



UNIVERSITY
of ALASKA

Many Traditions One Alaska

FY13 Capital Budget Request
and
10-Year Capital Improvement Plan

Board of Regents
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University of Alaska
*******FY13 Capital Budget Request and**
10-Year Capital Improvement Plan
Introduction

Presented within are the FY13 Capital Budget Request and the 10-Year Capital Improvement Plan. The FY13 Capital Budget presents the top priority projects for the University of Alaska. The FY13 top priority projects require state funding of approximately \$202 million. The request overwhelmingly consists of the highest priority deferred maintenance needs, and the sustainment funding dollars for the University of Alaska facilities sustainment plan. Funding requests include current year Deferred Maintenance (DM), Annual Renewal and Repurposing (R&R), and additional catch up funding for our huge DM backlog.

Funding is also requested to support important research directly associated with Alaskan needs.

Priority DM and R&R projects included in the FY13 Capital Budget Request are listed beginning on page 5 and full project descriptions begin on page 7.

- The State of Alaska's appropriation of \$37.5 million will continue to be applied to the deferred maintenance backlog. This will be the third year of the Governor's 5-year plan to reduce the State's DM backlog. Unfortunately, it has been insufficient to reduce UA's backlog. The deferred maintenance (DM) and renewal and repurposing (R&R) bill has continued to increase due to years of underfunded capital reinvestment, allowing the backlog to grow so large. There will be a decrease in the DM and R&R backlog rate of increase going into FY13 because the \$37.5 million in state funding will be coupled with UA bonding for \$50 million. Without a yearly total sustainment investment (maintenance and repair funding and annual R&R funding) of around \$80 million, the DM and R&R backlog will continue to increase each year. The DM and R&R project funding distribution plan is included on page 22 and is based on the full amount of funding requested from the state.
- Annual Renewal and Repurposing (R&R) Requirement funding of \$50 million is set at a common standard of approximately 2.5% of the UA's facilities adjusted value. Fully funding annual R&R is a criterion that can prevent adding to the maintenance and R&R backlog.
- An additional DM Backlog Reduction request of \$100 million is also essential in order to actually reduce the current UA DM and R&R backlog to approximately 12% of the adjusted value of the UA's facilities by FY16. Holding to this acceptable level of DM will minimize the unprogrammed need for using maintenance dollars to handle emergency response maintenance on DM projects which is more expensive than performing preventative maintenance, routine maintenance, and capital reinvestment on a planned basis.

- As a result of the overwhelming, pressing needs described above, New Construction (New Starts) and Planning and Design funding requests are not included in the FY13 budget request, but have been moved to the 10-year capital improvement plan for consideration in future capital budget requests, assuming the DM crisis can be better accommodated first. The 10-year capital improvement plan is included on page 4.
- Research for Alaska includes funding to support efforts that address critical, pressing needs in the areas of statewide energy solutions, Arctic oil spill response, and the very alarming impacts of ocean acidification on Alaska's fisheries.

The 10-Year Capital Improvement Plan presents the short-, mid-, and long-term capital improvement goals of the University. The goal of the Capital Improvement Plan (CIP) is to guide decision making that ensures that the necessary facilities, equipment, and infrastructure are in place to support the academic direction of the university system as prescribed in the UA Academic and Strategic Plans. This extended capital forecast also allows for consideration of the associated annual operating costs that might be incurred.

The 10-Year Capital Improvement Plan continues to focus on deferred maintenance, critical infrastructure, student support, teaching and research facilities, with major projects including the UAS Student Housing and the UA Engineering Buildings in the short-term, and UAA's Health Sciences Phase II and UAF's Cogen Power Plant in the mid-term. Because of the dynamic nature of the economic and political climates, the 10-Year Capital Improvement Plan must be evaluated annually. This assessment includes identifying and incorporating the impacts of all pertinent events on each campus.

University of Alaska
*******FY13 Capital Budget Request**
(in thousands of \$)

	State	Receipt	
	Approp.	Auth.	Total
Deferred Maintenance (DM) and Renewal & Repurposing (R&R)	37,500.0		37,500.0
<i>UAA Main Campus</i>	9,000.0		9,000.0
<i>UAA - Community Campuses</i>	1,837.5		1,837.5
<i>UAF Main Campus</i>	22,575.0		22,575.0
<i>UAF - Community Campuses</i>	900.0		900.0
<i>UAS Main and Community Campuses</i>	2,587.5		2,587.5
<i>UA - Statewide</i>	600.0		600.0
 Annual Renewal & Repurposing Requirement	 50,000.0		 50,000.0
 Additional DM Backlog Reduction	 100,000.0		 100,000.0
 New Construction (New Starts)			
<i>Refer to 10-Year Capital Improvement Plan</i>			
 Planning and Design			
<i>Refer to 10-Year Capital Improvement Plan</i>			
 Research for Alaska			
UAF Partnership to Develop Statewide Energy Solutions	10,000.0	3,100.0	13,100.0
<i>Energy Technology Testing and Development (Lead: ACEP)</i>	4,000.0	3,100.0	7,100.0
<i>Energy Analysis (Energy Analysis Group)</i>	3,000.0		3,000.0
<i>Comprehensive Fossil Fuel Research (Fossil Fuels Integration Group)</i>	3,000.0		3,000.0
UAF Effective Arctic Oil Spill Response	2,000.0	25,000.0	27,000.0
UAF Assessing the Impacts of Ocean Acidification on Alaska's Fisheries	2,700.0	750.0	3,450.0
 University Receipt Authority for Capital Projects		15,000.0	15,000.0
 *****Total FY13 Capital Budget	 <u>202,200.0</u>	 <u>43,850.0</u>	 <u>246,050.0</u>

University of Alaska
10-Year Capital Improvement Plan
(in thousands of \$)

