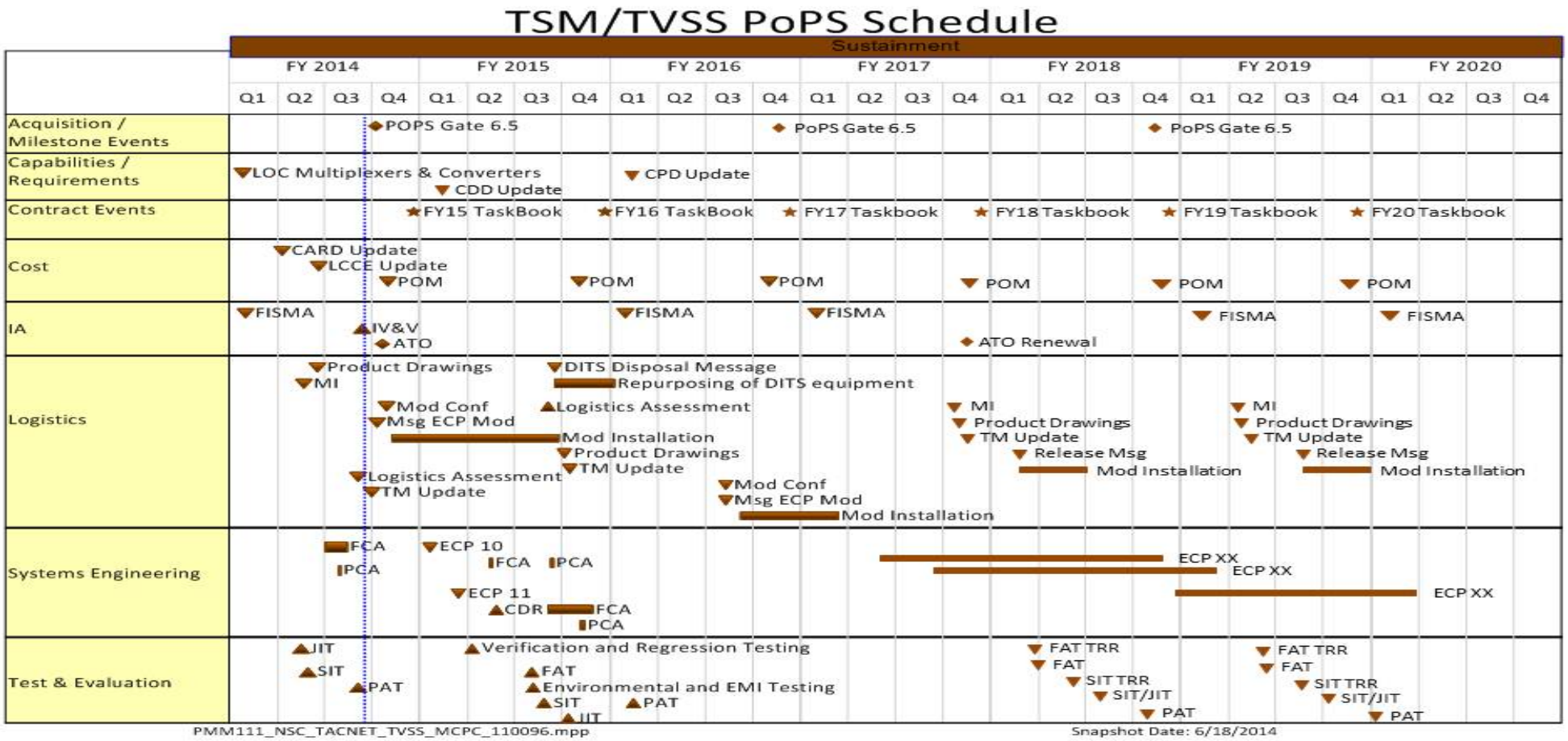

Exhibit R-4, RDT&E Schedule Profile: PB 2016 Navy		Date: February 2015
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Program Schedule - NPM

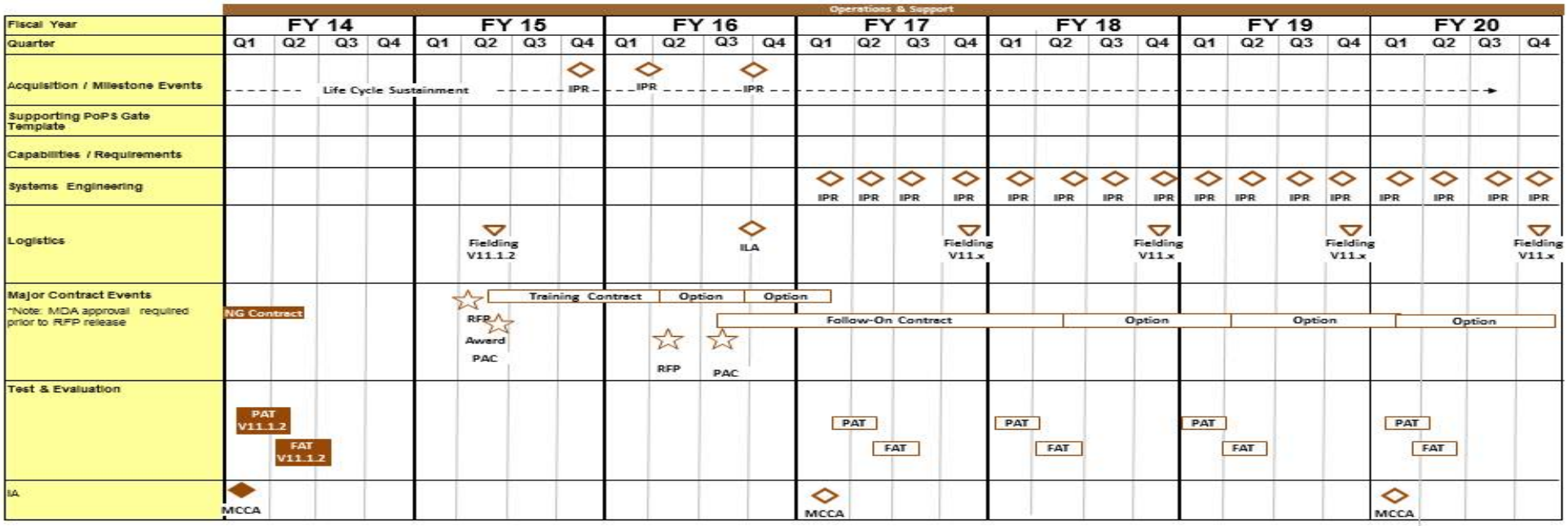

Exhibit R-4A, RDT&E Schedule Details: PB 2016 Navy		Date: February 2015
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Schedule Details

	Start		End	
Events by Sub Project	**Quarter**	**Year**	**Quarter**	**Year**
Proj 2276				
DTC DRAW DOWN OF DTC ASSETS	1	2015	4	2017
DTC ECP IA	2	2015	2	2015
DTC Disposal	4	2017	4	2017
JECCS FAT I (V1.2, 1.0)	1	2014	1	2014
JECCS Mods Installation V1.2.0.0	1	2014	2	2014
JECCS FAT II (V1.2.1.00)	2	2014	2	2014
JECCS Disposal and Repurposing of JECCS Assets	3	2014	4	2015
DDS-M CORE FOC	1	2015	1	2015
DDS-M FAT TRR	1	2015	1	2015
DDS-M ECP GROUP 3	2	2015	1	2017
DDS-M EXP FOC	3	2015	3	2015
DDS-M SIT TRR	3	2015	3	2015
DDS-M ECP GROUP 4	1	2016	3	2017
DDS-M PIR	3	2016	3	2016
TVSS (TSM) MOD INSTALLATION	4	2014	3	2015
TVSS (TSM) ECP 10	1	2015	1	2015
TVSS (TSM) ECP 11	1	2015	1	2015
TVSS (TSM) FAT	3	2015	3	2015
TVSS (TSM) ENVIRONMENTAL AND EMI TESTING	3	2015	3	2015
NPM PAT	1	2017	2	2017
NPM FAT	2	2017	3	2017

Exhibit R-2A, RDT&E Project Justification: PB 2016 Navy			Date: February 2015
Appropriation/Budget Activity 1319 / 7	R-1 Program Element (Number/Name) PE 0206313M / *Marine Corps Comms Systems*	Project (Number/Name) 2277 / *System Engineering and Integration*	

COST ($ in Millions)	Prior Years	FY 2014	FY 2015	FY 2016 Base	FY 2016 OCO	FY 2016 Total	FY 2017	FY 2018	FY 2019	FY 2020	Cost To Complete	Total Cost
2277: *System Engineering and Integration*	27.412	12.101	5.117	5.161	-	5.161	4.921	4.921	4.922	5.322	Continuing	Continuing
Quantity of RDT&E Articles		-	-	-	-	-	-	-	-	-		

A. Mission Description and Budget Item Justification

This project provides funds for engineering, test, and evaluation activity, which ensures that the systems being developed within the Program Element (PE) employ consistent standards for interoperability and to the maximum extent feasible use of hardware and software which is uniform and standard across programs.

Expeditionary Energy Office (E2O): Energy is a top priority for the USMC and one of the six pillars of Modernization for the Corps identified by the Commandant. In 2009 the Commandant established the USMC Expeditionary Energy Office (E2O), with the mission to analyze, develop, and direct the Marine Corps' energy strategy in order to optimize expeditionary capabilities across all warfighting functions. E2O's role is to advise the Marine Requirements Oversight Council (MROC) on all energy and resource related requirements, acquisitions, and programmatic decisions. This office and funding directly support execution of the USMC Expeditionary Energy Strategy and Implementation Plan (Mar 2011), and priorities identified in the USMC Expeditionary Energy Water and Waste Initial Capabilities Document/Capabilities Based Assessment (Sept 2011), as well as Science and Technology Objectives identified in the 2012 USMC S&T Strategic Plan. The Marine Corps program aligns with the Commandant's Planning Guidance 2010, the National Defense Authorization Act 2009, DoD directives and SECNAV goals. This funding will support the achievement of the Strategy, and the activities of the USMC Experimental Forward Operating Base process, managed by the E2O.

Joint Interoperability of Tactical Command and Control Systems (JINTACCS) is a Joint Chiefs-of-Staff (JCS)/DoD-mandated program for joint development, implementation, and testing of tactical data links and US Message Text Format (MTF) under the direction of the Defense Information Systems Agency (DISA) and Office of the Secretary of Defense/Networks and Information Integration (OASD/NII) per the Commander Joint Chiefs of Staff (CJCSI) 6610.01C and CJCS16241.04 for US Military Tactical Forces (USMTF). This effort also covers interoperability and testing of tactical message standards such as MILSTD 6017 Variable Message Format used between the US Army and USMC; and Coalition message formats the Joint Command, Control, Consultation Information Exchange Data Model (JC3IEDM).

Marine Air-Ground Task Force Command, Control, Communications, Computers, and Intelligence Systems Engineering and Integration, and Coordination (MAGTF C4I SEI&C) provides for the centralized planning and execution of Marine Corps Enterprise Information Technology and National Security Systems. It develops, certifies, and manages the configurations of the Marine Corps Enterprise Systems and Technical Architecture products and uses these to support enterprise-level systems engineering. It supports unified technical representation to joint and coalition communities for Marine Corps Systems and provides top-tier system engineering support to address system of systems technical issues. It is used to conduct direct Marine Expeditionary Unit/Marine Expeditionary Force (MEU/MEF) support in system integration testing with USN. This is part of Deploying Group Systems Integration Testing (DGSIT) and workups supporting Marine Expeditionary Force (MEF) deployments. It is also used to support Marine Corps systems coordination and involvement in DoD initiatives to include ForceNet, Global Information Grid Enterprise Services (GIGES), and other Deployable Information Systems Architecture DISA/NETWARCOM efforts.

Exhibit R-2A, RDT&E Project Justification: PB 2016 Navy		Date: February 2015
Appropriation/Budget Activity 1319 / 7	**R-1 Program Element (Number/Name)** PE 0206313M / *Marine Corps Comms Systems*	**Project (Number/Name)** 2277 / *System Engineering and Integration*

Marine Civil Information Management System (MARCIMS) is a system of systems comprised of people, process and technology that operates in the full Joint, Interagency, Intergovernmental, and Multinational (JIIM) environment. It is a force multiplier for the commander that allows him to leverage the process of Planning, Collection, Consolidation, Analysis, Production, and sharing of civil information in order to support the visualization and understanding of the civil environment to the military commander's decision making process. The increase of $.150M from FY15 to FY16 will support minor software patches.

Public Affairs System (PAS) provides the Marine Air Ground Task Force (MAGTF) and the broader Marine Corps the capability to research, understand and affect the information environment. PA Marines and Systems enable commanders at all levels and across the range of military operations to engage domestic and foreign publics whose trust, confidence, and understanding are mission critical. The Public Affairs Systems (PAS) AAP identifies and fields materiel solutions required to research and plan communication initiatives, acquire still and video visual information, produce and disseminate communication products, and assess the effects of communication initiatives within the information environment. The program maintains an evolutionary approach to acquisitions, and leverages commercial industry-standard non-developmental items to provide the best value to the Marine Corps, while keeping PA Marines appropriately equipped to understand and affect the information environment. This is a New Start for RDT&E in FY16 to research and evaluate solutions to modernize the Public Affairs Still Acquisition System into a single handheld device with the capability to acquire, edit and transmit still and video imagery and engage publics via traditional and social media.

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2014	FY 2015	FY 2016 Base	FY 2016 OCO	FY 2016 Total
Title: Expeditionary Energy Office (E2O)	2.311	2.671	2.253	-	2.253
Articles:	-	-	-	-	-
FY 2014 Accomplishments: Continued to support the USMC Expeditionary Energy Strategy and Implementation Plan, and priorities identified in the USMC Expeditionary Energy Water and Waste Initial Capabilities Document/Capabilities Based Assessment, as well as Science and Technology Objectives identified in the 2012 USMC S&T Strategic Plan. Using these priority roadmaps, E2O will invest in R&D programs to advance Strategy goals. Priority areas for investment include, but are not limited to: Energy harvesting; hybrid power; efficient heating and cooling of people, equipment and water; energy storage; energy efficient vehicles; energy metering and monitoring and decision tools; energy efficient shelters and sustainment.					
FY 2015 Plans: Continue to support the USMC Expeditionary Energy Strategy and Implementation Plan, and priorities identified in the USMC Expeditionary Energy Water and Waste Initial Capabilities Document/Capabilities Based Assessment, as well as Science and Technology Objectives identified in the 2012 USMC S&T Strategic Plan. Using these priority roadmaps, E2O will invest in R&D programs to advance Strategy goals. Priority areas for investment include, but are not limited to: Energy harvesting; hybrid power; efficient heating and cooling of					

Exhibit R-2A, RDT&E Project Justification: PB 2016 Navy		Date: February 2015
Appropriation/Budget Activity 1319 / 7	**R-1 Program Element (Number/Name)** PE 0206313M / *Marine Corps Comms Systems*	**Project (Number/Name)** 2277 / *System Engineering and Integration*

