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# Alaska State Legislature

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## State Senate

### MEMORANDUM

Date: February 16, 1983

Subject: Report from the House Transportation Committee Meeting  
February 11, 1983, regarding HB 98

To: All Committee Members  
Senate Transportation Committee

From: H. Pappy Moss, Chairman  
Senate Transportation Committee

A handwritten signature in black ink, appearing to read "Pappy Moss".

House Bill 98 was not passed out of committee, mainly because the committee did not feel it could act on the Bill with a zero fiscal note attached. They felt the fiscal note problem should be discussed with OMB before action is taken on this Bill.

John Bates was there to discuss the merits of HB 98. He indicated that putting a four-lane highway into the Eklutna Flats area is not a high priority with the administration. It does not even appear on their six-year plan. He says that according to the Department's prioritization system it is well below many other projects in terms of need. He was quizzed on the specifics of the Department's prioritization criteria. He indicated the administration first looks at the general goals, and whether or not rehabilitation is appropriate. Then, the condition of the road is compared to the condition of other roads through a computer rating system.

In this second step, DOT/PF seems to look at the physical road condition of a road, assign a numerical value to its condition, and then quantitatively compare it to the condition of other roads in the state. It should be noted, however, that the first criteria, the administration's goals, may well set the tone for what is the acceptable point of comparison between any two road projects. That is to say, in

the prioritization process, before DOT/PF arrives at the arguable, qualitative portion of their criteria, each decision must first clear a very subjective, and oft times abstract, policy mandated by the current administration. It is this nebulous conceptual criteria that may well account for fluctuation from year to year in DOT/PF's CIP priority list. It should also be pointed out, from a professional planner's point of view, the entire prioritization process used by DOT/PF is not only inefficient, but also antiquated. In conversations concerning this problem, it has been suggested that the use of outdated planning tools may well be attributed to the lack of planning expertise at the upper levels of DOT/PF's Division of Planning.

From the House Transportation Committee's discussion, it was apparent the issue here is DOT's prioritization process. It would seem that the sponsoring representatives disagree with the priority assigned to the Eklutna Flats area. As they presently prioritize, this project's priority can only be changed by a policy change of the administration. However, for the Eklutna Flats project, I would suggest that examining DOT's prioritization process would be the best approach.

Attached please find an example of a more sophisticated planning model which could easily be adapted to DOT/PF's system. The attachment is enclosed for comparative purposes only. It is not the only model available for use by DOT/PF.

## ANALYTICAL PLANNING NARRATIVE: AN ALTERNATIVE APPROACH

Establishing a system for analytical planning in DOT/PF is indispensable to an adequate planning process and would greatly strengthen the planning functions described and help fill the gaps in the present structure, particularly at the system level, where project identification is presently more an administrative activity than an analytical one. Data generated from the system planning level is also useful for project planning in a system context, as a foundation for the more detailed project-level information that is required in reconnaissance and feasibility studies.

### Technical Analysis

The type of technical analysis that fits well with the system planning function is called "sketch planning." This analysis technique takes a broad network view of the transportation system with quantitative measures of system relationships and system performance with order-of-magnitude levels of detail for life-cycle costs and benefits. It relates future traffic to future population growth and economic development in the project area. It can also be geared to produce indices of system performance which correspond to desired service levels in the villages and cities and to provide some indication of constraints that are preventing the system from reaching desired levels of service. The basic steps in this process are the same as those incorporated into at least one report already in DOT/PF's possession, namely:

- 1) Determine present socio-economic variables which influence demand for transportation;
- 2) Determine the relationships between these variables and traffic levels;
- 3) Forecast the socio-economic variables;
- 4) Forecast freight and passenger traffic by mode;
- 5) Identify potential projects or improvements in the transportation system;
- 6) Estimate costs of project construction, operation and maintenance; and
- 7) Evaluate projects based on service levels, cost-benefit analysis and other indicators of desirability.