	FY13			State Appropriations		
	State Approp.	Receipt Auth.	Total	Short-Term FY14-FY15	Mid-Term FY16-FY17	Long-Term FY18-FY22
Deferred Maintenance (DM) and Renewal and Repurposing (R&R)						
Facilities	37,500.0		37,500.0	75,000.0	37,500.0	
Equipment				10,000.0	10,000.0	25,000.0
Annual Requirement for R&R	50,000.0		50,000.0	100,000.0	100,000.0	250,000.0
Additional DM Backlog Reduction	100,000.0		100,000.0	50,000.0	50,000.0	
New Construction (New Starts)¹					160,000.0	400,000.0
Academic Facilities						
UA Engineering Buildings (UAF and UAA) (UAF - \$10M in UAR) ²				234,000.0		
UAA Health Sciences Phase II/Parking Structure and Bridge to Campus					99,000.0	
Research Facilities						
UAF Energy Technology Facility				11,000.0		
Student Life (Housing) & Community Support Facilities						
UAF P3 Dining and Housing				2,000.0		
UAS Student Housing Addition (\$2M in UAR)				6,750.0		
Infrastructure						
UAF Cogen Power Plant					175,000.0	
UAS Facilities Services					9,500.0	
Planning and Design					16,000.0	40,000.0
UAF Cogen Power Plant				22,000.0		
UAA Health Sciences Phase II/Parking Structure and Bridge to Campus				11,000.0		
Research for Alaska						
UAF Partnership to Develop Statewide Energy Solutions	10,000.0	3,100.0	13,100.0			
UAF Effective Arctic Oil Spill Response	2,000.0	25,000.0	27,000.0			
UAF Assessing the Impacts of Ocean Acidification on Alaska's Fisheries	2,700.0	750.0	3,450.0			
Receipt Authority		15,000.0	15,000.0			
Total	202,200.0	43,850.0	246,050.0	521,750.0	657,000.0	715,000.0

¹Additional projects will be determined in support of academic and strategic goals

² Includes new construction, backfill costs and associated infrastructure costs

University of Alaska
FY13 Priority Deferred Maintenance (DM) and Renewal & Repurposing (R&R) Projects by MAU
State Appropriations (in thousands of \$)

Project Name	DM	R&R	Total
UAA Main Campus			
Beatrice McDonald Building Renewal		6,915.0	6,915.0
Allied Health Science Building Renovation	900.0	900.0	1,800.0
Campus Building Envelope & Roof Replacement	4,500.0		4,500.0
Campus Mechanical/Electrical/HVAC Upgrades	4,500.0		4,500.0
Campus Roads, Curbs and Sidewalks	1,500.0		1,500.0
EM1 and EM2 Mechanical	3,430.0		3,430.0
MAC Housing Renewal		8,000.0	8,000.0
Consortium Library Old Core Mechanical Upgrades	2,850.0		2,850.0
Engineering Building Renewal	1,032.0	2,308.0	3,340.0
Fine Arts Mechanical System Renewal	7,482.0		7,482.0
Health Sciences Backfill	750.0	4,250.0	5,000.0
Cuddy Phase II Renewal	5,560.5	5,560.5	11,121.0
Classroom, Office & Lecture Hall Lighting Upgrades	1,500.0		1,500.0
Building Automation System Renewal	1,500.0		1,500.0
Campus Wayfinding		750.0	750.0
Emergency Generator Upgrades / Replacements	1,500.0		1,500.0
Fire Alarm Panel Upgrades	1,500.0		1,500.0
Electrical Feeder/Panel Upgrade	1,500.0		1,500.0
Elevator Safety/Code Upgrades	1,500.0		1,500.0
UAA Main Campus FY13 Project Total	41,504.5	28,683.5	70,188.0
UAA Community Campus			
KPC Kenai River Campus Goodrich and Ward Building Backfill	252.8	1,011.3	1,264.0
Kodiak College Campus Renewal	1,154.0	2,139.0	3,293.0
PWSCC Campus Renewal	3,639.0		3,639.0
Mat-Su Restroom Upgrades	200.0	306.0	506.0
Kodiak Roof Replacement	2,022.0		2,022.0
PWSCC Parking and Security	1,683.0	817.0	2,500.0
KPC Kenai River Campus Academic Center/Classroom Renewal	500.0	1,500.0	2,000.0
KPC Kenai River Campus Boiler/HVAC Renewal	288.0	160.5	448.5
KPC Kenai River Campus Roof Repair-Replacement	1,508.0		1,508.0
Mat-Su Door Locks/Card Key Access		561.0	561.0
UAA Community Campus FY13 Project Total	11,246.8	6,494.8	17,741.5
UAF Main Campus			
Cogen Heating Plant Required Upgrades to Maintain Service	12,175.0		12,175.0
Critical Electrical Distribution	15,900.0	350.0	16,250.0
Fairbanks Campus Main Waste Line Repairs		5,500.0	5,500.0
Fairbanks Main Campus Wide Roof Replacement		6,500.0	6,500.0
West Ridge Research Revitalization Including LS Backfill	11,000.0		11,000.0
ADA Compliance Campus Wide: Elevators, Ramps, Restrooms		5,000.0	5,000.0
Elevator Scheduled Upgrading and Replacement		1,500.0	1,500.0
Lower Campus Backfill Renovations per 2010 Masterplan	6,000.0		6,000.0
Eielson/Signers' Code Corrections	5,700.0		5,700.0
Patty Center Revitalization	3,600.0		3,600.0
Campus Roads, Sidewalks, Curbs, Gutters, and Ramps		6,000.0	6,000.0
Campus Wide Building Electrical Safety and Code Compliance	2,750.0		2,750.0

University of Alaska
FY13 Priority Deferred Maintenance (DM) and Renewal & Repurposing (R&R) Projects by MAU
State Appropriations (in thousands of \$)