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2014	FY 2015	FY 2016 Base	FY 2016 OCO	FY 2016 Total
people, equipment and water; energy storage; energy efficient vehicles; energy metering and monitoring and decision tools; energy efficient shelters and sustainment. ***FY 2016 Base Plans:*** Funds will continue to support the USMC Expeditionary Energy Strategy and Implementation Plan, and priorities identified in the USMC Expeditionary Energy Water and Waste Initial Capabilities Document/Capabilities Based Assessment, as well as Science and Technology Objectives identified in the 2012 USMC S&T Strategic Plan. Using these priority roadmaps, E2O will invest in R&D programs to advance Strategy goals. Priority areas for investment include, but are not limited to: Energy harvesting; hybrid power; efficient heating and cooling of people, equipment and water; energy storage; energy efficient vehicles; energy metering and monitoring and decision tools; energy efficient shelters and sustainment. ***FY 2016 OCO Plans:*** N/A					
Title: JINTACCS: JCS and DoD CIO Data Links Testing	1.056	0.504	0.425	-	0.425
Articles:	-	-	-	-	-
Description: Joint Interoperability of Tactical Command and Control Systems or JINTACCS is a United States military program for the development and maintenance of tactical information exchange configuration items (CIs) and operational procedures. It was originated to ensure that the command and control (C2 and C3) and weapons systems of all US military services and NATO forces would be interoperable. Joint Interoperability of Tactical C2 Systems (JINTACCS) resides at MARCORSYSCOM under SIAT oversight but primarily executed by the Interoperability Branch at MCTSSA. Created as a non-acquisition R&D engineering program it provides for critical engineering services in several areas. JINTACCS is essential to USMC development and maintenance of tactical data exchange standards (Link 16, VMF, MTF, etc.), maintenance of C2 systems interoperability issues, development of Net Centric standards (UCore, C2 Core, XML, Web Services) to meet requirements of DoD/ USMC Net Centric Data Strategy, and participation in Marine Corps and Joint Interoperability Certification testing to DoD/JCS/USMC requirements. Requirements annotated in IT Budget Submit (NC-36). ***FY 2014 Accomplishments:*** Continued to perform the engineering and testing functions for tactical data exchanges (e.g. VMF-XML, NIEM MilOps, COIs XML) that are necessary to certify and field MAGTF C2 systems as interoperable with Joint & Coalition forces. Conducted interoperability testing at JUICE14 for NATO STANAG 4677. ***FY 2015 Plans:***					

Exhibit R-2A, RDT&E Project Justification: PB 2016 Navy		Date: February 2015
Appropriation/Budget Activity 1319 / 7	**R-1 Program Element (Number/Name)** PE 0206313M / *Marine Corps Comms Systems*	**Project (Number/Name)** 2277 / *System Engineering and Integration*

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2014	FY 2015	FY 2016 Base	FY 2016 OCO	FY 2016 Total
Continue to review and update all IT Standards applicable to the USMC and maintain the architectural data environment to ensure all developed solution architectures are associated with the appropriate technical IT standards in their DoDAF Standards View. DC SIAT will continue to lead the Army - Marine Corps C2 interoperability Systems Engineering IPT to align the use of tactical messaging standards to create interoperability between the DoD ground force systems FBCB2/JTCW (VMF), GCCS (OTH Gold), TBMCS/ AFATDS (USMTF), and aviation tactical data links (Link 16/22). This effort will continue to support HQMC Director C4 in the development of implementation plans for the Marine Corps to meet its Service level requirements mandated by the DoD Net Centric Data Strategy and participate in the Joint development of XML data standards to enable tactical data exchanges in C2 systems. Additionally, this effort will expand to incorporate the ability to use Tactical Service Oriented approaches to mediate data across multiple environments/domains (Air/Mobile platform/Dismounted/Stationary command posts). DC SIAT will continue to lead the development of data model converter applications to create Standard Agreement 4677 on interoperability between the NATO JC3IEDM data model to the JTCW (VMF) system allowing coalition interoperability at the dismounted level. ***FY 2016 Base Plans:*** Continue to review and update all IT Standards applicable to the USMC and maintain the architectural data environment to ensure all developed solution architectures are associated with the appropriate technical IT standards in their DoDAF Standards View. DC SIAT will continue to lead the Army - Marine Corps C2 interoperability Systems Engineering IPT to align the use of tactical messaging standards to create interoperability between the DoD ground force systems FBCB2/JTCW (VMF), GCCS (OTH Gold), TBMCS/ AFATDS (USMTF), and aviation tactical data links (Link 16/22). ***FY 2016 OCO Plans:*** N/A					
Title: SEIC: Engineering and Technical Support	7.344	1.892	1.983	-	1.983
Articles:	-	-	-	-	-
FY 2014 Accomplishments: -Continued engineering and technical support for configuration management of MAGTF C4I systems. Reviewed and submitted multiple Integration Support Plans (ISPs) and Tactical ISPs (TISPs). Participated in ForceNet, NCES, GIGES, and other Joint DoD initiatives. New policy, handbooks and training were produced for Configuration Management, In-Service Engineering, Systems Engineering Technical Reviews, as well as an updated overarching Systems Engineering Guidebook. New processes for policy review and approval and					

Exhibit R-2A, RDT&E Project Justification: PB 2016 Navy		Date: February 2015
Appropriation/Budget Activity 1319 / 7	**R-1 Program Element (Number/Name)** PE 0206313M / *Marine Corps Comms Systems*	**Project (Number/Name)** 2277 / *System Engineering and Integration*

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2014	FY 2015	FY 2016 Base	FY 2016 OCO	FY 2016 Total
management thereof were instituted. Plans are for continued activities to support the interoperability and jointness of the USMC Enterprise IT/NSS systems, and for the development of just-in-time training programs. -Executed DGSIT events ISO 11th, 22nd & 24th MEU deployments and 2D MEB (BOLD ALLIGATOR 14). -Contributed to the development of the 2014 Afloat MAGTF C4 Required Capabilities (AMC4RC Letter). -Contributed to the submission of Blue-In-Support-Of-Green (BISOG) issues to OPNAV N9 and N2/N6 for POM-16 and preparation for POM-17. -Provided technical support to CD&I, CDD, SID's Seabased C2 IPT. -Directly supported the development of USMC input to OUSD AT&L's Joint C2 Capability Area FY15 Sustainment & Modernization Plan and FY15 Plan Build Workshop. -Provided engineering support to capability document (JCIDs, SON, etc.) development and review in response to 60 MCATS. Provided engineering support to the execution and assessment of 4 AoAs (MEHPS, TWTS, LX(R), Able Archer). -Assisted in the development of CD&I's CPM Process and its alignment with MARCORSYSCOM's Requirements Transition Process. ***FY 2015 Plans:*** Continue to provide system engineering policy, process, systems analysis, SE resource management, requirements transition coordination, Systems of Systems Certification, transport engineering analysis, transportation certification and external (DoD, Joint Staff, ASN, Navy, Army et al.) coordination to ensure program success, system interoperability, and an integrated system of systems capabilities for the Marine Corps. ***FY 2016 Base Plans:*** -Provide DGSIT support to 11th, 22nd and 24th MEU deployments. -Contribute to the development of the 2016 Afloat MAGTF C4 Required Capabilities (AMC4RC) Letter. -Contribute to the OPNAV N9 & N2/N6 Blue-In-Support-Of-Green (BISOG) POM-18 submission and POM 19 development. -Provide engineering support to capabilities development, review and assessment as well as requirements transition. -Provide engineering support to the development of USMC input to OUSD AT&L's Joint C2 Capability Area FY17 Sustainment & Modernization Plan and Plan Build Workshop ***FY 2016 OCO Plans:*** N/A					
Title: MARCIMS: Marine Civil Information Management System	1.390	0.050	0.200	-	0.200

Exhibit R-2A, RDT&E Project Justification: PB 2016 Navy		Date: February 2015
Appropriation/Budget Activity 1319 / 7	**R-1 Program Element (Number/Name)** PE 0206313M / *Marine Corps Comms Systems*	**Project (Number/Name)** 2277 / *System Engineering and Integration*

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2014	FY 2015	FY 2016 Base	FY 2016 OCO	FY 2016 Total
Articles:	-	-	-	-	-
FY 2014 Accomplishments: Initiated software and technical data package development, testing, and engineering study and implementation on the AWS Cloud infrastructure. ***FY 2015 Plans:*** Continue software development to incorporate all remaining threshold requirements to get to Full Operational Capability (FOC). ***FY 2016 Base Plans:*** Continue development and implementation of minor software patches. ***FY 2016 OCO Plans:*** N/A					
Title: Public Affairs System (PAS): Product Development	-	-	0.300	-	0.300
Articles:	-	-	-	-	-
FY 2014 Accomplishments: N/A ***FY 2015 Plans:*** N/A ***FY 2016 Base Plans:*** Initiate support to the research and evaluation of solutions to modernize the Public Affairs Still Acquisition System into a single handheld device with the capability to acquire, edit and transmit still and video imagery and engage publics via traditional and social media. These actions will include the evaluation of device solutions, development of specific software applications, and the attainment of required information assurance certifications and accreditations for a handheld Public Affairs System. This is a new start for RDT&E in FY16. ***FY 2016 OCO Plans:*** N/A					
Accomplishments/Planned Programs Subtotals	12.101	5.117	5.161	-	5.161

Exhibit R-2A, RDT&E Project Justification: PB 2016 Navy		Date: February 2015
Appropriation/Budget Activity 1319 / 7	**R-1 Program Element (Number/Name)** PE 0206313M / *Marine Corps Comms Systems*	**Project (Number/Name)** *2277 / System Engineering and Integration*

C. Other Program Funding Summary ($ in Millions)

Line Item	FY 2014	FY 2015	FY 2016 Base	FY 2016 OCO	FY 2016 Total	FY 2017	FY 2018	FY 2019	FY 2020	Cost To Complete	Total Cost
• PMC/4620AA: *MARCIMS*	1.533	0.568	0.301	-	0.301	0.300	0.237	0.223	0.227	Continuing	Continuing
• PMC/4620BB: *Public Affairs Systems*	2.280	1.193	1.124	-	1.124	0.901	0.918	0.669	0.681	Continuing	Continuing

Remarks

D. Acquisition Strategy

Marine Civil Information Management System (MARCIMS) will employ an evolutionary acquisition strategy utilizing an incremental approach for development and fielding of the MARCIM. The Letter of Clarification (LOC) identifies two baselines to fullfill all Threshold requirements. The current acquisition strategy addresses both baseline builds to include the software development, training, fielding and sustainment of these builds. Build 1 will support an Initial Operational Capability (IOC) and Build 2 will support a Full Operational Capability (FOC).

Public Affairs System will employ an evolutionary acquisition strategy, maximizing the utilization of commercial-off-the-shelf devices and software to provide best overall performance solutions to the warfighter with minimal developmental cost and schedule investments.

E. Performance Metrics

N/A

Exhibit R-3, RDT&E Project Cost Analysis: PB 2016 Navy		Date: February 2015
Appropriation/Budget Activity 1319 / 7	**R-1 Program Element (Number/Name)** PE 0206313M / *Marine Corps Comms Systems*	**Project (Number/Name)** *2277 / System Engineering and Integration*

Product Development ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2014 Cost	FY 2014 Award Date	FY 2015 Cost	FY 2015 Award Date	FY 2016 Base Cost	FY 2016 Base Award Date	FY 2016 OCO Cost	FY 2016 OCO Award Date	FY 2016 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
MARCIMS	C/FFP	AGC : Boston,MA	0.000	1.080	Aug 2014	-		0.174	Apr 2016	-		0.174	-	1.254	-
MARCIMS	MIPR	AGC : Boston, MA	0.000	0.086	May 2014	-		0.026	Feb 2016	-		0.026	-	0.112	-
MARCIMS Tech Doc	MIPR	AGC : Boston, MA	0.000	0.118	Feb 2014	-		-		-		-	-	0.118	-
Experimental Forward Operating Base	WR	NSWC : Various	4.234	1.082	Oct 2013	2.314	Nov 2014	-		-		-	Continuing	Continuing	Continuing
Experimental Forward Operating Base	WR	NRL : Wash, DC	0.781	0.224	Jan 2014	0.357	Jan 2015	-		-		-	Continuing	Continuing	Continuing
PAS	WR	TBD : TBD	0.000	-		-		0.300	Mar 2016	-		0.300	Continuing	Continuing	Continuing
		Subtotal	5.015	2.590		2.671		0.500		-		0.500	-	-	-

Support ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2014 Cost	FY 2014 Award Date	FY 2015 Cost	FY 2015 Award Date	FY 2016 Base Cost	FY 2016 Base Award Date	FY 2016 OCO Cost	FY 2016 OCO Award Date	FY 2016 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
MARCIMS	C/FFP	SPAWAR : Charleston,SC	0.000	0.025	Jun 2014	-		-		-		-	-	0.025	-
MARCIMS	C/FFP	SPAWAR : Charleston, SC	0.000	0.074	Feb 2014	-		-		-		-	-	0.074	-
MARCIMS	WR	SPAWAR : Charleston, SC	0.000	0.007	Feb 2014	0.050	Feb 2015	-		-		-	-	0.057	-
JINTACCS	C/FFP	NSWC : Dahlgren, VA	3.891	0.571	Apr 2014	0.041	Apr 2015	-		-		-	Continuing	Continuing	Continuing
Prior Years Cumulative	C/BA	CDSA : DAM Neck	0.441	-		-		-		-		-	-	0.441	-
MAGTF SEI&C	C/FP	SPAWAR : Charleston, SC	0.500	-		0.392	Apr 2015	0.500	Apr 2016	-		0.500	Continuing	Continuing	Continuing
MAGTF SEI&C	C/FP	LTC : Stafford, VA	4.462	4.111	Apr 2014	-		-		-		-	Continuing	Continuing	Continuing
MAGTF SEI&C	C/FP	MCSC : Quantico, VA	1.240	1.600	Apr 2014	-		-		-		-	Continuing	Continuing	Continuing
MAGTF SEI&C	WR	NSWC : Dahlgren, VA	2.290	1.633	Apr 2014	1.500	Apr 2015	1.483	Apr 2016	-		1.483	Continuing	Continuing	Continuing

Exhibit R-3, RDT&E Project Cost Analysis: PB 2016 Navy		Date: February 2015
Appropriation/Budget Activity 1319 / 7	**R-1 Program Element (Number/Name)** PE 0206313M / *Marine Corps Comms Systems*	**Project (Number/Name)** *2277 / System Engineering and Integration*

Support ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2014 Cost	FY 2014 Award Date	FY 2015 Cost	FY 2015 Award Date	FY 2016 Base Cost	FY 2016 Base Award Date	FY 2016 OCO Cost	FY 2016 OCO Award Date	FY 2016 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
JINTACCS	C/FP	MCTSSA : Cmp Pendlton CA	1.672	0.485	Apr 2014	0.463	Apr 2015	0.425	Apr 2016	-		0.425	Continuing	Continuing	Continuing
		Subtotal	14.496	8.506		2.446		2.408		-		2.408	-	-	-

Test and Evaluation ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2014 Cost	FY 2014 Award Date	FY 2015 Cost	FY 2015 Award Date	FY 2016 Base Cost	FY 2016 Base Award Date	FY 2016 OCO Cost	FY 2016 OCO Award Date	FY 2016 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Prior Years Cummulative Funding	Various	various : various	5.622	-		-		-		-		-	-	5.622	-
Experimental Forward Operating Base	WR	MCWL : Quantico, VA	1.300	0.491	Oct 2013	-		0.125	Mar 2016	-		0.125	Continuing	Continuing	Continuing
Experimental Forward Operating Base	WR	ATC : Aberdeen, MD	0.979	0.231	Jan 2014	-		0.140	May 2016	-		0.140	Continuing	Continuing	Continuing
Experimental Forward Operating Base	WR	NSWC : Various	0.000	0.283	Nov 2013	-		1.888	Nov 2015	-		1.888	-	2.171	-
Experimental Forward Operating Base	WR	NAVFAC : Various	0.000	-		-		0.100	Mar 2016	-		0.100	-	0.100	-
		Subtotal	7.901	1.005		-		2.253		-		2.253	-	-	-

	Prior Years	FY 2014		FY 2015		FY 2016 Base		FY 2016 OCO		FY 2016 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	27.412	12.101		5.117		5.161		-		5.161	-	-	-

Remarks

Exhibit R-4, RDT&E Schedule Profile: PB 2016 Navy		Date: February 2015
Appropriation/Budget Activity 1319 / 7	**R-1 Program Element (Number/Name)** PE 0206313M / *Marine Corps Comms Systems*	**Project (Number/Name)** 2277 / *System Engineering and Integration*