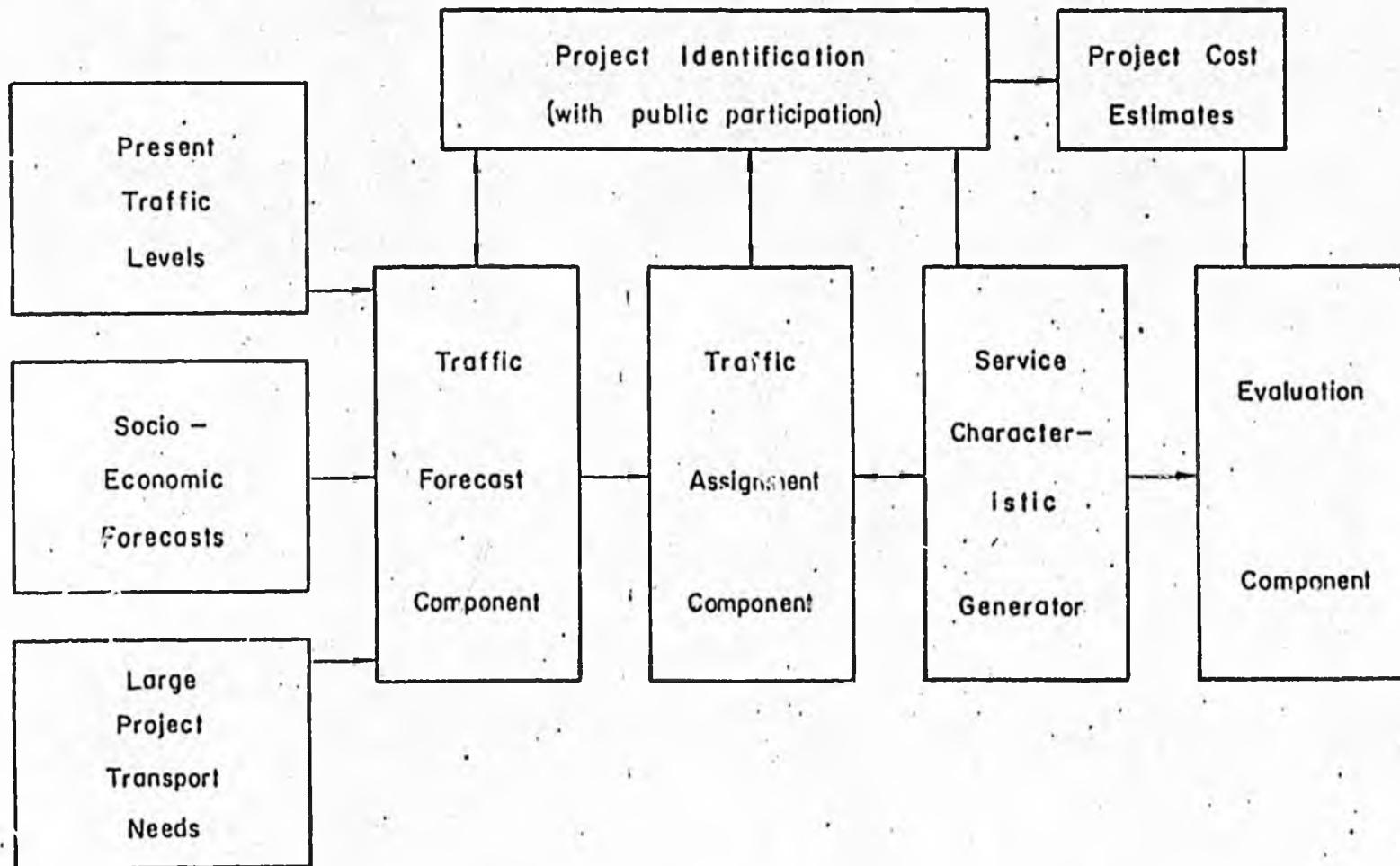
In order to accomplish these functions, the system, therefore, requires:

- 1) a traffic forecasting component which is tied to present traffic levels, basic socio-economic data, and specific characteristics of large

projects; 2) a traffic assignment component with a network model which may or may not be computerized; 3) a service characteristic generator which determines frequency of service by mode; 4) a project identification and cost estimation component, and 5) an evaluation component that compares system costs, characteristics and indices with and without any project or transportation demand or supply element. These components are shown graphically in the attached chart.

