



MEMORANDUM

STATE OF ALASKA

Department of Transportation and Public Facilities

To: Joel G. St. Aubin, P.E.
Contracting Officer
Construction Engineer, Central Region

Date: November 18, 2021

Thru: Sharon L. Smith, P.E.
Chief of Contracts, Central Region

From: Clint J. Adler, P.E.
Design Project Manager

Project No.: Z536100000
Project Name: Seward Hwy MP 17-22.5 Rehabilitation

Subject: Brand Specification Determination

Introduction:

This is a request to allow the specification of proprietary items in the upcoming Seward Highway MP 17-22.5 Rehabilitation Project at the Victor Creek trailhead expansion location and the proposed Road Weather Information System (RWIS) Environmental Sensor Station (ESS). The Department is constructing the Victor Creek Trailhead in this project as mitigation to the United States Forest Service (USFS) for highway easement needed for the expansion of the roadway, and the RWIS ESS will provide information for avalanche mitigation and other essential maintenance and operations activities. I anticipate completion of the project by June 30, 2024.

Proprietary items for the USFS Trailhead:

- Kiosk – Romtec, Inc. Model 3105 – 2-Post Single Kiosk
- Bear Proof Trash Can (2) – BearSaver BE Series Single Trash Enclosure, ADA Compliant – BE1-P

We estimate the total cost of these components to be between \$10,000 and \$15,000.

Proprietary items for the RWIS ESS:

- Remote Processing Unit – Vaisala RWS200
- Snow depth sensor – Campbell Scientific SR50A
- Non-intrusive pavement temperature, friction, and grip sensors – Vaisala DSC211 and DST111
- Barometric sensor – Vaisala PTB110
- Air temperature/relative humidity sensor – Vaisala HMP155
- Air temperature/relative humidity sensor radiation shield – Vaisala DTR13
- Wind speed/direction sensor (anemometer) – R.M. Young Model 05603C
- PTZ color cameras (2) – one (1) Axis Q8685-LE one (1) Axis Q6154-E
- Precipitation sensor #1 (tipping bucket) – Vaisala RG13H
- Precipitation sensor #2 (Present Weather Detector – PWD type) – Vaisala PWD12
- Ethernet switch – CTC Union IFS-500 or Red Lion SL-5ES-1 unmanaged 5-port Ethernet network switch

We estimate the total cost of the RWIS ESS, including the identified components, to be between \$90,000 and \$110,000.

The total construction cost estimate is approximately \$75,000,000.

Justification

USFS Trailhead:

There is a maintenance benefit to using the same product across multiple similar sites in the area based on familiarity with the product and compatibility of replacement parts.

The USFS has successfully installed and used both the Romtec single kiosk and BearSaver trash cans at several USFS sites around the state of Alaska, including those with access from the Alaska Highway System. A similar example is at the Trail River Campground at about MP 23.5 on the Seward Highway, which has both items installed. At the request of the USFS, and for ease of maintenance and consistency with their other sites, this project will install one (1) interpretive kiosk and two (2) bearproof garbage cans of the brand and model indicated above.

After construction of the Victor Creek Trailhead is complete as part of the Seward Highway MP 17-22.5 project, the DOT&PF will turn over the site and all its content including the maintenance of the facility to the USFS. This site is on USFS owned land and ownership will remain with the USFS after construction is completed.

RWIS ESS:

DOT&PF has an existing statewide Road Weather Information System (RWIS) contract, competitively bid using federal dollars, which includes an equipment buy list for RWIS sites. This contract includes proprietary items noted on the equipment list for providing atmospheric data, camera images, pavement temperature and subsurface soil temperature data for RWIS sites. All equipment selected was either chosen from the equipment list for the statewide contract or it was selected in coordination with State RWIS and Highway Data staff to ensure compatibility. This equipment has been carefully specified and selected to interface with an existing system for gathering, recording and communicating data efficiently.


Approval for these proprietary items serves two purposes:

- 1) The data provided by the RWIS is standardized and can be ingested and processed by our Department's existing software and web server without additional customizations or programmatic resources. Data standards ensure a smooth process for dissemination to the Department's website at roadweather.alaska.gov, as well as the Department's Maintenance Decision Support System (MDSS). In addition, partner agencies such as National Weather Service receive daily data extracts from our RWIS server.

- 2) Standardization of ESS equipment streamlines the maintenance and operations of the onsite ESS equipment and reduces the complexity of the installation, commissioning, network configuration, and ongoing calibration of sensors. Standardization of equipment also reduces the level of training DOT&PF staff will need for troubleshooting the equipment onsite.



Determination

The products specified herein are the only products to satisfy the state's needs, in accordance with 2 AAC 12.100 and department Policy and Procedure 10.02.050, and the undersigned approve brand specifying them for inclusion in the Seward Highway MP 17-22.5 Rehabilitation Project.

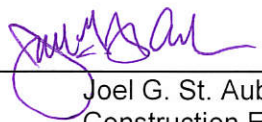
Submitted By:  Digitally signed
by Clint Adler
Clint J Adler, P.E.
Design Project Manager

11/18/2021

Date

Recommended By: 
 Sharon L. Smith, P.E.
Chief of Contract, Central Region

11/18/2021
Date

Approved By: 
Joel G. St. Aubin, P.E.
Construction Engineer, Central Region

11/19/2021
Date