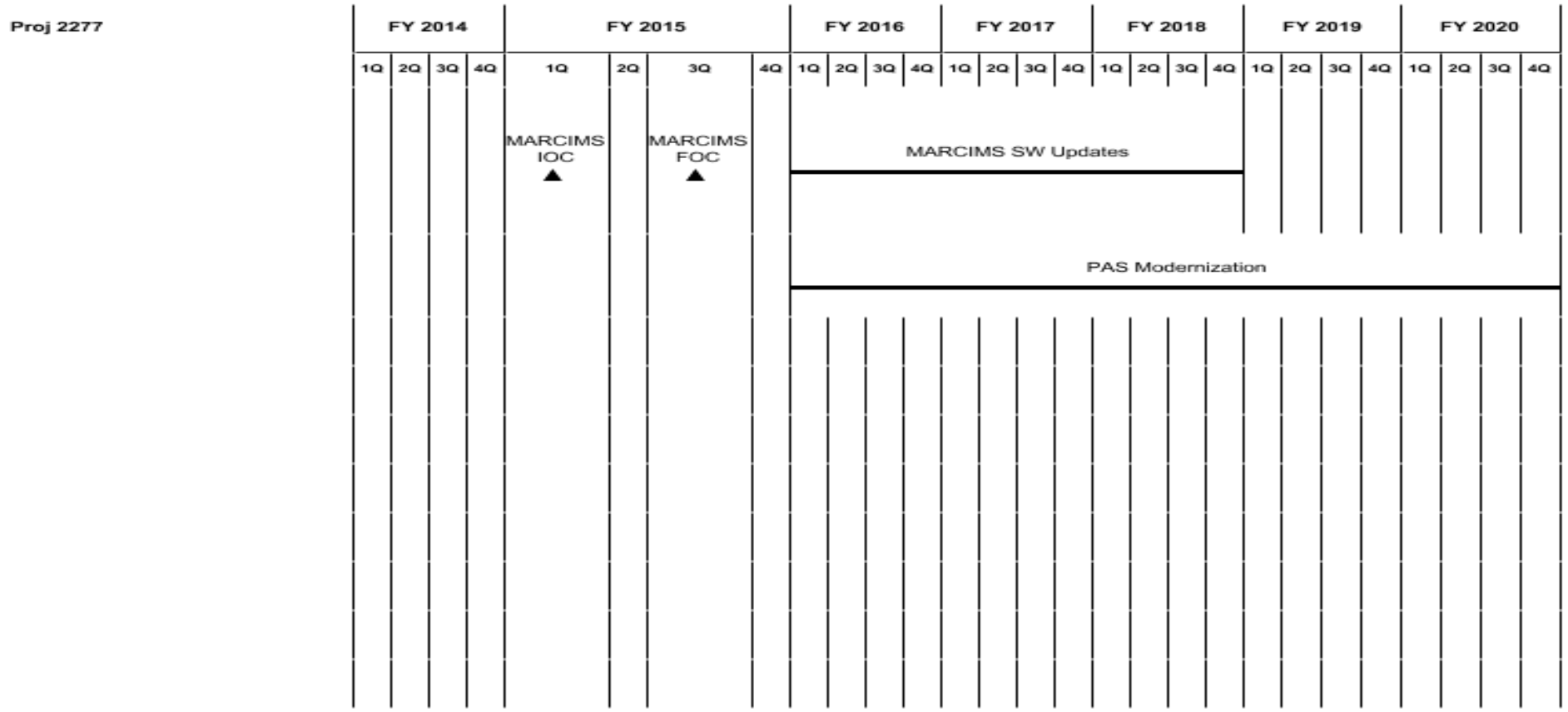

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Exhibit R-4A, RDT&E Schedule Details: PB 2016 Navy		Date: February 2015
Appropriation/Budget Activity 1319 / 7	**R-1 Program Element (Number/Name)** PE 0206313M / *Marine Corps Comms Systems*	**Project (Number/Name)** 2277 / *System Engineering and Integration*

Schedule Details

	Start		End	
Events by Sub Project	**Quarter**	**Year**	**Quarter**	**Year**
Proj 2277				
MARCIMS IOC	1	2015	1	2015
MARCIMS FOC	3	2015	3	2015
MARCIMS SW Updates	1	2016	4	2018
PAS Modernization	1	2016	4	2020

Exhibit R-2A, RDT&E Project Justification: PB 2016 Navy			Date: February 2015
Appropriation/Budget Activity 1319 / 7	R-1 Program Element (Number/Name) PE 0206313M / *Marine Corps Comms Systems*	Project (Number/Name) 2278 / *Air Defense Weapons System*	

COST ($ in Millions)	Prior Years	FY 2014	FY 2015	FY 2016 Base	FY 2016 OCO	FY 2016 Total	FY 2017	FY 2018	FY 2019	FY 2020	Cost To Complete	Total Cost
2278: *Air Defense Weapons System*	37.701	3.580	3.453	1.721	-	1.721	1.821	1.826	2.919	2.967	Continuing	Continuing
Quantity of RDT&E Articles		-	-	-	-	-	-	-	-	-		

A. Mission Description and Budget Item Justification

Ground Based Air Defense-Transformation (GBAD-T) - Based upon the deployment of the Low Altitude Air Defense (LAAD) Battalions and their employment of the Stinger Missile, GBAD-T transforms Air Defense equipment through technology insertion and equipment repackaging to address capability gaps as the result of equipment obsolescence and the emergent and evolving threats to the Marine Air Ground Task Force (MAGTF).

GBAD-T consists of three efforts: 1) systems engineering support of currently fielded LAAD equipment/assets to include the Stinger Mounted Optic and Mode 5/S Identification Friend or Foe (IFF); 2) redesign and integration of the Advanced Man-Portable Air Defense System (A-MANPADS) Increment 1 Fire Unit Vehicle (FUV) which consists of a M1114 (HMMWV), into an operationally capable vehicle configuration; 3) design, test, and integration of new systems for the Fire Unit Vehicle (FUV) to replace aging and failing technology. The replacement technology is required to retain interfaces with, and be capable of receiving, a Common Aviation Command and Control System (CAC2S) broadcasted link. It will also be capable of interfacing with legacy Marine Air Command and Control System (MACCS) equipment. The decrease ($1.732) from FY15 to FY16 reflects realignment of RDT&E funding to the correct appropriation to support Contractor Advisory and Assistance Services.

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2014	FY 2015	FY 2016 Base	FY 2016 OCO	FY 2016 Total
Title: GBAD TRANSFORMATION: Product Development	0.464	1.112	0.827	-	0.827
Articles:	-	-	-	-	-
FY 2014 Accomplishments: Initiated directed energy research of follow on weapon system.					
FY 2015 Plans: Initiate Stinger Missile Mounted Optic (AN/PAS-18) replacement development.					
FY 2016 Base Plans: Continue Stinger Missile Mounted Optic (AN/PAS-18) replacement development.					
FY 2016 OCO Plans: N/A					
Title: GBAD TRANSFORMATION: Support Costs	0.876	0.559	0.403	-	0.403
Articles:	-	-	-	-	-

Exhibit R-2A, RDT&E Project Justification: PB 2016 Navy		Date: February 2015
Appropriation/Budget Activity 1319 / 7	**R-1 Program Element (Number/Name)** PE 0206313M / *Marine Corps Comms Systems*	**Project (Number/Name)** 2278 / *Air Defense Weapons System*

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2014	FY 2015	FY 2016 Base	FY 2016 OCO	FY 2016 Total
FY 2014 Accomplishments: Continued GBAD-T assessments at the LAAD Battalions and the Stinger Missile School House, ensuring future readiness is maintained. ***FY 2015 Plans:*** Continue both Stinger Missile Mounted Optic (AN/PAS-18) replacement and M1114 (HMMWV)/FUV Replacement documentation. ***FY 2016 Base Plans:*** Continue development of both Stinger Missile Mounted Optic (AN/PAS-18) replacement and M1114 (HMMWV)/ FUV Replacement documentation, as well as, conduct an A-MANPADS Engineering Change Proposal (ECP) Readiness Analysis. ***FY 2016 OCO Plans:*** N/A					
Title: GBAD TRANSFORMATION: Test and Evaluation	0.812	0.940	0.250	-	0.250
Articles:	-	-	-	-	-
FY 2014 Accomplishments: Completed M1114 and supported Warhead Proximitiy Fuse testing. ***FY 2015 Plans:*** Initiate Developmental Test/Operational Test (DT/OT) and Field User Evaluation (FUE) of Stinger Missile Mounted Optic (AN/PAS-18) replacement. ***FY 2016 Base Plans:*** Complete DT/OT and FUE of Stinger Missile Mounted Optic (AN/PAS-18) replacement. ***FY 2016 OCO Plans:*** N/A					
Title: GBAD TRANSFORMATION: Program Management Services	1.428	0.842	0.241	-	0.241
Articles:	-	-	-	-	-
FY 2014 Accomplishments: -Finalized development of acquisition planning documentation for GBAD portfolio of programs and projects.					

Exhibit R-2A, RDT&E Project Justification: PB 2016 Navy		Date: February 2015
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B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2014	FY 2015	FY 2016 Base	FY 2016 OCO	FY 2016 Total
-Completed M1114 (HMMWV)/FUV modeling and design effort and conduct DT test events. ***FY 2015 Plans:*** Initiate development of GBAD Follow On Weapon System acquisition documentation in support of Stinger Night Replacement and R&D efforts to test and integrate a Fire Unit Laptop and Secure Tactical Wireless replacement system. ***FY 2016 Base Plans:*** -Finalize development of acquisition documentation in support of Stinger Night Replacement. -Initiate development of acquisition documentation in support of Stinger Identification Friend or Foe (IFF) replacement system. ***FY 2016 OCO Plans:*** N/A					
Accomplishments/Planned Programs Subtotals	3.580	3.453	1.721	-	1.721

C. Other Program Funding Summary ($ in Millions)

Line Item	FY 2014	FY 2015	FY 2016 Base	FY 2016 OCO	FY 2016 Total	FY 2017	FY 2018	FY 2019	FY 2020	Cost To Complete	Total Cost
• PMC/300600: *GBAD-T*	18.656	30.339	7.565	-	7.565	9.260	9.508	12.320	12.570	Continuing	Continuing

Remarks

D. Acquisition Strategy

GBAD-Transformation: A-MANPADS Increment I is an Abbreviated Acquisition Program (AAP), GBAD-T enables the rapid transition from the Avenger/MANPADS weapon system to the more mobile, flexible and maintainable Advanced MANPADS. The AAP is principally comprised of integrating Government Off The Shelf (GOTS) equipment and Non-Developmental Items (NDI).

E. Performance Metrics

N/A

Exhibit R-3, RDT&E Project Cost Analysis: PB 2016 Navy			Date: February 2015
Appropriation/Budget Activity 1319 / 7	R-1 Program Element (Number/Name) PE 0206313M / *Marine Corps Comms Systems*	Project (Number/Name) 2278 / *Air Defense Weapons System*	

Product Development ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2014 Cost	FY 2014 Award Date	FY 2015 Cost	FY 2015 Award Date	FY 2016 Base Cost	FY 2016 Base Award Date	FY 2016 OCO Cost	FY 2016 OCO Award Date	FY 2016 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
GBAD-T	WR	NSWC : Dahlgren, VA	0.000	0.247	Jan 2014	0.485	Oct 2014	0.230	Feb 2016	-		0.230	Continuing	Continuing	Continuing
GBAD-T	WR	NSWC : Crane.IN	3.703	0.217	Jan 2014	-		-		-		-	Continuing	Continuing	Continuing
GBAD-T	Various	VARIOUS : VARIOUS	5.548	-		0.627	Mar 2015	0.597	Jul 2016	-		0.597	Continuing	Continuing	Continuing
Prior Years Cumulative Funding	Various	N/A : N/A	15.932	-		-		-		-		-	-	15.932	-
		Subtotal	25.183	0.464		1.112		0.827		-		0.827	-	-	-

Remarks

* Base FY 2016 Award date for Various Activities reflect the actual obligation date for the last activity.

Support ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2014 Cost	FY 2014 Award Date	FY 2015 Cost	FY 2015 Award Date	FY 2016 Base Cost	FY 2016 Base Award Date	FY 2016 OCO Cost	FY 2016 OCO Award Date	FY 2016 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
GBAD-T	MIPR	Army : AMRDEC	0.049	-		0.320	Mar 2015	-		-		-	Continuing	Continuing	Continuing
GBAD-T	WR	NSWC : Crane, IN	0.926	0.876	Dec 2013	0.239	Oct 2014	0.403	Nov 2015	-		0.403	Continuing	Continuing	Continuing
Prior Years Cumulative Funding	Various	N/A : N/A	4.279	-		-		-		-		-	-	4.279	-
		Subtotal	5.254	0.876		0.559		0.403		-		0.403	-	-	-

Test and Evaluation ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2014 Cost	FY 2014 Award Date	FY 2015 Cost	FY 2015 Award Date	FY 2016 Base Cost	FY 2016 Base Award Date	FY 2016 OCO Cost	FY 2016 OCO Award Date	FY 2016 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
GBAD-T	WR	NSWC INDIAN HEAD : Indian Head, MD	0.000	0.212	Dec 2013	-		-		-		-	Continuing	Continuing	Continuing
GBAD-T	MIPR	NSWC Crane : Crane, IN	0.000	-		0.940	Mar 2015	0.250	Jan 2016	-		0.250	Continuing	Continuing	Continuing

Exhibit R-3, RDT&E Project Cost Analysis: PB 2016 Navy			Date: February 2015
Appropriation/Budget Activity 1319 / 7	R-1 Program Element (Number/Name) PE 0206313M / *Marine Corps Comms Systems*	Project (Number/Name) 2278 / *Air Defense Weapons System*	

Test and Evaluation ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2014 Cost	FY 2014 Award Date	FY 2015 Cost	FY 2015 Award Date	FY 2016 Base Cost	FY 2016 Base Award Date	FY 2016 OCO Cost	FY 2016 OCO Award Date	FY 2016 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
GBAD-T	MIPR	CMDS : Redstone Arsenal,AL	0.000	0.600	Oct 2014	-		-		-		-	-	0.600	-
Prior Years Cumulative Funding	Various	N/A : N/A	4.057	-		-		-		-		-	-	4.057	-
		Subtotal	4.057	0.812		0.940		0.250		-		0.250	-	-	-

Management Services ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2014 Cost	FY 2014 Award Date	FY 2015 Cost	FY 2015 Award Date	FY 2016 Base Cost	FY 2016 Base Award Date	FY 2016 OCO Cost	FY 2016 OCO Award Date	FY 2016 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
GBAD-T	C/FP	MCSC : Quantico, VA	1.862	1.074	Jun 2014	0.527	Jun 2015	-		-		-	Continuing	Continuing	Continuing
GBAD-T	Various	MCSC Travel : Quantico, VA	0.027	0.040	Nov 2013	0.015	Dec 2014	0.076	Dec 2015	-		0.076	Continuing	Continuing	Continuing
GBAD-T	WR	NSWC : Dahlgren, VA	0.000	0.314	Jan 2014	0.300	Oct 2014	0.165	Oct 2015	-		0.165	Continuing	Continuing	Continuing
Prior Years Cumulative Funding	Various	N/A : N/A	1.318	-		-		-		-		-	-	1.318	-
		Subtotal	3.207	1.428		0.842		0.241		-		0.241	-	-	-

	Prior Years	FY 2014		FY 2015		FY 2016 Base		FY 2016 OCO		FY 2016 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	37.701	3.580		3.453		1.721		-		1.721	-	-	-

Remarks

Exhibit R-4, RDT&E Schedule Profile: PB 2016 Navy		Date: February 2015
Appropriation/Budget Activity 1319 / 7	**R-1 Program Element (Number/Name)** PE 0206313M / *Marine Corps Comms Systems*	**Project (Number/Name)** 2278 / *Air Defense Weapons System*