There are computerized sketch planning programs available. However, they are often oriented to urban transportation planning and would have to be adapted to rural Alaskan requirements. There have been studies produced for DOT/PF which have effectively modified an analytic system suitable for use in Alaska. They, however, have never been implemented.

Transportation Sketch Planning Components



Background:

The four-lane Glenn Highway, heading north out of Anchorage/Eagle River, narrows to two lanes at Eklutna Bridge.

Going south toward Anchorage/Eagle River, two major highways, the Glenn and the Parks, merge into the two-lane Glenn Highway. The effect is the same--four lanes of major highway narrow into an older, two-lane paved road.

The resulting doubly-bottlenecked stretch of road (see sketch, Attachment A) carries traffic across some of the most exposed, wind-buffeted area in the Matanuska Valley: the Eklutna Flats. Winds gusting across the flats have literally blown vehicles off the road. In the very recent past, a trailer being pulled by a semi was blown across the guard rail over the Matanuska River.

This section of highway also spans three major bridges across the Matanuska and Knik Rivers. Condensation produces heavy fog throughout this area almost daily. Another effect of the moisture present there is a large amount of road ice.

The area also supports a large moose population. The perimeters of the road are unfenced, allowing these animals to cross the roadway at random. The high banks necessary to keep the road from flooding inhibit the driver's ability to spot moose crossing this highly trafficked road.

Add to this already hazardous drive the fact that the Glenn Highway is the primary artery of the substantial commuter population traveling from the Mat-Su Borough to jobs in Anchorage/Eagle River. Forty percent of the Borough's working population is employed outside the Borough.

In addition, many residents shop and do business in the Municipality of Anchorage.

The Mat-Su Valley offers a variety of recreational and tourist pastimes, drawing large numbers from the Anchorage bowl to its lakes, streams, ski trails, and other facilities.

Finally, the Glenn Highway is the only road leading north out of Anchorage, and south into Anchorage, Eagle River, and the Kenai Peninsula.

Statistics and Projections:

According to a 1982 Mat-Su Borough census, the borough has 26,000 residents. From 1970-1982, the Borough has experienced an average annual growth rate of 13.4%. There is solid reason to believe that this growth will continue, and could accelerate, in the future. The population will probably increase if planned construction projects, such as the Healy-Willow Intertie and the Beluga-Anchorage gas pipeline, go forward as scheduled. (See Attachment B.)

Of the 9,000 employed Borough residents, 3,600 work outside the Borough, largely in Anchorage/Eagle River. Although most of these people drive, alone or in car pools, three commuter buses daily accommodate approximately 70 people.

Average daily traffic on the Glenn Highway at the Eklutna Bridge is over 14,000 vehicles (see Attachment C). According to DOT/PF Deputy Commissioner John Bates, traffic is already above average for a two-lane highway.

During peak tourist traffic times, the highway usage more than doubles. On Labor Day, 1982, the Glenn Highway was traveled by 35,560 vehicles (traffic count at Scale House south of Eagle River; no data available for this date at Eklutna Bridge).

Accidents and road repairs which block one or both lanes further complicate smooth traffic flow. Emergency medical services personnel have expressed concern that traffic tangles may one day block passage of ambulances en route to Anchorage.

The Glenn Highway was constructed in 1965-66, when the Borough's population was 6,350, and the population of the Anchorage area was 102,337. The road was upgraded to four lanes from Anchorage to Peters Creek in 1972. The four lane highway was expanded to Eklutna Bridge in 1980.

