Exhibit R-2, RDT&E Budget Item Justification: PB 2020 Army											Date: March 2019	
Appropriation/Budget Activity 2040: *Research, Development, Test & Evaluation, Army I* BA 3: *Advanced Technology Development (ATD)*					**R-1 Program Element (Number/Name)** PE 0603461A *I High Performance Computing Modernization Program*							
COST ($ in Millions)	Prior Years	FY 2018	FY 2019	FY 2020 Base	FY 2020 OCO	FY 2020 Total	FY 2021	FY 2022	FY 2023	FY 2024	Cost To Complete	Total Cost
Total Program Element	-	214.100	218.098	184.755	-	184.755	188.205	191.644	197.808	198.507	0.000	1,393.117
DS7: *High Performance Computing Modernization Program*	-	175.100	183.098	184.755	-	184.755	188.205	191.644	197.808	198.507	0.000	1,319.117
DW5: *HIGH PERF COMP MODERN (HPCM) (CA)*	-	39.000	35.000	0.000	-	0.000	0.000	0.000	0.000	0.000	0.000	74.000

A. Mission Description and Budget Item Justification

The High Performance Computing Modernization Program (HPCMP) addresses the supercomputing requirements of Department of Defense (DoD) scientists and engineers by: (1) demonstrating and maturing the most advanced, leading-edge computational architectures while exploiting the resulting systems by employing complementary specialized expertise; (2) demonstrating and maturing the Defense Research and Engineering Network (DREN), which investigates, demonstrates, and matures leading-edge digital networking and security technologies to securely deliver computational capabilities to the distributed DoD Research, Development, Test, and Evaluation (RDTE) community; and (3) leveraging specialized expertise from DoD, other federal departments and agencies, industry, and academia to demonstrate and mature leading-edge software application codes. DoD Supercomputing Resource Centers (DSRCs) provide extensive computational capabilities to demonstrate and mature emerging technologies that address the supercomputing requirements of the DoD RDTE community in the areas of hardware, software, and programming environments. All HPCMP sites are interconnected to each other, the DoD High Performance Computing (HPC) RDTE community, and other major defense sites via the DREN, a research network which investigates, demonstrates, and matures (a) state-of-the-art digital networking technologies to ensure a robust distributed environment and (b) the most advanced digital security capabilities to protect the intellectual property of the DoD and its contract entities as they employ HPCMP capabilities. The HPCMP's software application effort (a) optimizes, enhances, demonstrates, and matures critical DoD physics-based and engineering software to allow scientists and engineers to execute calculations with precision and efficiency on leading-edge supercomputers, (b) demonstrates and matures immersive collaborative programming environments to improve science and engineering workflows, and (c) demonstrates and matures leading-edge computational technology from academia and industry. These synergistic activities collectively demonstrate and mature horizontal technologies that are exploited across the DoD RDTE community, ensuring the DoD maintains the most advanced research and development ecosystem in computationally-intensive modeling and design.

The work cited is consistent with the Under Secretary of Defense for Research and Engineering priority focus areas and the Army Modernization Strategy.

Exhibit R-2, **RDT&E Budget Item Justification:** PB 2020 Army			**Date:** March 2019	

Appropriation/Budget Activity 2040: *Research, Development, Test & Evaluation, Army I* BA 3: *Advanced Technology Development (ATD)*	**R-1 Program Element (Number/Name)** PE 0603461A *I High Performance Computing Modernization Program*

B. Program Change Summary ($ in Millions)	**FY 2018**	**FY 2019**	**FY 2020 Base**	**FY 2020 OCO**	**FY 2020 Total**
Previous President's Budget	182.331	183.322	186.329	-	186.329
Current President's Budget	214.100	218.098	184.755	-	184.755
Total Adjustments	31.769	34.776	-1.574	-	-1.574
• Congressional General Reductions	-0.148	-0.224			
• Congressional Directed Reductions	-	-			
• Congressional Rescissions	-	-			
• Congressional Adds	39.000	35.000			
• Congressional Directed Transfers	-	-			
• Reprogrammings	-	-			
• SBIR/STTR Transfer	-7.083	-			
• Adjustments to Budget Years	-	-	-1.574	-	-1.574

Congressional Add Details ($ in Millions, and Includes General Reductions)	**FY 2018**	**FY 2019**
Project: DW5: *HIGH PERF COMP MODERN (HPCM) (CA)*		
Congressional Add: *Congressional Increase*	39.000	35.000
Congressional Add Subtotals for Project: DW5	39.000	35.000
Congressional Add Totals for all Projects	39.000	35.000

Change Summary Explanation

FY 2018 congressional increase in Project DW5 for High Performance Computing Modernization.
FY 2019 congressional add ($35.0 million) for "Program increase" in Project DW5.

