

**State of Alaska**  
**FY2004 Governor's Operating Budget**

**Department of Transportation/Public Facilities**  
**Highways and Aviation**  
**Budget Request Unit Budget Summary**

## Highways and Aviation Budget Request Unit

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### BRU Mission

The mission is to maintain, safeguard and control the state's infrastructure system of highways, airports and harbors.

### BRU Services Provided

- Winter snow and ice control including snow plowing, snow removal, sanding, anti-icing, avalanche control, snow fencing and culvert thawing.
- Summer maintenance including: grading, pothole patching, crack sealing, leveling of heaves and dips, brush clearing, sweeping, dust control, drainage cleaning and repair, fence and guardrail repair, bridge painting and repair, and sign maintenance.
- Road and airport lighting systems including: maintenance of traffic signals, intersection and road illumination, harbor electrical service and lighting, and runway and taxiway lights.
- Roadside litter control and trash removal at rest areas, turnouts and campgrounds.
- Control access to state rights of way for driveways, access roads, signs and utilities.
- Maintain federally mandated security at state airports, including access controls, criminal history checks and badging, security fencing, communications, and law enforcement.

### BRU Goals and Strategies

To maintain and operate state highway, airport, and harbor facilities in a manner that allows safe and efficient transportation of passengers and freight.

- Evaluate safety and efficiency of operations through training, communication with the public, and new technology research.
- Monitor and report highway and airport conditions to all users.
- Turn state gravel roads "black" as well as pavement rehabilitation, crack sealing, and overlay projects.
- Provide snow and ice control.
- Develop and use a maintenance management system to better manage our resources and gauge our performance.
- Continue to repair and replace guardrails throughout the state.
- Begin to use new technology such as Road and Weather Information Systems to help maintain the highways.

To safeguard the State's investment in highways, airports, and harbors.

- Provide adequate maintenance by the most productive and cost effective means available.
- Allocate public funds responsibly through the use of private contracts and in-house resources.

### Key BRU Issues for FY2003 – 2004

- Protecting Alaska's investment in its transportation infrastructure is a key concern. The State's investments in roads, harbors and airports are eroding each year due to insufficient maintenance. As the transportation infrastructure continues to age, M&O is faced with an ever-increasing list of deferred maintenance work. Other demands include increases in the cost of labor, materials, electricity and fuel; cost of maintaining new infrastructure such as airport taxiways and lighting systems and highway traffic signals; and finally, the increasing burden of new laws and regulations. The M&O budget has not kept up with these increased demands and is inadequate to sustain basic preventative maintenance of our roads and airports. Our list of deferred maintenance items currently exceeds \$258 million. Adequate and stable funding is mandatory to properly maintain our infrastructure and provide a suitable level of service to the public.
- Airport security is a major issue following the events of September 11, 2001. Requirements for security have changed to comply with the Transportation Security Administration's (TSA) mandated Emergency Amendments to airport security programs. Additional personnel are needed to perform mandated functions such as security management, inspection, law enforcement, access control, and perimeter patrols, and administrative functions. Along with additional personnel, considerable costs will be incurred to provide security fences, lighting equipment,

access controls and additional security vehicles. The Aviation Security Act will help define Federal requirements for added security and specify whether federal funds will be available. All persons who require unescorted access to aircraft secure areas now must have a fingerprint-based Criminal History Records Check (CHRC) that shows no convictions of disqualifying crimes.

- Increased costs have been offset slightly through increased productivity and other efficiencies. They are offset to a larger extent by increased reliance on capital funds. General Funds for capital improvements have dwindled in recent years to insignificant levels. Highways and Aviation has made maximum use of federal highway funding to achieve improvements in road surfaces (chip sealing), which decreases maintenance costs for the short term. These funds are limited to specific maintenance activities such as asphalt and bridge repair and are not available for routine activities such as guardrail repair or snow and ice control. Operating costs, however, have continued to increase and still outweigh the sum of our cost reducing efforts, the infusion of capital funds, and our operating revenues.
- The H&A workforce is aging and nearing retirement. Within the next five years over 30% of the H&A foreman, equipment operators and mechanics will be eligible for retirement. This is the front wave of baby boomers whose departure from the work force will leave a significant gap. There are not sufficient skilled employees within our ranks to fill these vacancies. Recruitment for these positions may also become a problem. Other states are currently unable to hire skilled personnel to fill their needs. The department previously had various grades of operators and mechanics from heavy duty to light duty and laborers. This allowed employees a natural progression as they acquired skills. During previous budget reductions, these lesser skilled positions were deleted to retain higher skilled operators and mechanics. The State must be proactive in planning for departure of skilled workforce so the level of service on our transportation system is not adversely impacted.
- Replace the maintenance stations at Chandalar, East Fork, Willow and Nome that were unsafe due to structural deficiencies. Temporary facilities are being used and funded with emergency funds, however they are insufficient for properly maintaining equipment. Preliminary design efforts are underway but full funding is necessary to finish detail design and start construction this summer.

