STATE OF ALASKA RFP NUMBER 2518S032
AMENDMENT NUMBER FOUR (4)
MANDATORY RETURN AMENDMENT

AMENDMENT ISSUING OFFICE:

Department of Transportation & Public Facilities
Statewide procurement
P.O. Box 112500
(3132 Channel Drive, Room 310)
Juneau, Alaska 99811-2500

THIS IS NOT AN ORDER   **DATE AMENDMENT ISSUED: March 15, 2018**

RFP TITLE:
AMHS Vessel Long Haul WAN Circuit Connections

This Amendment provides answers to questions posed by vendors IN THE Pre-Proposal Conference.

1. **Q.** Sec. 1.01 states, DOT&PF, "is soliciting proposals for long-haul circuit connections to AMHS vessels for data/voice/radio/video services." What do you require for radio?

    A. This verbiage is a generic description of the types of traffic that may traverse the vendor provided Wide Area Network (WAN) services. These services are mentioned for the purposes of potential Quality of Service (QoS) rules. The current network design requires an Ethernet hand-off to the state of Alaska (SOA) supported onboard security appliance. A VPN tunnel will established between this appliance and the SOA aggregator at the Juneau and/or Anchorage data centers. This renders QoS somewhat moot. However, we do expect the vendor to be able to supply QoS for applicable traffic within the network segments they control.

    At this time we have no specific requirement for radio traffic.

2. **Q.** Per Sec. 1.07, Do you prefer email or hard copies of the proposals, also if hardcopy, do you require a CD or can we substitute a USB stick?

    A. If you email your proposal, three (3) hard copies will still be required. A USB stick is acceptable.

3. **Q.** Section 3.03.1.A calls for two forms of WAN connectivity, a primary and a secondary redundant path. Is the data connection on the current contract only via the Ku Band?

    A. Yes, we currently only use the Ku band. The RFP calls for a "reliable primary and secondary form of connectivity with different redundant paths and utilizing different technologies." How the vendor accomplishes this is up to them.

4. **Q.** With this redundancy required in Sec. 3.03.1, where will routing take place, a failover box?

    A. The routing, failover and load balancing will be accomplished will be accomplished by the vendor.

5. **Q.** Will each router be part of the "Vendor-Supported On-Vessel Equipment" shown in Attachment #7
    - Fleet WAN High Level Topology?
    **A. The demarcation point for SOA support is the onboard Meraki Security Appliance. Any vendor
    provided equipment will be vendor supported.**

6. **Q.** Can we use the same Bandwidth for the Minimum Required Bandwidth and the Minimum Service
    Window Bandwidth stated in 3.03.1.M?
    A. Yes. There are scenarios where this approach will meet the requirements.

7. **Q.** Sec. 3.03.1.M requires a Minimum Bandwidth of 1.5Mbps and a Minimum Service Window
    Bandwidth of 50Mbps. How will this be managed to assure the vendor maintains this
    requirement?
    **A. Under 3.03.2.C the WAN System Management Dashboard will provide real-time remote
    monitoring
    and the SLA reporting requirements of Sec. 3.03.6.B will provide reports to the State.**

8. **Q.** Does the redundant WAN connectivity requirement reflect the current service provided to the ferry
    system?
    No. The redundant WAN requirement in Sec. 3.03.1.A will be new to AMHS.

9. **Q.** How will the 99% availability requirement in Sec. 3.03.1.J and Sec. 3.03.5.A be measured,
    considering possible terrain blockage?
    **A. Sec. 3.03.9 requires for the "mapping of all terrain blockage zones for each vessel along all
    routes, for each satellite used", by the Successful Offeror. If these "blockage zones" have been
    mapped by the Successful Offeror, they will not be considered in determining the 99% availability
    as required in Sec. 3.03.5.A.**

10. **Q.** Something about a Service Window 50Mbps speed uploaded bandwidth? I believe the question
    was: Is the 50Mbps minimum service window bandwidth synchronous or asynchronous?