Exhibit R-2A, RDT&E Project Justification: PB 2020 Army										Date: March 2019	

Appropriation/Budget Activity 2040 / 3				R-1 Program Element (Number/Name) PE 0603461A / High Performance Computing Modernization Program				Project (Number/Name) DS7 / High Performance Computing Modernization Program			

COST ($ in Millions)	Prior Years	FY 2018	FY 2019	FY 2020 Base	FY 2020 OCO	FY 2020 Total	FY 2021	FY 2022	FY 2023	FY 2024	Cost To Complete	Total Cost
DS7: *High Performance Computing Modernization Program*	-	175.100	183.098	184.755	-	184.755	188.205	191.644	197.808	198.507	0.000	1,319.117

A. Mission Description and Budget Item Justification

The High Performance Computing Modernization Program (HPCMP) addresses the supercomputing requirements of Department of Defense (DoD) scientists and engineers by (1) demonstrating and maturing the most advanced, leading-edge computational architectures and exploiting the resulting systems by employing complementary specialized expertise; (2) demonstrating and maturing the Defense Research and Engineering Network (DREN) which investigates, demonstrates, and matures leading-edge digital networking and security technologies to securely deliver computational capabilities to the distributed DoD Research, Development, Test, and Evaluation (RDTE) community; and (3) leveraging specialized expertise from DoD, other federal departments/agencies, industry, and academia to demonstrate and mature leading-edge software application codes. DoD Supercomputing Resource Centers (DSRCs) provide extensive computational capabilities and demonstrate and mature emerging technologies that address the supercomputing requirements of the DoD RDTE community in the areas of hardware, software, and programming environments. All HPCMP sites are interconnected to each other, the DoD High Performance Computing (HPC) RDTE community, and other major defense sites via DREN, a research network which investigates, demonstrates, and matures (a) state-of-the-art digital networking technologies to ensure a robust distributed environment and (b) the most advanced digital security capabilities to effectively protect the intellectual property of the DoD and its contract entities as they employ HPCMP advanced capabilities. The HPCMP's software application effort (a) optimizes, enhances, demonstrates, and matures critical DoD physics-based and engineering software to allow scientists and engineers to execute calculations with precision and efficiency on leading-edge supercomputers, (b) demonstrates and matures immersive collaborative programming environments to improve science and engineering workflows, and (c) demonstrates and matures leading-edge computational technology from academia and industry. These synergistic activities collectively demonstrate and mature horizontal technologies that are exploited throughout the DoD RDTE community, ensuring the DoD maintains the most advanced research ecosystem in the areas of computationally-intensive modeling and design.

The work cited is consistent with the Under Secretary of Defense for Research and Engineering priority focus areas and the Army Modernization Strategy.

B. Accomplishments/Planned Programs ($ in Millions)

	FY 2018	FY 2019	FY 2020
Title: Department of Defense Supercomputing Resource Centers	90.067	93.484	97.880
Description: The effort investigates, demonstrates, and matures general and special-purpose supercomputing environments that incorporate the most advanced, leading-edge computational architectures, distributed mass storage technologies, and data analysis methodologies; employs complementary specialized expertise to mature and exploit these environments; enables the DoD Research, Development, Test and Evaluation (RDTE) community to effectively and efficiently investigate, demonstrate, and mature a broad range of technologies through advanced computational methods. *FY 2019 Plans:*			

Exhibit R-2A, RDT&E Project Justification: PB 2020 Army		Date: March 2019
Appropriation/Budget Activity 2040 / 3	R-1 Program Element (Number/Name) PE 0603461A / High Performance Computing Modernization Program	Project (Number/Name) DS7 / High Performance Computing Modernization Program

