



**Internal Refinance  
Opportunities  
for the  
Tacoma Narrows  
Bridge**

**Final Report**

**Joint Transportation Committee**

**January 13, 2014**

## Study Background333

Recent increases in the cost of tolls for the Tacoma Narrows Bridge (TNB), and the likelihood that additional toll increases will be needed in the coming years in order to meet bond payment requirements, led legislators to investigate what might be done to reduce future toll rate increases.

With current interest rates at historic lows, some have suggested refinancing the TNB debt in order to lower debt service payments. However, the Office of the State Treasurer (OST) reports that conventional refinancing is not feasible for the majority of bonds issued to finance the bridge, due to the type of bonds that were issued. As a result, refinancing is not an option to reduce future toll rate increases.

Therefore, the Legislature decided to evaluate other options to reduce the burden of toll increases on users of the Tacoma Narrows Bridge. ESSB 5024, Section 204(4) directed the Joint Transportation Committee (JTC) to convene a work group to identify and evaluate internal refinance opportunities for the Tacoma Narrows Bridge. The study was conducted within existing funds by a staff work group, including staff from the Office of Financial Management, the Transportation Commission, the Department of Transportation, the Office of the State Treasurer, and the legislative Transportation Committees. The JTC will issue a report of its findings to the House of Representatives and the Senate Transportation Committees by December 31, 2013.

The term “internal refinance opportunities” in the proviso directing this study refers to changes that do not require the State Treasurer to re-issue debt. This may include identifying non-toll revenue (including gas tax dollars) to help pay costs, reducing costs, and other potential alternatives.

### **Sources of information**

A number of resources were used to compile the following summary of the Tacoma Narrows Bridge, its construction, finance, operations and toll rate history, and to create and evaluate the scenarios’ impacts on potential toll rates. Many thanks to the staff from the Washington State Department of Transportation, the Office of the State Treasurer, and the Washington State Transportation Commission, for sharing their excellent summaries, presentations, reports, spreadsheets, memos, work products and opinions, all of which were considered and used to write this report.

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# Executive Summary

## Study Process

The 2013 Legislature directed the Joint Transportation Committee (JTC) to convene a staff work group to identify and evaluate internal refinance opportunities for the Tacoma Narrows Bridge (ESSB 5024, Sec 204(4)). The study was to be completed within existing funds.

*“(4) The joint transportation committee shall convene a work group to identify and evaluate internal refinance opportunities for the Tacoma Narrows bridge. The study must include a staff work group, including staff from the office of financial management, the transportation commission, the department of transportation, the office of the state treasurer, and the legislative transportation committees. The joint transportation committee shall issue a report of its findings to the house of representatives and the senate transportation committees by December 31, 2013.”*

JTC staff prepared a study workplan outlining the study (See Appendix pp 68-69) which was approved by the JTC in May. The approved workplan defined “internal refinance opportunities” as changes that do not require the State Treasurer to re-issue debt, such as identifying non-toll revenue to help defray costs, reducing costs paid by tolls, or other potential alternatives. The workplan called for the staff workgroup to meet three times to review relevant studies and reports, identify potential alternatives, and evaluate their potential to reduce toll increases.

The first meeting of the staff workgroup was July 9, 2013. The study was introduced, including study tasks and schedule. The workgroup discussed a draft white paper outlining the history of the project and its financing and tolling. Workgroup members discussed the development of a scenario estimating tool that WSDOT staff would produce, in conjunction with JTC staff and other workgroup members.

Staff made an initial study presentation focused on the history of the facility and its financing and tolling to the JTC at the July 24, 2013, meeting in Chehalis. The presentation can be found in the Appendix pp 70-73.

On August 5, 2013, WSDOT unveiled the draft scenario estimating tool to the workgroup members, who discussed its components, WSDOT’s assumptions regarding cost and revenue estimates, changes to improve the tool, and caveats that should be stated when the tool results are described.

An August 20, 2013, meeting of the workgroup again focused on the updated scenario estimating tool. WSDOT staff used the model to illustrate its various utilities, and to show how it could develop estimated toll impacts of various expenditure reduction and additional revenue scenarios.

Two meetings were held on September 4, 2013. A morning meeting focused on potential toll operations cost savings, and the operations and maintenance costs which account for 16% of the facility costs. In the afternoon, the workgroup reviewed and manipulated the updated scenario estimating tool, discussed toll caveats and assumptions, potential scenarios to evaluate, and potential effects of a loan from the motor vehicle account on other programs and projects funded from that account. WSDOT agreed to update the tool in accordance with the official September transportation revenue forecast.

A final workgroup meeting was held on September 26, 2013, to review the draft presentation to the Joint Transportation Committee scheduled for October 9, 2013, and to discuss potential impacts on other tolled facilities in the state.

On October 9, 2013, JTC staff presented the study results to the JTC in Tacoma. Those results illustrated that under the current traffic forecast, a blended toll is not likely to exceed \$6.00 through 2030, and that even if traffic fell every year by 0.8% and inflation is double what's currently expected in the official TNB finance plan, the maximum blended toll is not likely to exceed \$9.00. A number of scenarios were presented and discussed. (The presentation can be found in the Appendix, pp 74-79.)

## History of the Tacoma Narrows Bridge Financing

In 1993, the Legislature passed the Public-Private Initiatives in Transportation Act (PPI) (RCW 47.46) to create a legal framework for transportation public-private partnerships (P3s). One of the explicit goals of the 1993 law was to build or operate transportation projects without requiring state tax dollars.

The Tacoma Narrows Bridge project was the only project of six to advance from the original implementation of RCW 47.46. Although ultimately a publicly-financed project, its financial structure reflects promises made by the P3 statute and program, namely, the ability to construct projects with few if any tax dollars.

Neither tax revenues nor toll revenues were available to pay debt service during the bridge's five-year construction period (2002 – 2007). This contributed to the decision by the State Finance Committee to finance construction largely with zero coupon bonds. Such bonds pay interest and principal to bondholders only on their maturity – not throughout the life of the bond. The upside to zero coupon bonds was that no revenue was needed for debt service during construction. The downside was that they were relatively costly, non-callable, and could not be refinanced when interest rates dropped.

The assumptions in the original 2002 bridge finance plan drove the debt structure and bond sales to finance the bridge. Both toll rates and net revenues available for debt service payments were assumed to increase over time. The 2002 plan called for tolls to start at \$3.00, and increase by \$1.00 every three years until a maximum of \$6.00 was reached in 2016. Combined with projected traffic levels, the 2002 plan showed that at these rates, tolls were sufficient to pay debt service, sales tax, insurance, and maintenance and operations for the bridge through 2030, when the debt is paid off and tolls are removed.

Actual bridge construction and finance costs were lower than projected in 2002, saving nearly \$300 million in debt service costs through 2030.

- **Construction costs.** The completed project came in \$43.1 million under budget -- \$717.3 million vs. \$760.4 million.
- **Interest rates.** The average bond interest rate was less than projected -- 4.93% vs. 5.85%.

A combination of factors led to lower revenue collections than projected once the bridge opened.

- **Lower tolls than forecasted.** Since opening day, tolls have been consistently below the level assumed in the 2002 finance plan.
- **Lower traffic than forecasted.** Bridge traffic has been consistently below the levels assumed in the 2002 finance plan.

Several steps have been taken to reduce bridge operating costs from original estimates, and to identify additional revenue sources, in an effort to relieve toll payer burden.

- **Operating and maintenance costs (O&M)** through June, 2013 are 17.4% lower than projected in 2002. This is a combination of lower WSDOT, maintenance, enforcement and insurance costs (45% lower), and higher toll vendor costs (29% higher).
- **New revenues sources.** The Legislature identified additional sources of revenues to offset some early costs, including transfers from other accounts, transponder sales, fines and fees and other sources. Through June, 2013, tolls paid 92% of costs compared with a 2002 projection of 99.6%. Today tolls pay 100% of O&M costs, as required by law (RCW 47.46.100), although some WSDOT oversight activities continue to be funded by other fund sources.
- **Refinancing.** The Office of the State Treasurer refinanced the bonds that could reasonably be refinanced, saving \$8.6 million in debt service over the life of the bonds.

Debt service costs will grow from \$45 million in FY 2013, to \$70 million in FY 2017, peaking at about \$86 million in FY 2029.

Exhibit 1 shows the operating and capital sources and uses of funds for the TNB through June 30, 2013, comparing what was projected in the 2002 finance plan to actuals.

Exhibit 1

<b>Tacoma Narrows Bridge</b>		
<b>Operating and Capital Sources and Uses of Funds</b>		
<i>nominal dollars in millions</i>		
	<b>July 2013</b>	<b>July 2002</b>
	<b>Financial Plan</b>	<b>Financial Plan</b>
	<i>Through June 30, 2013</i>	
<b>Sources of Funds</b>		
Toll Revenue	\$266.5	\$366.1
Transponder Sales	3.3	-
Fines and Fees	7.3	-
Miscellaneous Revenue	4.1	-
Gross Bond Proceeds	684.2	726.0
Transfers from Motor Vehicle Account (Capital)	39.0	39.0
Expenditures from Motor Vehicle Account	11.0	11.0
Loan from Motor Vehicle Account	5.3	-
Transfers from Other Accounts	1.3	-
Toll Revenue Used for Deferred Sales Tax	-	-
Interest Earnings	10.2	12.1
Capitalized Interest	(4.4)	(4.8)
<b>Total Sources of Funds</b>	<b>\$1,027.8</b>	<b>\$1,149.4</b>
Debt Service	(\$207.7)	(\$262.3)
<b>Remaining Funds</b>	<b>\$820.1</b>	<b>\$887.2</b>
<b>Uses of Funds</b>		
Cost of Bond Issuance	\$6.4	\$7.6
WSDOT Management Costs	18.2	21.9
Toll Systems Operations (Vendor Contract)	42.8	33.2
Insurance	10.1	23.0
Enforcement and Security	1.4	5.1
Maintenance	1.2	6.3
Capital Construction in TNB Account	717.3	760.4
Capital Construction in MVA Account	11.0	11.0
Deferred Sales Tax	-	9.0
R & R Costs	0.15	0.8
<b>Total Use of Funds</b>	<b>\$808.7</b>	<b>\$878.3</b>
<b>Ending Balance June 2013</b>	<b>\$11.4</b>	<b>\$8.9</b>

Source: WSDOT

## The Scenario Estimating Tool Developed for this Study

Working with JTC and the staff workgroup, WSDOT staff developed a scenario estimating tool to evaluate a number of “what if” scenarios and their potential impact on toll rates through 2030 and beyond. It is not a rate-setting tool, but allows policy makers to evaluate the relative scale of impacts of various scenarios.