GBAD SCHEDULE

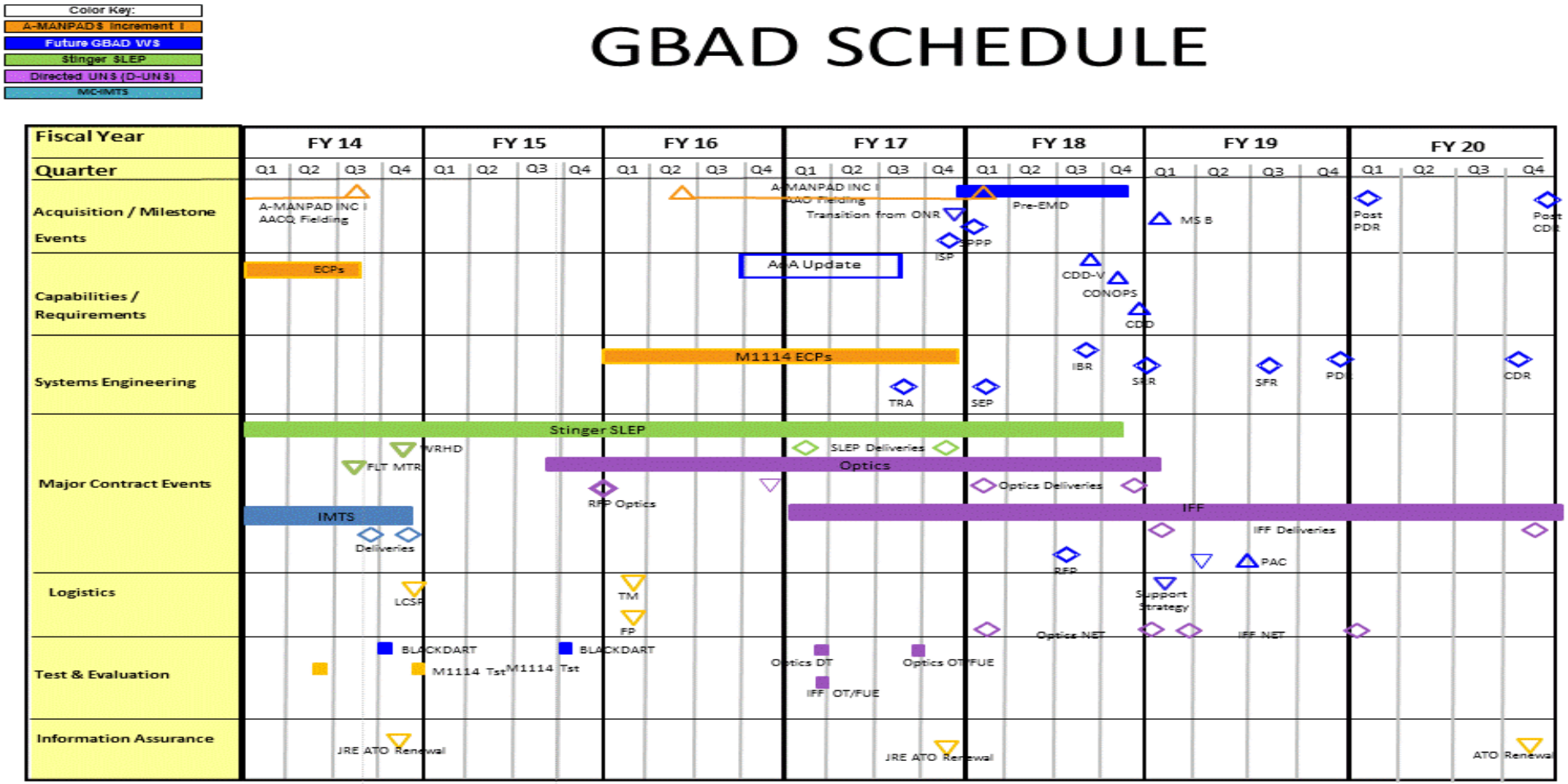

Exhibit R-4A, RDT&E Schedule Details: PB 2016 Navy		Date: February 2015
Appropriation/Budget Activity 1319 / 7	**R-1 Program Element (Number/Name)** PE 0206313M / *Marine Corps Comms Systems*	**Project (Number/Name)** 2278 / *Air Defense Weapons System*

Schedule Details

	Start		End	
Events by Sub Project	**Quarter**	**Year**	**Quarter**	**Year**
Proj 2278				
MC--IMPROVED MOVING TARGET SIMULATOR DELIVERY	4	2014	4	2014
117G FIRMWARE (MULTI-BAND VOICE AND DATA RADIO)	1	2014	1	2014
BLACK DART COUNTER UNMANNED AERIAL SYSTEMS DEMO, JOINT TEST EVENT FY14	4	2014	4	2014
STINGER SLEP CONTRACT AWARD (Flight Motor)	3	2014	3	2014
STINGER SLEP CONTRACT AWARD (War Head)	4	2014	4	2014
STINGER SLEP	4	2014	4	2017
JRE (JOINT RANGE EXTENSION) FY14 AUTHORITY TO OPERATE RENEWAL	4	2014	4	2014
AMANDPADS INC 1 FIELDING	2	2016	1	2018
JRE FY17 AUTHORITY TO OPERATE RENEWAL	4	2017	4	2017
OPTICS DEVELOPMENTAL TEST	1	2017	1	2017
OPTICS OT/FUE (OPERATIONAL TEST/FIELD USER EVALUATION)	3	2017	4	2017
OPTICS DELIVERY	1	2018	4	2018
IFF OT/FUE	1	2017	1	2017
IFF DELIVERIES	1	2019	4	2019
M1114 (HMMWV)/FUV ECP (ENGINEERING CHANGE PROPOSAL)	1	2016	4	2017
M1114 (HMMWV)/FUV TEST	4	2014	1	2015
BLACK DART 1	3	2014	4	2014
BLACK DART 2	4	2015	4	2015

Exhibit R-2A, RDT&E Project Justification: PB 2016 Navy											Date: February 2015	
Appropriation/Budget Activity 1319 / 7					R-1 Program Element (Number/Name) PE 0206313M / *Marine Corps Comms Systems*				Project (Number/Name) 2510 / *MAGTF CSSE & SE*			
COST ($ in Millions)	**Prior Years**	**FY 2014**	**FY 2015**	**FY 2016 Base**	**FY 2016 OCO**	**FY 2016 Total**	**FY 2017**	**FY 2018**	**FY 2019**	**FY 2020**	**Cost To Complete**	**Total Cost**
2510: *MAGTF CSSE & SE*	268.552	3.120	4.124	3.031	-	3.031	2.372	1.228	0.946	0.977	Continuing	Continuing
Quantity of RDT&E Articles		-	-	-	-	-	-	-	-	-		

A. Mission Description and Budget Item Justification

(U) The Marine Air Ground Task Force (MAGTF) Combat Service Support Element & Supporting Establishment (CSSE & SE) consists of mutually supporting Logistics Information Technology (IT) programs that support force deployment, planning, and execution; sustainment and distribution; and contributes to the Combatant Commander's Common Operating Picture to support rapid accurate decision making. The funding decrease from FY15 to FY16 in the Transportation Systems Portfolio is due to the completion of initial developmental efforts in accordance with program development schedule.

GLOBAL COMBAT SUPPORT SYSTEM-MARINE CORPS (GCSS-MC) is the physical implementation of the enterprise Information Technology (IT) architecture designed to support both improved and enhanced Marine Air Ground Task Force (MAGTF) Combat Support Services (CSS) functions and MAGTF Commander and Combatant Commanders/Joint Task Force (CC/JTF) combat support information requirements. Today the program includes all transactional CSS systems related to Supply Chain Management (SCM) and Enterprise Asset Management (EAM) functionality enabled with Service Management functions. When combined, these capabilities are referred to as Logistics Chain Management(LCM). The primary goal of GCSS-MC/LCM is to provide the capabilities specified in the Logistics Operational Architecture (Log OA). The result of enabling the Log OA is the retirement of legacy applications. The GCSS-MC/LCM exposes timely mission information to Marine Corps operational and CSS commanders, CC/JTF commanders and their staffs and other authorized users. It exposes information interoperability and common logistics information applications and services across functional areas. GCSS-MC/LCM allows operating forces commanders to base decisions on complete logistics information and make decisions in concert with specific operational tasks. Other follow-on capabilities can be invoked if affordable and when defined by the Business Case(s) as follow-on activities to the Business Capabilities Lifecycle documentation.

JOINT FORCE REQUIREMENTS GENERATOR II (JFRG II)) is an Automated Information System (AIS) that provides the Marine Corps' the capability to plan and execute strategic force movements in support of Joint contingency and crisis action operations and plans. It serves as the single link between Service operational force requirements and validated/sourced unit personnel and cargo data. JFRG II permits multi-level planning with entry of equipment and personnel data, transportation/ movement data, and the phasing of the total force throughout the entire movement timeline. JFRG II interfaces with the Joint Operation Planning and Execution System (JOPES) to register update and validate deployment information within the Department of Defense chain of command. Validated deployment information is then used by U.S. Transportation Command for the scheduling of strategic transportation assets. JFRG II interfaces with the MAGTF Deployment Support System II (MDSS II) for unit cargo information and the War Reserve System (WRS) in order to register sustainment requirements. JFRG II can generate standard, executive, and ad hoc reports and perform database queries to support information requirements. JFRG II operates and functions in a classified environment.

BASE TELECOMMUNICATIONS INFRASTRUCTURE (BTI) provides all Marine Corps installations with the base area network communications infrastructure that connects the end-user to the Defense Information Systems Agency (DISA) network. BTI sustains upgrades and enhances the telecommunications systems infrastructure for all Marine Corps Installations in order to meet the demands required to support the 5th Element of the Marine Air Ground Task Force (MAGTF). BTI is designed to maintain industry currency as it relates to technological capabilities for all voice, video and data transport services via each installation's infrastructure.

Exhibit R-2A, RDT&E Project Justification: PB 2016 Navy		Date: February 2015
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These data services include support for but are not limited to: telephony (including voice over internet protocol), video-teleconferencing, integrated services digital network, Marine Corps enterprise network, energy monitoring control systems, intrusion detection systems, access control systems, fire alarm control networks and fleet training systems. This includes supporting systems such as optical networks, telecommunications management systems, primary power, voice mail, teleconferencing, and outside plant infrastructure.

ELECTRONIC MAINTENANCE SUPPORT SYSTEM (EMSS) is composed of several main components including Electronic Maintenance Devices (EMD), regional servers, deployment servers, charger racks, and ruggedized deployment cases. EMSS is a rugged organizational-level (O-level), light-weight, one-man portable maintenance device capable of supporting multiple platforms and systems across maintenance communities. EMSS provides a Commercial Off-The-Shelf (COTS) hardware device equipped with network interfaces, Built-In-Test/Built-In-Test Equipment (BIT/BITE) interfaces, and Software Defined Test Instrument (SDTI) General Purpose Electronic Test Equipment (GPETE) capabilities. These hardware capabilities will enable commercial or custom DoD and USMC software capabilities including Interactive Electronic Technical Manuals (IETMs), Computer Based Training (CBT), access to Subject Matter Experts (SMEs) over USMC networks, and other maintenance applications to be hosted on EMSS. With these capabilities, maintainers will make more informed decisions, thereby sustaining force readiness over time. Program renamed MAGTF Logistics Support System beginning in FY16.

TRANSPORTATION SYSTEMS PORTFOLIO (TSP): provides funding that supports the USMC Deployment and Execution Support Systems and the Distribution Management Support Systems, and fair share cost to the joint program management office systems. These systems and applications support the planning, deployment, distribution, sustainment and redeployment of supplies, equipment and personnel. The TSP portfolio applications utilize AIT read/write devices, active radio frequency identification (aRFID) tags and satellite tracking systems. TSP applications support In-Transit Visibility (ITV) and Total Asset Visibility (TAV) initiatives to provide commanders with timely and accurate near real-time data on the location and movement of personnel, equipment and supplies that are in-process, in-transit and in-theater. Portfolio renamed Enterprise Logistics Support Systems beginning in FY16.

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2014	FY 2015	FY 2016 Base	FY 2016 OCO	FY 2016 Total
Title: BASE TELECOM (BTI)	0.394	0.487	0.490	-	0.490
Articles:	-	-	-	-	-
FY 2014 Accomplishments: -Initiated participation in the Defense Information Systems Agency (DISA) Unified Capabilities (UC) (voice, video, collaboration, and data) pilot is critical to BTI modernization strategy. -Initiated testing efforts in support of the DISA UC Everything over Internet Protocol (EoIP) effort. After the testing is reviewed by the Joint Interoperability Test Command (JITC), successfully evaluated products will be placed on the DISA Approved Products List (APL).					
FY 2015 Plans:					

Exhibit R-2A, RDT&E Project Justification: PB 2016 Navy		Date: February 2015
Appropriation/Budget Activity 1319 / 7	**R-1 Program Element (Number/Name)** PE 0206313M / *Marine Corps Comms Systems*	**Project (Number/Name)** 2510 / *MAGTF CSSE & SE*

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2014	FY 2015	FY 2016 Base	FY 2016 OCO	FY 2016 Total
Continue test and evaluation (T&E) engineering support for Defense Information Systems Agency (DISA) Unified Capabilities (UC) (voice, video, collaboration, and data) implementation. ***FY 2016 Base Plans:*** Continue test and evaluation (T&E) engineering support for Defense Information Systems Agency (DISA) Unified Capabilities (UC) (voice, video, collaboration, and data) implementation. ***FY 2016 OCO Plans:*** N/A					
Title: GCSS-MC LOGISTICS CHAIN MANAGEMENT (GCSS-MC)	2.626	-	-	-	-
Articles:	-	-	-	-	-
FY 2014 Accomplishments: -Complete requirements for GCSS-MC/LCM Increment I for the R12 upgrade Tasks and Development and Operational Test (D&OT) events required to validate the Automated Task Organization and Data Synchronization functionalities of the deployed capability ***FY 2015 Plans:*** N/A ***FY 2016 Base Plans:*** N/A ***FY 2016 OCO Plans:*** N/A					
Title: JOINT FORCES REQUIREMENT GENERATION II (JFRG II)	-	0.203	0.204	-	0.204
Articles:	-	-	-	-	-
FY 2014 Accomplishments: - N/A ***FY 2015 Plans:*** Initiate development of modernized information system. ***FY 2016 Base Plans:*** Conduct Development, Government Acceptance, Information Security and Interoperability testing/certification					

Exhibit R-2A, RDT&E Project Justification: PB 2016 Navy		Date: February 2015
Appropriation/Budget Activity 1319 / 7	**R-1 Program Element (Number/Name)** PE 0206313M / *Marine Corps Comms Systems*	**Project (Number/Name)** 2510 / *MAGTF CSSE & SE*

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2014	FY 2015	FY 2016 Base	FY 2016 OCO	FY 2016 Total
Deploy Information System and transition to Post Deployment Software Support (PDSS) ***FY 2016 OCO Plans:*** N/A					
Title: TRANSPORTATION SYSTENS PORTFOLIO (TSP) / Enterprise Logistics Support Systems	-	2.780	1.686	-	1.686
Articles:	-	-	-	-	-
FY 2014 Accomplishments: Initiated requirements decomposition and design efforts to develop Sea Service Deployment Module (SSDM) within Integrated Computerized Deployment System (ICODES) Managed by Joint Program Management Office (JPMO). ***FY 2015 Plans:*** Develop ICODES SSDM with JPMO. Validate and verify program development and continue testing and validation of functional transition. ***FY 2016 Base Plans:*** Initiate subsequent increment of ICODES development as necessary and continue functional testing and validation. ***FY 2016 OCO Plans:*** N/A					
Title: ELECTRONIC MAINTENANCE SUPPORT SYSTEM (EMSS) / MAGTF Logistics Support System	0.100	0.654	0.651	-	0.651
Articles:	-	-	-	-	-
FY 2014 Accomplishments: Initiated investigation of NGEN computer and tablet connectivity on the Electronic Maintenance Support System (EMSS) Program ***FY 2015 Plans:*** -Initiate investigation of software defined test instruments (SDTI) and software applications. -Initiate investigation of advanced Interactive Electronic Technical Manual software to incorporate advanced diagnostics. -Initiate development of advanced software interfaces to integrate wireless capability into software defined test instruments (SDTI).					

