

**Design of Seward Highway Replacement Bridges -
Ptarmigan Creek, Falls Creek and Trail River**

FY2010 Request: \$3,000,000
Reference No: 47534

AP/AL: Appropriation

Project Type: Research / Studies / Planning

Category: Transportation

Location: Moose Pass

Contact: Frank Richards

House District: Homer/Seward (HD 35)

Contact Phone: (907)465-3900

Estimated Project Dates: 07/01/2009 - 09/30/2011

Brief Summary and Statement of Need:

Design and permitting for the permanent replacement of three critical bridges on the Seward Highway. This project contributes to the Department's Mission by reducing injuries, fatalities and property damage and by improving the mobility of people and goods.

Funding:	FY2010	FY2011	FY2012	FY2013	FY2014	FY2015	Total
Gen Fund	\$3,000,000						\$3,000,000
Total:	\$3,000,000	\$0	\$0	\$0	\$0	\$0	\$3,000,000

<input type="checkbox"/> State Match Required	<input type="checkbox"/> One-Time Project	<input checked="" 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	
Totals:	0	0

Additional Information / Prior Funding History:

None.

Project Description/Justification:

The Ptarmigan Creek, Falls Creek, and Trail River bridges are located on the Seward Highway between MP 23 and 25 in the vicinity of Moose Pass. The bridges consist of timber pile bents (piers) with timber cap beams supporting reinforced concrete tee beam superstructures. The bridges were all constructed in the early 1950's.

Advanced deterioration has required pier cap repair and replacement for the past ten to fifteen years. Piers 3 and 5 at Ptarmigan Creek have supplemental steel bents that were installed to prevent imminent collapse in 1995. Several of the timber caps at the Trail River Bridge have been replaced, including Pier 14 that required expedited replacement last winter.

The subject bridges are scheduled for replacement as part of the Seward Highway MP 18 to 25 reconstruction project. With this in mind, the department has taken the approach of monitoring their condition and repairing only when necessary. The advanced deterioration of the cap beam at Pier 14 of the Trail River Bridge triggered a special inspection of all three bridges on October 9 and 10, 2007. There are 11 deteriorated timber cap beams on these bridges needing replacement in the near future – some should be replaced this summer if possible. Additionally, several of the concrete girder ends are cracked, raising concern about their long-term stability.

In the long-term, all of the bridges need to be replaced. The deteriorated pier conditions result in the

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bridges being listed as “structurally deficient” and eligible for federal bridge funds. The bridges are also seismically vulnerable. While seismic retrofit may improve their anticipated performance in an earthquake, the seismic retrofit may not prevent collapse and the benefit would be small compared to complete replacement.