Project Name	DM	R&R	Total
Bartlett Hall Plumbing and Piping Replacement	4,500.0		4,500.0
Kodiak FITC Renewal	2,500.0		2,500.0
Campus Wide Fire Alarm Survey		1,500.0	1,500.0
Tilly Commons DM and Repurpose	11,000.0		11,000.0
Moore Hall Plumbing and Piping Replacement	4,500.0		4,500.0
UAF Community and Technical College Space Revitalization Phase 4	3,975.0		3,975.0
University Park Building Repurposing	200.0		200.0
Original Duckering Ventilation Completion	1,650.0		1,650.0
Campus Wide Asbestos Abatement Phase 2	3,800.0		3,800.0
Cogen Heating Plant Code Corrections Phase 3	2,900.0		2,900.0
Student Services Renewal -Student Union and Original Bookstore	575.0	11,500.0	12,075.0
Physical Plant Code Corrections Phase 3	500.0		500.0
UAF Main Campus FY13 Project Total	93,225.0	37,850.0	131,075.0
UAF Community Campus			
Kuskokwim Campus Facility Critical Deferred and Voc-Tech Renewal -- Phase 2	5,100.0		5,100.0
UAF Community Campus FY13 Project Total	5,100.0		5,100.0
UAS Main Campus			
Hendrickson Remodel and Renovation	1,620.5	1,579.5	3,200.0
Auke Lake Way Campus Entry Improvements & Road Realignment	226.0	755.5	981.5
Technology Education Center Diesel Lab & Mine Training Remodel	500.0	1,000.0	1,500.0
Juneau Campus Fire Alarm Replacement	275.0		275.0
Juneau Campus Pavement Replacement	500.0		500.0
Juneau Campus Site Lighting Replacement	300.0		300.0
UAS Main Campus FY13 Project Total	3,421.5	3,335.0	6,756.5
Statewide			
Butrovich Building Repairs	600.0		600.0
Computing Facility Power Infrastructure	3,700.0		3,700.0
Statewide FY13 Project Total	4,300.0		4,300.0
UA System FY13 Project Total	158,797.8	76,363.3	235,161.0
Additional DM and R&R			
UAA Main Campus	142,109.2	105,139.9	247,249.1
UAA Community Campus	11,749.0	9,433.0	21,182.0
UAF Main Campus	422,917.6	230,755.0	653,672.6
UAF Community Campus	7,300.0	13,128.0	20,428.0
UAS Main Campus	5,620.5	217.7	5,838.2
Statewide	2,300.0		2,300.0
UA System Additional DM and R&R	591,996.3	358,673.5	950,669.8
UA System DM and R&R Grand Total	750,794.0	435,036.8	1,185,830.8

FY13 Capital Budget Project Descriptions

are no longer available for these units. Control systems are no longer able to properly regulate air flow resulting in irregular temperatures and conditions within the building. The 2004 Library addition contains newer HVAC systems with different control and delivery systems. This has resulted in incompatibilities between the two systems which has affected the efficiencies of both systems.

o **Engineering Building Renewal**

FY13 (GF: \$3,340.0, Total: \$3,340.0)

UAA's existing Engineering Building was built in 1983. When the Integrated Science Building (ISB) opened in 2009, several of the faculty offices were relocated from Engineering to ISB. In the fall of 2011, renovations to the Science Building and completion of the Health Sciences Building will allow for the remaining science and WWAMI programs to vacate space in Engineering. This space will need to be renovated to meet existing program needs of Engineering.

o **Fine Arts Mechanical System Renewal**

FY13 (GF: \$7,482.0, Total: \$7,482.0)

The major mechanical systems of the Fine Arts Building are no longer providing adequate heating and cooling for the offices and classrooms. The systems are not providing appropriately conditioned ventilation and make up air to the shops, labs and studios. This project will remodel the building's HVAC systems resulting in fully operational and streamlined HVAC systems that meet current mechanical code, indoor air quality standards and provide a properly controlled educational environment for staff, faculty and students. It will also provide a properly controlled storage environment for educational material, furnishings, musical instruments and equipment.

o **Health Sciences Backfill**

FY13 (GF: \$5,000.0, Total: \$5,000.0)

In an effort to promote a collaborative and interdisciplinary approach to health science education at the University of Alaska Anchorage, the existing health science programs within the College of Health and Social Welfare, the College of Arts and Sciences, and the Community and Technical College are planned to be relocated into the new Health Sciences District. By consolidating the existing programs, located throughout campus, into state of the art facilities in close proximity to one another, the physical layout of the new district will encourage interaction and foster synergies among the diverse research programs and curricula. The first phase of the first Health Sciences Building within the district will include space for the School of Nursing, Biomedical Program (WWAMI), Allied Health Sciences, and Physician Assistant Program. The spaces that will be impacted by this move will occur in the Professional Studies Building, Engineering Building, Allied Health Sciences Building and Diplomacy Building.

A study was conducted by Livingston Slone, Inc. and Ayers/Saint/Gross Architects in July 2010 and approximately 21,680 sqft. of space in the following buildings were identified as being vacated by programs moving to the Health Sciences Phase I Building:

Professional Studies Building: Approximately 13,300 gross square feet vacated by the School of Nursing, to be backfilled by the College of Health and Social Welfare, College of Education, Student Services, WIN Alaska and the Office of Sustainability.

Allied Health Sciences Building: Approximately 2,700 gross square feet vacated by the Medical Laboratory Technology program, to accommodate other Allied Health Science programs. Backfill of the Allied Health Sciences Building will be accomplished under UAA Project 11-0110 (CBR 473).

Engineering Building: Approximately 4,300 gross square feet vacated by WWAMI, to be utilized by the

FY13 Capital Budget Project Descriptions

School of Engineering. Backfill of the Engineering Building will be accomplished under UAA Project 07-0040 (CBR 286).