### Major BRU Accomplishments in 2002

- Applied chip seal, hot mix, or high float asphalt to 265 lane miles of road.
- Covered 275 lane miles with crack seal.
- Paved approximately 29 lane miles of gravel roads.
- Repaired 36 bridges.
- Continued to coordinate parts delivery with State Equipment Fleet at remote camps by using Maintenance and Operations employees to perform this service.
- Continued to grow the Adopt-a-Highway system with new volunteer groups enthusiastically participating in clean up of selected segments of highways. A safety video has been developed and distributed. A Policies and Procedures Manual for Adopt-a-Highway programs is currently being developed.
- Met all the new finger printing requirements at the certified airports.
- Moved the Anchorage Maintenance District offices and shop into the National Guard Building next door on Tudor Road.
- Made travel on Pile Bay Road without fording the rivers possible for the first time in more than 25 years.
- Constructed and installed new float at Gustavus dock to replace float destroyed by a storm.
- Performed extensive ditching and brushing on roads and airports.

### Key Performance Measures for FY2004

**Measure:**

**The number of miles of gravel roads that are surfaced with chip seal, hot mix, or high float asphalt for the first time, reported regionally.**

Sec 149(b)(1) Ch 124 SLA 2002(HB 515)

**Alaska's Target & Progress:**

The number of lane miles of gravel road surfaced with chip seal, hot mix or high float asphalt for the first time during FY02 is as follows:

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	by Highways &	by Construction	Total (lane miles)
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	Aviation		
Central Region	80	62	142
Northern Region	5	305	310
Southeast Region	10	0	10
<b>TOTAL</b>	<b>95</b>	<b>367</b>	<b>462</b>

**Benchmark Comparisons:**

We are unaware of any specific benchmark at this time. The number of miles of roads that are surfaced is dependent upon amount of funds budgeted through the Statewide Transportation Improvement Program (STIP).

**Background and Strategies:**

The Road Paving Program established in FY99 implements the Administration's goal of reducing maintenance costs and improving the quality of life for Alaskans by hard surfacing state owned/maintained Non National Highway System (NHS) gravel roads, as well as those NHS roads also identified under the STIP. The scope of this work represents limited shoulder work, drainage and other work related to preserving the road structure. This is an extremely important program and will provide great benefit to many Alaskans. The Department of Transportation and Public Facilities also benefits directly from this program through reduced maintenance costs. Roads are selected for this program based on cost, condition of the roads, and traffic levels.

**Measure:**

**The percentage of highway and airport lane miles per full-time equivalent employee compared to the average of member states of the Western Association of State Highway and Transportation Officials.**

Sec 149(b)(2) Ch 124 SLA 2002(HB 515)

**Alaska's Target & Progress:**

	FY01	FY02	FY03	FY04
Central Region	37.0	37.0	42.1	37.0
Northern Region	42.1	42.2	45.9	42.2
Southeast Region	35.3	35.3	37.0	35.3
WASHTO Average	21.7	29.3	29.3	

Northern Region Maintenance and Operations, Highways and Aviation maintains highway and airport lane miles with 45.9 (42.2 – FY02) lane miles per full-time equivalent position. Southeast Region averages 37.0 (35.3 – FY02) highway and airport lane miles per full-time equivalent. And, Central Region M&O maintains highway and airport lane miles with an average of 42.1 (37.0 – FY02) lane-miles per FTE position.

**Benchmark Comparisons:**

Fifteen states average 29.3 lane miles per full time equivalent position (Data Source: OKDOT Survey, 1999 & 2001 results from 15 WASHTO States) as follows:

Arizona	29.89	
California	10.33	(1999)
Colorado	15.98	(1999)
Hawaii	8.86	(1999)
Idaho	29.50	
Montana	35.25	
Nevada	33.30	
New Mexico	30.39	
North Dakota	46.55	(1999)
Oklahoma	39.30	
Oregon	16.77	
South Dakota	42.86	
Texas	40.61	
Utah	41.59	
Washington	18.49	(1999) Average 29.31

**Background and Strategies:**

At the current levels of lane miles per full-time equivalent, the Department is not able to provide an adequate level of service. There is a long list of “deferred maintenance” work – jobs that have not been completed due to lack of personnel and other resources. Staff are required to concentrate on critical needs, such as snow removal, rock slides, flooding, and erosion of roadbeds, and are able to devote less attention to preventive maintenance, such as crack sealing, ditching, and brush cutting. Work on priority maintenance items is scheduled when time and resources permit, and federal funds are used to improve the transportation infrastructure to minimize future maintenance needs.