Exhibit R-2A, RDT&E Project Justification: PB 2016 Navy		Date: February 2015
Appropriation/Budget Activity 1319 / 7	**R-1 Program Element (Number/Name)** PE 0206313M / *Marine Corps Comms Systems*	**Project (Number/Name)** 2510 / *MAGTF CSSE & SE*

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2014	FY 2015	FY 2016 Base	FY 2016 OCO	FY 2016 Total
-Initiate development of software applications which support enhanced maintenance capabilities on existing weapon system platforms. ***FY 2016 Base Plans:*** -Continue to Investigate software defined test instruments (SDTI) and software applications. -Continue to investigate advanced Interactive Electronic Technical Manual software to incorporate advanced diagnostics. -Continue to develop advanced software interfaces to integrate wireless capability into software defined test instruments (SDTI). -Continue to develop software applications which support enhanced maintenance capabilities on existing weapon system platforms. ***FY 2016 OCO Plans:*** N/A					
Accomplishments/Planned Programs Subtotals	3.120	4.124	3.031	-	3.031

C. Other Program Funding Summary ($ in Millions)

Line Item	FY 2014	FY 2015	FY 2016 Base	FY 2016 OCO	FY 2016 Total	FY 2017	FY 2018	FY 2019	FY 2020	Cost To Complete	Total Cost
• PMC/BLI 461700 GCSS: *GCSS-MC*	0.536	-	-	-	-	-	-	-	-	Continuing	Continuing
• PMC/BLI 463500 BTI: *BTI*	14.447	21.867	54.476	-	54.476	84.457	75.759	172.795	53.089	Continuing	Continuing
• PMC/BLI 418100: *EMSS/ MAGTF Logistics Support Systems*	1.500	0.796	3.606	-	3.606	3.866	3.948	3.043	3.103	Continuing	Continuing
• PMC/BLI 461700: *TSP/Enterprise Logistics Support Systems*	-	0.498	0.396	-	0.396	0.595	-	-	-	Continuing	Continuing
• PE/BLI 4616: *GCSS-MC*	-	-	-	-	-	1.100	2.000	-	1.200	Continuing	Continuing
• RDTE/4041: *JFRG*	-	-	0.294	-	0.294	-	-	-	-	Continuing	Continuing

Remarks

D. Acquisition Strategy

GLOBAL COMBAT SUPPORT SYSTEM-MARINE CORPS (GCSS-MC) The Acquisition Strategy for GCSS-MC/LCM Increment 1 and the Business Capabilities Lifecycle for the GCSS-MC/LCM Follow-on acquisition is building an acquisition approach in the portfolio of systems for Logistics Chain Management (LCM) that adds

Exhibit R-2A, RDT&E Project Justification: PB 2016 Navy		Date: February 2015
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to the baseline system developed in Increment 1. The goal is to field operationally suitable and supportable capabilities in the shortest time possible that meets the Logistics Advocate goals. The GCSS-MC Program Management Office acquisition approach will deliver capabilities in increments as defined in the DoDi 5000 Interim guidance, and updated as guidance is developed. Each increment capability will follow the established acquisition model for software intensive systems. Increments will include emergent user priorities, advanced technology improvements and expanded capabilities as prioritized and funded by the system advocates. Increment 1 is an operational Enterprise system (authorized for 36,000 users). The Mobile Field Service (MFS), Enterprise Automated Task Organization (EATO) and Riverbed Steelhead Appliance (RSA) (WAN optimization) will be provided as a deliverable in Increment 1 Release 1.1.1. This release provides limited detached capability (store and forward), automated task organizing, and optimizes WAN throughput. Other follow-on capabilities can be invoked if affordable and when defined by the Business Case(s) as follow-on activities to the Business Capabilities Lifecycle documentation.

JOINT FORCES REQUIREMENT GENERATOR II (JFRG II) II is required to modernize in order to implement Joint Requirements Oversight Counsel (JROC) mandates in support of Adaptive Planning and Execution (APEX) including the inclusion of Global Force Management - Data Initiative (GFM-DI) data elements and Joint Command and Control (JC2) Capabilities Development Document (CDD) requirements. The JFRG II legacy software application will remain supported until end of life (EOL) in 1st Qtr FY17 when it will be replaced by the modernized version. The planning phase (requirements analysis, market research and cost analysis, etc.) was completed during the 2d and 3d Qtr FY13. The design and prototype demonstration phase was conducted during FY14 and development of the approved design will take place during FY15. The modernized version of JFRG II will deploy during the 2d Qtr FY16 with a six month transition period ending 4th Qtr FY16.

BASE TELECOMMUNICATIONS INFRASTRUCTURE (BTI) provides all Marine Corps installations with the base area network communications infrastructure that connects the end-user to the DISA network. BTI sustains upgrades and enhances the telecommunications systems infrastructure for all Marine Corps Installations in order to meet the demands required to support the 5th Element of the Marine Air Ground Task Force (MAGTF). Participation in the DISA Unified Capabilities (voice, video, collaboration, and data) pilot is critical to BTI modernization strategy. The RDT&E funds will be utilized for analysis, research and evaluation of Unified Capabilities (UC) (voice, video, collaboration, and data) implementation efforts.

ELECTRONIC MAINTENANCE SUPPORT SYSTEM (EMSS)/MAGTF Logistics Support Systems is pursuing an evolutionary acquisition strategy in order to field operationally suitable and supportable capability across the Marine Corps as a maintenance aid. EMSS must evolve in concert with the supported platforms maintenance philosophy to provide extended functionality and access to network connectivity.

TRANSPORTATION SYSTEMS PORTFOLIO (TSP): The acquisition strategy is to develop the functional elements of the MAGTF Deployment Support System II (MDSS II) into a Sea Service Deployment Module (SSDM) of the Integrated Computerized Deployment System (ICODES). ICODES is a Joint Program currently managed by the Surface Deployment and Distribution Command (SDDC) of USTRANSCOM. The development of the SSDM will be instituted as a CLIN to the SDDC JPMO contract for ICODES expected to be awarded in January 2015. The development will follow an evolutionary acquisition approach that allows for continued development based on functional transition and changing user need requirements as well as information assurance requirements. The JPMO will determine the contracting strategy and this PMO will acknowledge and approve strategies prior to funding development.

E. Performance Metrics

N/A

Exhibit R-3, RDT&E Project Cost Analysis: PB 2016 Navy			Date: February 2015
Appropriation/Budget Activity 1319 / 7	R-1 Program Element (Number/Name) PE 0206313M / *Marine Corps Comms Systems*	Project (Number/Name) 2510 / *MAGTF CSSE & SE*	

Product Development ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2014 Cost	FY 2014 Award Date	FY 2015 Cost	FY 2015 Award Date	FY 2016 Base Cost	FY 2016 Base Award Date	FY 2016 OCO Cost	FY 2016 OCO Award Date	FY 2016 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Prior Years Cumulative Funding	Various	Various : Various	261.019	-		-		-		-		-	Continuing	Continuing	Continuing
JFRG II	C/FFP	TBD : TBD	0.418	-		0.203	Sep 2015	0.204	Aug 2016	-		0.204	Continuing	Continuing	Continuing
TSP Enterprise SyS Modernization	TBD	USTRANSCOM JPMO : SCOTT AFB, IL	0.000	-		2.780	Feb 2015	1.686	Nov 2015	-		1.686	Continuing	Continuing	Continuing
GCSS-MC Deployable Capability/ Warehouse Mgmt	TBD	Various : SSC-LANT, SC	0.000	2.399	Jan 2015	-		-		-		-	-	2.399	-
		Subtotal	261.437	2.399		2.983		1.890		-		1.890	-	-	-

Support ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2014 Cost	FY 2014 Award Date	FY 2015 Cost	FY 2015 Award Date	FY 2016 Base Cost	FY 2016 Base Award Date	FY 2016 OCO Cost	FY 2016 OCO Award Date	FY 2016 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
EMSS/MAGTF Logistics Support Systems Program SW Support	WR	NSWC, Crane : Crane, Indiana	0.563	-		0.654	Apr 2015	0.651	Mar 2016	-		0.651	Continuing	Continuing	Continuing
Prior Years Cumulative Funding	Various	Various : Various	3.177	-		-		-		-		-	Continuing	Continuing	Continuing
		Subtotal	3.740	-		0.654		0.651		-		0.651	-	-	-

Test and Evaluation ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2014 Cost	FY 2014 Award Date	FY 2015 Cost	FY 2015 Award Date	FY 2016 Base Cost	FY 2016 Base Award Date	FY 2016 OCO Cost	FY 2016 OCO Award Date	FY 2016 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
EMSS	WR	NSWC,Crane : Crane, Indiana	0.000	0.100	Dec 2014	-		-		-		-	-	0.100	-
BTI	MIPR	MITRE : Aberdeen Proving Ground, MD	0.000	0.394	Dec 2014	0.487	Jan 2015	0.490	Jan 2016	-		0.490	-	1.371	-

Exhibit R-3, RDT&E Project Cost Analysis: PB 2016 Navy			Date: February 2015
Appropriation/Budget Activity 1319 / 7	R-1 Program Element (Number/Name) PE 0206313M / *Marine Corps Comms Systems*	Project (Number/Name) 2510 / *MAGTF CSSE & SE*	

Test and Evaluation ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2014 Cost	FY 2014 Award Date	FY 2015 Cost	FY 2015 Award Date	FY 2016 Base Cost	FY 2016 Base Award Date	FY 2016 OCO Cost	FY 2016 OCO Award Date	FY 2016 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
GCSS-MC Deployed Capability/Warehouse Management	MIPR	JTIC : Indian Head, MD	0.000	0.227	Nov 2014	-		-		-		-	-	0.227	-
Prior Years Cumulative Funding	Various	Various : Various	3.375	-		-		-		-		-	Continuing	Continuing	Continuing
		Subtotal	3.375	0.721		0.487		0.490		-		0.490	-	-	-

	Prior Years	FY 2014		FY 2015		FY 2016 Base		FY 2016 OCO		FY 2016 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	268.552	3.120		4.124		3.031		-		3.031	-	-	-

Remarks

Exhibit R-4, RDT&E Schedule Profile: PB 2016 Navy		Date: February 2015
Appropriation/Budget Activity 1319 / 7	**R-1 Program Element (Number/Name)** PE 0206313M / *Marine Corps Comms Systems*	**Project (Number/Name)** 2510 / *MAGTF CSSE & SE*

JFRG II Program Schedule

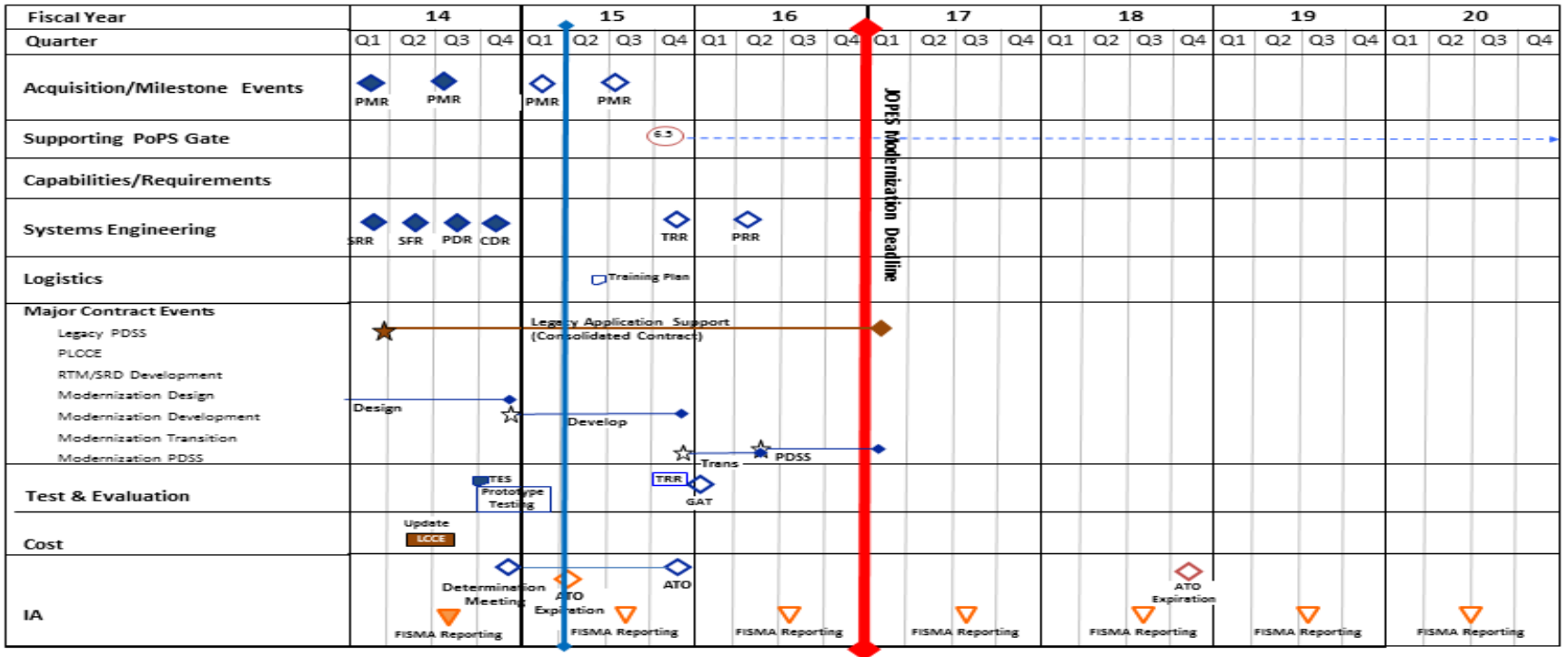

Exhibit R-4, RDT&E Schedule Profile: PB 2016 Navy		Date: February 2015
Appropriation/Budget Activity 1319 / 7	**R-1 Program Element (Number/Name)** PE 0206313M / *Marine Corps Comms Systems*	**Project (Number/Name)** 2510 / *MAGTF CSSE & SE*

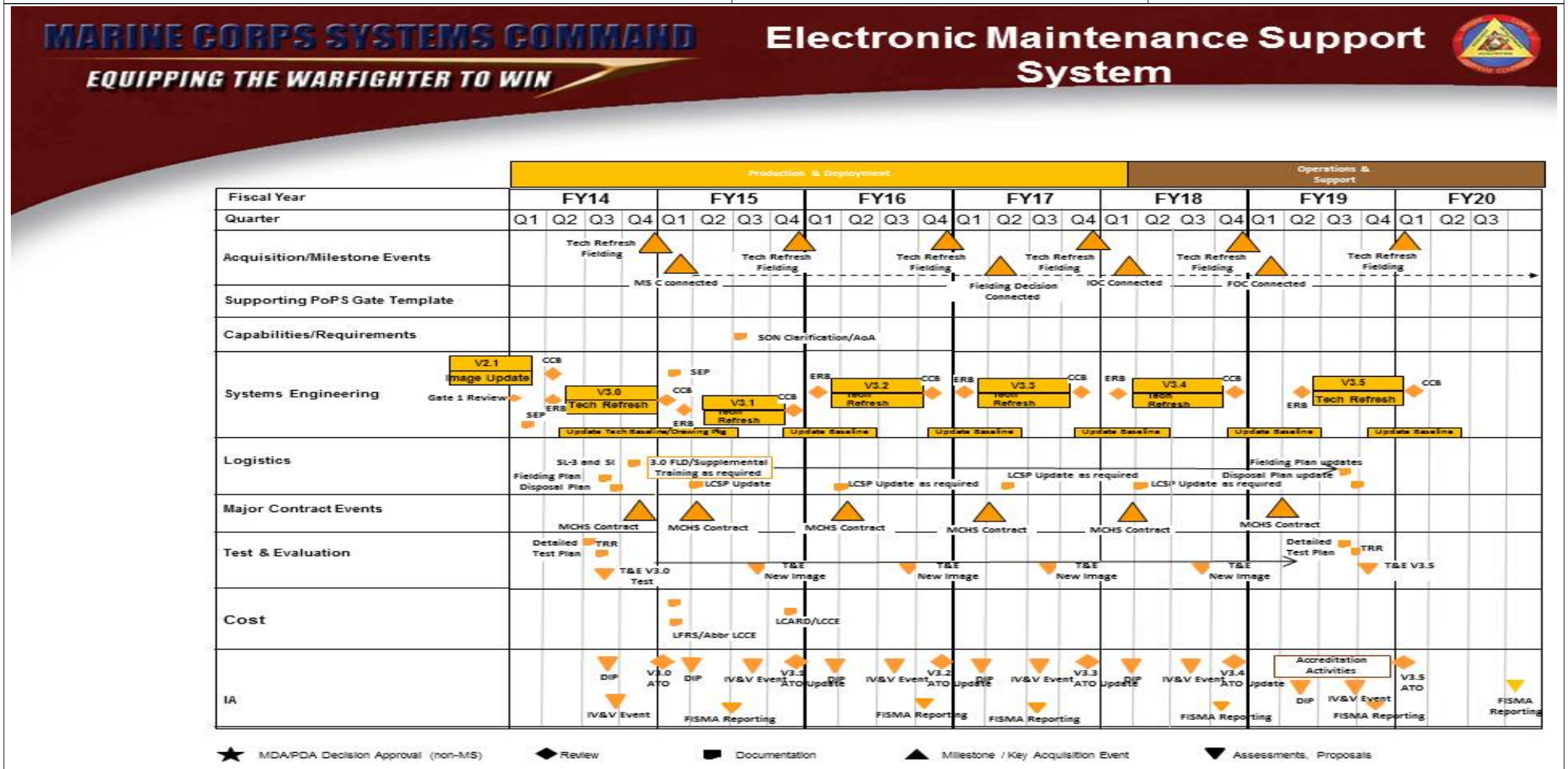

Exhibit R-4, RDT&E Schedule Profile: PB 2016 Navy		Date: February 2015
Appropriation/Budget Activity 1319 / 7	**R-1 Program Element (Number/Name)** PE 0206313M / *Marine Corps Comms Systems*	**Project (Number/Name)** 2510 / *MAGTF CSSE & SE*