Diplomacy Building: Approximately 1,380 gross square feet vacated by the Physician Assistant program, to accommodate other Health Sciences programs. No backfill is required.

o **Cuddy Phase II Renewal**

FY13 (GF: \$11,121.0, Total: \$11,121.0)

Cuddy Center was built in 1972 with an addition constructed in 1977. It serves as the center of the University's Culinary Arts, Hospitality, Dietetics and Nutrition Programs. The current program is using facilities that are inadequate due to old and outdated equipment and technology. The cafeteria side needs to be reconfigured for improved circulation, which will result in relocating kitchen equipment and roof top exhaust equipment. This project will renew electrical, mechanical, structural and architectural systems and add a 2025sf administrative wing along the east or west side of the building.

o **Classroom, Office & Lecture Hall Lighting Upgrades**

FY13 (GF: \$1,500.0, Total: \$1,500.0)

FY14-FY18 (GF: \$1,500.0, Total: \$1,500.0)

Many classrooms and lecture halls currently utilize either surface or strip mount direct distribution lighting systems. Some of these use magnetic ballasts with T12 lamps, which are being phased out. Retrofitting to a direct/indirect system using electronically ballasted systems with T8 lamps requires on average about one half to one third the number of fixtures for the same level of light. In addition, a teacher control center would provide the instructor with the ability to control the light levels in reference to the teaching environment. Control of light levels allows the students to see video presentations while still having enough light to take notes. Currently, the lights need to be turned off for viewing presentations, making it difficult for students to take notes during presentations. Occupancy sensors turn lights off after 10 minutes of inactivity to prevent energy waste from lights being left on. The teacher control center has a one hour override setting for use during test periods to prevent false offs. Installing this lighting system will result in a significant energy savings with an average payback of five years. Several pilot classrooms have already been retrofitted with this system with excellent results and positive feedback from faculty and students.

o **Building Automation System Renewal**

FY13 (GF: \$1,500.0, Total: \$1,500.0)

FY14-FY18 (GF: \$500.0, Total: \$500.0)

Over the past 20 years there have been extensive technological advances in building environmental systems. These advances allow for better control of air quality and heating/cooling control as compared to the original pneumatic controls that were installed in these buildings. Going from maintenance-intensive pneumatic controls to modern direct digital controls saves the university both energy usage and maintenance costs. These funds would provide upgrades for approximately 10 buildings.

o **Campus Wayfinding**

FY13 (GF: \$750.0, Total: \$750.0)

FY14-FY18 (GF: \$750.0, Total: \$750.0)

Phase I implementation included wayfinding elements for the Wells Fargo Sports Complex, University Center and selected exterior campus signs. Phase II funding is being requested to continue implementation of interior and exterior building signage, pedestrian wayfinding kiosks and other plan elements.

FY13 Capital Budget Project Descriptions

o **Emergency Generator Upgrades / Replacements**

FY13 (GF: \$1,500.0, Total: \$1,500.0)

FY14-FY18 (GF: \$1,500.0, Total: \$1,500.0)

UAA Anchorage campus has multiple generators and above ground storage tanks in locations around campus. The generators provide limited backup service to the critical building systems. The generators are old and have spent 10-15 years exposed to the weather. The generators are a variety of sizes and types. Few have automatic transfer switching (ATS), which means someone needs to come on campus to turn them on. This project would standardize equipment types, install ATSs, consolidate the number of generators, and connect buildings not currently connected. The project would also validate what building systems should be powered in an emergency. This would be a multi-year project.

o **Fire Alarm Panel Upgrades**

FY13 (GF: \$1,500.0, Total: \$1,500.0)

FY14-FY18 (GF: \$1,500.0, Total: \$1,500.0)

This is a campus-wide project to replace obsolete and non-compatible fire panels and associated systems. These funds would replace outdated fire alarm panels on campus. The new systems will meet current code requirements and will be adaptable to meet future code requirements.

o **Electrical Feeder/Panel Upgrade**

FY13 (GF: \$1,500.0, Total: \$1,500.0)

FY14-FY18 (GF: \$1,500.0, Total: \$1,500.0)

The majority of the buildings on the UAA campus are still operating under original electrical service and associated panels and components that were installed when the buildings were constructed. Buildings on the West Campus are approaching 35 years old and the buildings on the East Campus are not far behind. The existing electrical service and associated panels and components do not provide the level of safety offered by today's technology. Replacement components for the existing panels are hard to find or are no longer manufactured. The existing electrical service for many buildings has reached its maximum capacity and cannot be expanded to meet the demands created by increasing enrollment and expanding curriculum.

o **Elevator Safety/Code Upgrades**

FY13 (GF: \$1,500.0, Total: \$1,500.0)

FY14-FY18 (GF: \$1,500.0, Total: \$1,500.0)

UAA Facilities & Campus Services manages the operations and maintenance for an inventory of more than 30 elevators and lifts. Based on a recent condition survey, the elevators in 17 buildings were identified as needing upgrades to meet ADA, code and safety requirements. These repairs, upgrades and reconditions would be phased over three years. The upgrades are critical to improve reliability of the lifts and will improve the mechanical and electrical components of the elevator for safety and energy efficiency.

All elevators and lifts consist of common components. Due to the age of the elevators, condition, or changes in code requirements, many of the elevators require upgrades in order to come into compliance. UAA's modernization program addresses the ADA, code, life safety and maintenance needs of the elevators identified in a recent condition analysis. Routine maintenance and minor renewal items for the UAA elevator inventory are being addressed with campus operating/M&R funds.

FY13 Capital Budget Project Descriptions

UAA Community Campus DM and R&R

o **KPC Kenai River Campus Goodrich and Ward Building Backfill**

FY13 (GF: \$1,264.0, Total: \$1,264.0)

The construction of the KPC Career and Technical Education Center will result in the relocation of programs and equipment to new space and will require the renovation and back filling of the space vacated in the Goodrich and Ward building.

The affected areas of the Goodrich (KP102 built 1974) and Ward (KP105 built 1982) buildings have not been renewed since original construction.

o **Kodiak College Campus Renewal**

FY13 (GF: \$3,293.0, Total: \$3,293.0)

The buildings on the Kodiak Campus were constructed in the early to mid-1970s. The exteriors are painted wood siding and are being impacted by the exposure to the extreme climate conditions of Kodiak. The original windows have worn seals that allow air infiltration. The mechanical and electrical systems are in need of renewal to meet the increased student demand and the increased use of new technology. Improvements to layout and design will increase space efficiency and allow for replacement of worn and outdated fixed equipment.