Key elements of the tool include the following, all of which can be modified to evaluate the impact of changes on potential toll rates:

- traffic
- revenues
- expenses
- the sufficient minimum balance required by the Transportation Commission, and
- the blended toll rate.

Traffic estimates. The tool allows the user to evaluate any number of traffic scenarios. For purposes of this study, three traffic scenarios were evaluated:

- the official traffic forecast, based on the official September, 2013 transportation revenue forecast;
- a zero-growth scenario, where traffic is flat through 2030; and
- a pessimistic scenario, where is assumed to fall every year by 0.8%. This -0.8% reflects the average traffic growth on the bridge during the first five years of operation, a period that includes a significant economic recession.

Caveats. In evaluating results of the scenario estimating tool, it is important to keep in mind the following caveats and assumptions:

- the tool does not adjust for elasticity (traffic is not adjusted due to higher or lower toll rates);
- expenses increase at the full inflation rate, not half as in the current TNB financial plan;
- the toll rate is expressed as a blended rate (a weighted average of all toll rates);
- analysis begins with FY 2016 rates, because the Transportation Commission has already set toll rates for FY 2014 and FY 2015; and
- results are rough estimates, suggesting general trends but requiring further analysis for policy decisions.

While a very useful tool without which the study could not have been completed, the scenario estimating tool is not a complex model. Furthermore, it was used to look 17 years into the future, so its results are speculative. By contrast, the Transportation Commission sets tolls one to two years in advance, so that rates are responsive to dynamic economic factors. This allows the Commission to achieve more accuracy and precision when setting toll rates.

## Summary of Scenarios

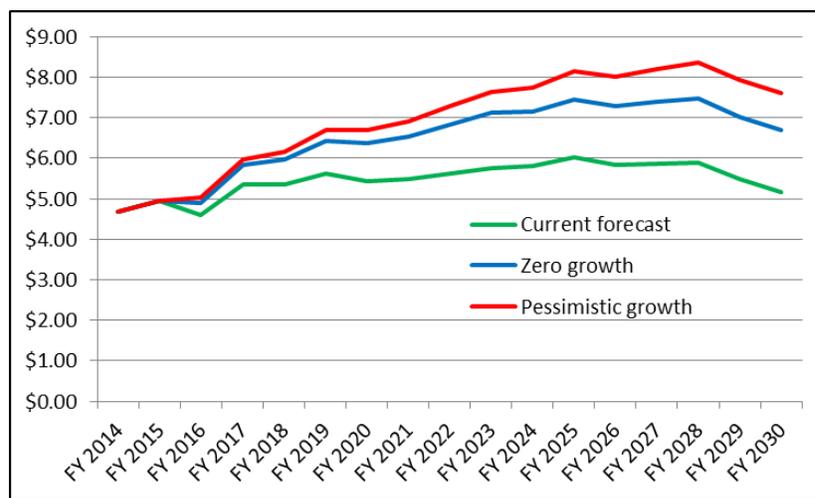
JTC staff used the scenario estimating tool to evaluate a base case and seven scenarios under the three traffic scenarios, as described below.

**Base case.** The base case reflects a current-law scenario. It illustrates potential toll rates under the three traffic scenarios, assuming tolls pay all costs as in current law, and costs are inflated by the full inflation rate.

**Results:** Through 2030, under the current traffic forecast, the blended toll is not likely to exceed \$6.00. In the pessimistic scenario, even if traffic fell every year by 0.8% and inflation is double the rate in the current TNB finance plan, the maximum blended toll is not likely to reach \$9.00.

### Base case -- Potential estimated blended toll rates

(Full IPD, tolls pay costs as in current law, three traffic scenarios)



- Scenario 1.** A non-toll revenue source pays the deferred construction sales tax.
- Scenario 2.** Effect on tolls of a 5% cut in toll operations and vendor costs.
- Scenario 3.** Effect on tolls if a non-toll revenue source pays preservation costs for the new bridge.
- Scenario 4.** Tolls only pay debt service – effect on tolls and the revenue source that pays the rest of the facility’s costs. Evaluated both as a “gift” from the other revenue source, and as a loan to be repaid by toll payers beginning in 2031.
- Scenario 5.** Loan to keep blended toll below \$6.00, with loan repaid by toll payers beginning in 2031.
- Scenario 6.** Loan to offset the effect of increasing debt service, with loan repaid by toll payers beginning in 2031.
- Scenario 7.** “Worst case” scenario: Is it likely tolls will reach double digits?

The table below summarizes the results of the seven scenarios. It assumes the motor vehicle account is the non-toll revenue source. In all cases, it is the responsibility of the Transportation Commission to set toll rates.

Scenario		Potential impact on tolls (reduction from base case)	Potential impact on motor vehicle account	Other considerations
1	The \$58 million deferred sales tax is repaid by non-toll revenues, FY 2019-2028	35 – 45 cents	\$58 million, or about \$11 million a biennium	SR 520 deferred sales tax is \$144 million, FY 2022 – FY 2031. If also repaid by motor vehicle account, costs \$201 million, or \$30 - \$40 m/biennium
2	5% cut in toll vendor and toll operations budget	5 cents		Already enacted in FY 2013-15 budget
3	Non-toll revenues pay preservation costs of \$26 million through 2030	10 - 15 cents on average	\$26 million	Users of other tolled facilities will want similar treatment.
4 “gift”	Tolls only pay debt service – gift from motor vehicle account pays all other costs	\$1.10 - \$1.45 on average, FY 2016 - 2030	\$276 million FY 2016 – 2030, averaging \$30 - \$42 million/biennium	<ul style="list-style-type: none"> <li>• Users of other tolled facilities will want similar treatment.</li> <li>• Impact on other projects and programs funded from the motor vehicle account</li> </ul>
4 “loan”	Tolls only pay debt service; loan from motor vehicle account pays other costs; repayment toll paid 2031-2035	Same savings as above; repayment toll averages \$3.70 - \$5.75	\$276 million FY 2016 – 2030, avg \$30 - \$42 million/biennium repaid beginning 2031	<ul style="list-style-type: none"> <li>• Users of other tolled facilities will want similar treatment</li> <li>• Impact on other projects and programs funded from the motor vehicle account</li> </ul>
5 “loan”	Maximum \$6.00 toll; loan from motor vehicle account; repayment toll paid 2031 - 2035	80 cents - \$1.30 average savings; repayment toll averages \$3.05 - \$5.00	\$161 - \$242 million  Repaid beginning 2031	<ul style="list-style-type: none"> <li>• Affects only zero growth and pessimistic traffic scenarios because tolls don’t exceed \$6.00 in current traffic forecast</li> <li>• Users of other tolled facilities will want similar treatment</li> <li>• Impact on other projects and programs funded from the motor vehicle account</li> </ul>
6 “loan”	Level debt service beginning in FY 2016; loan from motor vehicle account; repayment toll paid 2031 - 2035	\$1.00 - \$1.30 average savings; repayment toll averages \$3.10 - \$4.75	\$231 million  Repaid beginning 2031	<ul style="list-style-type: none"> <li>• Loan from motor vehicle account would offset the effect of escalating debt service</li> <li>• Impact on other projects and programs funded from the motor vehicle account</li> </ul>
7	Likelihood of double digit tolls	Not likely to reach double digit tolls	NA	Extremely unlikely scenarios may result in blended toll slightly above \$10 in the last 1-3 years of debt service payment: <ul style="list-style-type: none"> <li>• traffic falling 2% every year; or</li> <li>• 9% annual inflation; or</li> <li>• 1.5% annual traffic decline plus 5% annual inflation</li> </ul>

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# **Tacoma Narrows Bridge Project Background and History**

## Tacoma Narrows Bridge Project History

### **Project genesis, 1993**

In 1993, the Legislature passed the Public-Private Initiatives in Transportation Act (PPI) (HB 1006, codified as RCW 47.46) to create a legal framework for transportation public-private partnerships (P3s). The 1993 law authorized the Secretary of Transportation to select up to six demonstration projects using the private sector to undertake projects on behalf of the WSDOT.

One of the explicit goals of the 1993 law was to build or operate transportation projects without requiring state tax dollars. The intent language of SHB 1006 as adopted by the Legislature said “such initiatives will supplement state transportation revenues, allowing the state to use its limited resources for other needed projects.”

In 1994, WSDOT issued a Request for Proposals inviting private firms to submit proposed projects for consideration. Fourteen proposals were submitted; the Secretary selected and the Transportation Commission approved six for further consideration. Over the next few years, five projects were dropped from consideration due to funding concerns, legislative opposition, or lack of public support. The last project was a new SR 16 Tacoma Narrows Bridge. In 1997, WSDOT selected a private consortium led by Bechtel Infrastructure and Kiewit Pacific to construct and operate the bridge as a P3. Additional information on Washington P3s can be found at <http://www.wsdot.wa.gov/Funding/Partners/History.htm>.