#### Conclusions:

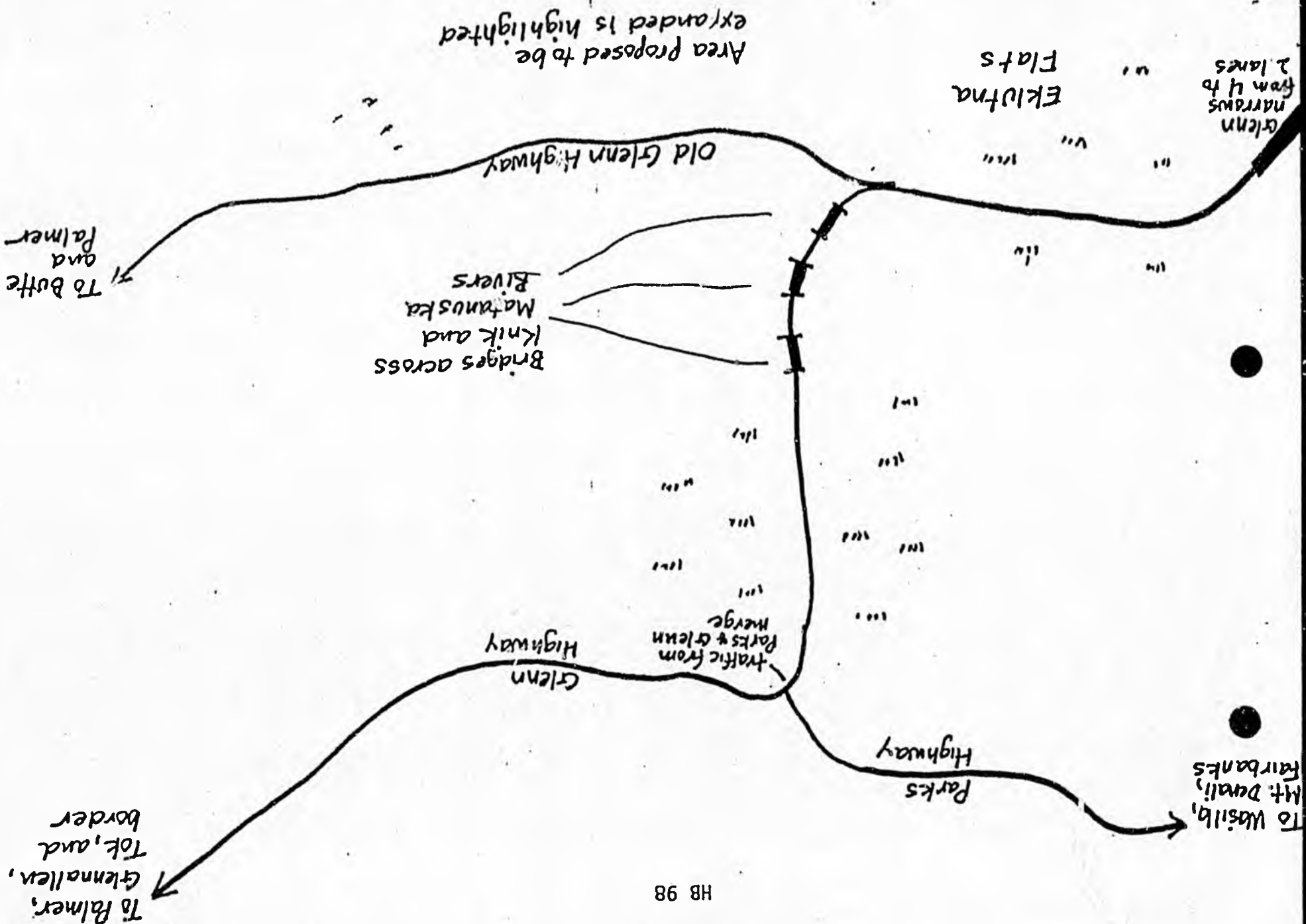
The Glenn Highway was adequate to meet traffic demands when it was constructed nearly twenty years ago. However, population in the Mat-Su area has more than quadrupled since that time, and Anchorage population has doubled. Tourism and recreation have become attractive industries for the economies of the Mat-Su and Anchorage areas. The existing road is no longer adequate for the increased demands being put upon it. As population, commuting workforce, and tourism increase, this strain will worsen.

