



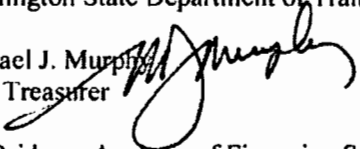
MICHAEL J. MURPHY
State Treasurer

State of Washington
Office of the Treasurer

MEMORANDUM

July 22, 2008

To: Paula Hammond, Secretary
✓ Amy Arnis, Assistant Secretary, Chief Financial Officer, Strategic Planning & Finance
Washington State Department of Transportation

From: Michael J. Murphy, State Treasurer 

Re: 520 Bridge – Analysis of Financing Scenarios

Deputy Treasurer Rick Patrick has briefed me on the recent analysis of financing scenarios for the 520 bridge WSDOT requested. I am writing to convey those results to you and because, as I'm sure you know, there are policy implications behind the numbers that I believe are important to identify and discuss.

Credit and Policy Considerations

The current analysis assumes the SR-520 project is financed with General Obligation Motor Vehicle Fuel Tax Bonds ("GO MVFT"). GO MVFT bonds are secured by a full faith and credit pledge of the state general fund, in addition to the pledge of motor vehicle fuel taxes. Any rating analyst reviewing the State credit will add outstanding SR-520 debt to the total amount of state debt outstanding. From a credit perspective, this project will be one of the largest infrastructure projects on the State's balance sheet. While the debt associated with the SR-520 project is expected to be self-supporting and thus revenue neutral to the general fund, the rating agencies will factor the full debt issuance into the State's debt ratios, increasing debt per capita and debt to assessed value significantly. Current state debt service outstanding (principal and interest) on GO bonds is \$22 billion. In some scenarios the 520 project would increase the amount outstanding by nearly 36%, or over \$7 billion. Per capita debt would increase by over \$500 per resident to nearly \$2,500.

If managed prudently, the proposed project is not expected to detrimentally impact the State's historically high credit ratings. That being said, the rating agencies have continued to note the State's high debt ratios relative to comparable state issuers throughout the Country. We discuss below various strategies available to mitigate risk to the general fund and improve budgetary predictability.

Early Tolling - Early tolling helps the overall financing of the bridge by making funds available to make debt service payments during the construction period. That is, early tolling reduces the need



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for payment of "interest on interest" during the construction period, thereby allowing for financing with less expensive debt structures. Moreover, early tolling reduces the risk to the state by creating a history of revenues available from actual toll collections before any debt is even issued, providing a historical context for budgeting. If successful, early tolling will give the rating agencies comfort that the State's general fund will not be overly leveraged by the added debt. The proposed financing scenarios include either early tolling on 520 alone, or no early tolling. See the arguments below on the importance of tolling both bridges, even at the pre-completion stages.

Tolling Both Bridges – Tolling both bridges facilitates revenue stability and decreases the risk that revenues might be delayed if the project is not completed on time ("competition risk"). The existence of a nearby non-tolled "competitor" roadway or bridge (such as I-90) has an enormous impact on the successful operation of a tolled facility. Such non-tolled facilities draw traffic away from the tolled facility and impact the revenue collections. Current studies indicate that traffic diversion is significantly increased if the State tolls only SR-520 and not I-90 as well. Without tolling both bridges the state risks traffic diversion and volatility that increase the risk of default – something the State of Washington *must* avoid; the State has never defaulted on a bond.

Investment Grade Toll Study – In order to establish credible revenue projections, the State must get an investment grade toll study that is based on regional factors, similar projects and economic fundamentals. After establishing the base case scenario, it is equally crucial to hold the projections to rigorous stress testing. Rating agencies and governmental toll programs such as TIFIA (Transportation Infrastructure Finance and Innovation Act) often stress projections up to 30% to ensure the project's ability to withstand periods of economic volatility. The stress tests should include an assessment of the economic and political implications of raising tolls to meet under-performing revenue projections. Due to elasticity, there is a point at which raising tolls could result in decreased driving and thus reduce revenues further. In addition, increasing tolls beyond a certain level could lead to political pressure from transportation interests and the traveling public.

Additional Protections – Coverage Factors – The financing structure is currently modeled so that net toll revenues exceed projected debt service by 25%; this coverage factor adds cushion to the security pledge on the bonds. Capital markets do not *require* a coverage factor for State of Washington General Obligation Bonds because, by definition, they carry the full faith and credit pledge. However, coverage is included in the current financial modeling in order to mitigate any impact on the State's general fund caused by lower than expected toll revenues. The financial model assumes that during the construction period, net toll revenues not needed to pay debt service (the coverage) flow back into the project. This use of coverage means that such monies are necessary for project completion and will not achieve the 1.25 times coverage in those early years.

Credit analysts will not recognize this structure as a true coverage cushion for the general fund. If toll revenues do not meet projections or are more volatile than projected, the general fund would be required to make debt service payments. At its most extreme, drawing general fund monies to pay debt service on the SR-520 bonds could restrict state general obligation debt issuance for other state projects, possibly resulting in their postponement.

The State may consider implementing a cash trap (providing a cash reserve) to provide increased protection from toll revenue volatility. A cash trap would essentially mean that if coverage declined below a certain point, the coverage factor would be set-aside as added cushion and the coverage generated would not be available to fund projects until the following year. We do not believe this would require increased debt issuance, *except for the first year in which coverage was assumed to fund projects, as bonds would be issued in that year instead*. Alternatively, the State may consider increasing the coverage cushion to protect the general fund, although this option is most effective if used in conjunction with a cash trap.