### **November 1998 election**

Two measures on the November ballot affected the Tacoma Narrows Bridge project: a public advisory election on building the new bridge as a public-private partnership, and a referendum authorizing \$1.9 billion in motor vehicle fuel tax general obligation bonds.

An August 24, 1998, *Seattle Times* story by Jim Lynch describes some of the rationale supporting private financing.

*“The ballot measure will ask whether a private company should finance the bridge construction with corporate bonds that would be paid back with toll fees. The toll would start no higher than \$3 per car but could increase over time.*

*DOT officials call it the quickest and most efficient way to solve the traffic crisis on the bridge, noting that even if voters pass the Referendum 49 transportation-spending plan in November, there still won't be nearly enough public money available to tackle the state's estimated \$30 billion list of roadway improvements - especially pricey projects like this bridge.*

*Officials also say that letting a company build, maintain, operate and take responsibility for the bridge is a perfect solution for the times, considering the Legislature's mandate to shrink government and turn over more services to the private sector.*

*It also is billed as a creative way to avoid forming a toll-bridge bureaucracy within state government and a massive public debt.”*

On November 3, 1998, the TNB public advisory election was held in the seven counties served by the bridge (Clallam, Jefferson, Kitsap, and Thurston counties, and portions of King, Mason, and Pierce counties), asking if a second bridge should be built in order to reduce significant daily congestion, and improve safety. The

ballot measure was approved by more than 53 percent of voters in the seven counties; it was approved in King, Mason, Pierce and Thurston counties, and rejected in Clallam, Jefferson and Kitsap counties.

The ballot measure asked if the TNB should be modified and a parallel bridge constructed, financed by tolls on bridge traffic and operated as a public-private partnership. The measure stipulated that toll revenues would be used to finance the improvements to the existing bridge, a new bridge parallel to the existing bridge, and a toll plaza located on the west side of the Narrows. It also stipulated the following:

- the initial round-trip toll was not to exceed \$3.00 and would be charged when the new bridge is open to traffic;
- the round trip toll may be adjusted at any time after the new bridge is open, consistent with limits imposed by state law;
- toll revenues would pay for development, financing, design, construction, maintenance and operations; and
- tolls would be collected until all bond retirement and interest has been paid (RCW 47.46.140).

Referendum 49 bonds. Voters were also asked on November 3, 1998, to approve Referendum 49 (R-49), (Chapter 321, Laws of 1998), authorizing \$1.9 billion in motor vehicle fuel tax general obligation bonds “to provide funds necessary for the location, design, right of way, and construction of state and local highway improvements” to be deposited in the motor vehicle account. The bonds issued under R-49 are “first payable from the proceeds of the state excise taxes on motor vehicle and special fuels.” R-49 was approved in all 39 counties, by a vote of 57% - 43%.

### **Project is approved as P3**

Following the November vote, Secretary of Transportation Sid Morrison approved the TNB project to move forward as a P3; the Transportation Commission unanimously endorsed his decision. The Legislature approved a \$50 million state contribution to the project during the 1999 legislative session. In June 1999, WSDOT entered into an agreement with United Infrastructure Washington, Inc. (UIW) to finance, develop, build and operate the new SR 16 bridge across the Tacoma Narrows. UIW was granted the “exclusive right to impose tolls” and the “exclusive right to establish, modify and adjust the rate of tolls.” In 2000, Gov. Gary Locke approved \$800 million in privately-issued tax exempt financing for the project.

### **Supreme Court decision**

Project opponents said the project was unconstitutional on several issues. Fourteen lawsuits were filed by Citizens Against Tolls, one private citizen, and the Peninsula Neighborhood Association seeking to force the state to reduce project costs, reduce or eliminate tolls, and/or halt the project altogether.

On November 9, 2000, the Washington State Supreme Court issued a unanimous decision saying the agreement between WSDOT and UIW violated state law. Violations included allowing tolls on the existing bridge, allowing a private entity to set tolls instead of the Transportation Commission, and allowing tolls to be used for the maintenance and operation costs of the existing bridge (142 Wn.2d 328). This ruling effectively halted the project.

During the 2001 regular legislative session and special sessions, WSDOT and UIW sought changes in the statutes that conflicted with their agreement; no such legislation was approved. On December 27, 2001, WSDOT and UIW reached an agreement that committed each party to work toward amending the existing development agreement to incorporate public financing for the project, should legislation be enacted that called for public financing.

## **2002 Project Financing, and Initial Financing Assumptions**

Several factors contributed to the current financing and toll structure for the bridge. Public financing, the completed project coming in under budget, and lower-than-anticipated bond interest rates reduced the projected debt service and resulting pressure on tolls. However, the type of bonds that the State Finance Committee issued severely limited refinancing opportunities to lower debt service payments when interest rates fell.

### **Public vs. private financing**

A number of legislators objected to the private financing of a public facility, as had been proposed in the agreement between WSDOT and UIW. State Treasurer Michael Murphy suggested at least \$400 million could be saved by having the State issue public sector bonds rather than using private P3 financing.

Legislation redirecting the project and requiring public financing for design and construction was approved by the Legislature in March 2002, and signed by Governor Locke (EHB 2723, Chapter 114, Laws of 2002).

WSDOT then revised and finalized agreements with UIW and Tacoma Narrows Constructors, Inc. (TNC), a joint venture of Bechtel Infrastructure Corporation and Kiewit Pacific Company and the design-build contractor for the project. WSDOT took over management of the construction and operation of the project, reimbursing UIW for their development efforts to-date. These new agreements accommodated the change in financing and completed remaining development activities for the project, which broke ground in October 2002.

### **Project financed with R-49 gas tax bonds**

The project was estimated to cost \$839 million. Legislature appropriated \$800 million of the existing R-49 bond authorization for the TNB project. In addition, the Legislature authorized a \$39 million transfer from the Motor Vehicle Account to the new Tacoma Narrows Toll Bridge Account to cover the balance of the estimated costs.

The R-49 bonds were voter-approved, tax-exempt bonds backed by the Motor Vehicle Account (fuel tax) and the full faith and credit of the state. Fuel tax dollars were pledged to the bond holders – not toll revenues. However, the 2002 legislation (EHB 2723) required toll revenues to reimburse the Motor Vehicle Account for debt service, and to pay annual operating and maintenance expenses and insurance costs of the new toll bridge.

### **2002 finance plan calls for \$3.00 initial toll, increasing to \$6.00**

WSDOT developed a finance plan for the new bridge in 2002, which included tolls to be collected on the new bridge. The 2002 plan assumed an initial toll to be \$3.00 at the time of bridge opening in 2007, with future \$1.00 increases in 2010, 2013, and 2016. The 2002 plan showed no increases beyond \$6.00.

## **Construction funding and zero coupon bonds**

The State Finance Committee, acting through the Office of the State Treasurer (OST), had to find a financing tool to pay construction costs during the five-year period of design and construction. At issue was the availability of revenues to pay debt service. Since state law prohibited tolls on the existing bridge to finance the new bridge, other means had to be identified to finance debt service before the new bridge opened to toll-paying traffic in 2007. Working with the OST, the Legislature evaluated a number of financing options. Worksheets used in 2002 to discuss these options with legislators are included in the Appendix pp 80-82.

### **One option required state appropriations to pay debt service during construction**

One financing option called for level debt service of approximately \$51 million/year throughout the life of the debt. This option required an up-front appropriation of \$118 million in state tax dollars to pay debt service during construction. This \$118 million would have been paid back by tolls during the tolling period. (See Appendix, p. 81, for illustration of this option, listed as Option A.)

The proposed toll schedule for this option assumed a \$3.00 toll from 2007-2010, gradually growing to \$4.75 in 2017, and maxing out at \$5.00 in 2022. Tolls would most likely have been able to come off before 2029. *NOTE: These toll levels were estimates used to discuss potential financing options with legislators during the 2002 legislative session. They were not the result of detailed work on the TNB financial plan, which occurred after the conclusion of the 2002 legislative session, and which included much more detailed and rigorous analysis. As a result, the official finance plan adopted in 2002 showed tolls maxing out at \$6.00 rather than \$5.00.*

This option was not selected to finance the bridge. The Legislature decided not to appropriate state tax dollars to cover debt service costs during construction, due in part to limited fuel tax funds, a huge backlog of projects that could be funded, and the original P3 promise that the bridge could be financed without state tax dollars.

### **Enacted financing required no appropriations for debt service during construction**

With no toll revenue or tax dollars to pay debt service during construction, the majority of R-49 bonds issued to finance construction were zero coupon bonds. Zero coupon bonds are often used when a project expects low revenue in the early, start-up phases, and growing revenue later to make steeper debt payments. The upside of zero coupon bonds is they pay interest and principal only on the final maturity date. Therefore no revenues were needed for debt service during construction. However, their downside is they are relatively costly, and non-callable bonds cannot be refinanced when interest rates drop.

Most of the TNB bonds were issued as non-callable zero coupon bonds. A non-callable bond is a one that cannot be redeemed (called) at the option of the issuer prior to the maturity date. While callable zero coupon bonds exist, they are unusual, rarely issued, and more costly than non-callable bonds, according to the Office of the State Treasurer.

The TNB debt structure was designed to escalate as revenues escalated; it started out low, and escalated through the end of the financing period. Compared to Option A described above, it provided

lower annual debt service through 2013, and followed by accelerating debt service that reached about \$90 million a year by 2029. This is essentially the debt service existing today. (See Appendix, p. 81, for illustration of this option, listed as Option E.)