According to John Scribner of DOT/PF, Anchorage, the project to widen the Glenn from Eklutna Bridge to the Parks Highway Junction, if funded this session, would be completed in approximately 1987, when, according to moderate population estimates, the population of the Matanuska Susitna Borough will be over 34,000. (Reference Attachment B.)

Therefore, it is vital to the economic well-being of the Matanuska-Susitna Borough and the Municipality of Anchorage, both its commuter and recreational/tourist travelers, and to the safety of all users of the Glenn Highway to begin construction of a four-lane highway from the south end of Eklutna Flats to the Junction of the Parks Highway.

ATTACHMENT A

HB 98



Area proposed to be expanded is highlighted

Eklitna Flats

Glenn Narrows from 4 to 2 lanes

Old Glenn Highway

Bridges across Knik and Matanuska Rivers

Traffic from Parks & Glenn merge

Glenn Highway

Parks Highway

To Wasilla, Mt. Dora, Fairbanks

To Butte and Palmer

To Palmer, Tok, and border

TABLE 4  
 MATANUSKA-SUSITNA BOROUGH POPULATION PROJECTION  
 MODERATE SCENARIO  
 (MID RANGE)

<u>Year</u>	<u>Population</u>	<u>% Increase</u>
1981	22,339	-
1982	23,456	5%
1983	24,761	6%
1984	26,247	6%
1985	28,377	8%
1986	30,942	8%
1987	34,303	10%
1988	39,449	15%
1989	45,430	15%
1990	51,080	12%
1991	57,339	11%
1992	64,723	13%
1993	71,880	11%
1994	79,824	11%
1995	85,620	7%
1996	91,568	7%
1997	97,036	6%
1998	102,213	5%
1999	107,660	5%
2000	113,390	5%
2001	119,414	5%

Source: "GROWTH POTENTIAL, DEVELOPMENT ISSUES, SETTLEMENT PATTERNS"  
 Volume 2 of 2, Matanuska-Susitna Borough Comprehensive  
 Planning Program, May, 1982

ATTACHMENT B

Glenn Highway: Eklutna - Parks Highway Junction

Built In 1965-1966

Normal Traffic: 1981 ADT 7,400-8,000 no winter counts are available on this segment of the road. (ADT - AVERAGE DAILY TRAFFIC)

Variance between morning and evening:

<u>Station</u>		<u>SB</u>		<u>NB</u>	
Eklutna Bridge	AM	3133	(43%)	2226	(31%) 7/14/82
Eklutna Bridge	PM	4103	(57%)	4749	(67%) 7/14/82
Eklutna Bridge	day	7238		6975	7/14/82
Glenn - S. of Parks Hwy.	AM	2566	(42%)	1826	(30%) 7/14/82
"	PM	3481	(58%)	4190	(70%) 7/14/82
"	day	6047		6016	7/14/82

Both Ways

Old Glenn Junct.	AM	4306	35%	July (13-15), 1982
	PM	7697	65%	
	day	12157	100%	

*above average for 2 lane rd.*

Park Traffic: At scale house - no data available for subject segment.

State Fair - Friday 8/20/82  
 NB 16,021  
 SB 15,006

Labor Day - Saturday 9/4/82 (Scale house)  
 SB 16,715 (into town) ANCHORAGE  
 NB 18,845

Time Road Closed:

one lane - 3 days last summer/repair of bridge  
 two lanes - 3 days - 3 years ago/repair R.R. crossing

No data available for road closures due to accidents.