B. Accomplishments/Planned Programs ($ in Millions)	FY 2018	FY 2019	FY 2020
Continue to refine and exploit the advanced capabilities of previously demonstrated supercomputers (utilizing the existing capability complete 31,000 trillion floating point operations per second) to conduct complex, tightly-coupled, large-scale, scientific calculations to address DoD challenges in the following 11 CTAs: (1) space and astrophysical sciences, (2) structural mechanics, (3) fluid dynamics, (4) chemistry and materials science, (5) electromagnetics and acoustics, (6) climate/weather/ocean modeling and simulation, (7) signal and image processing, (8) forces modeling and simulation, (9) electronics, networking, and systems, (10) environmental quality, and (11) integrated modeling and test environments. Will demonstrate the viability of two (or more) large, tightly-integrated supercomputers containing leading-edge (i.e. 2019) processor, memory, disk I/O, interconnect, and OS capabilities (adding an additional capability of 11,000 trillion floating point operations per second) to conduct complex, tightly coupled, large-scale, scientific calculations to address DoD challenges in the 11 CTAs cited above; will continue to further mature GUI access to supercomputers without requiring software to be added to the client machine to allow scientists and engineers at sites with prohibitive security practices to apply supercomputing to DoD use cases; will continue to further mature the ability to use both general purpose and accelerated processors collectively in a single supercomputer (i.e. a hybrid supercomputer) to expand the breadth of DoD use cases that can be addressed by supercomputing; will continue to mature data-intensive supercomputing architectures for DoD use cases in which it is more economical to move (in real-time) the executable code to the data (as opposed to the standard approach of moving the data to the executable code) to expand the breadth of DoD use cases that can be addressed by supercomputing; will continue to mature shared above secret capabilities to address critical DoD mission requirements.			
FY 2020 Plans: Will accelerate technology capabilities with a suite of supercomputers to address DoD priorities that satisfy the diverse needs of DoD stakeholders including security, workload, and architecture requirements. Refine and exploit the advanced capabilities of previously demonstrated supercomputers (utilize the existing capability to complete 54,000 trillion floating point operations per second) to conduct complex, tightly-coupled, large-scale, scientific calculations to address DoD challenges in the essential computational domains. Will demonstrate the potential benefits of multiple architectures (scientific, analytics, machine learning, etc.) that are tightly-integrated and incorporate leading-edge (i.e. 2020) processor, memory, disk I/O, interconnect, and OS capabilities. Will demonstrate enhanced access solutions to supercomputers ? solutions that do not require software to be added to the client machine to allow scientists and engineers located at sites with prohibitive security practices to access supercomputers. Will demonstrate new mechanisms to access and reduce barriers to supercomputers. Will leverage data-intensive supercomputing architectures for DoD use cases in machine learning, artificial intelligence, and data sciences.			
FY 2019 to FY 2020 Increase/Decrease Statement: Adjustment due to inflation.			
Title: Defense Research and Engineering Network	31.284	30.946	32.400

Exhibit R-2A, RDT&E Project Justification: PB 2020 Army		Date: March 2019
Appropriation/Budget Activity 2040 / 3	R-1 Program Element (Number/Name) PE 0603461A / High Performance Computing Modernization Program	Project (Number/Name) DS7 / High Performance Computing Modernization Program