BTI Top-Level Program Schedule

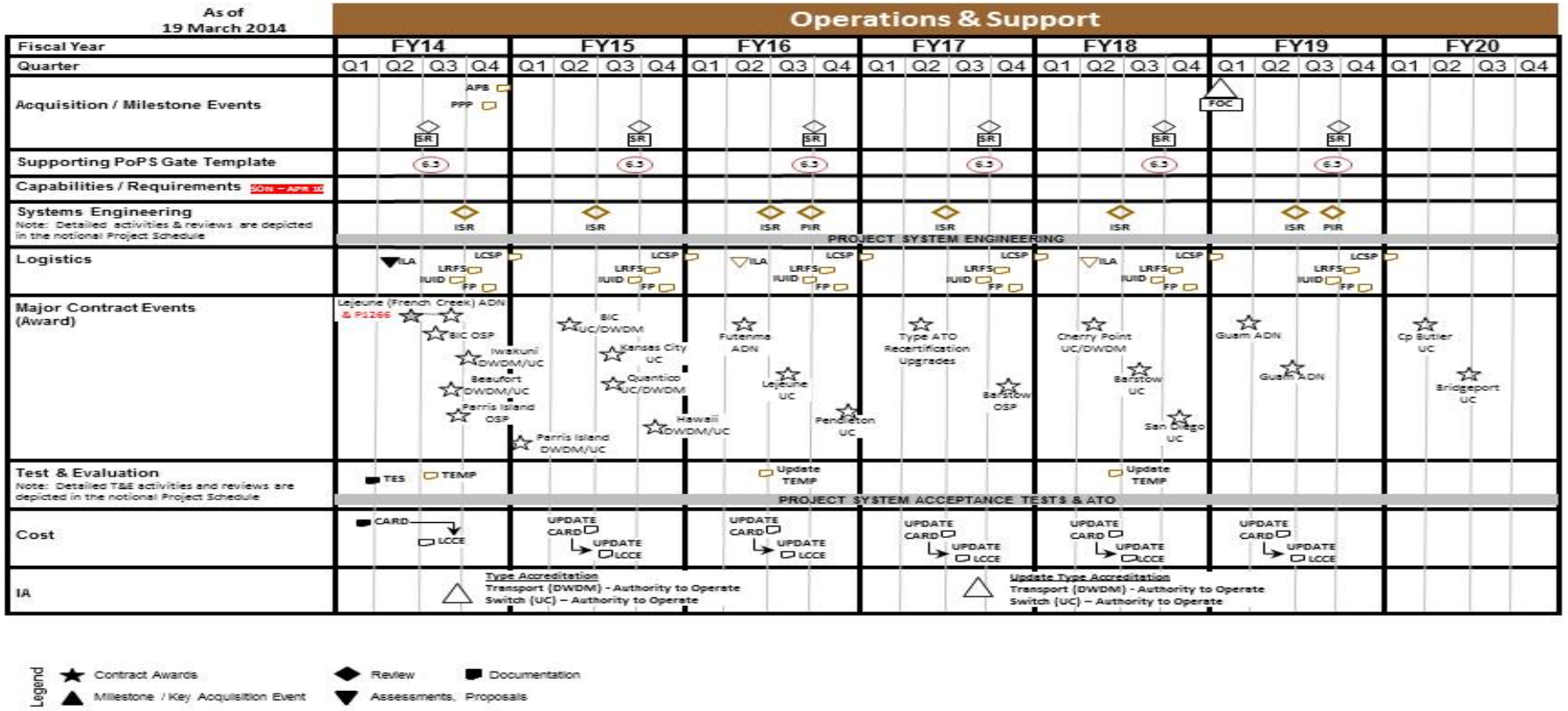

Exhibit R-4, RDT&E Schedule Profile: PB 2016 Navy		Date: February 2015
Appropriation/Budget Activity 1319 / 7	**R-1 Program Element (Number/Name)** PE 0206313M / *Marine Corps Comms Systems*	**Project (Number/Name)** 2510 / *MAGTF CSSE & SE*

TSP

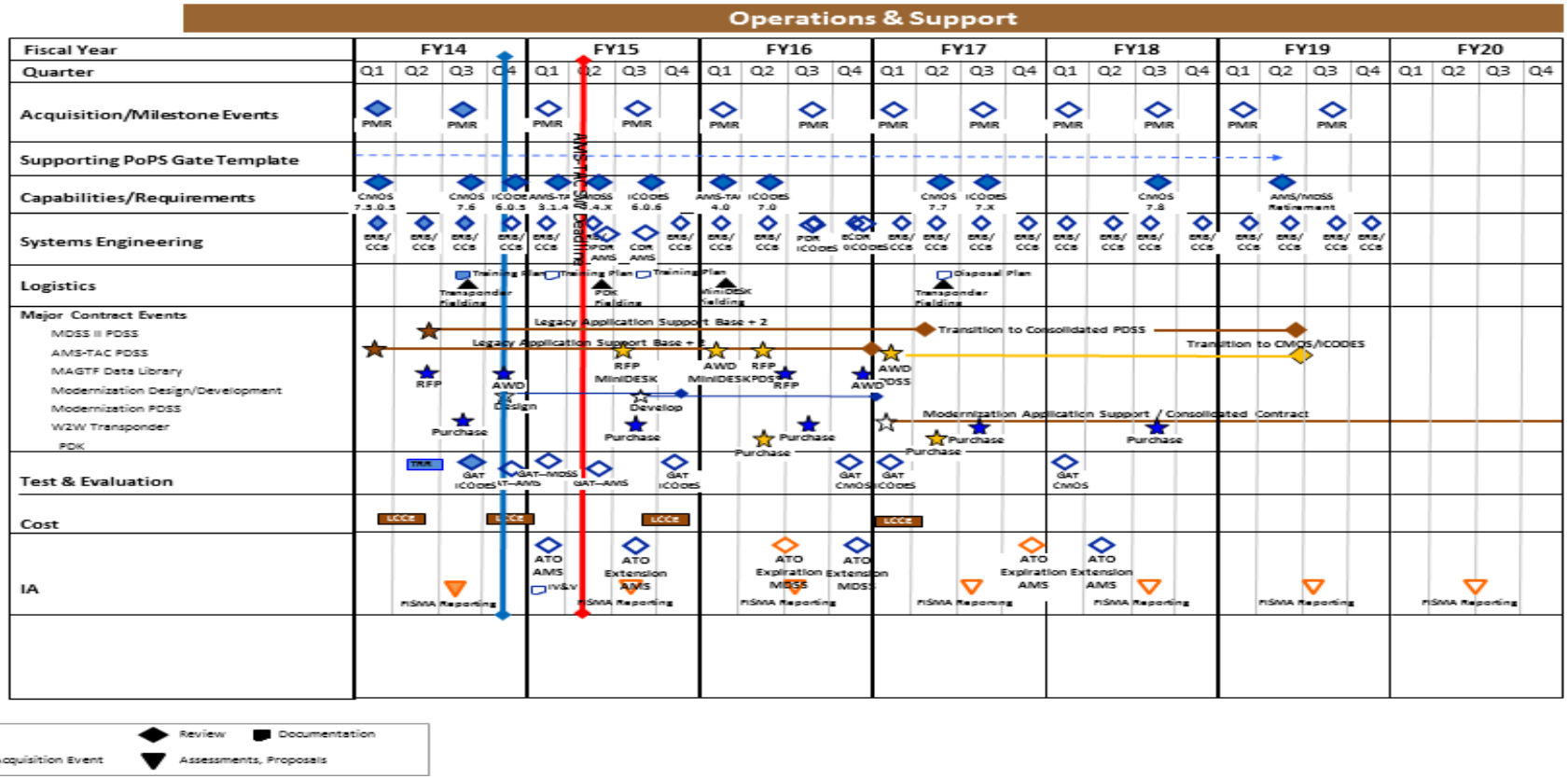

Exhibit R-4, RDT&E Schedule Profile: PB 2016 Navy		Date: February 2015
Appropriation/Budget Activity 1319 / 7	**R-1 Program Element (Number/Name)** PE 0206313M / *Marine Corps Comms Systems*	**Project (Number/Name)** 2510 / *MAGTF CSSE & SE*

PEO EIS
ENTERPRISE INFORMATION SYSTEMS
DEPARTMENT OF THE NAVY

GCSS-MC/LCM Increment 1 Schedule

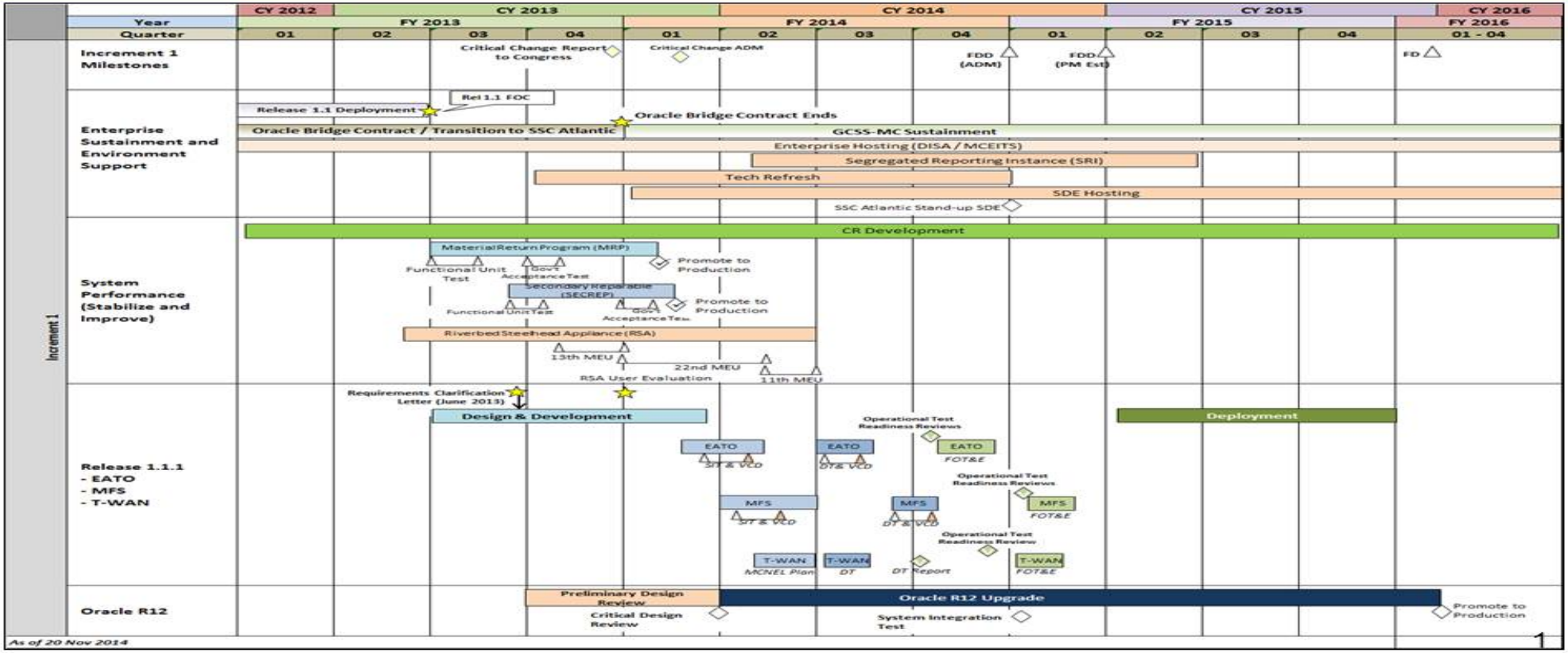

Exhibit R-4A, RDT&E Schedule Details: PB 2016 Navy		Date: February 2015
Appropriation/Budget Activity 1319 / 7	**R-1 Program Element (Number/Name)** PE 0206313M / *Marine Corps Comms Systems*	**Project (Number/Name)** 2510 / *MAGTF CSSE & SE*

Schedule Details

	Start		End	
Events by Sub Project	**Quarter**	**Year**	**Quarter**	**Year**
Proj 2510				
Milestone C (Re-baseline Block I)	1	2015	1	2015
Tech Refresh V3.1 Fielding	4	2015	4	2015
Initial Operational Capability (IOC) Connected	1	2018	1	2018
Full Operational Capability (FOC) Conntected	1	2019	1	2019
GCSS-MC Increment 1 Full Deployment Decision (FDD)	1	2015	1	2015

Exhibit R-2A, RDT&E Project Justification: PB 2016 Navy			Date: February 2015
Appropriation/Budget Activity 1319 / 7	R-1 Program Element (Number/Name) PE 0206313M / *Marine Corps Comms Systems*	Project (Number/Name) 3099 / *Radar System*	

COST ($ in Millions)	Prior Years	FY 2014	FY 2015	FY 2016 Base	FY 2016 OCO	FY 2016 Total	FY 2017	FY 2018	FY 2019	FY 2020	Cost To Complete	Total Cost
3099: *Radar System*	169.458	9.305	10.342	11.083	-	11.083	17.156	18.898	17.333	17.665	Continuing	Continuing
Quantity of RDT&E Articles		-	-	-	-	-	-	-	-	-		

A. Mission Description and Budget Item Justification

Long Range Radar (AN/TPS-59) - The AN/TPS-59 is a three dimensional ground-based sensor that can detect and track long range Air Breathing Targets (ABT) at ranges of 300 nautical miles and Tactical Ballistic Missiles (TBM) at ranges of 400 nautical miles. The system is experiencing increasing Obsolescence and Diminishing Manufacturing Sources and Material Shortages (ODMSMS) issues. The program will use a Post Production Support (PPS) contract and Other Government Activities (OGAs) to develop engineering changes to resolve ODMSMS and incorporate Mode 5 Identification Friend or Foe (IFF) per DOD mandate.

Family of Target Acquisition Systems (FTAS) - The FTAS provides the MAGTF the capability to locate, identify, and attack enemy indirect fire weapons systems and observe and direct friendly artillery fire. The FTAS consists of the AN/TPQ-46 Firefinder Radar, the AN/TPQ-49 Lightweight Counter Mortar Radar, and the AN/TSQ-267 Target Processing Set. The FTAS is critical in the execution of counterfire and the integration of target acquisition information enabling attack by MAGTF assets. The FTAS also provides artillery firing units the ability to conduct artillery registration and other friendly fire missions. The FTAS encompasses the equipment required to support target acquisition within the target acquisition platoon and is resident in the headquarters battery of each artillery regiment. The program will continue to address engineering issues that arise due to ODMSMS items within the FTAS. Also, prior to FY15, the Marine Corps was able to leverage US Army efforts but as the US Army divests from the AN/TPQ-46 and AN/TPQ-49, the USMC will have to assume and fund the responsibilities of the primary inventory control activity (PICA).

Short/Medium Range Air Defense Radar (SHORAD or AN/TPS-63) - The AN/TPS-63 is a two-dimensional, medium-range, medium altitude, transportable radar system, which is doctrinally employed as a tactical gap-filler or as an early warning system for early deployment into the operational area. It has a 360-degree air surveillance capability at a range of 160 miles and complements the co-employed AN/TPS-59 three-dimensional, long-range, air surveillance radar system. The program will use OGAs to develop engineering change proposals related ODMSMS to improved system reliability with the specific purpose of meeting increased fleet operational requirements.