Accidents: Should have accident data tomorrow.



STATE OF ALASKA  
PRELIMINARY STATEMENT OF FISCAL IMPACT

Bill No: SB 6 Date on Bill: 1/18/83  
 Title: Approp... DOTPF..construct..hwy..Eklutna to Palmer-Wasilla junction.  
 Sponsor: Kerttula and Moss  
 Requestor: Senate Transportation Committee

1. Estimated fiscal impacts on:

a. Expenditures:

(Thousands of Dollars)

			FY 83	FY 84	FY 85	FY 86		
Capital				39,000.0				
Operating								
Total				39,000.0				

b. Revenues:

Revenue				-0-				
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2. Source of funds to offset fiscal impact of bill:

3. Assumptions:

See Attached.

4. Disclaimer:

This statement has not been reviewed by the OMB in the Office of the Governor. It not represent the policy of the Sheffield Administration or the final estimate of fiscal impact.

Prepared By: Wayne Weeks Phone: 465-4060  
 Division: Planning & Programming, Unit Support Date: \_\_\_\_\_

Approved by Commissioner: *J. Bates* Date: 2/16/83  
 Department: Transportation & Public Facilities

5. Distribution:

- Original to Legislative Finance
- Copy to OMB
- Copy to Sponsor
- Copy to Requestor

2/8/83

## ANALYSIS - SB 6

Construction of a four-lane highway from the south end of Eklutna Flats to the Palmer-Wasilla junction as described in SB 6 is not included in the Governor's 1984 capital request. Our estimated cost for construction of this project is \$60,105,000.

This estimate is based on the following.

### Project Scope:

1. a new south bound 2 lane roadway from Eklutna Flats to the junction of the Parks Highway (8.5 miles);
2. bridges (4,500 feet);
3. an interchange at the intersection with the Old Glenn Highway; and
4. an overlay of the existing highway.

Estimated construction cost in FY 83 dollars is \$38,479,000, including a 10% contingency.

### Project Schedule and funding needs:

1. an annual inflation rate of 10%;
2. preliminary engineering (P.E.) contracted out to a consultant;
3. P.E. funding available by July 1983; and
4. the construction contract advertising for bid by February 1987.

The estimated P.E. cost in FY 83 dollars is \$946,000, which is 3% of the estimated construction cost. The analysis assumes that P.E. costs are spread over 3 years. On completion of construction, it is estimated that maintenance and operating costs will approximate \$7,000 per lane mile. This translates to \$119,000 per year.

STATE OF ALASKA  
PRELIMINARY STATEMENT OF FISCAL IMPACT

MAR 07 1983

Bill No: SB 6 Date on Bill: January 18, 1983  
Title: Approp. to DOT/PF for construction of a four-lane highway from Eklutna Flats to Palmer-Wasilla Junction.

Sponsor: \_\_\_\_\_  
Requestor: Kerttula & Moss

1. Estimate fiscal impact on:

a. Expenditures:

(Thousands of Dollars)

			FY 84	FY 85	FY 86	FY 87	FY 88	
Capital			400	400	334	30,000	28,971	
Operating								
Total			400	400	334	30,000	28,971	

b. Revenues:

Revenue								
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2. Source of funds to offset fiscal impact of bill:

Not identified by the sponsor.

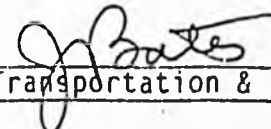
3. Assumptions:

The ultimate fiscal impact of this Bill will be \$119,000 per year (in FY 84 dollars), starting in FY 88.

4. Disclaimer:

This statement has not been reviewed by the OMB in the Office of the Governor. It therefor does not represent the final estimate of fical impact.

Prepared By: Wayne Weeks Phone: 465-4060  
Division: DOT/PF, Planning & Programming Date: 2/2/83

Approved by Commissioner:  Date: 3-2-83  
Department: Department of Transportation & Public Facilities

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