    **A. No. While a synchronous 50Mbps service would be ideal, a 50Mbps download and 5Mbps
    upload speed is the minimum asynchronous requirement.**

11. **Q**. Bandwidth distribution minimum committed information rate per vessel???
    **A. I don't recall the full question. The bandwidth requirements are clearly defined in section
    3.03.1.M. The vessel must be able to achieve these sustained transfer rates on demand.**

12. **Q.** 50Mpbs burst speed, connect to al ships.
    **A. The RFP does not define bursting requirements. It defines minimum sustained bandwidth. While
    we are open to scenarios that provide bursting, the minimum required bandwidth allocations
    must be sustainable as needed.**

13. **Q.** Will each ship have a terminal?
   A. If we define terminal as onboard network hardware including above and below decks equipment; yes, each ship will have a terminal.

14. **Q.** Clarify the difference between ship-to-shore and shore-to-ship. How will each be used.
   A. Ship-to-shore refers to the WAN connectivity provided to the vessel. Shore-to-ship connectivity refers to shore based clients utilizing the vessel WAN service for connectivity.

   The primary purpose of the RFP is to provide WAN connectivity to the AMHS fleet. Section 3.03.4 defines an optional solution to provide WAN connectivity to Motorola hand held computers to support reservation system functionality in the field. The vessel WAN services could be used as a backhaul for these clients.

15. **Q.** Per Sec. 3.03.1.E, "The back-haul from the vendor NOC to the SOA NOC must accommodate simultaneous maximum traffic to and from each vessel." Is all traffic routed?
   A. The current network design requires an Ethernet hand-off to the state of Alaska (SOA) supported onboard security appliance. A VPN tunnel will established between this appliance and the SOA aggregator at the Juneau and/or Anchorage data centers. The path between the vendor and SOA data centers must accommodate simultaneous maximum traffic. How the vendor accomplishes this is not specified. It is expected that this path will be scalable.

16. **Q.** How is the latency rate under Sec. 3.03.5 "Qos Measurable Performance Requirements" to be measured?
   A. The latency rate will be measured via round-trip ping from each ship to the SOA Data Center.

17. **Q.** Will the 50Mbps "Service Window" from Sec. 3.03.1.M be able to be used while the vessel is on the move?
   A. There are scenarios in which it could be used when the ferry is moving.

18. **Q.** Is the vendor responsible for managing the service on-board?
   **A. Per Sec. 3.03.1.H, the vendor must, "State the type of Out Band Management and support system
      Proposed. Uplogix or other?" Yes, the vendor will manage the service they provide.**

19. **Q.** In Sec. 3.03.1.M, is the Minimum Required Bandwidth to be achieved on Primary & Secondary methods of WAN connectivity?
   A. The Minimum Bandwidth requirement of Sec. 3.03.1.M must be achieved on all methods or paths.

20. **Q.** SEC 303.1.M Can you please specify the availability of the WAN connections for the 50Mbps service window at terminals via LAN WiFi.
   A. In this case terminal is defined as shore based facility at a port of call. For the purposes of the RFP assume the various local internet service providers (ISP) can provide 50Mbps/5Mbps to the AMHS ferry terminal locations.

21. Q. SEC 3.03.2.B With regard to the redundant system. Are the minimum bandwidth requirements to be met over the entire service area?

A. Each ship must be provided the minimum bandwidth requirements throughout the service area. If a ship fails over to a redundant system the ship must be provided the minimum bandwidth requirement while utilizing the redundant system.

22. Q. SEC 3.03.4 Do you require the installation of wireless access points onboard the ships for the hand scanners?

A. Onboard wireless access points is one potential solution to provide connectivity the hand held devices defined in Sec 3.03.4.

23. Q. It looks according to Amendment 2 responses that the only data connectivity currently is through the Ku band VSAT service however in your RFP you're asking for two methods of WAN connectivity. Primary and Secondary using different paths / technology. Would you like, as a standard option, a dual band system with two independent satellite networks?

A. As long as the bandwidth and redundancy requirements are met, a dual band system is acceptable.

24. Q. Will you consider a bid acceptable if you have VSAT at 50 Mbps as primary, L band (either Iridium Certus or Inmarsat FleetBroadband) as backup? Please note that CERTUS is slated to offer speeds up to 1.4 Mbps and FleetBroadband is 432 Kbps. Given the 50 Mbps on VSAT, the slower speed on L band, it is assumed that you would have terrestrial LTE service at in port, at your terminals, featuring high speed data that would be automatically routed to with our interface box.

