

14-7372

MEMORANDUM

STATE OF ALASKA

Department of Transportation & Public Facilities
Design & Engineering Services – Central Region
Highway Design

TO: Charles Deininger
Chief Contracts Officer

DATE: June 11th, 2014

THRU: Robert A. Campbell, PE
Director, Central Region

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FROM: Anna Bosin, PE
HSIP Coordinator

25-14-026-PIF

SUBJECT: Approval Request for Purchase of Proprietary Item on Project 58160 HSIP Daisy Bell Avalanche Release System for **Public Interest Finding**

Introduction

The Alaska Department of Transportation and Public Facilities (ADOT&PF) is seeking a Public Interest Finding (PIF) to allow the purchase of brand specific, proprietary equipment for use by the Maintenance and Operations Section of ADOT&PF.

ADOT&PF is proposing to purchase and use the TAS Daisy Bell Avalanche Release System (Daisy Bell), a unique and proprietary avalanche detonation system, to improve avalanche control and safety to the traveling public and ADOT&PF workers. The Daisy Bell was approved by FHWA as eligible for Highway Safety Improvement Program funding during the FFY14 nomination period.

Daisy Bell Avalanche Release System Equipment –Manufactured by TAS Natural Hazards Control Solutions, Distributed by MND USA
Estimated Cost Each: \$130,000
Estimated Project Quantity: 1
Estimated Total Cost: \$130,000

Project 58160 Background

Daisy Bell is an alternative avalanche release system that is mobile and does not use explosives. The proposed Daisy Bell will be most frequently used for the avalanche paths that affect the Seward Highway north of Girdwood between MP 90-99. However, this system would have a secondary role for other locations in Central Region including Hatcher Pass, Kodiak and the Whittier Tunnel.

The device is shaped like a bell and it is suspended on a long line beneath a helicopter. A remote control in the cockpit regulates the ignition of hydrogen and oxygen which creates a shockwave that impacts the snowpack below the device which is otherwise not accessible for detonation by traditional artillery fire. The impact pressures are of sufficient force to initiate a controlled avalanche release.

Justification for Public Interest Finding

Based on ADOT&PF research, the Daisy Bell is the only commercially available mobile avalanche detonation device that does not use explosives. Daisy Bell is considered a proprietary system.

The data for MP 90-99 of the Seward Highway for the past 31 years shows that current Avalanche Control Program's techniques do not eliminate the avalanche hazard to the traveling public and workers along avalanche prone highways. Improvements to the existing active control program are being pursued in order to reduce the amount of avalanches affecting the road while it is open to traffic.

Supplementing the existing artillery program with the Daisy Bell avalanche system would allow for more precision within the complex terrain in the Seward Highway MP 90-99 avalanche paths.


Key Advantages of the Daisy Bell System over traditional methods include:

- No explosive storage or handling is required by ADOT&PF
- Added safety for employees clearing avalanche debris
- Fewer personnel needed for avalanche control work
- Quicker avalanche control missions resulting in less traffic delays
- Provides avalanche control abilities to otherwise unreachable remote locations
- Easier to trigger controlled avalanches in precise locations
- Alternative tool to military artillery
- Lower cost per mission than artillery
- Easily transported to other ADOT&PF highways


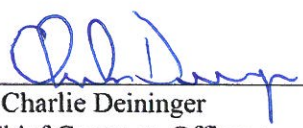
If purchased, ADOT&PF Maintenance and Operations will house the equipment at the Girdwood Maintenance and Operations facility.

Finding of Public Interest

It is hereby found to be in the Public's best interest and consistent with the Code of Federal Regulations Title 23, Section 635.411 and ADOT&PF Policy and Procedure 10.02.013 to specify proprietary items for ADOT&PF.

Submitted by:  6/11/14
Anna Bosin, P.E. Date
HSIP Coordinator

Recommended by:  6/16/14
Robert A. Campbell, P.E. Date
Regional Director

 Submitted by:  6/17/14
Charlie Deininger Date
Chief Contracts Officer