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Exhibit R-2, RDT&E Budget Item Justification: PB 2023 Air Force **Date:** April 2022

| | |
|---|---|
| Appropriation/Budget Activity 3620F: <i>Research, Development, Test & Evaluation, Space Force I BA 7: Operational Systems Development</i> | R-1 Program Element (Number/Name) PE 1203906SF / NCMC - ITW/AA System |
|---|---|

| COST (\$ in Millions) | Prior Years | FY 2021 | FY 2022 | FY 2023 Base | FY 2023 OCO | FY 2023 Total | FY 2024 | FY 2025 | FY 2026 | FY 2027 | Cost To Complete | Total Cost |
|--|-------------|---------|---------|--------------|-------------|---------------|---------|---------|---------|---------|------------------|------------|
| Total Program Element | - | 6.752 | 9.858 | 7.274 | 0.000 | 7.274 | 13.520 | 13.562 | 14.675 | 13.680 | 0.000 | 79.321 |
| 67A051: <i>Space Superiority - Advanced Intelligence Systems</i> | - | 6.752 | 9.858 | 7.274 | 0.000 | 7.274 | 13.520 | 13.562 | 14.675 | 13.680 | 0.000 | 79.321 |
| Quantity of RDT&E Articles | - | - | - | - | - | - | - | - | - | - | - | - |

A. Mission Description and Budget Item Justification

This program element supports development activities for the North American Aerospace Defense Command (NORAD) Cheyenne Mountain Complex (NCMC) - Integrated Tactical Warning Attack Assessment (ITW/AA) system that provides timely, unambiguous, and continuous warning and attack assessment of air, missile and space threats to North America, and geographical theaters. This system integrates and correlates missile launch and air surveillance information from certified sources to assess the nature of an enemy launch/attack and issue warnings to the President of the United States, Canadian National Leadership, United States Secretary of Defense, National Military Command Center and war-fighting Combatant Commanders. NCMC-ITW/AA and Legacy Space Command and Control (C2) systems provide NORAD/US Northern Command (USNORTHCOM), US Strategic Command (USSTRATCOM), and US Space Command (USSPACECOM) command structures with the information management, decision aids, and connectivity required to monitor, assess, plan, and execute assigned strategic, space operations, and missile defense missions. It provides Nuclear C2 and detonation detection.

The Combatant Commanders Integrated Command and Control System (CCIC2S) is a unique, integrated C2 "system of systems," providing data communication between external sensors and end users, mission processing for air and missile warning mission, and system operations functions. The system supports national strategic objectives with ITW/AA and provides missile and air warning, cueing, and engagement information to theater combatant commanders. The system consists of terrestrial and space-based sensor outputs, C2 nodes, and communications and dissemination links, connecting the US and Canadian defense information networks.

Space acquisition must respond with speed and agility to emerging adversary threats. Space Systems Command (SSC) has transformed the organization and implementation of space acquisition to an enterprise approach, to increase innovation and resiliency, leveraging international, commercial, and mission partnerships, and managing program/project priorities according to an integrated unclassified/classified enterprise space architecture. Expanding the appropriate acquisition authorities and contract mechanisms to deliver capability sooner, SSC will strategically execute experimentation, prototyping, risk reduction, and other efforts to develop new or re-purpose existing capabilities to meet emerging threats with our Nuclear C2 assets by ingesting and integrating non-traditional source data in a structured fashion so as to continue to meet strategic requirements.

This program element may include necessary civilian pay expenses required to manage, execute, and deliver NCMC-ITW/AA's weapon system capability. The use of such program funds would be in addition to the civilian pay expenses budgeted in program elements 1206392SF and 1206398SF.

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

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| B. Program Change Summary (\$ in Millions) | FY 2021 | FY 2022 | FY 2023 Base | FY 2023 OCO | FY 2023 Total |
|---|----------------|----------------|---------------------|--------------------|----------------------|
| Previous President's Budget | 6.990 | 9.858 | 0.000 | 0.000 | 0.000 |
| Current President's Budget | 6.752 | 9.858 | 7.274 | 0.000 | 7.274 |
| Total Adjustments | -0.238 | 0.000 | 7.274 | 0.000 | 7.274 |
| • Congressional General Reductions | 0.000 | 0.000 | | | |
| • Congressional Directed Reductions | 0.000 | 0.000 | | | |
| • Congressional Rescissions | 0.000 | 0.000 | | | |
| • Congressional Adds | 0.000 | 0.000 | | | |
| • Congressional Directed Transfers | 0.000 | 0.000 | | | |
| • Reprogrammings | 0.000 | 0.000 | | | |
| • SBIR/STTR Transfer | -0.238 | 0.000 | | | |
| • Other Adjustments | 0.000 | 0.000 | 7.274 | 0.000 | 7.274 |

Change Summary Explanation

FY 2021: - 0.238M decrease for SBIR.