The proposed toll schedule for the financing that was enacted started at \$3.00 from 2007-2010, gradually growing to \$4.75 by 2017, and maxing out at \$5.00 in 2021. Tolls would come off in 2029. This proposed toll schedule was slightly more expensive than Option A, but not significantly so. *NOTE: These toll levels were estimates used to discuss potential financing options with legislators during the 2002 legislative session. They were not the result of detailed work on the TNB financial plan, which occurred after the conclusion of the 2002 legislative session, and which included much more detailed and rigorous analysis. As a result, the official finance plan adopted in 2002 showed tolls maxing out at \$6.00 rather than \$5.00.*

## Implementing the Financing Plan

The entire project was estimated to cost \$839 million; this included costs for construction, financing, sales tax, and related costs. These costs were financed from ten separate bond series issued between 2002 and 2007.

### **\$300 million in debt service savings due to lower construction costs and interest rates**

The 2002 finance plan assumed the construction element of the project would cost \$761 million, and that \$800 million in bonds would be sold throughout construction at an interest rate of 5.85%.

In fact, by 2007 when the project was completed, construction costs came in under budget, at \$717.3 million, and with favorable market conditions, bond sales totaled \$684 million at an average rate of 4.93%. Subsequent bond refinancings in 2012 would drop the overall average rate to 4.76%.

This combination of favorable factors resulted in \$300 million in debt service savings over the life of the financing, as shown in Exhibit 2 below.

Exhibit 2

<b>Tacoma Narrows Bridge</b>		
<b>Capital Sources and Uses of Funds</b>		
<i>nominal dollars in millions</i>		
	<b>July 2013</b>	<b>July 2002</b>
	<b>Financial Plan</b>	<b>Financial Plan</b>
	<i>Through June 30, 2013</i>	
<b>Sources of Funds</b>		
Interest Earnings	\$8.8	\$10.5
Gross Bond Proceeds	684.2	726.0
Capitalized Interest	(4.4)	(4.8)
Expenditures from Motor Vehicle Account	11.0	11.0
Transfers from Motor Vehicle Account	39.0	39.0
<b>Total Sources of Funds</b>	<b>\$738.7</b>	<b>\$781.7</b>
<b>Uses of Funds</b>		
Cost of Issuance	\$6.4	\$7.6
Capital Construction in TNB Account	717.3	760.4
Capital Construction in MVA Account	11.0	11.0
R & R Costs	0.2	0.8
<b>Total Uses of Funds</b>	<b>\$734.9</b>	<b>\$779.8</b>
Interest rate on bonds sold	4.93%	5.85%
Total Debt Service through 2030	\$1,483	\$1,783

Total debt service through 2030 does not include \$4.4 million in capitalized interest.

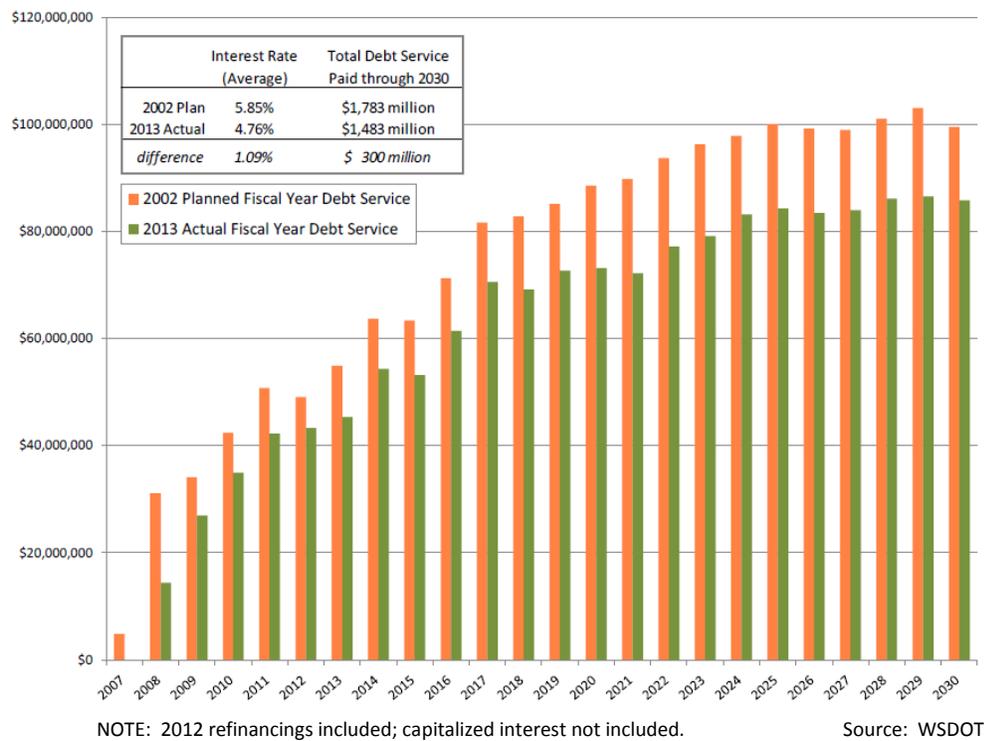
Source: WSDOT

The graphs below shows projected annual debt service and toll revenues underlying the 2002 finance plan at the time of the initial bond sale, and debt service and toll revenues under the current finance plan.

A comparison of these two finance plans shows the approximately \$300 million in debt service savings that resulted from lower-than-projected project costs and bond interest rates. The orange bars in Exhibit 3 below shows the 2002 projected debt service, while the green bars show the actual debt service for the bridge. The difference represents the \$300 million in actual debt service savings compared to the 2002 projected debt service.

Exhibit 3

**Tacoma Narrows Bridge Fiscal Year Debt Service  
Actuals vs. 2002 Financial Plan**  
*nominal dollars*



**Refinancing opportunities are limited**

The project was funded from ten separate bond issuances shown in Exhibit 4 below. With current interest rates at historic lows today, some have suggested refinancing the bridge debt in order to lower debt service payments.

However, the Office of the State Treasurer (OST) reports that conventional refinancing is not possible for the majority of bonds issued to finance the bridge. Eight of the bond series were non-callable zero coupon bonds, which cannot be recalled and refinanced. Two bond series were callable (current interest) bonds, eligible for refinancing when interest rates fall. The callable (current interest) bonds represent only a small portion of the overall bond portfolio for the project.

In September 2012, the OST did refinance one of the two callable (current interest) bonds (2006C, bond sale #7). The savings were \$413,088; \$254,519; \$254,419; \$507,768 for fiscal years 2013 through 2016, respectively, with total savings of \$8,555,150 over the life of the bonds (or \$5,815,311 in current dollars).

The callable bonds of 2008B (the other series with current interest bonds, totaling \$7.9 million) have not been refinanced because estimated savings do not reach the state’s minimum savings thresholds.

The OST also reviewed alternative market strategies to substitute bonds with longer maturities for the existing bonds, in order to lower debt service payments. They found the alternatives too costly to consider. The alternatives included a “tender” and a “defeasance.” A tender involves issuing new tax-exempt debt and using proceeds of the new bonds to buy a portion of the outstanding bonds back from investors. A defeasance consists of issuing new taxable debt and using the proceeds to buy a portfolio of U. S. Treasuries that produces income sufficient to cover the debt service on the outstanding TNB bonds. Analysis showed that any tender or defeasance options would be quite costly to the State in the current market -- \$250 million to \$550 million -- because short-term interest rates are so low.

Moreover, neither alternative could be implemented under current law (RCW 39.53.090). Current law states that any refunding bonds may not have final maturities that extend beyond the original bonds that they are refunding, when the bonds to be refunded are voter-approved general obligation bonds. The TNB bonds are voter-approved R-49 general obligation bonds. Accordingly, the non-callable TNB bonds cannot be restructured under current statutes.

**Exhibit 4 – The Ten Bond Series Issued to Finance Construction of the Bridge**

Series	Sales Date	Par Amount	Maturity Amount	True Interest Cost	Final Maturity	Type of Bonds
2003C	9/18/2002	158,000,317	371,975,000	4.86%	6/1/2030	Zero Coupon
2003F	1/22/2003	75,001,618	178,625,000	5.24%	12/1/2029	Zero Coupon
2004C	7/22/2003	110,001,632	266,910,000	5.38%	6/1/2030	Zero Coupon
2004F	2/3/2004	89,982,568	193,395,000	4.89%	12/1/2029	Zero Coupon
2005C	7/13/2004	65,001,473	139,050,000	5.18%	6/1/2030	Zero Coupon
2005F	3/1/2005	45,001,192	87,320,000	4.84%	12/1/2029	Zero Coupon
2006C	9/7/2005	55,000,000	55,000,000	4.44%	6/1/2030	Current Interest
2006F	1/24/2006	55,001,856	100,735,000	4.38%	12/1/2029	Zero Coupon
2007E	1/23/2007	16,180,976	33,955,000	4.51%	12/1/2029	Zero Coupon
2008B	9/12/2007	12,000,000 <sup>1</sup>	12,000,000	4.35%	7/1/2029	Current Interest
<b>Total:</b>		<b>681,171,634</b>	<b>1,438,965,000</b>			

1) Portion of Series 2008B attributable to the TNB.

Source: OST

A January 30, 2012, memo from the OST to State Senator Derek Kilmer explains in detail the analysis of the alternative market strategies referenced above, and is found in the Appendix p. 83.

