

**Alaska Marine Highway System: M/V Columbia Repower and Ship Systems Improvements**

**FY2012 Request: \$25,000,000**  
**Reference No: AMD 51889**

**AP/AL:** Allocation

**Project Type:** Construction

**Category:** Transportation

**House District:** Statewide (HD 1-40)

**Location:** Statewide

**Contact:** Captain Michael Neussl, Deputy Commissioner

**Impact House District:** Statewide (HD 1-40)

**Estimated Project Dates:** 07/01/2011 - 06/30/2018

**Contact Phone:** (907)465-6977

**Appropriation:** Surface Transportation Program

**Brief Summary and Statement of Need:**

This project is being included in the FY2012 amended request due to changes in the scheduled obligation of federal funds to other DOT&PF projects that occurred after the release of the budget on December 15, 2010. This project will replace main propulsion engines and perform subsystem upgrades, including: modifications and/or replacement of reduction gears, potential shafting and propeller replacement, modifications to main engine control and monitoring systems, intake and exhaust modifications, including waste heat boilers, fuel system modifications, investigation and modifications to vessel electrical systems, ventilation and cooling modifications, foundation modifications, and other auxiliary equipment upgrades.

<b>Funding:</b>	<u>FY2012</u>	<u>FY2013</u>	<u>FY2014</u>	<u>FY2015</u>	<u>FY2016</u>	<u>FY2017</u>	<u>Total</u>
Fed Rcpts	\$25,000,000						\$25,000,000
<b>Total:</b>	\$25,000,000	\$0	\$0	\$0	\$0	\$0	\$25,000,000

<input type="checkbox"/> State Match Required	<input checked="" type="checkbox"/> One-Time Project	<input type="checkbox"/> Phased - new	<input type="checkbox"/> Phased - underway	<input type="checkbox"/> On-Going
0% = Minimum State Match % Required		<input checked="" 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	
<b>Totals:</b>	<b>0</b>	<b>0</b>

**Additional Information / Prior Funding History:**

None.

**Project Description/Justification:**

The M/V Columbia Main Engines are approaching the end of their maintainable life, and are now currently 37 years old.

The major engine components, such as the crankshaft and block, have in excess of 100,000 hours of operation. In addition, the engine manufacturer does not maintain a stock of parts for the major components. During the last rebuild, the Alaska Marine Highway System (AMHS) was required to have many parts machined by the engine manufacturer due to lack of suitable parts from the manufacturer. This places AMHS in a position of constantly purchasing expensive remanufactured or newly manufactured parts to keep the engines running in good and reliable condition.

There are only a very limited number of machinists and mechanics that are familiar with the existing engines. Major engine remanufacturers do not now possess the technical expertise to rebuild and

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maintain the existing engines in the event of a major failure and need to rebuild.

Should there be a major component failure, AMHS will lose the availability of the M/V Columbia until such time as new engines and supporting systems can be installed. The out-of-service period will likely approach two years, assuming suitable replacement engines can be identified, procured, and installed.

For these reasons, AMHS believes it is prudent to plan for and execute an engine replacement project on the M/V Columbia as soon as funding can be arranged.