

AP/AL: Allocation **Project Type:** Deferred Maintenance
Category: Natural Resources
Location: Fairbanks Areawide **Contact:** Leta Simons
House District: Fairbanks Areawide (HD 7-11) **Contact Phone:** (907)465-2400
Estimated Project Dates: 07/01/2008 - 06/30/2009
Appropriation: Department of Natural Resources Deferred Maintenance

Brief Summary and Statement of Need:

Funding is requested to "modernize" the Department of Natural Resources Fairbanks Office building to increase energy efficiency, safety, and ease of maintenance. These projects implement increased capacity of electrical service in the building, replace current windows, and replace siding on the north and east sides of the building. In addition, we will replace the constant velocity air circulation fan with a variable speed fan. These projects will continue to provide a safe, healthy, and energy efficient facility for the Department's employees and the public, allowing staff to protect, develop, and manage resources.

Funding:	FY2009	FY2010	FY2011	FY2012	FY2013	FY2014	Total
ASLC Bonds	\$545,000						\$545,000
Gen Fund		\$500,000	\$200,000	\$200,000			\$900,000
Total:	\$545,000	\$500,000	\$200,000	\$200,000	\$0	\$0	\$1,445,000

<input 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
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
<u>One-Time Startup:</u>	<u>0</u>	<u>0</u>
Totals:	0	0

Additional Information / Prior Funding History:

SLA2007/CH30 \$300,000. Project is underway; working with DOT/PF on specific maintenance projects.

Project Description/Justification:

The DNR Regional Office houses the regional headquarters for five DNR Divisions with a total staff approaching 100 people. Enhancing energy efficiencies and replacement or repair of some of the facility's components or systems that are simply wearing out or have become unworkable is our goal. Additional maintenance projects could be accommodated if costs for these come in for less than anticipated or if other priorities emerge.

Electrical Capacity Study Implementation - \$200,000

When the DNR Northern Region Office Building was built 20 years ago, very few offices had a fax machine and personal computers were just entering the market. In the intervening two decades, nearly every office desk has a computer, along with a monitor (or two), printer, copier, scanner, and perhaps, a fax machine, none of which was foreseeable 20 years ago. What technology has brought, among many other things, is a significant electrical load that was non-existent when the DNR Northern Region Office was constructed. As we continue to embrace new and necessary technology, the need to upgrade the electrical distribution capabilities within the office complex is created.

Whereas the original array of electrical outlets was sufficient when the building was constructed, there currently are a limited number of outlets available to provide electrical service to the myriad of office machines in use today. These outlets and the accompanying electrical circuits are typically overloaded and frequently have non-approved devices, such as gang plugs, so more devices may be connected to the outlet. The use of extension cords, in violation of the electrical

code, is also a common practice. All of these conditions and practices create fire and safety hazards as well as exposing DNR to citations and fines from the Division of Occupational Safety and Health. These conditions also violate various fire and electrical codes that have been adopted, by reference as regulations, and are enforceable within the State of Alaska.

As a means to mitigate these conditions, the current electrical distribution system, which is presently controlled by two distribution panels, needs to be upgraded to three new distribution panels that have already been installed. This will allow for supplementary circuits and additional outlets, thus eliminating the overload conditions which currently exist. Expanding the electrical distribution system within the building will also accommodate the increased number of personnel who are currently working in the facility. Additional offices have been created to accommodate positions who were previously located in other office buildings. The placement of the Commissioner of DNR, State Forester, and Chief of Fire's offices within this complex, as an example, has also exacerbated an already critical problem.

This upgrade, when completed, will eliminate the potential for employees to utilize non-compliant practices and will eliminate the potential for injuries, and reduce the potential for devastating building loss due to fire which will provide a safer and more user friendly office atmosphere for the public and our employees.

Energy Savings - \$265,000

Saving money in the face of seemingly skyrocketing fuel costs is another challenge, and to mitigate that we have two needs, the solutions to which are specifically aimed at saving the State money in utility bills. These are to replace the building's windows with modern energy-efficient windows and install a variable speed fan in the air heating/cooling system.

Windows - \$55,000

We plan to replace the building windows with triple pane, argon-filled windows with Low E glass. The current windows are double pane, and the caulking is cracking and coming off some, leaving significant gaps between the glass and the frame for heat to escape.

Electronic Variable Air Ventilation Boxes - \$160,000

Pneumatic controls currently direct where air for cooling and water in the baseboard for heating are needed. This system lacks fineness of control necessary to provide the appropriate air space temperatures and leaves some areas too cool or too hot without any way of any fine-tuning the temperature. To increase thermal efficiency in the building as a whole plus being able to adjust the heating/cooling to discrete areas that aren't well thermally regulated due to corner locations or otherwise poorly ventilated areas, we plan to replace the pneumatic controls with electronic controls.

Variable Speed Fan - \$25,000

The DNR Building has a unique heating/cooling system. The main air circulation fan pushes cooling air through the building constantly whether or not the thermal sensors request cooling. This means a lot of wasted electrical power is used by the fan to operate when unnecessary all year long. We plan to replace the constant velocity fan with a variable speed fan that would only push cooling air into the system when necessary.

Exterior door replacement - \$25,000

Exterior metal doors that might have been the best available 20 years ago when this building was constructed are simply without adequate insulation, causing the loss of significant levels of heat in the winter and allowing cold air to flow in at levels that force nearby staff to block off emergency doors with boxes or cardboard to attempt to keep the cold from flowing in and cooling their work areas. By doing so we may be violating certain safety codes. Replacing these doors with technology advances in insulating materials should also provide us with a healthier and safer workplace, not to mention the fuel savings of better insulated doors.

Exterior Siding Replacement - \$80,000

Continuous sub-zero temperatures in a very low humidity climate as well as solar damage are forcing replacement of the warped and damaged exterior wood surface of the building on the south and west sides. To maintain a consistent appearance of the building, we need to replace all four sides of the building. The original siding is no longer available on the market, so matching all sides within one year will provide a professional and consistent exterior.

Why is this Project Needed Now?:

DNR Northern Region Office Building Deferred Maintenance FY2009 Request: \$545,000
Reference No: 42878

The DNR building is showing its age, and components are failing with increased frequency. The functionality of the building is at risk, mostly with respect to the operational systems that provide a safe and comfortable working environment for the public and staff. Concern that we might find ourselves faced with a situation that requires instant replacement of a whole system which would be impossible to do due to our distant location or even the existence of parts, and that could be even more dire if it occurred in winter, makes portions of this request significant and certainly very time sensitive.

Specific Spending Detail:

<u>LINE ITEM</u>	<u>DOLLAR AMOUNT</u>	<u>DESCRIPTION (text)</u>
Services	\$ 545,000	Contracts with the Department of Transportation and Public Facilities for specific work.