## Fuel Tax-Funded Investments Supporting the New Bridge: \$649 Million

Since 2003, the Legislature has approved a number of fuel tax-funded investments along the SR 16 corridor intended to improve the flow of traffic to and over the new bridge, and throughout the corridor. Investments in SR 16 totaled \$134 million, and included improvements north and south of the bridge, primarily widened bridges and the creation of HOV lanes. In addition, the Legislature approved \$515 million in fuel tax funding for three projects to rebuild the I-5/SR 16 Nalley Valley interchange and HOV facilities. None of these projects are financed with tolls.

Washington State Department of Transportation  
**SR 16 Investments Completed Since 2003** August 2013

Exhibit 5



	PE	RW	CN	TOTALS
State, non-Nickel	\$9,951,102	\$1,280,790	\$23,133,910	\$34,365,802
State, Nickel	\$2,560,732	\$3,689,074	\$90,632,720	\$96,882,526
Local	\$1,965		\$56,426	\$58,391
Fed	\$594,945	\$2,164,879		\$2,759,824
<b>TOTALS</b>	<b>\$13,108,744</b>	<b>\$7,134,743</b>	<b>\$113,823,056</b>	<b>\$134,066,543*</b>

\* Above total does not include three projects to rebuild I-5/SR 16 Interchange ("Nalley Valley" projects) and HOV facilities at a cost of \$515 million.

## TNB Toll Rates

The Transportation Commission is designated by law as the State Tolling Authority and sets toll rates for all state highways and bridges. <http://wstc.wa.gov/HighwayTolling/default.htm>

### **Current toll rates and options to pay**

Today's TNB users have five options to pay their tolls, and each comes with a different toll price. The rates below apply to two-axle vehicles and motorcycles. For vehicles with more than two axles, rates are determined by the number of axles.

	<b>Effective July 1, 2013</b>	<b>Effective July 1, 2014</b>
Automatic payment via transponder ( <i>Good To Go!</i> pass)	\$4.25	\$4.50
Automatic payment via Pay By Plate (PBP)	\$4.50	\$4.75
Cash paid at the toll booth	\$5.25	\$5.50
Short term account set up within 72 hours of crossing the bridge	\$5.75	\$6.00
Pay by Mail (PBM)	\$6.25	\$6.50

### **Historical toll rates on the 1940 and 1950 Tacoma Narrows bridges**

The first Tacoma Narrows Bridge toll was imposed in 1940; it was \$1.10 for a round trip, or the equivalent of \$18.22 in 2013 dollars. When the second bridge opened in 1950, the starting toll was \$1.00, or the equivalent of \$9.77 in 2013 dollars.

### **History of toll rates on the new Tacoma Narrows Bridge**

**2002 financial plan called for initial \$3.00 toll.** In 1999, Wilbur Smith Associates (now CDM Smith) was hired to undertake a traffic and revenue study for the TNB project; a finalized study was presented in May 2002. The recommended toll rate was \$3.00 with future \$1.00 increases in January 2010, 2013, and 2016, plus additional fees for vehicles with more than two axles. Based on the toll rates and traffic projections, the projected revenues were determined to be sufficient to pay for debt service, and operating and maintenance expenses.

**2005 financial plan update.** In 2005, the financial plan and traffic forecast were updated. Due to more pessimistic economic factors, the projected toll revenue decreased. The 2005 update included the latest traffic volume data for the bridge and competing state ferry routes, and the latest socioeconomic and demographic forecasts to determine, among other things, the extent of the airline industry's and Boeing's economic recovery from the September 11, 2001, attack on the World Trade Center. There was no change to the toll rate structure in the 2005 update.

**2007 initial toll rates.** In March 2006, prior to the start of tolling, the Legislature approved a \$1.3 million transfer from the Multimodal Account to the TNB Account as a non-reimbursable state contribution. The purpose of the contribution was to allow up to a 50% discount on the toll for electronic toll payers while the old existing bridge was retrofitted. This buy-down allowed the initial electronic toll collection (ETC) rate to be set at \$1.75. The cash toll was \$3.00, with a higher rate for vehicles with more than two axles.

**2008 toll rate increase.** On July 1, 2008, the 2-axle rate increased to \$2.75 for *Good To Go!* and \$4.00 for cash, the increases driven by the financial plan and revenue forecast of the TNB Account. These rates remained in place for four years, until July 1, 2012.

**2010 no toll increase.** The 2005 financial plan assumed a \$1.00 toll rate increase (to \$4.00) in FY 2010. That did not occur, due in part to lower debt service, operating and maintenance costs, the addition of other revenue, and the delay in repayment of the deferred sales tax and a \$5.288 million loan.

During the 2010 rate setting process, the Transportation Commission discussed toll rates and levels of fund balance, and considered a proposal by the Office of the State Treasurer (OST) to introduce coverage requirements as a function of toll rate setting. They also considered a Citizens Advisory Committee (CAC) proposal to target a low fund balance in order to postpone toll rate increases.

The Commission decided to hold toll rates constant and relied upon fund balances to offset expense increases in FY 2011, realizing that rates would need to increase in FY 2013. The Commission also voted to create a Sufficient Minimum Balance Policy (SMB) (see p. 40 for full description), to ensure future rate setting would protect against a dangerously low fund balance. The Commission acknowledged that this strategy of drawing down fund balances to avoid rate increases was delaying the inevitable, and would lead to even larger increases in the coming fiscal years to match revenues with expenses.

**2010 toll administration changes.** The 2010 Legislature passed ESSB 6499 modifying the administration, collection, and enforcement of tolls. Previously, tolls were paid electronically by customers with a prepaid account and a vehicle transponder, or manually at a toll booth with cash or credit. The new legislation authorized photo tolls, which are paid after the driver uses a toll facility, via license plate photograph to identify a vehicle. Photo tolls may be paid using a Pay By Plate customer account, Short-Term account, or through a toll bill (also called Pay By Mail).

**2012 rate setting.** In response to the 2010 administrative changes, in 2011 the Commission established new rates, fees and discounts associated with photo tolling, including Pay By Mail, Pay By Plate, and Short-term Accounts. Photo tolling and Pay By Mail for the TNB commenced in early December 2011, and in late December, 2011 WSDOT started tolling the SR 520 Bridge. TNB shares toll administration costs with the SR 167 and SR 520 toll facilities.

**2013 rate increases.** During the 2012 rate setting process, the Commission learned that the FY 2012 ending fund balance would fall well short of the SMB policy level. In order to increase toll revenue to match expenses, and to build the fund balance to the required SMB level, they adopted rate increases and reduced the difference between the *Good To Go!* and Pay By Mail rates to align statewide tolling pricing policies.

On July 1, 2012, TNB rates increased to \$4.00 for *Good To Go!*, \$5.00 for cash, and \$6.00 for Pay By Mail. The 2005 financial plan assumed the toll (weighted average toll) would be \$5.00 in FY 2013; the actual average weighted toll was \$4.44.

**2014 and 2015 increases.** In 2013, the Transportation Commission approved a 25 cent increase in all toll rates for FY 2014 (beginning July 1, 2013), and another 25 cent increase for FY 2015 (beginning July 1, 2014).

These rate increases were adopted in a single action with the intention of having the CAC review the traffic and revenue data and financial details later in FY 2014 to determine if the FY 2015 increase is sufficient. The Commission increased toll rates uniformly and incrementally across payment methods.

## Toll rates have remained below the original planned toll rate

TNB toll rates have been consistently below rates originally contemplated when the 2002 finance plan was developed and adopted, and based upon which construction bonds were sold. The Exhibits below from WSDOT show the planned and actual toll rate structure; the 2002 planned rates are highlighted in tan in each.

Exhibit 6

		FY07	FY08	FY09	FY10	FY11	FY12	FY13	FY14	FY15	FY16 ~ FY30
2002 planned toll rate	Cash	\$3.00			\$4.00			\$5.00			\$6.00
Actual toll rate	ETC	N/A	\$ 1.75	\$2.75			\$ 2.75	\$ 4.00	\$ 4.25	\$ 4.50	
	Cash		\$ 3.00	\$4.00			\$ 4.00	\$ 5.00	\$ 5.25	\$ 5.50	
	PBM						\$ 5.50	\$ 6.00	\$ 6.25	\$ 6.50	
Weighted avg toll		\$ 2.12	\$ 3.13	\$ 3.13	\$ 3.13	\$ 3.13	\$ 3.13	\$ 4.44	\$ 4.57	\$ 4.82	

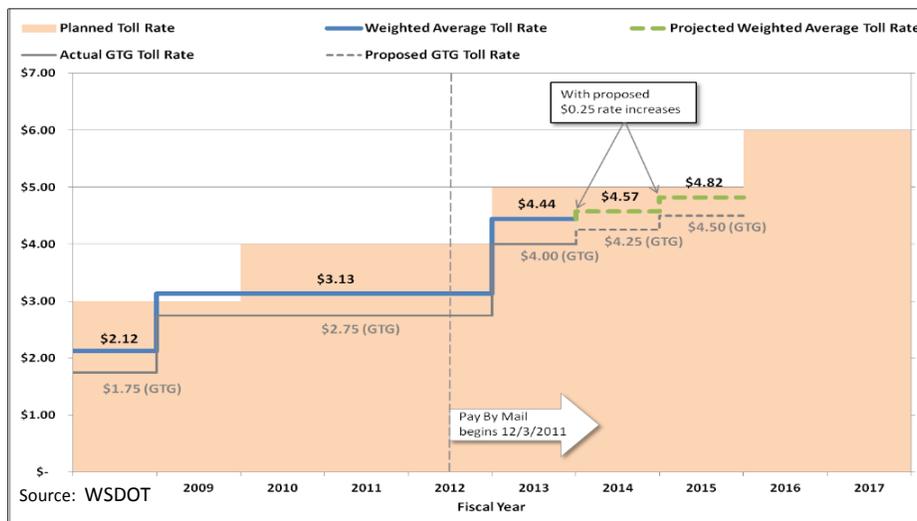
The *planned* toll rate is based on the original 2002 finance plan, which included only one toll rate. The *weighted average* toll rate is comprised of all two-axle toll rates, proportional to their usage. It is the best comparison to the single rate originally contemplated. The *blended* toll rate used in this study to describe potential toll impacts of various evaluated scenarios is similar to the weighted average toll rate.