In FY09 and FY10, some funding was provided for the replacement of siding on two of the buildings and for some minor upgrades. In FY11, additional funding was allocated and used to continue the most urgent repairs to the buildings.

o **PWSCC Campus Renewal**

FY13 (GF: \$3,639.0, Total: \$3,639.0)

The Growden-Harrison building was originally build shortly after the 1964 earthquake as an elementary school and was added onto in a piecemeal fashion during the following years. This has resulted in aging mechanical, electrical, and HVAC systems that are currently undersized for the facility and have materials containing asbestos. The piecemeal additions have resulted in draining and weathering problems that adversely impact the building envelope.

o **Mat-Su Restroom Upgrades**

FY13 (GF: \$506.0, Total: \$506.0)

This project would renovate eight of the restrooms within the two buildings.

o **Kodiak Roof Replacement**

FY13 (GF: \$2,022.0, Total: \$2,022.0)

The buildings on the Kodiak campus are 25-30 years old and the roofs need to be replaced.

o **PWSCC Parking and Security Upgrades**

FY13 (GF: \$2,500.0, Total: \$2,500.0)

This project will address safety issues such as vehicle circulation, parking lot lighting, building lighting and security cameras. This project will renew landscaping around the parking area and the buildings. This work is driven by a need for an increased security presence on campus and reconfiguration of the area based on the Whitney Museum addition which was completed in spring 2008.

FY13 Capital Budget Project Descriptions

- o **KPC Kenai River Campus Academic Center/Classroom Renewal**

FY13 (GF: \$2,000.0, Total: \$2,000.0)

This project would allow for the renewal and reconfiguration of the Brockel Building, which is greatly needed after 33 years of hard use.

- o **KPC Kenai River Campus Boiler/HVAC Renewal**

FY13 (GF: \$448.5, Total: \$448.5)

The boiler plant in the Ward Building (KP105) is more than 28 years old. This equipment has exceeded the estimated lifespan. New boilers will operate at a minimum increased efficiency of 11 percent over the existing boiler plant, reducing natural gas usage and CO2 emissions. Much of the piping around these boilers was constructed with steel piping and vitriolic fitting, which leak on a regular basis, causing the loss of propylene glycol.

The McLane (KP101) and Brockel (KP103) additions were constructed between 1972 and 1976 and the original air handling units are in place. The air handling equipment and associated duct work in these buildings cannot supply the quantities of air required by current mechanical standards. The University needs to replace the heat plant and air handling equipment for these facilities prior to a failure results in an emergency replacement.

- o **KPC Kenai River Campus Roof Repair and Replacement**

FY13 (GF: \$1,508.0, Total: \$1,508.0)

A number of roofs are at or have exceeded their life cycle at the Kenai River Campus. Some roofs contain asbestos products which will require some abatement prior to replacement.

The following is a history of the roof installs and replacements:

2010 - McLane Building, KP101, the roof was replaced to the metal deck with a built up 3 layer asphalt roof system.

2005- Steffy Building, KP107, new construction the roof system is a Carlisle Syntec fully adhered.

2003 -Ward Expansion, KP105, the portion of the expansion was installed with a Carlisle Syntec fully adhered roof system.

1995 -Brockel Building, KP103, the roof was replaced but did not include the penthouse roofs that are well past expected life.

1990-Ward Building, KP105, had a reroof, the roof system is a Carlisle Syntec S-Weld C 22,700 sf.

1989 - Goodrich Building, KP102, a built-up asphalt with LG board ballast (not leaking 20 year life cycle) was installed.

- o **Mat-Su Door Locks/Card Key Access**

FY13 (GF: \$561.0, Total: \$561.0)

The original doors and hardware are still in use across the campus with some units being over 40 years old and heavily used. As these units wear, energy holes are created within the buildings which increase the cost of operation and wear on other systems, resulting in an unbalanced environment within the buildings. Technology advancements increase the energy efficiency and security of these units, which will reduce expenses for the University.

UAF Main Campus DM and R&R

o **Cogen Heating Plant Required Upgrades to Maintain Service**

FY13 (GF: \$12,175.0, Total: \$12,175.0)

FY14-FY18 (GF: \$14,000.0, Total: \$14,000.0)

The UAF combined heat and power plant is a co-generation facility that provides electrical power, domestic and firefighting water, and steam for heating buildings. The plant is over 40 years old and many components have exceeded their useful life. This project will address revitalization of the highest priority deficiencies of utilities on the UAF Main Campus. The heating plant renewal items will include the steam, electrical, and water systems. These items were identified in the 2006 Utility Development Plan as needing immediate action. Avoiding a major utility failure is the primary objective of this project.

o **Critical Electrical Distribution**

FY13 (GF: \$16,250.0, Total: \$16,250.0)

The existing electrical distribution system at UAF is nearly 50 years old. With the completion of several new facilities, the antiquated equipment could be stretched beyond its capabilities and begin to fail. To ensure campus power is not shutdown, major upgrades must be made to replace the ancient switchboard and cabling to bring the campus distribution back into code compliance. This is a multi-phase project and \$25.3M has already been appropriated in past years (2005-2012).

o **Fairbanks Campus Main Waste Line Repairs**

FY13 (GF: \$5,500.0, Total: \$5,500.0)

FY14-FY18 (GF: \$6,000.0, Total: \$6,000.0)

Much of the sanitary and storm sewer main piping on campus is original woodstave or clay piping dating back nearly 60 years. These mains, though not at full capacity, have far exceeded their useable life and are failing. Campus growth and an ever-changing regulatory environment require the modification and upgrade of the waste water handling infrastructure. The project will replace several thousand feet of waste line main piping with new modern materials with a life that exceeds 60 years.

o **Fairbanks Main Campus Wide Roof Replacement**

FY13 (GF: \$6,500.0, Total: \$6,500.0)

FY14-FY18 (GF: \$3,000.0, Total: \$3,000.0)

UAF has many large campus structures that still have original roof systems. As buildings on campus age and do not receive adequate R&R funding, roofing system repairs only offer a Band-Aid solution to a long-term problem. Funding is required for a multi-year project to replace roofs that have surpassed their useable life and are at risk of complete failure.

o **West Ridge Research Revitalization Including LS Backfill**

FY13 (GF: \$11,000.0, Total: \$11,000.0)

FY14-FY18 (GF: \$22,350.0, Total: \$22,350.0)