B. Accomplishments/Planned Programs ($ in Millions)	FY 2018	FY 2019	FY 2020
Description: This effort investigates, demonstrates, and matures state-of-the-art digital networking technologies to ensure a robust distributed environment among High Performance Computing Modernization Program (HPCMP) sites, the DoD High Performance Computing (HPC) Research, Development, Test and Evaluation (RDTE) community, and other major defense sites; investigates, demonstrates, and matures the most advanced digital security capabilities to effectively protect the intellectual property of the DoD and its contract entities as they employ HPCMP advanced capabilities; employs complementary specialized expertise to mature and exploit this environment. **FY 2019 Plans:** Continue to refine and exploit DREN III (an advanced digital DoD research network) which provides robust, high-bandwidth, low-latency, low-jitter connectivity among the HPCMP and DoD RDTE communities with specific efforts targeted at the unique requirements of the Test & Evaluation (T&E) and Acquisition Engineering communities; will continue strategic technical planning and acquisition strategy development for DREN IV, a follow-on to DREN III, with next-generation technical capabilities and significantly increased bandwidths to support the HPCMP and DoD RDTE communities; will continue to refine and exploit the HPCMP's DISA-accredited Tier 2 cybersecurity service provider capability to effectively protect the intellectual property of the DoD and its contract entities as they utilize HPCMP advanced capabilities; will continue to mature the advanced network technologies and complex cybersecurity mechanisms required to implement logically-separated networked COIs at multiple classification levels; will continue to demonstrate hardware architecture and software stack enhancements for network sensors to simultaneously allow (1) active support for the HPCMP's DISA-accredited Tier 2 cybersecurity service provider capabilities and (2) active experimentation for novel, adaptive cybersecurity detection and intervention methods; will continue to demonstrate the ability to employ SDNs to allow traditional IP and experimental protocol networks to coexist within a common DoD networking infrastructure; will continue to mature an ISCM and cyber situational awareness capability to ingest robust, diverse, host-based and network-based near-real-time information by harnessing HPC resources for advanced mission essential task elements; improve cybersecurity methods to aid in the detection of insider threats. **FY 2020 Plans:** Will continue to refine and exploit DREN III (an advanced digital DoD research network) which provides robust, high-bandwidth, low-latency, low-jitter connectivity among the HPCMP and DoD RDTE communities with specific efforts targeted at the unique requirements of the Test & Evaluation (T&E) and Acquisition Engineering communities. Formalize the strategic technical planning and acquisition strategy development for DREN IV, the follow-on to DREN III, with next-generation technical capabilities and significantly increased bandwidths to support the HPCMP and DoD RDTE communities; complete source selection for DREN IV. Will complete final configuration and fine tune the IAP Security Gateway Enhancement Project to enhance HPCMP's DISA-accredited Tier 2 cybersecurity service provider capability to effectively protect the intellectual property of the DoD and its contract entities as they utilize HPCMP advanced capabilities. Will continue to mature the advanced network technologies and complex cybersecurity mechanisms required to implement logically-separated networked COIs at multiple classification levels. Will			

Exhibit R-2A, RDT&E Project Justification: PB 2020 Army		Date: March 2019
Appropriation/Budget Activity 2040 I 3	**R-1 Program Element (Number/Name)** PE 0603461A I *High Performance Computing Modernization Program*	**Project (Number/Name)** DS7 I *High Performance Computing Modernization Program*

B. Accomplishments/Planned Programs ($ in Millions)	FY 2018	FY 2019	FY 2020
continue to demonstrate hardware architecture and software stack enhancements for network sensors to simultaneously allow; (1) active support for the HPCMP's DISA-accredited Tier 2 cybersecurity service provider capabilities; and (2) active experimentation for novel, adaptive cybersecurity detection and intervention methods; Implement the ability to employ SDNs to allow traditional IP and experimental protocol networks to coexist within a common DoD networking infrastructure. Will implement a prototype ISCM and cyber situational awareness capability to ingest robust, diverse, host-based and network-based near-real-time information by harnessing HPC resources for advanced mission essential task elements. ***FY 2019 to FY 2020 Increase/Decrease Statement:*** Adjustment due to inflation			
Title: Software Applications ***Description:*** This effort optimizes, enhances, demonstrates, and matures software applications to provide for the adaptation of widely used applications and algorithms to address Research, Development, Test and Evaluation (RDTE) requirements. The Computational Research Engineering Acquisition Tools and Environments (CREATE) initiative demonstrates and matures advanced application codes to allow scientists and engineers to use supercomputers to design and analyze virtual prototypes of DoD ships, fixed-wing aircraft, rotorcraft, ground vehicles, and radio frequency (RF) antennas; HPCMP Institutes demonstrate and mature advanced supercomputing application codes to address critical high-impact DoD challenges (e.g. blast protection for platforms and personnel, high-power microwaves and lasers, munition sensitivities, and mobile network designs/prototypes); High Performance Computing Applications Software Initiative (HASI) projects address the need to mature and refine critical DoD software that can take advantage of new and emerging hardware advances; the Frontier initiative represents and supports the DoD's highest-priority, highest-impact computational work, both from a technical and mission-relevance standpoint; the Productivity, Enhancement, Technology Transfer, and Training (PETTT) initiative (1) optimizes and enhances critical DoD physics based and engineering software to allow scientists and engineers to execute scientific calculations with precision and efficiency on leading-edge supercomputers, (2) demonstrates and matures immersive collaborative programming environments to improve science and engineering workflows, and (3) demonstrates and matures leading-edge computational technology from academia and industry. ***FY 2019 Plans:*** Continue to mature multi-disciplinary software technology in support of current and future defense programs. For aeronautical systems of all types (i.e., fixed and rotary-wing aircraft, munitions, missiles, rockets, etc.), this endeavor will continue maturing model-centric conceptual design software technology to support pre Milestone-A Defense acquisition processes, enabling application of physics-based analysis of alternatives, technology trade-space exploration, and cost implications. For fixed-wing aircraft, this will include, but will not be limited to, high-fidelity physics-based analysis capabilities for coupled aerodynamics, structural dynamics, propulsion, and flight controls in support of flight certifications (e.g., air worthiness, store carriage and release, etc.), mission planning for fielded and new systems and associated upgrades, and acquisition decisions associated	53.749	52.027	54.475