Currently about 73% of users pay via transponders, 22% pay cash, and 5% pay by mail. Those paying by transponder is projected to increase to 77% by 2025, with a corresponding decrease in those paying cash.

Exhibit 7

	2002 Planned toll	Actual Good To Go! toll	Weighted average toll
2008	\$3.00	\$1.75	\$2.12
2009	\$3.00	\$2.75	\$3.13
2010	\$4.00	\$2.75	\$3.13
2011	\$4.00	\$2.75	\$3.13
2012	\$4.00	\$2.75	\$3.13
2013	\$5.00	\$4.00	\$4.44
2014	\$5.00	\$4.25	\$4.57
2015	\$5.00	\$4.50	\$4.82
2016	\$6.00	TBD	TBD

Exhibit 8



## **Transportation Commission sets TNB toll rates**

The Washington State Transportation Commission is charged with setting tolls for all state toll facilities. The Commission monitors each facility's financial plan and adjusts rates to ensure expense coverage, including an appropriate minimum balance.

As part of their general rate setting work, the Commission considers estimates of toll revenue and costs for several years in the future. But they typically set rates one and sometimes two years in advance, so that the rates are responsive to the dynamic economic factors that influence rates, revenues and costs.

For TNB rate setting, a nine-member Citizen's Advisory Committee (CAC) was appointed by the Governor starting in 2006 to provide recommendations to the Commission on toll rates (RCW 47.46.090). Composed of permanent residents of the bridge area, the CAC generally has approached its work in three steps: understanding the financial plan, requesting traffic and revenue forecasts, and voting to recommend proposed rates.

Typically the CAC is convened in the Fall prior to the year in which rates are to be adjusted. The CAC holds several meetings, reviewing detailed financial and operational information, and works towards arriving at a rate recommendation for the next fiscal year.

The CAC presents its rate recommendations to the Transportation Commission in the early part of the year in which rate setting would occur, typically in February or March.

Once the Transportation Commission receives the CAC recommendation, the Commission follows the rulemaking process prescribed by the Washington Administrative Procedures Act (Chapter 34.05, RCW) to enact new toll rates. The Commission arrives at its toll rate adjustment proposal based upon the CAC recommendations, WSDOT suggestions, and the Transportation Commission's own review of detailed financial information and up-to-date traffic and revenue estimates of various rate scenarios.

The Commission makes a formal rate recommendation by filing a proposed rule and then holds public input meetings in the impacted communities surrounding the bridge on the proposed rates. After the proposed rule is published in the Washington State Register and a waiting period passes, the Commission holds a formal rate hearing, after which a final rate-setting action can be taken and a final rule filed. Rates changes typically take effect on July 1 of the year they are adopted.

# **Expenditure Factors Affecting Toll Rates**

## Expenditure Factors Affecting Toll Rates

In setting toll rates, the Transportation Commission looks at expenditures that tolls must cover. This includes debt service, toll vendor and toll operations costs, bridge insurance, bridge maintenance and preservation costs, the sufficient minimum balance, loans that require repayment, and the construction sales tax whose payment was deferred by legislation adopted in 1998 and 2012.

RCW 47.46.100 addresses the duties of the Transportation Commission in setting toll rates for the Tacoma Narrows Bridge. It requires the Commission to give due consideration to any required costs for operating and maintaining the toll bridge or toll bridges, including the cost of insurance, and to any amount required by law to pay debt service and interest.

This statute requires the Commission to impose toll charges sufficient to do the following:

- Provide annual revenue sufficient to pay annual operating and maintenance expenses, until the bonds are fully paid.
- Pay insurance costs and debt service payments (principal and interest), including reimbursing the motor vehicle fund for any debt service payments made on the TNB.

A number of other statutes also identify costs that TNB tolls must cover. The costs must relate directly to the TNB. By law, tolls must cover costs to:

Make debt service payments on construction bonds, including reimbursing the motor vehicle fund for any payments made on TNB bonds	RCW 47.46.100, RCW 47.46.140, RCW 47.56.165
Operate and maintain the new bridge (but not the old one), operate and maintain toll collection	RCW 47.46.100, RCW 47.56.245, RCW 47.56.165
Make necessary repairs and restoration to the new bridge	RCW 47.46.100, RCW 47.56.165
Purchase insurance in case something happens that takes the bridge out of service	RCW 47.46.100
Pay deferred construction sales and use tax	RCW 47.46.060

The Transportation Commission has also adopted a policy calling for a Sufficient Minimum Balance (SMB) in the TNB Account, in order to ensure sufficient toll revenues are available to pay legally required costs in the event toll collections are lower than projected. The SMB policy is discussed on p. 40.

## Debt service

As discussed earlier, TNB debt service started low and escalates throughout the life of the debt. Exhibit 3 on p. 20 shows the actual debt service compared to that anticipated in the 2002 financial plan.

For purposes of this study and as used in the scenario estimating tool, WSDOT has estimated annual debt service costs as follows. These amounts include the projected withholding amounts necessary to make payments to bond holders. This addresses a payment timing issue.

Exhibit 9

<b>TNB Debt Service</b>	
FY 2014	\$ 54,932,000
FY 2015	\$ 54,735,000
FY 2016	\$ 62,311,000
FY 2017	\$ 70,092,000
FY 2018	\$ 69,889,000
FY 2019	\$ 72,861,000
FY 2020	\$ 72,770,000
FY 2021	\$ 72,478,000
FY 2022	\$ 78,093,000
FY 2023	\$ 79,339,000
FY 2024	\$ 83,480,000
FY 2025	\$ 84,301,000
FY 2026	\$ 83,683,000
FY 2027	\$ 84,047,000
FY 2028	\$ 86,325,000
FY 2029	\$ 86,542,000
FY 2030	\$ 79,660,000

Source: WSDOT

## Operations and Maintenance Costs (O&M)

WSDOT defines TNB operations and maintenance costs to include the following: toll vendor costs, WSDOT toll operations costs; maintenance and preservation costs (renewal and replacement of the new bridge); and bridge insurance. Exhibit 10 below uses different terminology, because it is an old table and the terminology has changed today.

On the next six pages, we'll discuss O&M costs from a broader perspective, and then beginning on p. 36, discuss each element of cost as discussed and evaluated in this study.

### Historical comparison of O&M costs

Exhibit 10 shows sources and uses of operating funds for the bridge through June, 2013, both as estimated in the 2002 finance plan, and the actuals through June, 2013.

Focusing on the uses of funds (the expenditures), it shows that four elements of costs have been lower than anticipated: WSDOT's management costs, insurance, enforcement and security and maintenance. These represent savings of \$25.2 million, or 45% of the 2002 financial plan estimates.

One element is higher than anticipated: the toll vendor contract, which is \$9.6 million or 29% higher than anticipated in 2002. WSDOT reports that the 2002 estimated cost was a "soft" number estimated by the project director, and not a price negotiated with the vendor. The 2002 estimate also underestimated the number of transponders distributed for free in the early years of the project. WSDOT renegotiated the contract with the vendor early on to reduce costs and tie vendor reimbursement to fixed prices.

Total operating costs through June 2013 were \$15.6 million or 17.4% lower than projected in the 2002 financial plan, after equalizing for the differential treatment of the deferred sales tax repayment.

Exhibit 10

Tacoma Narrows Bridge		
Operating Sources and Uses of Funds		
<i>nominal dollars in millions</i>		
	July 2013	July 2002
	Financial Plan	Financial Plan
<i>Through June 2013</i>		
<b>Sources of Funds</b>		
Miscellaneous Revenue	\$4.1	-
Interest Earnings	1.4	1.6
Fines and Fees	7.3	-
Transponder Sales	3.3	-
Toll Revenue	266.5	366.1
Loan from Motor Vehicle Account	5.3	-
Transfers from Other Accounts	1.3	-
<b>Total Sources of Funds</b>	<b>\$289.2</b>	<b>\$367.7</b>
Debt Service	(\$207.7)	(\$202.3)
<b>Remaining Funds</b>	<b>\$81.4</b>	<b>\$105.5</b>
<b>Uses of Funds</b>		
WSDOT Management Costs	\$18.2	\$21.9
Toll Systems Operations (Vendor Contract)	42.8	33.2
Insurance	10.1	23.0
Enforcement and Security	1.4	5.1
Maintenance	1.2	6.3
Deferred Sales Tax*	-	9.0
<b>Total Uses of Funds</b>	<b>\$73.8</b>	<b>\$98.4</b>
<i>The 2002 Financial Plan anticipated the bridge opening April 2007. Actual bridge opening was July 2007</i>		
<i>*Deferred sales tax is a capital expenditure, to be repaid by tolls.</i>		