The majority of the research facilities located on UAF's West Ridge were built in the late 1960s and early 1970s. Elvey, home to the UAF Geophysical Institute, is a major center for many state emergency preparedness programs. AHRB is home to several research programs that directly affect the health and welfare of thousands of Alaskans, including the Center for Alaska Native Health Research. Regardless of new construction efforts on campus, Arctic Health will continue to serve as the hub for all types of research. The building currently houses programs with grants receipts equal to approximately one half of the total yearly research fund in the entire UA system. The Irving I facility is the home of the Institute of Arctic Biology and the Department of Biology and Wildlife. Hundreds of undergraduate, graduate, and

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master's degree students learn, research, and teach in the building every day. IAB is also responsible for approximately 20% of UAF's research revenue. Irving I is a key component to UAF's competitive edge in research relating to the Arctic regions. The research intensive Irving II facility serves the Institute of Marine Sciences and Institute of Arctic Biology. Since the late 1990's, the building has been under citation for a lack of proper occupancy separation, exhaust ducts on fume hoods that are out of compliance, and multiple structural issues.

This project will determine the needs of UAF's research community and revitalize the spaces necessary to continue the world-class research conducted at UAF.

- o **ADA Compliance Campus Wide: Elevators, Ramps, Restrooms**

FY13 (GF: \$5,000.0, Total: \$5,000.0)

FY14-FY18 (GF: \$4,750.0, Total: \$4,750.0)

This project will include accessibility improvements such as installation of new elevators, renovations to restrooms, improvements to accessibility routes, replacing drinking fountains, and modifying stairwell handrails. Buildings being addressed include Cooperative Extension, Gruening, Hess Commons, Patty Ice, Lola Tilly and Whitaker.

- o **Elevator Scheduled Upgrading and Replacement**

FY13 (GF: \$1,500.0, Total: \$1,500.0)

FY14-FY18 (GF: \$1,500.0, Total: \$1,500.0)

UAF Facilities Services manages the operation and maintenance for a fleet of more than 50 elevators and lifts with an average age of over 25 years. With the help of an FY01 audit, 28 elevators were identified as needing modernization upgrades. This request represents the fourth and final phase of a multi-year modernization plan and will address ADA, code, and deferred maintenance improvements of nine elevator systems.

- o **Lower Campus Backfill Renovations per 2010 Masterplan**

FY13 (GF: \$6,000.0, Total: \$6,000.0)

FY14-FY18 (GF: \$9,150.0, Total: \$9,150.0)

Many classrooms on the Fairbanks campus do not meet the needs of today's students. This project will update and renovate classrooms to make them more conducive learning environments including soundproofing, renovating vacant and underutilized spaces, and renovating spaces vacated by moves to new West Ridge facilities.

- o **Eielson/Signers' Code Corrections**

FY13 (GF: \$5,700.0, Total: \$5,700.0)

FY14-FY18 (GF: \$2,000.0, Total: \$2,000.0)

As the two oldest facilities on the UAF campus, Eielson and Signers' do not have ventilation systems and experience problems maintaining comfortable temperatures in occupied zones. Other code corrections will provide adequate exit pathways for building occupants. The facilities are specifically utilized for student admissions, registrar functions, financial aid, and campus administration.

- o **Patty Center Revitalization**

FY13 (GF: \$3,600.0, Total: \$3,600.0)

FY14-FY18 (GF: \$16,325.0, Total: \$16,325.0)

Constructed in 1963 to replace an existing 40 year old gym, the Patty Center now houses sports and recreational space for five NCAA Division II, and two NCAA Division I sports. This includes both men's

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and women's teams that are a vital part of the UAF Campus Life Master Plan. The construction project will correct an abundant list of code citations and extend the life of the 47-year-old facility. The facility must be upgraded to meet basic competition standards.

o **Campus Roads, Sidewalks, Curbs, Gutters, and Ramps**

FY13 (GF: \$6,000.0, Total: \$6,000.0)

FY14-FY18 (GF: \$2,250.0, Total: \$2,250.0)

The main UAF campus is connected by a series of small roads that were constructed nearly 40 years ago when the student population and vehicle traffic was only a fraction of what it is today. Whether it is building access, road pavement, or student drop off locations, there are inadequate and aged pedestrian and vehicular facilities all over the campus.

UAF Main Campus' roads and building access are in major need of renewal and renovation. Unlike the state, UAF does not receive federal maintenance funding per mile of road. UAF also does not receive funding for projects that address air quality issues, such as bus pullouts and bike paths.

In addition to multiple sidewalks, curbs, gutters and ramps improvements, this project will complete the northern link of Tanana Loop and the roundabout on Tanana Drive. The project will also create safe and attractive pedestrian walkways close to the roadway for non-motorized users. Existing roads will be resurfaced and sidewalks will be replaced to maintain ADA compliance.

o **Campus Wide Building Electrical Safety and Code Compliance**

FY13 (GF: \$2,750.0, Total: \$2,750.0)

Electrical systems of campus buildings constructed prior to the 1980s are nearing the end of their operational life and/or have sustained damage during their life and should be replaced. Additionally, some equipment in these facilities does not meet current electrical codes and/or is no longer supported by the manufacturer.

o **Bartlett Hall Plumbing and Piping Replacement**

FY13 (GF: \$4,500.0, Total: \$4,500.0)

Bartlett Hall dormitory, built in 1970, was designed to house 315 students. Since the original construction, the dormitory has not had a significant remodel or upgrade. Deferred maintenance and code issues are now significantly impacting the usability of the facility. The dorm is no longer able to provide the basic level of safe sanitation services for students. The shower facilities on all three student floors have deteriorated to the point of compromising the integrity of the walls, ceilings and plumbing within the restrooms due to old age and water leakage.

The project will address the need for the university to provide safe and sanitary restroom and shower facilities in their dormitories. The project will also ensure that the facility is brought up to current ADA regulations.

o **Kodiak FITC Renewal**

FY13 (GF: \$2,500.0, Total: \$2,500.0)

The Kodiak Fishery Industrial Technology Center renewal project will address items critical to the mission of the facility including energy conservation initiatives. Expected annual savings on utility costs is \$25,000.