The Department plans to implement an Alaskan maintenance management system that will establish specific maintenance criteria (roadway surface, drainage, snow & ice control, traffic services, etc.) with defined service levels and associated cost to identify to the public and legislature meaningful performance measures. Use of the maintenance management system will identify specific maintenance areas (e.g., guardrail repair, brush cutting, etc.) lacking in necessary resources. To reduce the average lane miles per employee, lane miles could be eliminated from state highway and aviation systems by transferring to communities, develop new funding sources, or encourage FHWA to make eligible more maintenance items under the federal aid highway program.

**Measure:**

**The number of miles of road maintenance for which responsibility is transferred to local governments.**

Sec 149(b)(3) Ch 124 SLA 2002(HB 515)

**Alaska's Target & Progress:**

In FY2002, 27.6 miles of road maintenance was transferred to local governments. Transferred road responsibilities include: 1.1 miles of Evergreen Street in Wrangell, Old Steese Highway (Wendell Street to Johansen Expressway), 1.5, miles, and Mat-Su Borough 25.0 Miles.

**Benchmark Comparisons:**

No benchmark has yet been established.

**Background and Strategies:**

The transfer of road maintenance responsibility to local governments is negotiated between Planning, M&O and the local community. In exchange for a capital project benefiting the community, the community agrees to accept responsibility for maintaining an equivalent section of road. This is a win-win situation for the State and the community, allowing the use of federal funds to construct a project that benefits the community while reducing M&O general fund costs and responsibilities. The transfers have benefited both the State and the local governments by having each side maintain those roads they can do best. Segments of roads found within larger areas of local responsibility can more efficiently be maintained by the local agency rather than the state DOT/PF. Efficiency is increased by reducing equipment travel times and by doing roads close to the other government's responsibilities. The department is working with communities to identify further roads that can be transferred to municipal control.

**Measure:**

**The percentage of applicable rural airports that maintain the pavement condition index (PCI) at 70 for runways and 60 for taxiways and aprons.**

Sec 150(b)(1) Ch 124 SLA 2002(HB 515)

**Alaska's Target & Progress:**

Out of those runways, aprons and taxiways inspected, 24% in Central Region, 18% in Northern Region and 85% in Southeast Region have exceeded the pavement condition index identified in this measure. All airports have been surveyed in the last three years except Galena (managed by the U.S. Air Force), McGrath, Unalaska, and Yakutat. Yakutat Airport is scheduled for a major pavement renewal project in FY2004. Sitka and Wrangell airports do not meet the PCI criteria for runways. These deficiencies will be addressed in future capital improvement projects. In the mean time, maintenance personnel address pavement deficiencies through daily maintenance and minor pavement repair projects. PCI values are only averages for the entire airport. It may be misleading to assume that the airport pavement conditions are fine if average conditions meet the measures. If, for example, an airport has several new pavement sections and the rest are old and worn, the average condition may meet the criteria, but it is not representative of true conditions.

**Benchmark Comparisons:**

PCI 70 for runways; PCI 60 for taxiways and aprons. Preventive and routine maintenance such a crack sealing and patching is recommended when pavement conditions exceed the minimum PCI values that are set forth. Corrective maintenance or pavement rehabilitation are recommended on areas with PCI values from 55 to the minimum values. Reconstruction is recommended when PCI values fall below 55. Recommendations are for specific pavement sections and are presented annually. Lack of funding and personnel to do the work often prevent the recommendations from being followed.

**Background and Strategies:**

The PCI is a quantitative indicator of overall pavement condition that, as part of a pavement management system, helps us to determine maintenance and rehabilitation needs at airports. It also helps us to determine priorities when scheduling major pavement projects. However, a PCI score describes only a portion of airport operation capabilities. The Department's goal is to maintain airports' required operational capability through effective staffing, equipment, maintenance, and management practices that ensure our airports are safe and open for business whether they have new pavement or are due for rehabilitation. However, lack of funding for pavement maintenance like crack sealing and patching is a continual problem. Project funding for pavement rehabilitation and reconstruction is also inadequate.

**Measure:**

**The percentage of private maintenance contracts at non-certified airports compared to total number of non-certified airports**

Sec 150(b)(3) Ch 124 SLA 2002(HB 515)

**Alaska's Target & Progress:**

72% of the Department's non-certificated airports are maintained under contract. The Department has 179 non-certificated airports. Of those, the maintenance and operations of 129 of them are contracted to private firms or individuals and the remainder are maintained by the Department.

**Benchmark Comparisons:**

No benchmark has yet been established.

**Background and Strategies:**

The current strategy is to adequately maintain all airports as cost effectively as possible. Most of the non-certified airports that are not maintained with private contractors are located next to highways. Consequently, the highway crews maintain these airports. They have all the necessary equipment and local knowledge of the airport's needs. Economy is gained by maintaining the highways and airports with existing employees and equipment. Costs to maintain airports are generally considerably higher at those not serviced by a road system. Maintenance costs will continue to be kept down through competitively bid contracts where it is cost effective to do so.

