

State of Alaska FY2002 Governor's Operating Budget

Department of Transportation/Public Facilities
Construction and CIP Support
Budget Request Unit

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BRU Mission

The mission of the Construction and CIP Support division is to improve the transportation system in Alaska and protect the health and safety of the people of Alaska by constructing safe, environmentally sound, reliable and cost effective highways, airports, harbors, docks, and buildings.

BRU Services Provided

Each Construction and CIP Support component reports to a different region, and the services provided may vary from region to region. The following information is typical of services provided. See individual components for detail.

Construction Branch: Administers construction contracts, provides field inspection and construction oversight, provides quality assurance that construction documentation and materials are in conformance with contract requirements during construction and closeout of projects, and reports Disadvantaged Business Enterprises/Minority Business Enterprise activity on construction projects.

Contracts Branch: The Construction Contract Unit reviews construction documents, provides bid packages, advertises and awards contracts, prepares certified bid tabulations, and helps resolve bidding disputes. The Professional Services Agreement Unit coordinates, solicits, selects, prepares and administers Professional Services agreements.

Project Control Branch: Coordinates and programs project funding, administers state and federal grants, provides engineering management support, prepares and manages the component's operating budget, develops, enhances, maintains Oracle management reporting system for capital projects, provides regional network administration and desktop computer support, and processes time and equipment charges to projects.

BRU Goals and Strategies

To improve the transportation system and public facilities in Alaska:

- Advertise, award, and administer construction contracts for roads, airports, and facilities efficiently and in accordance with department policies and procedures.
- Construct and complete all projects on time and within budget.
- Prepare project documentation and provide construction administration in conformance with all laws, regulations, and requirements to ensure continuing federal funding.

To protect the health and safety of the people of Alaska:

- Ensure Americans with Disabilities Act (ADA) requirements are incorporated into all projects.
- Identify and correct existing safety related problems on road and facilities projects.

Key BRU Issues for FY2001 – 2002

TEA-21 has increased the level of Federal Highway Administration (FHWA) funds nationwide, creating competition across the country for trained and experienced engineering personnel. The State's salary levels for engineers have made it difficult to hire and retain experienced personnel, however wages were recently increased for many of our engineers and we are still waiting to see how effective that action was.

Major BRU Accomplishments for FY2000

- Received \$230 million in federal highway construction authorization in FFY99.

- Received \$74 million in federal aviation authorization in FFY99, of which the majority was allocated to the construction phase.
- Awarded contracts for \$50 million in International Airport Revenue Fund, general fund, and reimbursable projects in FY99.
- Increased safety awareness in construction traffic zones.

Key Performance Measures for FY2002

Measure: The total construction cost of the annual highway and aviation programs should be within 5% of the contract bid amount.
(Not yet addressed by Legislature.)

Current Status:

Out of a representative random sample of 55 projects completed in FY00, the total percentage change from contract bid to completion was approximately 7%.

Benchmark:

No benchmark is known. A review of other states will be conducted to determine if similar information is collected and used for management purposes.

Background and Strategies:

Currently, the department is working on over 519 active construction projects that span several construction seasons. Significant to the cost of urban projects are traffic maintenance costs necessary for a project to have a minimal impact on the travelling public, heavy public input during the construction of a project, and safety, pedestrian, and environmental considerations. Scope changes during construction are rare, and are undertaken only where there is a substantial advantage to the public, the potential of a significant lost opportunity, a safety consideration and/or a major environmental issue.

Contracts allow specific relief for changed conditions that could not be foreseen, forces of nature, and/or unusually severe weather. Due to these factors, specific projects will occasionally have cost overruns. To decrease contract overruns, some combination of the following is necessary: improve estimating quantities in bid documents, make more field changes that reduce quantities and costs, make fewer field changes that increase quantities or cost, or decline performing extra work requested by others (e.g., local governments, other agencies).

It is also important to note that because large-dollar projects generally take longer to build and usually have more significant environmental and community impacts than the majority of federal-aid highway projects, they have greater potential to experience substantial cost increases and lengthy construction delays. The Public Facilities Branch typically provides design and construction administration services for other state client agencies. During the course of construction these client agencies may direct additional work be performed, making the stated performance measure out of the control of Department personnel.

Measure: Percentage of the total construction costs that were spent on contract administration.
(Developed jointly with Legislature in FY2001.)

Current Status:

The percentage of contract administration costs for closed projects during FY00 were as follows:

	Highways	Aviation
Central Region	18%	13%
Northern Region	18%	18%
Southeast Region	19%	19%

Benchmark:

There is no established benchmark at this time. However, up until recently the FHWA had a benchmark of 15%, which has been considered an industry standard.

Background and Strategies:

This measure can only be accurately determined after the project is closed and all project charges are accounted for. The Department closed out 55 projects during FY00. Historically, contract administration costs run at about 14.5%. The high percentage recorded in FY00 is because the small number of closed projects was not representative of the typical size and complexity of projects normally closed out in a year.