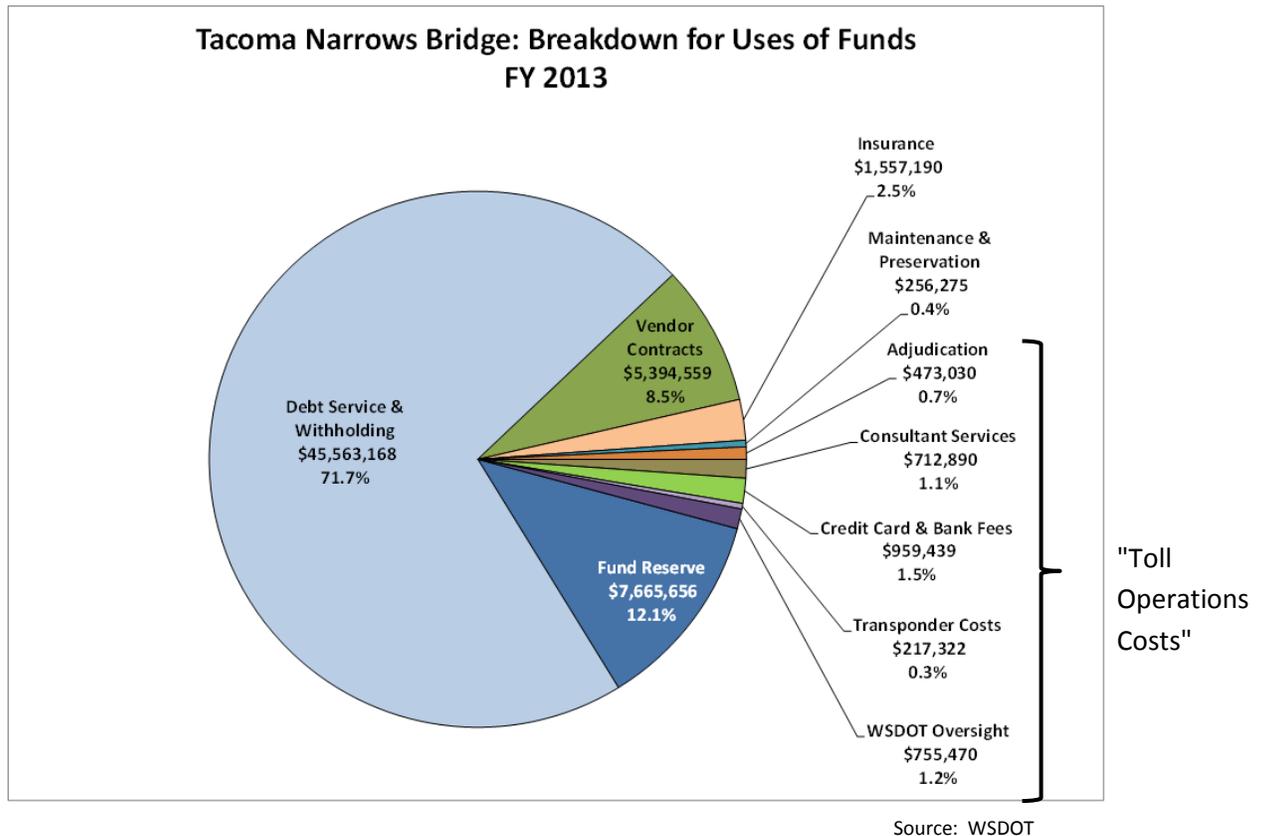
Source: WSDOT

## Current O&M costs

In FY 2013, toll operations, maintenance, insurance, and vendor costs accounted for about 16 percent of costs supported by tolls. The largest cost paid for by tolls is debt service at 72 percent. (Note that, consistent with information provided to the Citizen Advisory Committee, the Transportation Commission's sufficient minimum balance requirement is also counted as an expense.)

For purposes of comparison, the scenario estimating tool created as part of this study includes a cost category called "toll operations costs," which includes the elements noted below: adjudication, consultants, credit card fees, transponders, and WSDOT oversight.

Exhibit 11

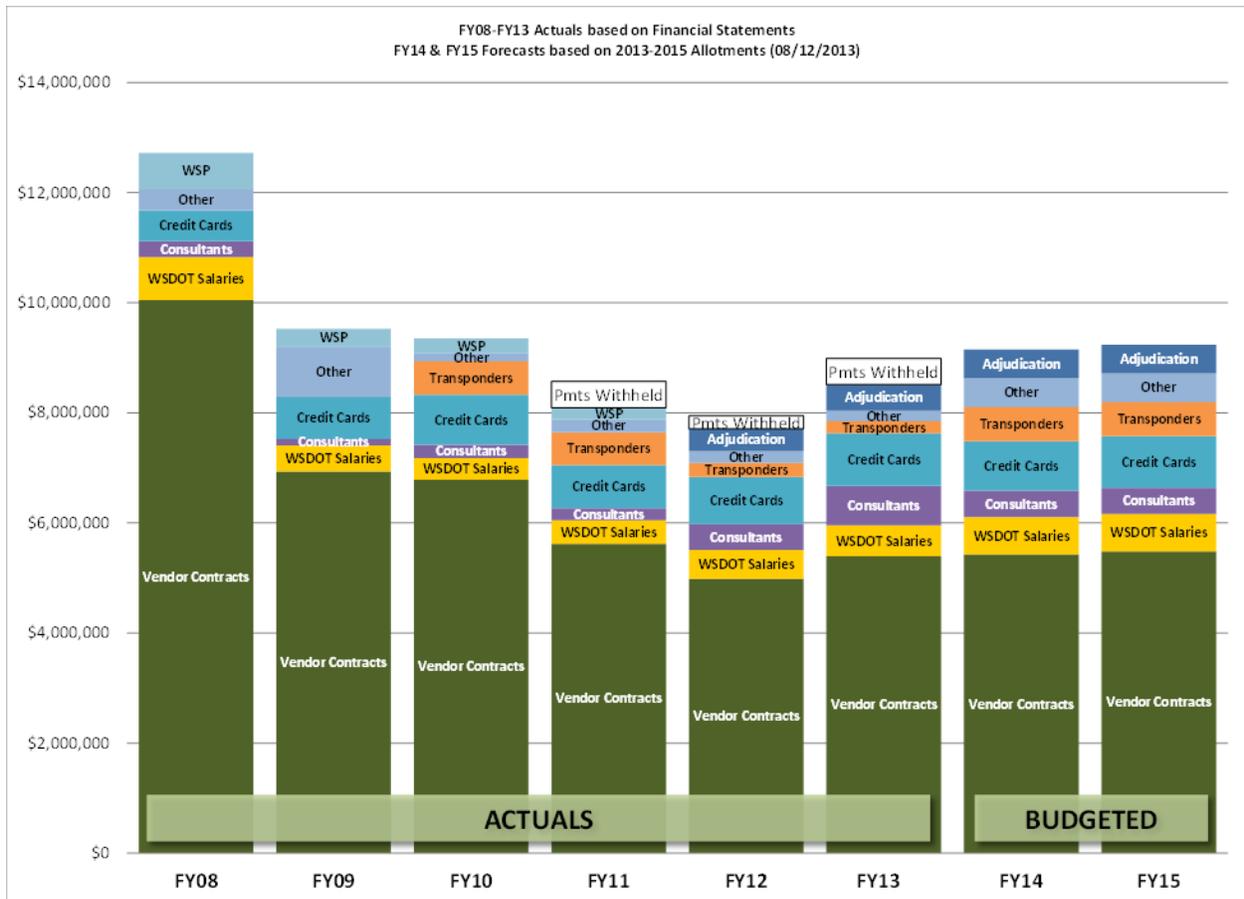


Over time, *actual* expenditures (through FY 2012 on the following chart) demonstrate a general decline, with slight expenditure increases into FY 2013. The general decline is due to:

- transitioning to the statewide Customer Service Center (CSC) which shifted some toll collections costs to other tolled facilities,
- vendor payments withheld due to delays and difficulties in the roll-out of the CSC, and
- holding TNB harmless from cost increases during the transition period.

As shown below, FY 2013 cost increases appear to be due largely to increases in credit card fees and consultant use. Credit card costs are driven mostly by the value of the transaction (the toll rate); the *Good To Go!* rate increased from \$2.75 in FY 2012 to \$4.00 in FY 2013. In the case of consultant costs, the Toll Division has increased its use of consultants to backfill vacant WSDOT positions, to increase forecasting work, and to conduct studies directed by the Governor, Legislature and State Auditor.

**Exhibit 12 -- Historical and Budgeted TNB Toll Operation Expenses by Category**



Source: WSDOT

## Future O&M costs

### The inflation factor

The following graph from WSDOT shows projected O&M costs through 2030, according to the 2012 TNB financial plan. The outlook appears better than in 2002 because the 2002 plan assumed higher inflation on insurance, incidence response, bridge maintenance, toll systems operations, and WSDOT's toll operations costs. The full growth rate of the forecasted Implicit Price Deflator (IPD) was used in 2002, while just half the rate was used in 2012.

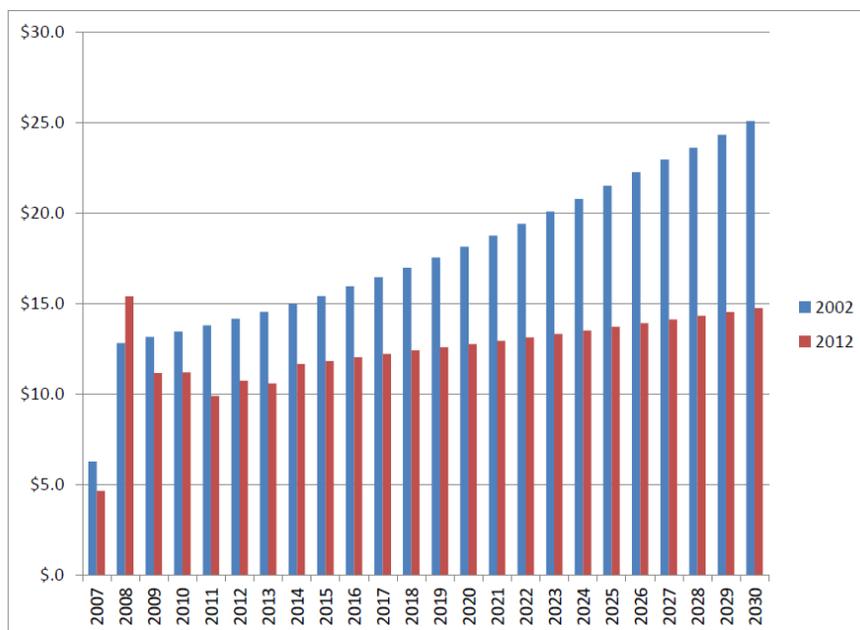
Why half the rate? It has been a legislative practice to inflate out-year operating cost estimates at half the rate of inflation in legislative finance plans unless there is a demonstrable deficiency in applying such an assumption. The legislative finance plan is an internal planning tool only, and not something endorsed or approved by the Legislature. One rationale for using half the rate of inflation is to put pressure on the agency to contain costs.

