

Alaska Satellite Interconnect Equipment Replacement and System Upgrade **FY2020 Request: \$500,000**
Reference No: 61878

AP/AL: Appropriation **Project Type:** Equipment / Commodities
Category: General Government
Location: Statewide **House District:** Statewide (HD 1-40)
Impact House District: Statewide (HD 1-40) **Contact:** Cheri Lowenstein
Estimated Project Dates: 07/01/2019 - 06/30/2024 **Contact Phone:** (907)465-5655

Brief Summary and Statement of Need:

This infrastructure provides a critical link for emergency communications, video, and audio services to bush, rural, and urban Alaskan audiences and broadcasters. The project work scope includes system design, equipment purchase, installation, and commissioning of equipment that will sustain and improve existing service levels by replacing the end-of-life/ end-of-service satellite distribution system currently in place.

Funding:	<u>FY2020</u>	<u>FY2021</u>	<u>FY2022</u>	<u>FY2023</u>	<u>FY2024</u>	<u>FY2025</u>	<u>Total</u>
1197 AK Cap Inc	\$500,000						\$500,000
Total:	\$500,000	\$0	\$0	\$0	\$0	\$0	\$500,000

<input type="checkbox"/> State Match Required	<input checked="" type="checkbox"/> One-Time Project	<input type="checkbox"/> Phased - new	<input type="checkbox"/> Phased - underway	<input type="checkbox"/> On-Going
0% = Minimum State Match % Required		<input type="checkbox"/> Amendment	<input type="checkbox"/> Mental Health Bill	

Operating & Maintenance Costs:

	<u>Amount</u>	<u>Staff</u>
Project Development:	0	0
Ongoing Operating:	0	0
One-Time Startup:	0	0
Totals:	0	0

Prior Funding History / Additional Information:

Project Description/Justification:

The primary purpose of the State of Alaska's satellite infrastructure is supporting Alaska Rural Communications Services (ARCS); the state owned and operated rural television service, and delivery of noncommercial broadcasting, distance education, and emergency communications services. These funds will allow State of Alaska (SOA) to meet their statutory responsibilities by ensuring delivery of these mission critical public services.

This system of multiple statewide public and emergency communications services is a State of Alaska owned distribution platform. Health, safety, and emergency alerts and information are embedded in, and represent an important part of, the public communications services delivered by this infrastructure into communities throughout bush, rural, and urban Alaska. Satellite services play an important role in the SOA's ability to quickly and efficiently distribute emergency information statewide and well beyond the reach of traditional media. ARCS is a State Relay Network participating in the State of Alaska's Emergency Alert Systems Plan delivering emergency alerts and Emergency Alert Systems (EAS) tests to commercial and non-commercial broadcasters and viewers across Alaska. ARCS is part of the State of Alaska, Division of Homeland Security and Emergency Management, Emergency Alert

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System, integrating Information Technology based emergency information sources across this satellite infrastructure, extending the reach of newer technologies to many of the most remote viewers and listeners statewide.

• What is the purpose of the project?

The primary purpose of this project is to save the SOA's satellite infrastructure supporting ARCS, the state owned and operated rural television service, and ensure delivery of noncommercial broadcasting, distance education and emergency communications services by replacing and upgrading the equipment that is the foundation of the service.

This infrastructure provides a critical link for emergency communications, video and audio services to bush, rural and urban Alaskan audiences and broadcasters. The project work scope includes system design, equipment purchase, installation and commissioning of equipment that will sustain and improve upon existing service levels by replacing the end-of-life/end-of-service satellite distribution system currently in place.

• Is this a new systems development project? Or, an upgrade or enhancement to existing department capabilities?

This is not a new system, ARCS and the satellite infrastructure has been providing service to rural and urban Alaska for many years. Replacing this aging infrastructure is an efficient and cost effective solution to prevent unplanned end-of-service/ end-of-life equipment failure, particularly if the SOA continues current practice in privatizing project design, installation and management. Now in its twelfth year of service, the current system has reached the end of its serviceable life. No repairs, replacements, or factory service is available on installed equipment. Current generation replacement equipment is not compatible with the existing previous generation system components in use. Piecemeal failures are resulting in temporary loss of capacity and service, ongoing. A major system failure will result in complete loss of service.

• Specifically, what hardware, software, consulting services, or other items will be purchased with this expenditure. Include a line item breakdown.

\$25.0	Design and engineering
\$200.0	Equipment
\$120.0	Software, Support and Licensing (5 years)
\$50.0	Initial Build, Test, Prep, and Installation Costs
\$25.0	Shipping
\$50.0	Administrative costs
<u>\$30.0</u>	Contingencies
\$500.0	Total

• How will service to the public be measurably improved if this project is funded?

Consistent service and outages limited to maintenance are rarely noticed until there is a problem. With an upgraded system, next generation equipment will save power and energy costs, require less space and create improved monitoring and troubleshooting capabilities via internet connectivity from a centralized location. Savings to future operating costs will be realized in several ways. New encoding and compression technology will increase satellite bandwidth efficiency and facilitate increased video,

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audio and data services without increasing operating costs. New equipment will be covered by warranty and service opportunities not available to the current system. Increased demand for low-latency, reliable, high quality audio and video distribution services is occurring within Alaska's public communications system as budget stressed users seek to realize savings through collaboration and consolidation efforts which this system offers. Spontaneous failure of current equipment will result in highest cost methods to restore service; proactive replacement and upgrade is prudent and cost effective.

This project will leverage multiple layers of private and local resources in the form of: 1.) Space, power and terminal equipment at the non-SOA encoding suite, 2.) Content and program resources traversing the uplink system to intended audiences statewide, 3.) Transmission and distribution systems at the far end housed and maintained by local organizations and communities, including the new ARCS Digital Television system which itself leverages the public communications content on the satellite to improve and increase services to rural Alaskans.

• Does project affect the way in which other public agencies will conduct their business?

The significant stake holders whose ability to deliver services on this satellite infrastructure include: the Alaska Division of Emergency Services and broadcasters who depend on this service for Emergency Alert System distribution, and the listeners and viewers who depend on those alerts for life saving information; public television viewers and public radio listeners; rural Alaskans watching 360 North and Gavel Alaska coverage of the State Legislative sessions; and the ARCS television viewers across rural Alaska.

• What are the potential out-year cost implications if this project is approved? (Bandwidth requirements, etc.)

The SOA operates this system in a cost-effective manner by privatizing the management and operation of the system, as well as user support service and troubleshooting functions. The primary out-year cost implication if the system undergoes upgrade and systems stability through on-going privatization is the efficient operation with a multi-year lifespan of service to Alaskans.

• What will happen if the project is not approved?

No reasonable alternative exists to replace this core equipment. Evolution of terrestrial network systems in rural Alaska are cost-prohibitive and capacity-limited to the needs of this system; satellite delivery will continue to be the platform of choice for the next ten years. The current system, while working without failure for 12 years, has reached the end of its serviceable life. If it experiences a catastrophic failure all services will be unavailable while emergency funding is secured, expedited purchasing, shipping, and installation are carried out at premium prices, and resulting in outages measured in months. Due to cuts in federally funded programs, an alternative source of funding does not exist to address the SOA's satellite infrastructure.