This measure is always a challenge because of the remoteness of most of the projects (increasing travel and transportation costs), and because the requirements of the federal funding agencies and the expectations of the traveling public tend to increase over time. All of these factors drive administrative costs up.

Measure: Percentage of the total construction costs that were spent on change orders.
(Developed jointly with Legislature in FY2001.)

Current Status:

The percentage of change order costs for closed projects during FY00 were as follows:

	Highways	Aviation
Central Region	6%	5%
Northern Region	6%	10%
Southeast Region	8%	8%

Benchmark:

There is no established benchmark at this time. However, past internal policy was to keep total contract adjustments, including change orders and quantity overruns, at less than 10%.

Background and Strategies:

This measure can only be accurately determined after the project is closed and all project charges are accounted for. Historically, total contract adjustments, including change orders and quantity overruns, run at about 5.4%. The high percentage recorded in FY00 is because the small number of projects closed out was not representative of the typical size and complexity of projects normally closed out in a year.

This measure is always a challenge because: 1) efforts to reduce design costs inevitably result in an increase in construction change order costs and quantity overruns; 2) local governments, utilities, and maintenance forces often don't recognize needed enhancements or utility adjustments until the projects are underway; and 3) upper management sometimes isn't aware of opportunities for enhancements until the projects are under construction. All of these factors are beyond the control of this construction program.

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.
(Developed jointly with Legislature in FY2001.)

Current Status:

The number of centerline miles of gravel road surfaced with chip seal, hot mix or high float asphalt for the first time during FY00 is as follows:

	Total	by Hwys & Aviation	by Const & CIP
Central Region	103.0	36.0	67.0
Northern Region	49.0	4.3	44.7
Southeast Region	5.0	.0	5.0
TOTAL	157.0	40.3	116.7

Benchmark:

We are unaware of any specific benchmark at this time. Number of miles of roads that are surfaced is dependent upon amount of funds budgeted through the STIP.

Background and Strategies:

The Road Paving Program established in State Fiscal Year 99 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 Statewide

Transportation Improvement Program (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

Status of FY2001 Performance Measures

	<i>Achieved</i>	<i>On track</i>	<i>Too soon to tell</i>	<i>Not likely to achieve</i>	<i>Needs modification</i>
<ul style="list-style-type: none"> The total construction cost of the annual highway and aviation programs should be within 5% of the contract bid amount. 			X		
<ul style="list-style-type: none"> Percentage of the total construction costs that were spent on contract administration. 		X			
<ul style="list-style-type: none"> Percentage of the total construction costs that were spent on change orders. 		X			
<ul style="list-style-type: none"> 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. 		X			

**Construction and CIP Support
BRU Financial Summary by Component**

All dollars in thousands

	FY2000 Actuals				FY2001 Authorized				FY2002 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
Formula Expenditures None.												
Non-Formula Expenditures												
Central Construction & CIP	246.8	0.0	12,441.9	12,688.7	255.5	0.0	12,324.8	12,580.3	255.6	0.0	13,660.0	13,915.6
Northern Construction & CIP	307.0	0.0	9,767.3	10,074.3	309.5	0.0	10,388.6	10,698.1	309.1	0.0	11,143.0	11,452.1
Southeast Region Construction	174.4	0.0	3,309.4	3,483.8	177.4	0.0	4,012.4	4,189.8	178.2	0.0	4,224.7	4,402.9
Totals	728.2	0.0	25,518.6	26,246.8	742.4	0.0	26,725.8	27,468.2	742.9	0.0	29,027.7	29,770.6

Construction and CIP Support**Proposed Changes in Levels of Service for FY2002**

No service changes.

Construction and CIP Support**Summary of BRU Budget Changes by Component****From FY2001 Authorized to FY2002 Governor***All dollars in thousands*

	<u>General Funds</u>	<u>Federal Funds</u>	<u>Other Funds</u>	<u>Total Funds</u>
FY2001 Authorized	742.4	0.0	26,725.8	27,468.2
Adjustments which get you to start of year:				
-Central Construction & CIP	0.0	0.0	560.5	560.5
-Northern Construction & CIP	0.0	0.0	71.2	71.2
-Southeast Region Construction	0.0	0.0	55.5	55.5
Adjustments which will continue current level of service:				
-Central Construction & CIP	0.1	0.0	-67.5	-67.4
-Northern Construction & CIP	-0.4	0.0	-40.8	-41.2
-Southeast Region Construction	0.8	0.0	-13.3	-12.5
Proposed budget increases:				
-Central Construction & CIP	0.0	0.0	842.2	842.2
-Northern Construction & CIP	0.0	0.0	724.0	724.0
-Southeast Region Construction	0.0	0.0	170.1	170.1
FY2002 Governor	742.9	0.0	29,027.7	29,770.6