Defense Appropriations Fiscal Year 2020 Highlights

(Note: Numbers are nationwide program funding levels.)

National Initiatives

- **Missile Defense:** Provides increased funding for the Missile Defense Agency, which includes additional funding for cyber security, hypersonic and ballistic tracking space sensors, a new space-based program to track incoming missiles. Realigns $728 million from FY2019 and FY2020 programs to fund a Next Generation Interceptor program. The bill also supports Israeli cooperative missile defense programs by providing $500 million—with $200 million allocated to procurement programs and $300 million for research and development programs.

- **Science and Technology:** Provides $325 million for cyber security enhancements, $436 million for a new 5G program, and an increase of $70 million for the micro nuclear reactor program.

- **Health Research and Development Programs:** Provides $20 million to accelerate research into ALS ("Lou Gehrig's Disease") causes, cures and therapies due to the VA determining that the presence of ALS in veterans is presumed to be service connected, as they are disproportionately affected by ALS. In addition, $5.8 million is provided for telemedicine research as part of the Defense Health program.

- **Military Moves:** Report language is included to address improving the moving experience for military members and their families and urges the Defense Department to address substantive concerns raised by military services, military families as well as industry representatives.

- **Space Launch:** Provides $1.24 billion for four separate National Security Space Launch services and $432.0 million to develop a new U.S. space launch vehicle.

- **Sexual Assault Prevention and Response**: Funded at $35 million above request.

Alaska Interest Initiatives

- **F-35A Aircraft Procurement:** The bill provides an increase of $1.2 billion to fund an additional 14 F-35A Joint Strike Fighters and $811.5 million in advance purchase to increase the production rate of future F-35s. Includes report language which supports the prudent development and fielding of additional F-35 capabilities and directs the Under Secretary of Defense to provide comprehensive plans for configuration management and control of F-35 fleet capabilities, to include simulators, trainers, operator training, and aircraft within deployed squadrons. Eielson Air Force Base is scheduled to house two F-35A Lighting II squadrons by the year 2022 and with these funding levels, Alaska will likely receive them even sooner.

- **Innovative Readiness Training (IRT):** In an effort to increase real world training opportunities and deployment readiness, $30 million is provided for the Innovative Readiness Training program. The program brings military reservists from across the country to Alaska for advanced training by providing public and civil-society programs that are rarely practices outside of typical training iterations. These programs typically include building critical infrastructure or providing mobile health and/or dental clinics to support the local communities that they are embedded with. To escape the growing risks of coastal erosion and flooding, people from Newtok, Alaska will relocate to the new village of Mertarvik, which has been made possible in large part due to the IRT program construction efforts.

- **Combat Training Ranges:** Provides $52.365 million for design, development, and installation of digital modifications to older threat systems or simulators, which will significantly improve usefulness to the F-35 community for testing and training.

- **Civil Air Patrol:** In Alaska the Alaska Wing of the Civil Air Patrol performs over 95 percent of all aircraft search and rescue mission for the U.S. Air Force. The bill funds the Civil Air Patrol's Air Force Operation and Maintenance at $7.1 million, the Air Craft Procurement at $8.2 million, and provides $1.8 million for radio equipment.

- **Spaceports:** Provides $20.837 million to ensure private spaceports, like Pacific Spaceport Alaska in Kodiak, maintain their readiness to carry out defense missions.

- **Advanced Electric Vertical Take Off and Landing Unmanned Aerial System:** As other nations increase their Arctic presence, it is imperative that the U.S. military do the same. Therefore, report language is included urging the Air Force to develop an advanced Electric Vertical Take Off and Landing Unmanned Aerial System, including a five-sensor detect and avoid system, for distributed logistics and a test range to provide for demonstration of the system, including operation in a GPS denied environment and to help meet Arctic defense strategies.