A. 1.4Mbps and 432Kbps do not meet the minimum bandwidth requirements stated in Sec. 3.03.1.M.

25. Q. Do you expect that Ka band service will be subject to significant rain fade in your operating area?

A. Ka band service is more susceptible to rain fade that Ku band. We have noticed some performance degradation with our current Ku band system when operating during heavy precipitation. Much of our operating area is within proximity to temperate rain forest. Service degradation due to precipitation is not a justifiable reason for non-compliance with SLA terms.

26. Q. You mention that you have a variety of terrestrial based technologies depending upon community and available services, can you please be more specific about the available bandwidth and confirm your current plan to interface with these data networks is with an Ethernet hand-off.

A. Communities throughout our operation area have various service providers. They deliver connectivity to terrestrial sites via a variety of technologies. For the purposes of the RFP assume the various local internet service providers (ISP) can provide 50Mbps/5Mbps to the AMHS ferry terminal locations.

Our requirement is an Ethernet hand-off to the onboard security appliance.

27. **Q.** Can you please advise the necessary bandwidth for each of the systems in section 3.01?
   A. The minimum bandwidth requirement are provided in section 3.03.1.M. How that bandwidth is utilized will vary based on day to day business needs. The usage per application is not relevant to the requirement.

28. **Q.** If you are going to use an L band as back up and back door for the VSAT, do you prefer Inmarsat or Iridium?
   A. The "backup and back door" will be proposed by the vendor. There is no preference. They just have to meet the requirements established in the RFP.

29. **Q.** Regarding 3.03.2.a, you ask for equal or greater level of VSAT service as your current vendor. Can you please confirm which satellite they are currently using for primary and secondary services? (This should be non-proprietary information)
   A. Our current system utilizes automatic beam switching between 123W and 172E.

30. **Q.** Sec. 303.1. M Sustained Bandwidth Required by Vessel
   - Can you please indicate the CIR (committed information rate) up/down split required for each vessel in normal operating procedures?
     A. Minimum required bandwidth is synchronous.
   - Is it expected the service window bandwidth is required to be available over satellite?
     A. Satellite delivered bandwidth is not required.
   - Please clarify the up/down split of the service window bandwidth?
     A. Minimum service window bandwidth can be asynchronous 50Mbps/5Mbps.

31. **Q.** Sec. 3.03.2.B
   - Please clarify whether you expect the ship to transmit a wireless signal to the shore for connectivity, or if you expect wireless to be installed at the terminal and transmitted to the ship?
     A. The RFP has purposefully not stated how the offeror is to meet the requirements. System design and the technologies used are intentionally not specified. The intention is for the offeror to propose a solution using the technologies and design they believe best meets the requirements.

     WAN connectivity to the vessels can be delivered by shore based wireless installations. WAN connectivity to hand held devices specified in section 3.03.4 can be delivered via ship base wireless installations using the ships WAN service as a backhaul, if necessary.
   - What is the minimum service level expected on the secondary redundant (wireless) WAN links?
     A. The availability requirement for the minimum required bandwidth is 99% as defined in the section 3.03.5.

32. **Q.** Sec. 3.03.3, are there any specific VoIP direct inward dial numbers required for the vessels?
   A. No.

33. **Q.** Under Sec. 3.03.3, will 911 be added to the VoIP Telephony Service?
    A. No. 911 service will not be added.

34. **Q.** Do you have existing phone numbers, or will you require new numbers?
    A.   AMHS does not have existing phone numbers.

35. **Q.** Will AMHS provide public access to internet?
    A.   No. The internet access is strictly for AMHS business use.

IMPORTANT NOTE:
Your proposal may be considered non-responsive if this amendment is not received by the issuing office along with your proposal, by the RFP Due Date & time.

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_____   _____
PRINTED NAME / TITLE   NAME OF COMPANY

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SIGNATURE   DATE