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- o **Campus Wide Fire Alarm Survey**

FY13 (GF: \$1,500.0, Total: \$1,500.0)

FY14-FY18 (GF: \$1,500.0, Total: \$1,500.0)

The campus wide fire alarm Survey project corrects existing code deficiencies for fire and life safety as well as major code violations and citations. These upgrades address code violations for inadequate sprinkler coverage, limited smoke and heat detection as well as the lack of ADA notification with horns and strobes.

- o **Tilly Commons DM and Repurposing**

FY13 (GF: \$11,000.0, Total: \$11,000.0)

In order to provide friendly and functional customer service to the UAF community, Lola Tilly Commons will be renovated for use as a one stop building for students, faculty, staff, and visitors.

- o **Moore Hall Plumbing and Piping Replacement**

FY13 (GF: \$4,500.0, Total: \$4,500.0)

Moore Hall dormitory, built in 1966, was designed to house 315 students. Since the original construction, the dormitory has not had a significant remodel or upgrade. Deferred maintenance and code issues are now significantly impacting the usability of the facility. The dorm is no longer able to provide the basic level of safe sanitation services for students. The shower facilities on all three student floors have deteriorated to the point of compromising the integrity of the walls, ceilings and plumbing within the restrooms due to old age and water leakage.

The project will address the need for the university to provide safe and sanitary restroom and shower facilities in their dormitories. The project will also ensure that the facility is brought up to current ADA regulations.

- o **UAF Community and Technical College Space Revitalization Phase 4**

FY13 (GF: \$3,975.0, Total: \$3,975.0)

FY14-FY18 (GF: \$6,275.0, Total: \$6,275.0)

The UAF Community and Technical College facility at 604 Barnette Street is in critical need of continuing major upgrades to ensure the reliable and efficient delivery of UAF Community and Technical College programs focused on key Alaskan industries. The facility was designed and constructed in 1962-63. Since taking ownership in 2003, the University has completed three State-funded projects and two additional projects funded by the Denali Commission. Out year funding will complete the fourth floor revitalization for Allied Health programs and upgrade antiquated elevator lift systems and cars. The UAF Community and Technical College facility is in need of continuing major revitalization of interior spaces, exterior grounds, and parking. These needs are reflected in the continued phasing for construction in subsequent years.

- o **University Park Building Repurposing**

FY13 (GF: \$200.0, Total: \$200.0)

This project will repurpose the failing, 50 year old school facility.

- o **Original Duckering Ventilation Completion**

FY13 (GF: \$1,650.0, Total: \$1,650.0)

During the 1999 renovation of the Duckering Building, funding was not available to complete required ventilation upgrades to the northern wing of the facility. New construction work will install code compliant ventilation to the labs and offices in the north wing.

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o **Campus Wide Asbestos Abatement Phase 2**

FY13 (GF: \$3,800.0, Total: \$3,800.0)

Currently, asbestos pipe insulation, floor tiles, mastic, and fire walls exist in nearly one-third of all campus facilities. The asbestos needs to be removed because it significantly adds to the costs and timeline of renovation and construction projects.

o **Cogen Heating Plant Code Corrections Phase 3**

FY13 (GF: \$2,900.0, Total: \$2,900.0)

FY14-FY18 (GF: \$1,000.0, Total: \$1,000.0)

The Atkinson Combined Heat and Power Plant code corrections project will complete the code construction to bring the facility into code compliance. The work includes the partial installation of an automatic sprinkler system in the building, and other code upgrades to the HVAC, electrical, asbestos, and fire alarm components.

o **Student Services Renewal -Student Union and Original Bookstore**

FY13 (GF: \$12,075.0, Total: \$12,075.0)

FY14-FY18 (GF: \$11,400.0, Total: \$11,400.0)

As part of the UAF Campus Life Master Plan, and in support of UAF Strategic Plan 2010, the Wood Center and Constitution Hall must be renewed to provide more efficient and effective services to the students.

o **Physical Plant Code Corrections Phase 3**

FY13 (GF: \$500.0, Total: \$500.0)

This project reconfigures the Physical Plant building to correct existing code and operational deficiencies. This is the final phase of work to complete the code and operational deficiencies within the administrative areas of this 1964 facility which houses the operations core for UAF's maintenance work.

UAF Community Campus DM and R&R

o **Kuskokwim Campus Facility Critical Deferred and Voc-Tech Renewal -- Phase 2**

FY13 (GF: \$5,100.0, Total: \$5,100.0)

FY14-FY18 (GF: \$8,500.0, Total: \$8,500.0)

Current maintenance and repair funding levels are not sufficient to meet the critical maintenance needs at the rural campuses. Critical needs include upgrading electrical systems, boiler replacements, and fixing ventilation issues.

UAS Main Campus DM and R&R

o **Hendrickson Remodel and Renovation**

FY13 (GF: \$3,200.0, Total: \$3,200.0)

The first floor of the Hendrickson Building was built in 1978 and the second floor added in 1982. The use of both floors has changed over the years from the original, vocational programs to a combination of general purpose classrooms, offices and environmental science labs. This project will renew and remodel the Hendrickson Building to provide more effective use of the space, replace building heating and ventilation systems, and refinish the interior.

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o **Auke Lake Way Campus Entry Improvements & Road Realignment**

FY13 (GF: \$981.5, Total: \$981.5)

The 2003 UAS Campus Masterplan recommends (1) the elimination of through vehicular traffic along Auke Lake Way as it passes along the five original campus buildings and (2) the improvement of the Mendenhall Loop Road campus entrance to make it the primary entrance. This project will eliminate vehicle and pedestrian conflicts and will create a central pedestrian activity space.

This project will remove public vehicular traffic from the center of the Juneau academic core and convert the existing roadway into a pedestrian greenway. The work involves creating new pedestrian paths, installing new site lighting and signage, landscaping, planting, and drainage modifications.

o **Technology Education Center Diesel Lab & Mine Training Remodel**

FY13 (GF: \$1,500.0, Total: \$1,500.0)

This project will address two growing vocational programs, mine training and diesel engine technology. Growing enrollment and industry training demands are overtaxing the current teaching spaces. This remodel, within the Technology Education Center, will increase the capacity for diesel instruction from 18 to 22 students, provide space for mine training simulators, and remodel other existing support spaces for all vocational programs housed in this facility.

o **Juneau Campus Fire Alarm Replacement**

FY13 (GF: \$275.0, Total: \$275.0)

This project would replace aging fire alarm detection systems.