Virtual Warfare Center (VWC) Support - The project team conducts fully interactive simulated war games at the Virtual Warfare Center (VWC) in St. Louis, MO, in order to quantify family of systems performance and how it impacts effectiveness in the Integrated Air and Missile Defense (IAMD) mission area. The VWC provides a venue for the exploration of advanced engagement concepts focused on persistent forward naval engagements in support of the MAGTF and the development of associated Joint and Service specific tactics, techniques, and procedures (TTPs). VWC support encompasses a set of integrated fire control (IFC) activities that also includes concept/CONOPS development, family of systems architecture development, and systems engineering/integration efforts.

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2014	FY 2015	FY 2016 Base	FY 2016 OCO	FY 2016 Total
Title: AN/TPS-59 : Product Development	0.700	1.065	1.991	-	1.991
Articles:	-	-	-	-	-

Exhibit R-2A, RDT&E Project Justification: PB 2016 Navy		Date: February 2015
Appropriation/Budget Activity 1319 / 7	**R-1 Program Element (Number/Name)** PE 0206313M / *Marine Corps Comms Systems*	**Project (Number/Name)** 3099 / *Radar System*

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2014	FY 2015	FY 2016 Base	FY 2016 OCO	FY 2016 Total
Description: The program will address Diminishing Manufacturing Sources and Material Shortages (DMSMS) issues by continuing use of a Post Production Support (PPS) contract as well as use of Other Government Activities (OGAs). The AN/TPS-59 modification will address DMSMS and the DOD mandated Mode 5 Implementation for the AN/TPS-59 Radar System. ***FY 2014 Accomplishments:*** -Continued software integration and ECPs to address obsolescence and DMSMS issues. ***FY 2015 Plans:*** -Continue software integration and ECPs to address obsolescence and DMSMS issues. ***FY 2016 Base Plans:*** -Continue software integration and ECPs to address obsolescence and DMSMS issues. ***FY 2016 OCO Plans:*** N/A					
Title: AN/TPS-59: Test and Evaluation	0.700	1.600	1.000	-	1.000
Articles:	-	-	-	-	-
FY 2014 Accomplishments: -Completed Software Validation and Verification: Bold Quest Interface Testing and Black Dart Interface Testing ***FY 2015 Plans:*** -Initiate Field User Evaluation (FUE) for Identification Friend or Foe (IFF) -Initiate Limited User Evaluation of Transport Shelter Tech Refresh -Initiate FUE for Ops Consoles/Servers Tech Refresh ***FY 2016 Base Plans:*** -Initiate Joint Operational Test Approach (JOTA) for IFF -Continue Sustainment Activities Integration Testing ***FY 2016 OCO Plans:*** N/A					
Title: AN/TPS-59 : Support	1.416	3.506	4.873	-	4.873
Articles:	-	-	-	-	-

Exhibit R-2A, RDT&E Project Justification: PB 2016 Navy		Date: February 2015
Appropriation/Budget Activity 1319 / 7	**R-1 Program Element (Number/Name)** PE 0206313M / *Marine Corps Comms Systems*	**Project (Number/Name)** 3099 / *Radar System*

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2014	FY 2015	FY 2016 Base	FY 2016 OCO	FY 2016 Total
FY 2014 Accomplishments: -Continued MITRE/NSWC Dahlgren - Engineering Support -Continued MCSC - Engineering Support and Program Office Travel -Continued Post Production Services and Support ***FY 2015 Plans:*** -Continue MITRE/NSWC Dahlgren - Engineering Support -Continue MCSC - Engineering Support and Program Office Travel -Continue Post Production Services and Support ***FY 2016 Base Plans:*** -Continue MITRE/NSWC Dahlgren - Engineering Support -Continue MCSC - Engineering Support and Program Office Travel -Continue Post Production Services and Support ***FY 2016 OCO Plans:*** N/A					
Title: AN/TPS-59: Management Services	3.668	-	-	-	-
Articles:	-	-	-	-	-
FY 2014 Accomplishments: -Continued program management and technical support for Long Range Radar efforts. ***FY 2015 Plans:*** N/A ***FY 2016 Base Plans:*** N/A ***FY 2016 OCO Plans:*** N/A					
Title: FTAS: Support	-	0.250	0.502	-	0.502
Articles:	-	-	-	-	-
FY 2014 Accomplishments:					

Exhibit R-2A, RDT&E Project Justification: PB 2016 Navy		Date: February 2015
Appropriation/Budget Activity 1319 / 7	**R-1 Program Element (Number/Name)** PE 0206313M / *Marine Corps Comms Systems*	**Project (Number/Name)** 3099 / *Radar System*

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2014	FY 2015	FY 2016 Base	FY 2016 OCO	FY 2016 Total
N/A ***FY 2015 Plans:*** -Continue NSWC Dahlgren - Engineering Support for the Family of Target Acquisition systems -Continue MCSC Albany - Program Travel in support of Equipment and Logistics SME. ***FY 2016 Base Plans:*** -Continue Tobyhanna Army Depot (TYAD)- ECP development on the AN/TSQ-267 and ECP development on the AN/TPQ-49. -Continue MCSC Albany - Program Travel in support of Equipment and Logistics SME. -Initiate assuming responsibilities of the primary inventory control activity (PICA) as the US Army divests from the AN/TPQ-46 and AN/TPQ-49. ***FY 2016 OCO Plans:*** N/A					
Title: FTAS: Product Development	0.131	1.892	1.090	-	1.090
Articles:	-	-	-	-	-
FY 2014 Accomplishments: -Continued ECP development for the AN/TSQ-267 and AN/TPQ-49. ***FY 2015 Plans:*** -Initiate development and testing of an engineering change to capitalize on products and technologies initiated by the Navy future capability for correlation/fusion of radar data within the AN/TSQ-267. -Initiate FTAS Correlation and Fusion ECP for the AN/TSQ-267 pending product outcome of the Correlation and Fusion Naval Future Capability Study. ***FY 2016 Base Plans:*** -Continue development and testing of an engineering change to capitalize on products and technologies initiated by the Navy future capability for correlation/fusion of radar data within the AN/TSQ-267 which includes the Correlation and Fusion ECP for the AN/TSQ-267. -Initiate assuming the responsibilities of the primary inventory control activity (PICA) as the US Army divests from the AN/TPQ-46 and AN/TPQ-49. ***FY 2016 OCO Plans:***					

Exhibit R-2A, RDT&E Project Justification: PB 2016 Navy		Date: February 2015
Appropriation/Budget Activity 1319 / 7	**R-1 Program Element (Number/Name)** PE 0206313M / *Marine Corps Comms Systems*	**Project (Number/Name)** 3099 / *Radar System*

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2014	FY 2015	FY 2016 Base	FY 2016 OCO	FY 2016 Total
N/A					
Title: SHORAD: Support	0.147	0.193	0.195	-	0.195
Articles:	-	-	-	-	-
Description: Continued development effort to resolve ongoing DMSMS and obsolescence issues. ***FY 2014 Accomplishments:*** -Completed AIMS Platform Certification ***FY 2015 Plans:*** -Continue Tobyhanna Army Depot (TYAD) - DMSMS ECP Efforts ***FY 2016 Base Plans:*** -Continue Tobyhanna Army Depot (TYAD) - DMSMS ECP Efforts ***FY 2016 OCO Plans:*** N/A					
Title: VWC: Support	2.543	1.836	1.432	-	1.432
Articles:	-	-	-	-	-
FY 2014 Accomplishments: -Continued simulated war games at the Virtual Warfare Center (VWC) in St. Louis, MO, in order to quantify family of systems performance and how it impacts effectiveness in the Integrated Air and Missile Defense (IAMD) mission area. ***FY 2015 Plans:*** -Continue simulated war games at the Virtual Warfare Center (VWC) in St. Louis, MO, in order to quantify family of systems performance and how it impacts effectiveness in the Integrated Air and Missile Defense (IAMD) mission area. ***FY 2016 Base Plans:*** -Continue to simulate war games at the Virtual Warfare Center (VWC) in St. Louis, MO, in order to quantify family of systems performance and how it impacts effectiveness in the Integrated Air and Missile Defense (IAMD) mission area. ***FY 2016 OCO Plans:***					

Exhibit R-2A, RDT&E Project Justification: PB 2016 Navy		Date: February 2015
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B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2014	FY 2015	FY 2016 Base	FY 2016 OCO	FY 2016 Total
N/A					
Accomplishments/Planned Programs Subtotals	9.305	10.342	11.083	-	11.083

C. Other Program Funding Summary ($ in Millions)

Line Item	FY 2014	FY 2015	FY 2016 Base	FY 2016 OCO	FY 2016 Total	FY 2017	FY 2018	FY 2019	FY 2020	Cost To Complete	Total Cost
• PMC/465003: *AN/TPS-59*	12.066	9.699	29.309	-	29.309	21.395	16.095	20.636	21.062	Continuing	Continuing
• PMC/465005: *FTAS*	2.617	6.623	4.388	-	4.388	3.059	2.764	2.899	2.980	Continuing	Continuing
• PMC/465007: *SHORAD (AN/TPS-63)*	1.496	0.973	1.421	-	1.421	0.729	0.743	-	-	Continuing	Continuing
• PMC/463000: *AN/TPS-59 MCHS*	0.091	0.098	0.121	-	0.121	0.143	0.149	0.151	0.154	Continuing	Continuing

Remarks

D. Acquisition Strategy

Long Range Radar (AN/TPS-59) - The AN/TPS-59 is a three dimensional ground-based sensor that can detect and track long range Air Breathing Targets (ABT) at ranges of 300 nautical miles and Tactical Ballistic Missiles (TBM) at ranges of 400 nautical miles. The system is experiencing increasing Obsolescence and Diminishing Manufacturing Sources and Material Shortages (ODMSMS) issues. The program will use a Post Production Support (PPS) contract with the original equipment manufacturer (OEM) as well as Other Government Agencies (OGAs) to develop engineering changes to resolve DMSMS and incorporate Mode 5 Identification Friend or Foe (IFF) per DOD mandate.

Family of Target Acquisition Systems (FTAS) - The Family of Target Acquisition Systems consists of 3 major components: AN/TPQ-46, AN/TPQ-49 and the AN/TSQ-267. Of these 3 systems, the AN/TPQ-46 is due to be replaced by the Ground/Air TAsk Oriented Radar (G/ATOR) beginning in 2018. Sustainment activities during 2016 and beyond will be limited to maintain the authority to operate (ATO) creditation. Sustainment activities on the AN/TPQ-49 are escalating as the US Army divests from the AN/TPQ-46 and AN/TPQ-49, the USMC will have to assume the responsibilities of the primary inventory control activity (PICA). Additionally, the AN/TSQ-267 requires hardware updates in order to continue housing the refreshed AFTADS and C2PC platforms.

Short/Medium Range Air Defense Radar (SHORAD or AN/TPS-63) - The AN/TPS-63 is experiencing increasing Obsolescence and Diminishing Manufacturing Sources and Material Shortages (ODMSMS) issues. The program will use Other Government Agencies (OGAs) to develop engineering changes to resolve DMSMS issues.

Virtual Warfare Center (VWC) Support - The project team conducts fully interactive simulated war games at the Virtual Warfare Center (VWC) in St. Louis, MO, in order to quantify family of systems performance and how it impacts effectiveness in the Integrated Air and Missile Defense (IAMD) mission area. VWC support encompasses

Exhibit R-2A, RDT&E Project Justification: PB 2016 Navy		Date: February 2015
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a set of integrated fire control (IFC) activities that also includes concept/CONOPS development, family of systems architecture development, and systems engineering/ integration efforts. These efforts are led by ONR.

E. Performance Metrics

Milestone Reviews

Exhibit R-3, RDT&E Project Cost Analysis: PB 2016 Navy		Date: February 2015
Appropriation/Budget Activity 1319 / 7	**R-1 Program Element (Number/Name)** PE 0206313M / *Marine Corps Comms Systems*	**Project (Number/Name)** 3099 / *Radar System*

Product Development ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2014 Cost	FY 2014 Award Date	FY 2015 Cost	FY 2015 Award Date	FY 2016 Base Cost	FY 2016 Base Award Date	FY 2016 OCO Cost	FY 2016 OCO Award Date	FY 2016 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
AN/TPS-59	SS/FFP	LMC : SYRACUSE, NY	3.690	0.700	Jan 2015	-		-		-		-	-	4.390	-
AN/TPS-59	C/FFP	MARCORSYSCOM : QUANTICO, VA	0.000	-		1.065	Jul 2015	1.000	Jun 2016	-		1.000	-	2.065	-
AN/TPS-59	WR	NSWC : CRANE, IN	3.425	-		-		0.991	Feb 2016	-		0.991	Continuing	Continuing	Continuing
FTAS	C/IDIQ	SRC TEC : SYRACUSE, NY	0.000	0.131	Sep 2014	1.492	Mar 2015	-		-		-	-	1.623	-
FTAS	MIPR	TYAD : TOBYHANNA, PA	0.000	-		0.400	Mar 2015	1.090	Feb 2016	-		1.090	-	1.490	-
Prior Year Cumulative Funding	Various	VARIOUS : VARIOUS	74.879	-		-		-		-		-	-	74.879	-
		Subtotal	81.994	0.831		2.957		3.081		-		3.081	-	-	-

Support ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2014 Cost	FY 2014 Award Date	FY 2015 Cost	FY 2015 Award Date	FY 2016 Base Cost	FY 2016 Base Award Date	FY 2016 OCO Cost	FY 2016 OCO Award Date	FY 2016 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
AN/TPS-59	WR	NSWC : DAHLGEN, VA	9.057	-		0.200	Nov 2014	0.753	Jan 2016	-		0.753	Continuing	Continuing	Continuing
AN/TPS-59	Various	SPAWAR : CHARLESTON, SC	4.397	-		0.500	Mar 2015	-		-		-	Continuing	Continuing	Continuing
AN/TPS-59	MIPR	MITRE : BEDFORD, MA	6.084	-		1.700	Mar 2015	1.300	Dec 2015	-		1.300	Continuing	Continuing	Continuing
AN/TPS-59	Various	MCSC : QUANTICO, VA	1.150	0.544	Aug 2014	0.300	Feb 2015	0.475	Oct 2015	-		0.475	Continuing	Continuing	Continuing
AN/TPS-59	C/CPFF	LOCKHEED MARTIN : SYRACUSE, NY	8.137	0.652	Jun 2014	0.500	Apr 2015	-		-		-	Continuing	Continuing	Continuing
AN/TPS-59	Various	MCSC COMP : QUANTICO, VA	5.871	-		0.306	Mar 2015	0.500	Jun 2016	-		0.500	Continuing	Continuing	Continuing
AN/TPS-59	WR	NSWC : CRANE, IN	2.232	0.220	May 2014	-		-		-		-	-	2.452	-

Exhibit R-3, RDT&E Project Cost Analysis: PB 2016 Navy			Date: February 2015
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Support ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2014 Cost	FY 2014 Award Date	FY 2015 Cost	FY 2015 Award Date	FY 2016 Base Cost	FY 2016 Base Award Date	FY 2016 OCO Cost	FY 2016 OCO Award Date	FY 2016 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
AN/TPS-59	MIPR	TYAD : TOBYHANNA, PA	0.000	-		-		1.845	Oct 2015	-		1.845	-	1.845	-
AN/TPS-63	MIPR	TYAD : TOBYHANNA, PA	0.249	-		0.153	Feb 2015	0.195	Feb 2016	-		0.195	Continuing	Continuing	Continuing
AN/TPS-63	WR	MCSC : QUANTICO, VA	0.084	-		0.040	Feb 2015	-		-		-	-	0.124	-
AN/TPS-63	MIPR	DTIC : FT BELVOIR, VA	0.000	0.147	Jul 2014	-		-		-		-	-	0.147	-
FTAS	WR	NSWC : DAHLGREN, VA	7.329	-		0.200	Mar 2015	-		-		-	Continuing	Continuing	Continuing
FTAS	MIPR	TYAD : TOBYHANNA, PA	0.693	-		-		0.452	Nov 2015	-		0.452	Continuing	Continuing	Continuing
FTAS	Various	MCSC : QUANTICO, VA	2.138	-		0.050	Feb 2015	0.050	Oct 2015	-		0.050	Continuing	Continuing	Continuing
VWC	C/CPFF	ONR : ST. LOUIS, MO	8.581	2.543	Jan 2014	1.836	Feb 2015	1.432	Dec 2015	-		1.432	Continuing	Continuing	Continuing
Prior Year Cumulative Funding	Various	VARIOUS : VARIOUS	7.954	-		-		-		-		-	-	7.954	-
		Subtotal	63.956	4.106		5.785		7.002		-		7.002	-	-	-