Exhibit R-2A, **RDT&E Project Justification:** PB 2020 Army		**Date:** March 2019
Appropriation/Budget Activity 2040 *I* 3	**R-1 Program Element (Number/Name)** PE 0603461A *I High Performance Computing Modernization Program*	**Project (Number/Name)** DS7 *I High Performance Computing Modernization Program*

B. Accomplishments/Planned Programs ($ in Millions)	**FY 2018**	**FY 2019**	**FY 2020**
with exploration and design analysis of future manned and unmanned aerial vehicle concepts. Additionally, it will include implementation of foundational software improvements necessary to begin development of physics-based design analysis tools for future hypersonic weapon systems (High Speed Strike, Tactical Boost-Glide, and Manned/Unmanned Conventional Prompt Global Strike). For rotorcraft, exemplars will include aeromechanics analysis associated with maneuvers, airframe-propulsion system integration, and weapons carriage and release, as well as infrared suppression analysis, chaff trajectory prediction, debris ingestion analysis, and loads prediction capability necessary for structural airworthiness assessments. These capabilities will be deployed in support of the FVL Program, as well as for sustainment of existing rotorcraft-based programs and associated upgrades, such as the ITEP. For RF antenna design analysis, will further mature computational electromagnetics capabilities to assist in design and evaluation of next generation radar for aircraft, ships, and ground-based platforms; will demonstrate capability for assessment of electromagnetic hazards on ordnance and will optimize computational methods for electronic warfare assessments and evaluation of multiple antenna systems on a single platform. For Naval Ships (surface and submarine), will further mature conceptual and early modeling capabilities in sync with detailed design and analyses, to realize full-lifecycle management of systems and platforms, and for conducting AoAs. *FY 2020 Plans:* Will continue to mature and enhance multi-disciplinary software technology in support of current and future defense programs. For aeronautical systems of all types (i.e., fixed and rotary-wing aircraft, munitions, missiles, rockets, etc.), this endeavor will continue to mature model-centric conceptual design software technology to support pre Milestone-A Defense acquisition processes, enabling application of physics-based analysis of alternatives, technology trade-space exploration, and analysis of cost implications. Will continue implementation of foundational software improvements necessary to begin development of physics-based design analysis tools for future hypersonic weapon systems (High Speed Strike, Tactical Boost-Glide, and Manned/Unmanned Conventional Prompt Global Strike). For fixed-wing aircraft, will a) incorporate new generation of high order accuracy solvers; b) implement hypersonic terminal maneuvers; and c) begin incorporation of hypersonic long-duration/heat soak algorithms. For rotorcraft, will continue aeromechanics analysis associated with maneuvers, airframe-propulsion system integration, and weapons carriage and release, as well as infrared suppression analysis, chaff trajectory prediction, debris ingestion analysis, and loads prediction capability necessary for structural airworthiness assessments. These capabilities will be deployed in support of the FVL Program, as well as for sustainment of existing rotorcraft-based programs and associated upgrades, such as the ITEP. RF antenna design and analysis is maturing computational electromagnetics capabilities to assist in design and evaluation of next generation radar for aircraft, ships, and ground-based platforms; demonstrating capability for assessment of electromagnetic hazards on ordnance and optimizing computational methods for electronic warfare assessments and evaluation of multiple antenna systems on a single platform. Will conclude efforts in aircraft radar signature prediction capabilities that effectively include propulsion system inlet and exhaust. Will continue efforts to incorporate high-resolution (X-Band frequencies) virtual test and analysis capabilities for fighter-scale aircraft. For Naval Ships (surface and submarine), will continue incorporation of; a) hullform optimization; b) multi-hull seakeeping capabilities; and c) virtual ship powering algorithms.			