This is a continuation of a project that began in FY08. The next phase (Phase 3) will include the Bill Ray Center and the Natural Science Research Lab.

o **Juneau Campus Pavement Replacement**

FY13 (GF: \$500.0, Total: \$500.0)

FY14-FY18 (GF: \$500.0, Total: \$500.0)

This project will reconstruct failing vehicular and pedestrian paved surfaces.

The pedestrian link from the main campus to student housing is over one-half mile in length. This paved and lighted path is the principal corridor for resident students.

The failures of sections of pavement create potential hazards to pedestrians, particularly during freezing weather.

o **Juneau Campus Site Lighting Replacement**

FY13 (GF: \$300.0, Total: \$300.0)

FY14-FY18 (GF: \$400.0, Total: \$400.0)

This project will replace exterior building, parking lot, street and path lighting to achieve better lighting and use less electrical energy.

SW DM and R&R

o **Butrovich Building Repairs**

FY13 (GF: \$600.0, Total: \$600.0)

FY14-FY18 (GF: \$2,300.0, Total: \$2,300.0)

The Butrovich building was constructed in 1988 and is in need of repairs. There are five projects that are needed to address safety issues and to preservation of the building and surrounding infrastructure. These projects include repairing the retaining wall, refurbishing the front canopy, roof replacement, lighting upgrades and repairs to the sidewalks, curbs and parking lots.

o **Computing Facility Power Infrastructure**

FY13 (GF: \$3,700.0, Total: \$3,700.0)

Current UA Computing Facility power capabilities allow for a maximum of 10 minutes of power capacity to shut down systems in the event of loss of power or emergency. Without shutdown or cooling, computing systems will overheat beyond this 10 minute window. New computing backup technology (UPSs) enables efficient cooling to mitigate disruption of UA academic, business and research services. A self-contained backup power source/generator and UPS upgrade will allow for a larger window for action (15+ minutes) to provide additional time and avoid damaging systems which would be costly to replace if overheated.

New Construction

New Construction (New Starts) funding requests are not included in the FY13 budget request. Refer to the 10-Year Capital Improvement Plan for more information about future new construction goals.

Planning and Design

Planning and Design funding requests are not included in the FY13 budget request. Refer to the 10-Year Capital Improvement Plan for more information about future planning and design goals.

Research for Alaska

o **UAF Partnership to Develop Statewide Energy Solutions**

FY13(GF: \$10,000.0, NGF: \$3,100.0 Total: \$13,100.0)

The University of Alaska Fairbanks has significant capabilities to assist the State of Alaska, Alaska communities, and Alaska industries in making informed decisions about energy technology, analysis, and development. The University of Alaska Fairbanks can serve as a neutral information broker to impartially assess a wide range of potential energy options from numerous perspectives. This will inform Alaska's decision makers, industries, businesses and residents who seek to develop and use Alaska's energy resources. As leaders in multi-disciplinary energy research, the University of Alaska Fairbanks can provide key stakeholders with a trusted, multidisciplinary source of analysis, research, and technology development. Additionally, the university can leverage resources through an extensive national and international research network including national laboratories other universities, and private non-profit organizations.

This additional funding will optimize existing capacity in energy technology testing and development (Lead: Alaska Center for Energy and Power) at the University of Alaska and add capacity where it's needed to deliver in two additional key areas, energy analysis and decision making (Lead: Energy Analysis Group – to be formed), and the integration of fossil fuels research capacity (Lead: Fossil Fuels Integration Group – to be formed).

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- o **UAF Effective Arctic Oil Spill Response**

FY13 (GF: \$2,000.0, NGF: \$25,000.0 Total: \$27,000.0)

On April 20, 2010, the Deepwater Horizon exploded and sank in the Gulf of Mexico. The resulting well-blowout flowed for nearly 4 months and resulted in one of the largest manmade oil spills ever on Earth. Given the huge offshore circum-arctic resource potential, oil development in the Arctic is a critical issue for the US and Alaska. Many of the difficulties associated with offshore development are intensified by the Arctic environment, and have not been studied as much as development in more temperate zones. UAF is uniquely situated to create a center focused on oil spill prevention and preparedness in the Arctic that would fill existing gaps in arctic knowledge and technology. Experts across the University are currently engaged in numerous leading edge research projects applicable to Arctic oil spills. This center will allow UAF to partner with State and Federal agencies, industry, and other academic institutions to support wise decision-making concerning Arctic oil spill response and prevention.

- o **UAF Assessing the Impacts of Ocean Acidification on Alaska's Fisheries**

FY13 (GF: \$2,700.0, NGF: \$750.0 Total: \$3,450.0)

Rapid and significant changes are occurring in the ocean waters surrounding Alaska that will affect our fisheries. One major change is the increased ocean acidification (OA). Currently, there are a number of independent studies (some inside of Alaska and others are being done national and internationally) that are working to better understand the impacts of OA to specific organisms and ecosystems. However, there is no effort to develop an economic model with predicative capabilities to identify the consequences of OA in Alaskan waters and determine how ecosystems in the Gulf of Alaska, the Bering Sea and the western Arctic Ocean will respond as OA continues to worsen. The modeling effort will require a multidisciplinary, highly integrative approach in order to accurately assess the impacts of OA in Alaska.

University Receipt Authority

- o **University Receipt Authority**

FY13 (NGF: \$15,000.0, Total: \$15,000.0)

This request is an estimation of potential university receipt authority needed for FY13-FY17 projects at the main and community campuses. Prior university receipt authority has been used for projects such as the UAA Wendy Williamson Auditorium Lighting Replacement (FY09: \$641.3), the UAF Critical Electrical Distribution (FY09: \$98.5), and the UAS Auke Lake Trail Project (FY09: \$124.0).