Test and Evaluation ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2014 Cost	FY 2014 Award Date	FY 2015 Cost	FY 2015 Award Date	FY 2016 Base Cost	FY 2016 Base Award Date	FY 2016 OCO Cost	FY 2016 OCO Award Date	FY 2016 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
AN/TPS-59	WR	MCTSSA : CAMP PENDLETON, CA	0.000	-		1.600	Mar 2015	-		-		-	-	1.600	-
AN/TPS-59	SS/FFP	LMC : SYRACUSE, NY	0.000	0.700	Nov 2014	-		-		-		-	-	0.700	-
AN/TPS-59	WR	NSWC : CRANE, IN	0.000	-		-		1.000	Feb 2016	-		1.000	-	1.000	-
Prior Year Cumulative Funding	Various	VARIOUS : VARIOUS	1.195	-		-		-		-		-	-	1.195	-

Exhibit R-3, RDT&E Project Cost Analysis: PB 2016 Navy			Date: February 2015
Appropriation/Budget Activity 1319 / 7	R-1 Program Element (Number/Name) PE 0206313M / *Marine Corps Comms Systems*	Project (Number/Name) 3099 / *Radar System*	

Test and Evaluation ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2014 Cost	FY 2014 Award Date	FY 2015 Cost	FY 2015 Award Date	FY 2016 Base Cost	FY 2016 Base Award Date	FY 2016 OCO Cost	FY 2016 OCO Award Date	FY 2016 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
		Subtotal	1.195	0.700		1.600		1.000		-		1.000	-	4.495	-

Management Services ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2014 Cost	FY 2014 Award Date	FY 2015 Cost	FY 2015 Award Date	FY 2016 Base Cost	FY 2016 Base Award Date	FY 2016 OCO Cost	FY 2016 OCO Award Date	FY 2016 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
AN/TPS-59	C/CPFF	MCSC: GENERAL DYNAMICS : QUANTICO, VA	19.809	3.668	Apr 2014	-		-		-		-	-	23.477	-
Prior Year Cumulative Funding	C/CPFF	MCSC: GENERAL DYNAMICS : QUANTICO, VA	2.504	-		-		-		-		-	-	2.504	-
		Subtotal	22.313	3.668		-		-		-		-	-	25.981	-

	Prior Years	FY 2014 Cost	FY 2014 Award Date	FY 2015 Cost	FY 2015 Award Date	FY 2016 Base Cost	FY 2016 Base Award Date	FY 2016 OCO Cost	FY 2016 OCO Award Date	FY 2016 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	169.458	9.305		10.342		11.083		-		11.083	-	-	-

Remarks

Exhibit R-4, RDT&E Schedule Profile: PB 2016 Navy		Date: February 2015
Appropriation/Budget Activity 1319 / 7	**R-1 Program Element (Number/Name)** PE 0206313M / *Marine Corps Comms Systems*	**Project (Number/Name)** 3099 / *Radar System*

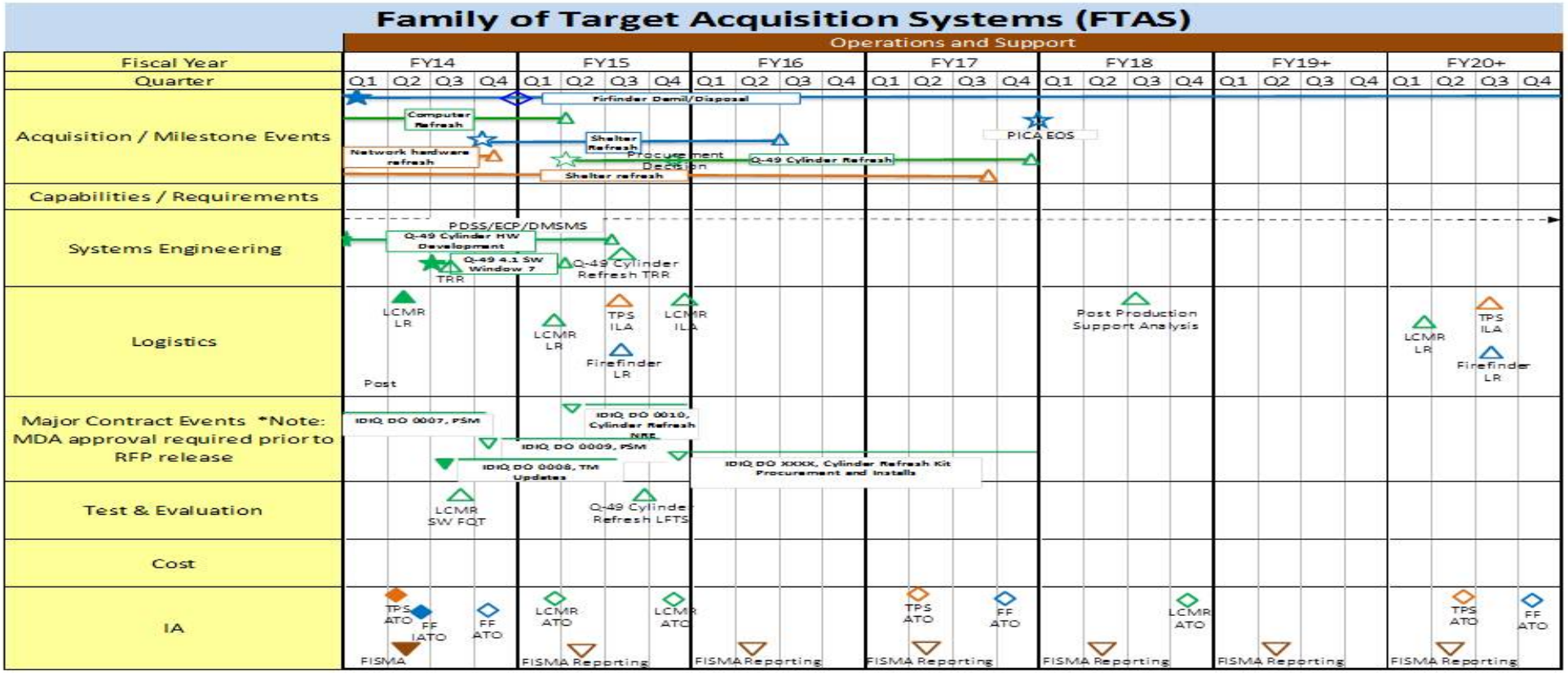

Exhibit R-4, RDT&E Schedule Profile: PB 2016 Navy		Date: February 2015
Appropriation/Budget Activity 1319 / 7	**R-1 Program Element (Number/Name)** PE 0206313M / *Marine Corps Comms Systems*	**Project (Number/Name)** 3099 / *Radar System*

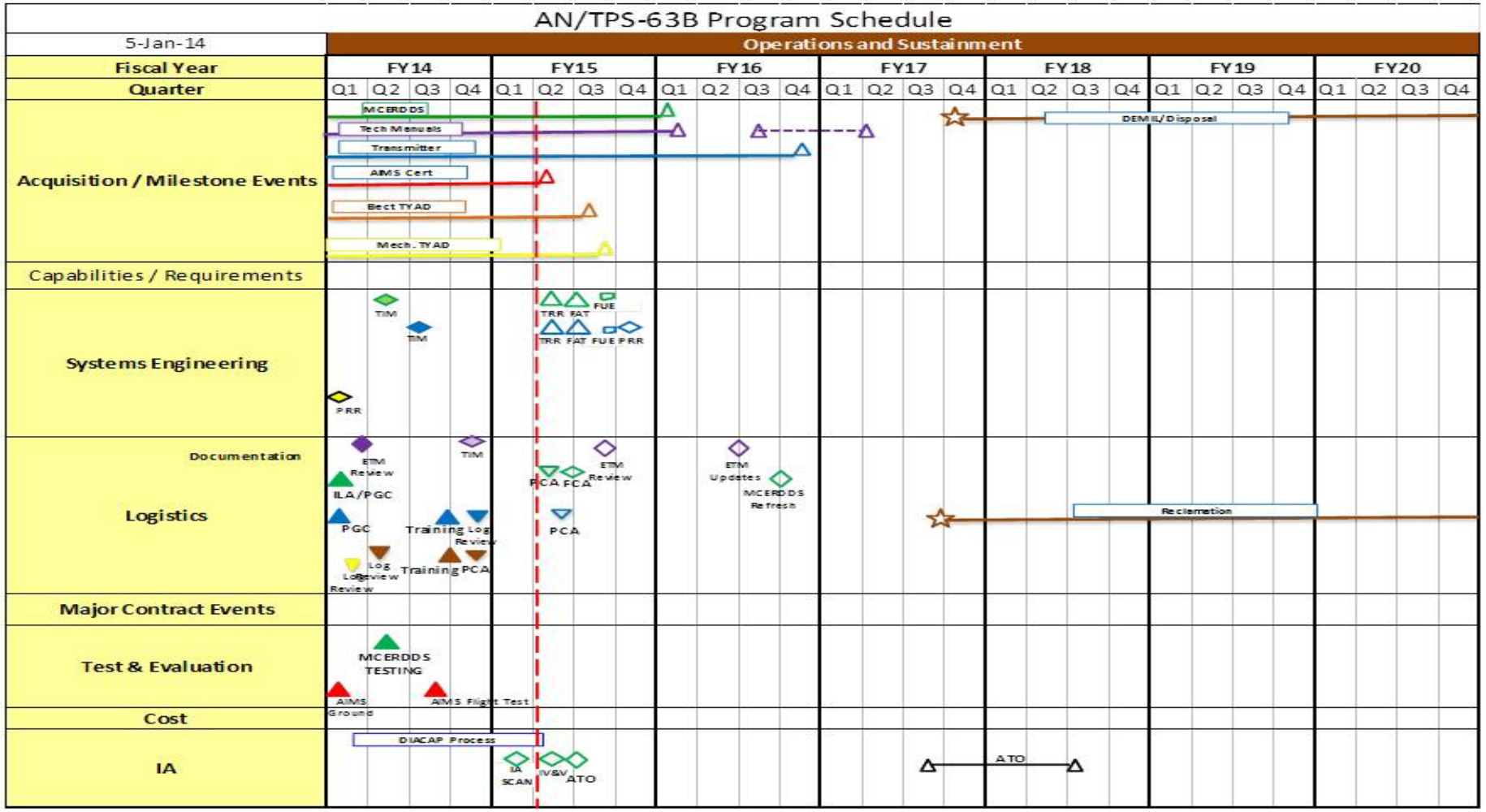

Exhibit R-4, RDT&E Schedule Profile: PB 2016 Navy		Date: February 2015
Appropriation/Budget Activity 1319 / 7	**R-1 Program Element (Number/Name)** PE 0206313M / *Marine Corps Comms Systems*	**Project (Number/Name)** 3099 / *Radar System*

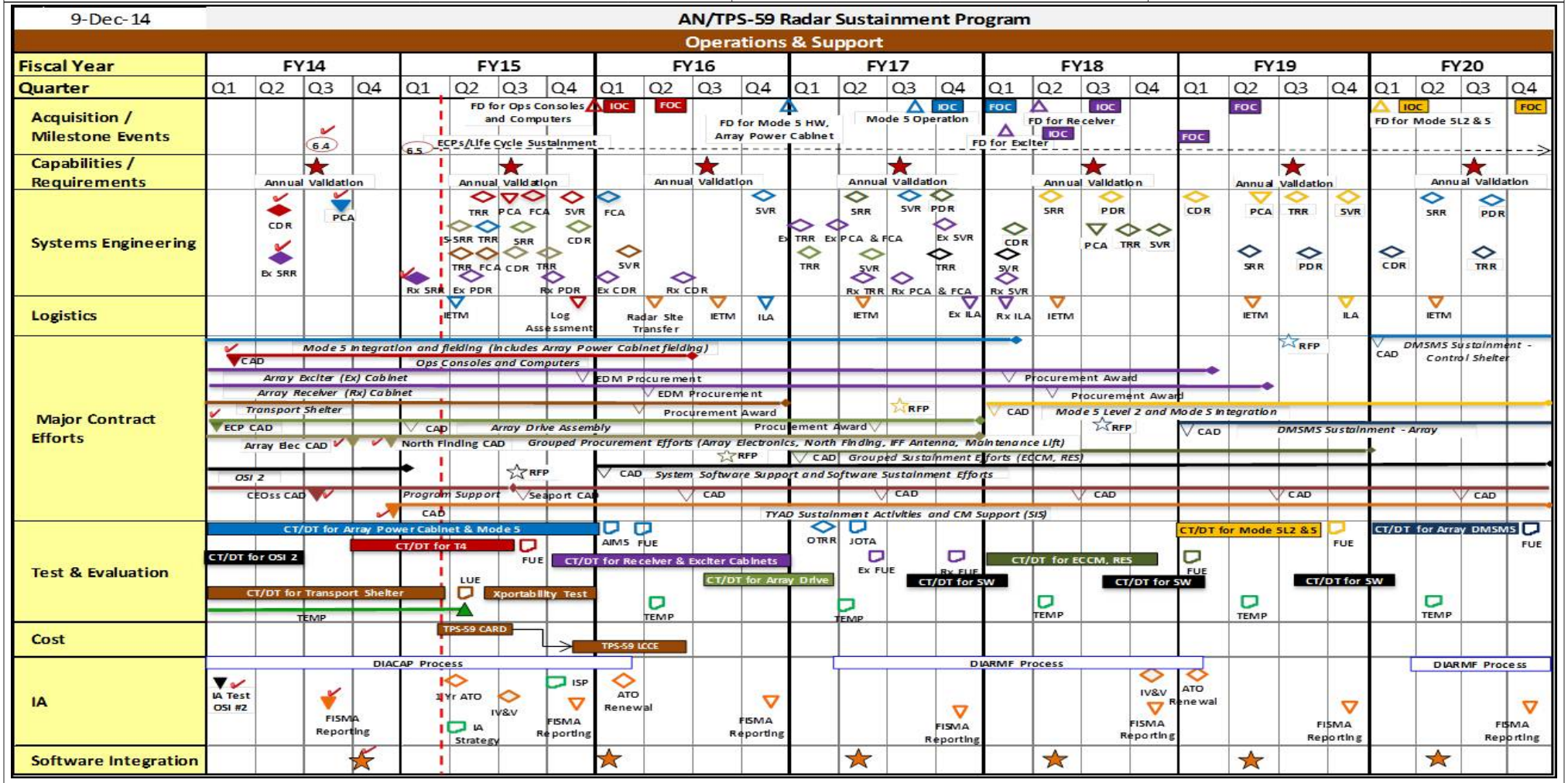

Exhibit R-4A, RDT&E Schedule Details: PB 2016 Navy		Date: February 2015
Appropriation/Budget Activity 1319 / 7	**R-1 Program Element (Number/Name)** PE 0206313M / *Marine Corps Comms Systems*	**Project (Number/Name)** 3099 / *Radar System*

Schedule Details

	Start		End	
Events by Sub Project	**Quarter**	**Year**	**Quarter**	**Year**
Proj 3099				
AN/TPS-59 - IFF Mode 5 Fielding Decision	1	2016	1	2016
AN/TPS-59 - IFF Mode 5 IOC	1	2017	1	2017
AN/TPS-59 - IFF Mode 5 FOC	2	2017	2	2017
AN/TPS-63 - Test Readiness Review (TRR) for Transmitter ECP	1	2015	1	2015
AN/TPS-63 - Technical Manual Delivery	3	2015	3	2015
FTAS AN/TPQ-49 - Cylinder Refresh Final Test Report Fielding Decision	3	2015	3	2015
FTAS - AN/TPQ-49 (LCMR) PICA Responsibility	4	2015	4	2015