- **Arctic Mobility:** Acknowledges the strategic importance of the Arctic Ocean and the necessity for a new generation of capabilities to address the Navy's need for Arctic mobility, to include power projection, search and rescue, humanitarian and disaster relief, and logistical support for scientific research, particularly in remote regions. Report language is included to direct the Secretary of the Navy to complete a comprehensive review of the Navy's unmet requirements for the Arctic region and to provide a plan to the congressional defense committees to research, develop, prototype, test, and evaluate materials and components capable of allowing sustained operation of advanced amphibious vehicles in Arctic, sub-zero temperature conditions.

- **Cold Weather Gear:** To improve the clothing of soldiers operating in hostile environments, $4 million is included for the rapid development of superior cold weather and Arctic clothing for soldiers –such as hand-wear, footwear, and cold/wet protective clothing systems, by also integrating fabrics that reduce weight and increase mobility in combat. The language also

encourages the Army to expedite the evaluation and integration of technologies and prototype systems from the laboratory to operational use.

- **Operations in a Permafrost Environment:** Provides $4 million for sustainment and improvements to the US Army Corps of Engineers Permafrost Tunnel Research Facility in Fox, Alaska, whose research improves construction techniques and mobility in permafrost environments.

- **Stryker Vehicle Protective Shelters (US Army Pacific):** Provides $32.7 million for the procurement of seven 10,000 square foot heated enclosures for Stryker vehicles assigned to bases in Arctic weather regions, such as Fort Wainwright where the current warm storage is very limited. These protective shelters will not only reduce the costs associated with parking vehicles outside in extreme cold environments, but will eliminate the current 72 hour preparatory period necessary to thaw and drain excess fluids and dry the vehicles before they can be loaded into the Alert Holding Area and loaded for transport to the battlefield from October-April.

- **Sensing and Prediction of Arctic Maritime Coastal Ice Conditions:** Provides $5 million to address force movement in arctic environments. This project develops reliable coastal ice condition assessments and forecasts at resolutions relevant to nearshore sealift and over the shore operations. Fielding Army forces over different shoreline boundaries from strategic sealift is a key competency. Logistics Over the Shore (LOTS) capabilities enhance the effectiveness of ground forces as a conventional deterrent and are critical to the Army's ability to respond in contingency operations. The research will provide technical expertise to observe and forecast near shore ice conditions relevant to vessel-ice avoidance, icebreaking routing and over-ice vehicle operation.

- **Terrain Condition Forecasting**: Provides $3 million to develop, advance and demonstrate a near real-time ability to support military mobility operations and assessments at Arctic and sub-Arctic locations. Cross-country ground vehicle maneuvers and rotorcraft landings, during training or operations, face significant restrictions and risks in sub-Arctic and Arctic cold regions. Unpredictable surface conditions arise from snow, thin ice, degrading permafrost and seasonal freezing and thawing of vegetation and soil, which exhibit spatial and temporal variability at tactical scales. This program will

- **Power Generation Technologies in Cold Regions:** Provides $5 million to help deal with unpredictable weather and extreme seasonality, including below freezing conditions for months, which increase the likelihood and consequences of power loss at critical facilities in remote cold region locations. Limited site access to remote locations and the potential presence of permafrost limits engineering options. Research is needed to demonstrate reliable and resilient energy and infrastructure operations for cold and remote regions with the goal of reducing diesel fuel consumption, storage and delivery required to supply critical electrical and heating loads, while maintaining or increasing continuity of service.

- **Reliable Power for Critical Infrastructure:** Provides $6 million to research how to provide reliable power in challenging environments. Installations have critical capital assets that

require reliable power. Though up to billions of dollars are spent on the non-electrical infrastructure to build these critical assets, only a small fraction of those dollars are spent ensuring reliable power is supporting those assets. For example, backup generation is often available for critical loads but if these backup generators fail to start then the critical load loses power. This program will ensure energy sources such as storage, backup generation and uninterruptible power systems (UPS) are not only more reliable to support critical assets but also have the intelligence to coordinate with utility power, Central Heat and Power (CHP) sources and load shedding strategies.

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