**Measure:**

**Whether the department maintains the 100 percent pass level of annual federal airport certification inspections for response and safety standards set out in federal aviation regulations.**

Sec 150(b)(4) Ch 124 SLA 2002(HB 515)

**Alaska's Target & Progress:**

100% of airports passed certification inspection. Compliance is mandatory and issues are corrected when noted.

**Benchmark Comparisons:**

There is no established standard or quantitative measure for FAA certification inspections. We attempt to provide the safest, most efficient service to airlines and the traveling public and ensure compliance with all appropriate regulations.

**Background and Strategies:**

The FAA, to ensure safe and standard airfield operations and compliance with its FAR 139 certification requirements, inspects the certificated airports at least annually. These inspections cover a broad range of areas including Airport Rescue and Firefighting (ARFF), safety, lighting, markings, runway incursions (interference with aircraft during takeoff and landing) and a number of other operating standards.

The Department's goal is to improve compliance with the FAA's FAR 139 program. This can be achieved by the

proper identification of deficiencies by maintenance, operations, and safety personnel. Inspections note deficiencies for a broad range of inspection criteria and differ each year depending on FAA focus. Compliance with FAR Part 139 is achieved through adequate training and supervision of airport personnel, and implementation of effective management practices by the Regional Maintenance and Operations staff. The Regional Airport Safety and Compliance Officer is always available to help airport managers with compliance issues and ensures, through regular communication and visits, that any problems are resolved quickly.

**Highways and Aviation**  
**BRU Financial Summary by Component**

*All dollars in thousands*

	FY2002 Actuals				FY2003 Authorized				FY2004 Governor			
	General Funds	Federal Funds	Other Funds	Total Funds	General Funds	Federal Funds	Other Funds	Total Funds	General Funds	Federal Funds	Other Funds	Total Funds
<b><u>Formula Expenditures</u></b>	None.											
<b><u>Non-Formula Expenditures</u></b>												
Central Highways and Aviation	27,653.3	380.2	3,357.8	31,391.3	27,178.4	2,002.2	6,822.7	36,003.3	28,732.6	1,933.3	3,767.6	34,433.5
Northern Highways & Aviation	37,037.1	532.5	4,538.9	42,108.5	36,371.0	539.9	2,874.1	39,785.0	39,448.5	474.9	5,642.3	45,565.7
Southeast Highways & Aviation	8,837.6	197.3	1,259.5	10,294.4	8,545.9	45.1	1,625.2	10,216.2	8,958.3	0.0	1,656.3	10,614.6
Whittier Access & Tunnel	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	100.0	0.0	3,704.6	3,804.6
<b>Totals</b>	<b>73,528.0</b>	<b>1,110.0</b>	<b>9,156.2</b>	<b>83,794.2</b>	<b>72,095.3</b>	<b>2,587.2</b>	<b>11,322.0</b>	<b>86,004.5</b>	<b>77,239.4</b>	<b>2,408.2</b>	<b>14,770.8</b>	<b>94,418.4</b>



**Highways and Aviation**  
**Proposed Changes in Levels of Service for FY2004**

FY04 budget decisions pending.

**Highways and Aviation**  
**Summary of BRU Budget Changes by Component**  
**From FY2003 Authorized to FY2004 Governor**

*All dollars in thousands*

	<u>General Funds</u>	<u>Federal Funds</u>	<u>Other Funds</u>	<u>Total Funds</u>
<b>FY2003 Authorized</b>	<b>72,095.3</b>	<b>2,587.2</b>	<b>11,322.0</b>	<b>86,004.5</b>
<b>Adjustments which will continue current level of service:</b>				
-Central Highways and Aviation	531.4	-68.9	-3,702.1	-3,239.6
-Northern Highways & Aviation	1,037.3	-65.0	0.0	972.3
-Southeast Highways & Aviation	-76.7	-45.1	2.0	-119.8
-Whittier Access & Tunnel	100.0	0.0	3,704.6	3,804.6
<b>Proposed budget decreases:</b>				
-Central Highways and Aviation	0.0	0.0	-88.0	-88.0
-Northern Highways & Aviation	-291.4	0.0	-59.8	-351.2
-Southeast Highways & Aviation	0.0	0.0	-30.9	-30.9
<b>Proposed budget increases:</b>				
-Central Highways and Aviation	1,022.8	0.0	735.0	1,757.8
-Northern Highways & Aviation	2,331.6	0.0	2,828.0	5,159.6
-Southeast Highways & Aviation	489.1	0.0	60.0	549.1
<b>FY2004 Governor</b>	<b>77,239.4</b>	<b>2,408.2</b>	<b>14,770.8</b>	<b>94,418.4</b>