Memorandum

TO: JTC Staff
Legislative Staff
Stakeholder Members

FROM: Christopher Wornum, Cambridge Systematics, Inc.

DATE: January 7, 2008

RE: Analysis of Diversion from Puget Sound Ports by Prof. Robert Leachman and Review of this Analysis by BST Associates.

Attached to this cover memorandum are two documents:

1. Draft Port and Modal Elasticity of Containerized Asian Imports via the Seattle-Tacoma Ports, by Dr. Robert C. Leachman, Leachman & Associates LLC, Jan. 3, 2008

2. Final Review of Dr. Leachman's Port and Modal Elasticity Report, by BST Associates, January 4, 2008

These two documents provide critical information for what we hope will be an informative discussion at the next Stakeholder meeting to be held in Olympia on January 23rd. Both Rob Leachman and Paul Sorenson (President of BST Associates) will present their findings and take questions from the stakeholders.

This discussion is an *essential* next step in our effort to understand the feasibility of implementing container fees as one of a number of potential new revenue sources for funding freight infrastructure. By "essential", I mean that no one reading Dr. Leachman's report and the chain of comments and responses in BST Associates' review should assume that they have obtained the full measure of knowledge on this matter. I expect the discussion on January 23rd to advance everyone's knowledge beyond what has been written in these two documents. Therefore, please read both documents carefully and come prepared to ask questions and discuss your remaining concerns.

Following the January 23rd Stakeholder meeting, Cambridge Systematics will prepare a synopsis of the discussion and any additional comments received following the meeting. This synopsis will include our analysis and our opinion as an objective arbiter regarding the outstanding issues. We will also summarize the major findings and explain their significance to the state's economic growth.

In addition to review by BST Associates, JTC Staff, Senate and House staff, senior consultants at Cambridge Systematics and Gill Hicks have all read and commented on the these documents in

advance of this release. Some of those comments were redundant with the comments from BST Associates, but the remaining comments are summarized below with responses from Dr. Leachman.

- The report doesn't seem to take into account the limiting factor of transportation congestion over time. It seems like a snap-shot in time. Granted, the bill did not specify the time frames to be modeled but the San Pedro Bay Port Study (SCAG report) included an analysis that showed if improvements funded with container fees relieves "X" amount of congestion, the marketplace could sustain a fee of "Y" dollars. No such analysis appears in the Washington State report.

  In the most simple terms, the scope of work for Dr. Leachman did not specify such an analysis. Even if the scope had included an analysis of improvements in container flows, however, Dr. Leachman would have needed to know what magnitude of improvement to test. There is not definitive list of specific projects that would be funded with container fees. In the San Pedro Bay Port Study, the specific investments were analyzed using a separate simulation model. While the benefit cost component of the study will partially address the issue, the B/C analysis in isolation won't relate back to the Leachman analysis and inform its conclusions. This analysis, therefore, may be worthwhile to perform. In addition, we note that Dr. Leachman's results assume that congestion (i.e., container flow times) do not change in the future `despite potential growth in volume, thus some level of investment is assumed to maintain the status quo.

- The analysis tests fees of $60, $150 and $450 per FEU. Figure S-2 (Page 14) does offer a scale for consideration of a lower rate structure but does not show the impact of rates lower than $30/FEU. It must be acknowledged that the legislation authorizing this study started with a rate of $100/FEU and the scope of work did not specify modeling of port user fees at very low fees amount. Nevertheless, a more detailed analysis of rates at the lower end of the scale would be more instructive given the sensitivity to fees above $30 per TEU.

  The brief response from Dr. Leachman indicates that the sensitivity of his model (i.e., granularity) to charges below $30 is not sufficiently reliable.

- It would be interesting to determine whether improvements in transportation service quality (reduced variability in transit time or overall reduction in transit time) for landside only would lead to any change in safety stock or pipeline inventory costs.[1] Its hard to imagine that this would make much difference on the highway side but could assuming step function response. It would be particularly interesting to look at this from the perspective of attracting trans-load business (a positive economic effect from the investments as opposed to just avoiding the negative).

[1] Safety stocks are established as a hedge against uncertainties in transit times and against potential errors in sales forecasts over the lead time from when the goods were ordered. Pipeline inventory costs are carrying costs for the value of the goods in the shipping pipeline.

The dray cost and service from Tacoma to Puyallup/Sumner is already the best in the US. Some improvement to the Seattle to Puyallup/Sumner corridor might help attract some more trans-loading to the area.

- Why is there no trans-loading option through Canadian ports?

  The only way this can be done without paying Canadian import duties is to not inventory the stuff, not perform any value-added processing, and directly trans-load to domestic vehicles in a bonded warehouse at the port. Such warehouses cannot connect to information systems of the importers. Using one of the professional de-consolidators like Hudd or American Port Services is impossible. So, as a practical matter, consolidation – de-consolidation to US markets through Canadian ports means paying double import duties. So no one does it. Vancouver is an excellent port for de-consolidation, and if the Canadian tax laws were to change, I think it would have a big effect.

- We have some concern about the re-positioning cost assumptions (see page 14-15). There may be cargo going to PNW to balance backhauls loads both by rail and by ocean to reduce the impact of re-positioning cost. We are not sure of the dynamics of this well enough to comment but would suspect some of the ports will bring this up.

  There are no re-positioning costs in the model whatsoever.

- On page 12, the report states that "direct-shipping supply chains may be adjusted to shift imports previously routed via the Puget Sound ports to either California or Canadian ports." It would be interesting to know in what proportion to Canada and California.

  To Chicago, Memphis and some northeastern points, the IPI rate via Prince Rupert is competitive with the rate via LA-LB. No service to Minneapolis, KC or Texas. Prince Rupert is not competitive to the southeast. From Vancouver, IPI rates are very competitive to Minneapolis, somewhat competitive to Chicago, Memphis and eastern points, not competitive to the southeast. the shares to Canada and California ports of traffic to the Upper Midwest and Eastern US in real life would depend more on port contracts and capacities rather than small differences in landside rate economics. Overall, California ports would get the traffic to South Central and Southeastern points and get more traffic to Central and Eastern points than the Canadian ports.

- On page 13 the report states that "trans-loading shipments have an economic incentive to re-route via California for even very small fees." Is that because Canadian ports do not have good trans-load facilities?

  See answer above.

- To what extent was Prince Rupert analyzed for the direct shipping by rail?

  Fully. CN's actual rates for Cosco were used.