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The State would be well-served in preparing contingency plans to address any shortfall in toll revenues, including identification of future projects that could be deferred if the State needs to make debt service payments on the SR-520 project bonds.

Financing Assumptions and Considerations

Term of Bonds – The analysis assumes that all revenue bonds for the program are issued for 30-year terms. This differs from the financing used for the Tacoma Narrows Bridge where bonds issued in the later years had shorter terms, thereby allowing all debt service requirements to end at the same time. The current proposed financing would significantly change if this project were similarly structured with 30 year bonding ending 30 years from the first issuance date. While this is probably not realistic given the lengthy construction time, we should ask, *Do we really want debt service continuing through 2046?* The answer is probably somewhere in between.

Capital Appreciation Bonds – The current analysis is expected to result in the lowest borrowing cost to the State as it leverages the State's high credit ratings and strong general fund pledge. However, the financing structure relies upon a significant level of capital appreciation bonds ("CABs"). CABs provide the benefit of reducing the upfront unfunded portion of the project. However, they are more expensive in the long run, cannot be paid off early or refunded and could decrease the State's financial flexibility in the future. Early tolling of both bridges could reduce the use of CABs.

Federal Funding – The analysis assumes that federal funds will continue to be available. Should they fall short, risk is borne by other projects.

The Questions and Answers

While the attached analyses answer the questions posed, it is important to note answers to questions one through three, have little to no room for error associated with the construction costs and timeline as well as the toll traffic and revenue projections. This is particularly risky when pre-completion tolling is excluded and no investment grade toll study has been completed. One could compare the discussion to how fast and low can you fly a 737 before you hit the ground.

Assume the two bridge Scenario 3096-D (Case 7) for the following questions.

(1) By what factor/percentage could net revenues available for debt service -- both pre- and post-completion -- be reduced and still result in a fully funded project?

Answer: Net toll revenues could be reduced by 12%. See Case 9.

(2) If we take away pre-completion tolling on SR 520, by what factor/percentage could net revenues available for debt service be reduced and still result in a fully funded project?

Answer: They couldn't. Toll revenues would need to be increased by 2% or you would need to increase other funding by \$50 million to fund the project. See Case 10.

(3) Now, if instead of asking the question of how much the toll revenue could be reduced, what if we stuck with the scenario D revenue. Could we reduce the net revenue by 3 million per year beginning with the pre-completion tolling of SR 520, and still fully fund the project.

Yes, net toll reductions in Question 1 (above) exceeded \$3 million in every year. See Case 11.

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(4) Taking a more pessimistic view of interest rates (e.g., +100 BP on current assumptions -- what would be your recommendation on this sensitivity test), can we still fully fund the project assuming SR 520 pre-completion tolling? If yes, can you describe the remaining cushion in terms of either the factor of question (1) or the additional capacity of question (3)? If not, describe the shortfall.

A sensitivity test of interest rates being 100 basis points higher showed that toll scenario 3096D could no longer fully fund the project. Net toll revenues would need to be increased by 2% to fully fund construction. See Case 12.

(5) If the toll revenues and future federal funds were treated as two separate financings with separate, case-specific assumptions, would that improve the funding picture? Even if it didn't, would you advise analyzing the financing in this way to better tailor assumptions and make the results more transparent?

Separating out toll revenues from federal revenues would not improve the funding picture, and may make it slightly worse. However, if this breakout would improve transparency or would be helpful with respect to communication, please let us know and we would be happy to change the way the analysis is run and communicated.

I would like to stress once again, the importance of an investment-grade traffic study and pre-completion tolling when bringing the financing for this project to market, both for the project itself and for the wider interests of the state.

Please contact Rick Patrick if you would like to arrange for further analyses. And, of course, my staff and I are always available to discuss this project with you.

Enc: July 21, 2008 analysis of 520 financing scenarios (Cases 9 – 12)

Summary of Financial Results
State Route 520
July 21, 2008

Case	Description	Total Construction Costs	Construction Costs after Sales		Ending FY2017 Balance	Present Value Net Debt Service***	Bond Proceeds		
			Costs	Tax Deferral			Zero Coupon	Current Interest	Total
3096D (2)	3096D with 12% proportional reduction in net toll revenues	#9 4,086.1m	3,831.0m	-	2,040.6m	545.6m*	1,958.4m	2,504.0m	
3096D (3)	3096D without early tolling	#10 4,086.1m	3,831.0m	(\$50.9m)	2,172.2m	1,507.1m*	1,060.6m	2,567.8m	
3096D (4)	3096D with 2% increase in net toll revenues and without early tolling	#11 4,086.1m	3,831.0m	-	2,204.3m	1,518.5m*	1,097.5m	2,616.0m	
3096D (5)	3096D with 2% increase in net toll revenues - Interest rates increased by 1%	#12 4,086.1m	3,831.0m	-	2,322.9m	534.6m**	1,945.4m	2,480.0m	

* Includes Federally Funded Bond Proceeds of \$319 million

** Includes Federally Funded Bond Proceeds of \$282 million