Exhibit R-2A, RDT&E Project Justification: PB 2020 Army			Date: March 2019		
Appropriation/Budget Activity 2040 / 3		**R-1 Program Element (Number/Name)** PE 0603461A / *High Performance Computing Modernization Program*	**Project (Number/Name)** DS7 / *High Performance Computing Modernization Program*		

B. Accomplishments/Planned Programs ($ in Millions)	FY 2018	FY 2019	FY 2020
Will begin efforts to incorporate 6-DOF submarine maneuvering. For Ground Vehicles a) will complete advanced model interfacing standards; b) will complete incorporation of sensing and autonomy capabilities; and c) will expand autonomy capabilities. ***FY 2019 to FY 2020 Increase/Decrease Statement:*** Adjustment due to inflation.			
Title: FY 2019 SBIR / STTR Transfer **Description:** FY 2019 SBIR / STTR Transfer ***FY 2019 Plans:*** FY 2019 SBIR / STTR Transfer ***FY 2019 to FY 2020 Increase/Decrease Statement:*** FY 2019 SBIR / STTR Transfer	-	6.641	-
Accomplishments/Planned Programs Subtotals	175.100	183.098	184.755

C. Other Program Funding Summary ($ in Millions)
 N/A
Remarks

D. Acquisition Strategy
 N/A

E. Performance Metrics
 N/A

Exhibit R-2A, RDT&E Project Justification: PB 2020 Army										Date: March 2019	

Appropriation/Budget Activity 2040 I 3				R-1 Program Element (Number/Name) PE 0603461A I High Performance Computing Modernization Program					Project (Number/Name) DW5 I HIGH PERF COMP MODERN (HPCM) (CA)		

COST ($ in Millions)	Prior Years	FY 2018	FY 2019	FY 2020 Base	FY 2020 OCO	FY 2020 Total	FY 2021	FY 2022	FY 2023	FY 2024	Cost To Complete	Total Cost
DW5: HIGH PERF COMP MODERN (HPCM) (CA)	-	39.000	35.000	0.000	-	0.000	0.000	0.000	0.000	0.000	0.000	74.000

Note

Congressional interest item for Program increase

A. Mission Description and Budget Item Justification

This project enables the Defense Research, Development, Test and Evaluation (RDT&E) community to resolve critical scientific and engineering problems more quickly, and with more precision, using advanced, physics-based computer simulation supported by high performance computing (HPC) technology. The computational expertise and resources enable Department of Defense (DoD) personnel to analyze phenomena that are often impossible, not cost effective, too time-consuming, or too dangerous to study any other way. The High Performance Computing Modernization Program (HPCMP) supports the requirements of the DoD's scientists and engineers in three major areas of effort: supercomputing resource centers, the Defense Research and Engineering Network (DREN), and software applications. DoD Supercomputing Resource Centers (DSRCs) provide extensive capabilities and demonstrate new technologies that address user requirements for hardware, software, and programming environments. Efforts of the DSRCs are augmented by dedicated HPC project investments (DHPIs) that address near real-time and real-time HPC requirements. All sites in the HPC Modernization Program are interconnected to one another, the user community, and major defense sites via the DREN, a research network which matures and demonstrates state-of-the-art computer network technologies. The Software Application effort optimizes and improves the performance of critical common DoD applications programs to run efficiently on advanced HPC systems, matures and demonstrates leading-edge computational technology from academic and commercial partners, and provides collaborative programming environments.

The work cited is consistent with the Under Secretary of Defense for Research and Engineering priority focus areas and the Army Modernization Strategy.

B. Accomplishments/Planned Programs ($ in Millions)	FY 2018	FY 2019
Congressional Add: Congressional Increase	39.000	35.000
FY 2018 Accomplishments: Congressional Increase		
FY 2019 Plans: Congressional Increase		
Congressional Adds Subtotals	39.000	35.000

C. Other Program Funding Summary ($ in Millions)

N/A

Remarks

Exhibit R-2A, **RDT&E Project Justification:** PB 2020 Army		**Date:** March 2019
Appropriation/Budget Activity 2040 *I* 3	**R-1 Program Element (Number/Name)** PE 0603461A *I High Performance Computing Modernization Program*	**Project (Number/Name)** DW5 *I HIGH PERF COMP MODERN (HPCM) (CA)*

D. Acquisition Strategy
 N/A

E. Performance Metrics
 N/A