FY 2023: The FY 2022 President's Budget submittal did not reflect FY 2023 through FY 2026 funding. Therefore, an explanation of the change between the two budget positions for FY 2023 cannot be made in a relevant manner.

| C. Accomplishments/Planned Programs (\$ in Millions) | FY 2021 | FY 2022 | FY 2023 |
|---|----------------|----------------|----------------|
|---|----------------|----------------|----------------|

| | | | |
|--|-------|-------|-------|
| Title: ITW/AA C2 Integration of C2BMC Feeds | 6.752 | 9.858 | 7.274 |
| Description: Obtain and assess non-ITW/AA (Global Data Integration) and non-traditional data sources (Command and Control, Battle Management, and Communications (C2BMC) and theater) for integration into CCIC2S and Processing and Display System Migration (PDSM) to display a more complete event picture. Improve source data accuracy for missile warning mission and translate for integration into CCIC2S that will enhance mission displays and improve impact prediction. Create multiple display options for the operator and reduce ambiguity between missile defense and missile warning displays. Provide program office support and other related support activities, including but not limited to technical analysis, prototyping, user evaluations, and independent certification testing. | | | |
| FY 2022 Plans: Continue integration, processing, and display of high fidelity data from non-ITW/AA and non-traditional sensors sources, ambiguity resolution, and prediction accuracy improvement to increase the National Command Authorities' time-critical nuclear response decision space. Continue to address emergent missile threats and other capability gaps identified in the Global Threat Characterization Assessment recommendations. Continue missile defense and missile warning information integration to support a common operating picture. | | | |

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| C. Accomplishments/Planned Programs (\$ in Millions) | | FY 2021 | FY 2022 | FY 2023 |
| <p>Continue harmonization of displays between Strategic Missile Warning, Theater Missile Warning, and Missile Defense, and non-traditional source data integration to provide a seamless event-tracking and common operating picture.</p> <p>Continue to leverage/integrate new data sources that come online and correlate with missile defense and missile warning display changes to meet emerging adversary threats.</p> <p>Continue program office support and other related support activities, including but not limited to technical analysis, prototyping, user evaluations, and independent certification testing.</p> <p>FY 2023 Plans: Continue upgrades to add additional non-ITW/AA data for emerging threats.</p> <p>Complete C2BMC connectivity effort.</p> <p>Continue harmonization of displays between Strategic Missile Warning, Theater Missile Warning, and Missile Defense, and non-traditional source data integration to provide a seamless event-tracking and common operating picture.</p> <p>Continue to leverage/integrate new data sources that come online and correlate with missile defense and missile warning display changes to meet emerging adversary threats.</p> <p>Implement changes/enhancements to Missile Warning (MW) systems based on PDM plus-up. Further details classified.</p> <p>Rapidly respond to implement system resiliency and situational awareness necessary to operate in the contested space domain. Activities may include, but are not limited to program office support, studies, technical analysis, experimentation, prototyping, etc.</p> <p>FY 2022 to FY 2023 Increase/Decrease Statement: FY 2023 decreased due to completion of first non-traditional data source ingestion.</p> | | | | |
| Accomplishments/Planned Programs Subtotals | | 6.752 | 9.858 | 7.274 |
| D. Other Program Funding Summary (\$ in Millions) | | | | |
| N/A | | | | |
| Remarks | | | | |
| | | | | |

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Appropriation/Budget Activity
3620F: *Research, Development, Test & Evaluation, Space Force I BA 7: Operational Systems Development*

R-1 Program Element (Number/Name)
PE 1203906SF / NCMC - ITW/AA System

E. Acquisition Strategy

The initial effort was competitively awarded from an existing software services Indefinite Delivery/Indefinite Quantity (IDIQ) contract in Q4 FY 2021. This effort will provide incremental deliveries to the ITW/AA sustainment provider for incorporation into the operational system. The use of experimentation, prototyping, risk reduction, and other efforts to develop new or re-purpose existing capabilities will be accomplished through multi-source acquisitions. In FY 2023, these efforts will continue from a previously awarded contract modification to an existing software services Indefinite Delivery/Indefinite Quantity (IDIQ) Contract.

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| Exhibit R-4, RDT&E Schedule Profile: PB 2023 Air Force | | Date: April 2022 |
| Appropriation/Budget Activity 3620F / 7 | R-1 Program Element (Number/Name) PE 1203906SF / NCMC - ITW/AA System | Project (Number/Name) 67A051 / Space Superiority - Advanced Intelligence Systems |

| FY 2021 | | | | FY 2022 | | | | FY 2023 | | | | FY 2024 | | | | FY 2025 | | | | FY 2026 | | | | FY 2027 | | | |
|---------|---|---|---|---------|---|---|---|---------|---|---|---|---------|---|---|---|---------|---|---|---|---------|---|---|---|---------|---|---|---|
| 1 | 2 | 3 | 4 | 1 | 2 | 3 | 4 | 1 | 2 | 3 | 4 | 1 | 2 | 3 | 4 | 1 | 2 | 3 | 4 | 1 | 2 | 3 | 4 | 1 | 2 | 3 | 4 |

| | |
|---|------------|
| C2 Integration of C2BMC Feeds | |
| C2 Integration Prime Contract | [REDACTED] |
| - Ingest GDI data into CCIC2S in TDF and CMAFS w/ user evaluation | [REDACTED] |
| - C2BMC Connectivity | [REDACTED] |
| - C2BMC Use and Display Data | [REDACTED] |

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| Exhibit R-4A, RDT&E Schedule Details: PB 2023 Air Force | | Date: April 2022 |
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Schedule Details

| Events by Sub Project | Start | | End | |
|---|---------|------|---------|------|
| | Quarter | Year | Quarter | Year |
| C2 Integration of C2BMC Feeds | | | | |
| C2 Integration Prime Contract | 4 | 2021 | 4 | 2027 |
| - Ingest GDI data into CCIC2S in TDF and CMAFS w/ user evaluation | 4 | 2021 | 4 | 2023 |
| - C2BMC Connectivity | 1 | 2022 | 1 | 2024 |
| - C2BMC Use and Display Data | 1 | 2022 | 4 | 2027 |