

Statewide: Seismic Retrofit - Bridges**FY2012 Request: \$2,000,000****Reference No: 36188****AP/AL:** Allocation**Project Type:** Construction**Category:** Transportation**Location:** Statewide**House District:** Statewide (HD 1-40)**Impact House District:** Statewide (HD 1-40)**Contact:** Frank Richards**Estimated Project Dates:** 07/01/2011 - 06/30/2018**Contact Phone:** (907)465-3900**Appropriation:** Surface Transportation Program**Brief Summary and Statement of Need:**

Structural enhancements to bridges that are determined to be seismically vulnerable in earthquake zones. 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:	FY2012	FY2013	FY2014	FY2015	FY2016	FY2017	Total
Fed Rcpts	\$2,000,000	\$2,000,000	\$2,000,000	\$2,000,000	\$2,000,000	\$2,000,000	\$12,000,000
Total:	\$2,000,000	\$2,000,000	\$2,000,000	\$2,000,000	\$2,000,000	\$2,000,000	\$12,000,000

<input checked="" type="checkbox"/> State Match Required	<input type="checkbox"/> One-Time Project	<input type="checkbox"/> Phased - new	<input type="checkbox"/> Phased - underway	<input checked="" type="checkbox"/> On-Going
9% = 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:

\$2,000,000 - Ch 43 SLA 2010 Sec 7 pg 52 ln 30; \$1,600,000 - Ch 3 FSSLA 2005 Sec 1 pg 84 ln 19; \$1,600,000 - Ch 159 SLA 2004 Sec 1 pg 47 ln 29; \$1,600,000 - Ch 82 SLA 2003 Sec 1 pg 53 ln 31.

Project Description/Justification:

Alaska is one of the most seismically active regions of the world. Bridges are quite vulnerable to earthquake induced ground motions and forces. Severe bridge damage and collapse seem to accompany every major earthquake around the world. Bridges constructed prior to the early 1990's are particularly vulnerable to significant damage. Seismic retrofitting is eligible for Highway Bridge Rehabilitation and Replacement Program funds for all bridges according to the Federal Highway Administration.

Phase 2 of this program identifies vulnerable bridges. Our bi-annual inspection program is used to determine the most vulnerable and critical bridges for seismic retrofit (strengthening). Vulnerability is based on structural details and proximity to known earthquake faults. Critical bridges are identified based on traffic demands, available detours, and bridge length. Retrofits typically include devices to keep beams from falling from their supports. In some cases, bridge column and abutment forces are reduced by installing special shock absorbing and isolation devices.