Addendum to Appendix E

User Benefit Analysis

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1.0 ECONOMIC EFFICIENCY OF ALTERNATIVES

1.1 Supplemental Analysis of Traffic and Economic Efficiency

The 2004 *User Benefit Analysis* employs a set of user costs that are different than are employed in the 2004 *Traffic Forecast Report*. The *Traffic Forecast Report* was the first and most time-sensitive report related to Juneau Access Improvements Project economics. The socioeconomic effects and user benefit analyses could not be started until the traffic forecast was complete. The traffic forecast analysis was launched with the understanding that slightly more refined and updated project parameters might be developed and applied in subsequent economic analyses. The decision to proceed in this manner was based on the study team's determination that none of the potential revisions would have any substantial effect on the fundamental findings of the traffic and economic analyses.

The question has been raised about what effect the different user costs would have on the traffic forecast. To answer the question, the study team applied the User Benefit Analysis' user cost data to the traffic model and found increases in traffic ranging from 0 to 17 percent, depending on the alternative. The following table presents the two sets of traffic numbers.

	Traffic Forecast Report Estimates*	User Benefit Analysis-Derived Estimates	Percent Difference
Current Service	80	80	0%
1 - No Action	91	106	17%
4C - Dayboat Auke Bay	100	109	9%
4D - Dayboat Sawmill Cove	127	132	4%
4A - FVF Auke Bay	137	141	3%
4B - FVF Sawmill Cove	161	164	2%
3 - West Lynn Canal Highway	305	353	16%
2B - East Lynn Canal Highway	374	386	3%

Note: *Traffic estimates presented in the 2004 *Traffic Forecast Report* were rounded to the nearest ten.

The No Action Alternative and Alternative 3 have the largest differences between the two sets of traffic estimates. These differences stem from differing assumptions in the *Traffic Forecast Report* and the *User Benefit Analysis* regarding time value, fast ferry fares and vehicle travel speeds. As illustrated in the preceding table, these assumptions have different effects on each alternative, depending on the configuration of each alternative.

The impact of these different traffic estimates on the overall economic evaluation is only meaningful if a change in economic efficiency ranking were to result. In terms of Net Present Value (NPV), among the alternatives carried forward to the Final EIS, East Lynn Alternative 2B is ranked number 1 in the *User Benefit Analysis*, at $70 million. Alternative 3 is second at $32 million. The 16-percent higher traffic estimate derived from the User Benefit analysis for Alternative 3 (353 average annual daily traffic [AADT] versus 305 AADT) compared to the 3 percent increase for Alternative 2B (386 AADT versus 374 AADT) would reduce the differential between the top two alternatives in terms of NPV, but would not change the ranking. In terms of benefit/cost ratio, Alternative 2B is highest, with a ratio of 1.45/1, and Alternative 3 is number 2 at 1.197/1. Higher traffic for Alternative 3 relative to Alternative 2B would move these alternatives closer together in terms of benefit/cost ratio but would not change the ranking.

In summary, the implications of using traffic estimates derived from *User Benefit Analysis* user costs (as opposed to the user costs originally developed in the *Traffic Forecast Report*) would be to move Alternatives 2B and 3 closer together in terms of benefit/cost and net present value analysis, but would not change the relative ranking of the two alternatives.

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2.0 USER COSTS

2.1 AMHS Fares

As explained on page 23 of the 2004 *Appendix E User Benefit Analysis Technical Report* from the Supplemental Draft EIS, the fares used in the analysis for shuttles associated with Alternatives 2B and 3 were computed based on flat fees of $2.00 per passenger and $6.00 per vehicle plus $0.30 per mile for passengers and $0.60 per mile for vehicles. This fare basis was established by a preliminary fare analysis prepared by the Department of Transportation and Public Facilities (DOT&PF) to use in the economic analysis. In March 2004, DOT&PF refined the fare projections for the Haines/Katzehin/Skagway and Sawmill Cove/William Henry Bay shuttle systems (*Proposed Marine Segments Fare Structures*, March 2004, revised August 2005). The Supplemental Draft EIS and the Final EIS use the March 2004 proposed fares. These fares are the same as the fare basis for the User Benefit Analysis, with the exception of the per mile vehicle fare, which is $0.80 rather than the earlier $0.60. Also, the estimates for a family of four in the EIS uses a half fare for children under 12, while the User Benefit Analysis does not. These differences are small, and are offsetting. They would therefore have little effect on the overall user costs and the outcome of the analysis.