It appears WSDOT chose to apply that same assumption in their planning process, and in the update to the 2012 TNB finance plan. Whether that level of savings can be achieved remains to be seen. Some would argue it is unreasonable to assume an on-going year-after-year drop in real costs, which is what would have to occur in order for costs to increase at just half the rate of inflation.

For this study, JTC staff used the full rate of inflation to estimate future TNB costs when evaluating scenarios describing the potential impact of various spending and revenue changes on potential blended toll rates.

#### Exhibit 13

**Tacoma Narrows Bridge Operating and Maintenance Expenditures  
2012 Financial Plan vs. 2002 Financial Plan**  
*nominal dollars in millions*



Source: WSDOT

## **Budget reductions and cost control**

Scenario 2 developed for this study evaluated the potential impact on toll rates of the 5% budget reduction enacted in the 2013-15 Transportation Budget. The scenario was intended to reflect the scale of reductions generally considered by the Legislature. It was determined that a 5% budget reduction would affect tolls by about a nickel. It is likely that cost reductions of this size are not large enough for the Transportation Commission to take action to adjust toll rates. However, efficiency measures are important means of offsetting other upward pressures on costs as well as demonstrating effective management of public funds.

As part of this study, WSDOT was asked to estimate savings related to a series of potential budget reduction options. Their responses are summarized below.

### **Are costs to collect some unpaid tolls in excess of the revenue collected? Is there a type of uncollected toll that should be ignored?**

- The Toll Division is currently evaluating the appropriate dollar threshold for dismissal of unpaid civil penalties. In the coming months, the Division will also investigate out-of-state plates and motorcycles.

### **Are pay-by-mail adjudication costs using administrative law judges cheaper than district court judges? Are the revenues from fines and penalties expected to cover the full cost of the administration of the fines and penalties?**

- WSDOT replied that it does not have the information to answer the first question.
- For purposes of this study, JTC staff looked at the 2010 final fiscal note for ESSB 6499. Pierce County reported that it had originally budgeted 4 clerical Full Time Equivalent (FTE) staff and 0.5 Commissioner FTE for this purpose. With county-wide budget reductions, these positions were not filled and the work was conducted by existing staff. As such, Pierce County costs appear to have been comparable or possibly less than WSDOT is currently spending. However, if Pierce County were to conduct the adjudications, they would also receive the revenue.
- WSDOT reports that fines and penalty revenue are currently covering expenses for the TNB. For the SR 520 Bridge, revenue exceeds expenditures. For FY 2013, WSDOT expenses for adjudicating TNB civil penalties were \$473,030; cash revenues were \$579,330. The adjudication program also includes SR 520 civil penalties. For SR 520 in this same period, expenses were \$1,468,555 and cash revenues were \$4.3 million.

### **What overhead is WSDOT charging to the TNB toll payers?**

- General WSDOT overhead costs such as human resources or information technology are not charged to TNB toll payers. Allocated costs of Toll Division and Accounting and Financial Services staff are charged to the TNB. The Motor Vehicle Account funds Toll Division staff which would otherwise be charged, in part, to the TNB Account: Assistant Secretary and two director positions and their administrative assistants, as well as staff in policy, planning, finance, and program management.

**Are there savings to be made from renegotiating contracts with credit card companies?**

- Credit card costs to the State are driven mostly by the value of transactions, with a smaller portion applied on a per-transaction basis. Increases in toll rates result in higher bank fees even if traffic across the bridge is unchanged. The Office of the State Treasurer has recently renegotiated lower credit card fees, which will result in a lower per transaction cost. It is important to keep in mind that other cost drivers may outweigh these savings: changes in toll rates, traffic levels, and customer payment preferences. In addition, TNB cash collection lanes use an older payment processing technology platform which will not benefit from these reductions.

**What would the savings be from automating the toll booths at the TNB? What are the labor costs associated with the toll booths and how much would an automated system cost?**

- WSDOT collected some initial data to answer this question, but additional research is needed to develop full cost and staffing estimates, as well as the cost of enforcement such as adding cameras, and/or the potential for increased losses due to toll evasion. WSDOT believes this question should be framed within a broader analysis framework that also considers a cashless option to address which options best advance policy objectives.
- WSDOT has considered three options:
  1. run automatic toll payment machines (ATPMs) full time with no attendants
  2. run ATPMs during non-peak hours and staff with attendants during peak hours
  3. have one or two toll attendants and use credit card-only ATPMs for the other lanes
- Automated toll collection machines require onsite staff support. If machines collect cash payments and/or make change, the amount of on-site supervision is higher than for machines that accept credit cards only.
- An ATPM that accepts cash would probably cost between \$100,000 and \$150,000 to purchase. Credit card-only machines are expected to cost \$40,000 to \$60,000. These costs do not include civil or system integration costs to put the ATPMs into use, nor the personnel cost to supervise and maintain the machines.

## Toll vendor costs

WSDOT contracts with two toll vendors to collect tolls on the TNB.

- \* TransCore operates the cash toll booths and the electronic toll collection equipment located at the TNB toll point. TNB toll payers are responsible for paying all TransCore costs, because they relate only to the TNB toll bridge.
- \* Electronic Transactions Consultant Corporation (ETCC) operates the statewide customer service center and back-office systems for account management. ETCC costs are shared among toll facilities statewide based on the proportion of non-cash transactions attributable to each (the methodology was developed in consultation with legislative staff and the Washington State Office of Financial Management). TNB toll payers pay only for their share of ETCC costs.

For purposes of this study and as used in the scenario estimating tool, WSDOT estimated toll vendor costs as follows, based on current appropriations. The costs are inflated by the full IPD inflation rate.

Exhibit 14

TNB Toll Vendor Costs	
FY 2014	\$ 5,453,500
FY 2015	\$ 5,453,500
FY 2016	\$ 5,532,660
FY 2017	\$ 5,614,549
FY 2018	\$ 5,696,045
FY 2019	\$ 5,791,056
FY 2020	\$ 5,892,420
FY 2021	\$ 5,999,934
FY 2022	\$ 6,109,775
FY 2023	\$ 6,222,642
FY 2024	\$ 6,338,510
FY 2025	\$ 6,455,447
FY 2026	\$ 6,574,718
FY 2027	\$ 6,695,656
FY 2028	\$ 6,818,009
FY 2029	\$ 6,943,257
FY 2030	\$ 7,070,847

Source: WSDOT

### Potential increases in toll vendor costs

For the future, the most significant potential cost increases for the TNB are likely to result from upcoming changes in vendor contracts. In addition, with no new toll facilities expected to come on-line until the 2015-17 biennium, any increases in toll collection costs will be borne by existing toll payers.

The current vendor contract for the CSC is scheduled to terminate June 30, 2014. The contract allows for two, 2-year extensions expiring in 2018. Current vendor expenditures reflect reductions in accordance with a settlement agreement. WSDOT has stated that current payments to the CSC vendor may not be covering the vendor's costs. WSDOT is in the process of evaluating options regarding contract extension, renegotiation, and the timing of competitively rebidding all or a portion of the contract.

## Toll operations costs

Toll operations costs are WSDOT's toll oversight and administration costs, including costs for salaries and benefits, consultant services, credit card and bank fees, purchase of transponders for resale, and overhead such as rent, utilities and mailing expenses.

For purposes of this study and as used in the scenario estimating tool, WSDOT has estimated toll operations costs as follows. The costs are inflated by the full IPD inflation rate.

Exhibit 15

<b>WSDOT Toll Operations Costs</b>		
FY 2014	\$	3,675,600
FY 2015	\$	3,640,400
FY 2016	\$	3,693,242
FY 2017	\$	3,747,905
FY 2018	\$	3,802,307
FY 2019	\$	3,865,731
FY 2020	\$	3,933,395
FY 2021	\$	4,005,164
FY 2022	\$	4,078,486
FY 2023	\$	4,153,829
FY 2024	\$	4,231,175
FY 2025	\$	4,309,234
FY 2026	\$	4,388,852
FY 2027	\$	4,469,582
FY 2028	\$	4,551,257
FY 2029	\$	4,634,864
FY 2030	\$	4,720,035

Source: WSDOT

## Bridge insurance costs

WSDOT purchases TNB bridge insurance for two purposes: property damage and loss of revenue. For FY 2014, total property damage risk coverage was \$500 million, which included loss of revenue coverage at \$62 million. The coverage is subject to a \$10 million deductible and a \$10 million earthquake limit.

Actual insurance costs paid are considerably less than originally projected. However, since FY 2011 the annual cost of the TNB insurance policy has risen slightly.

Exhibit 16	TNB Insurance		
	2002 Estimated	2005 Estimated	Actual
CY (12/31/07 to 7/1/09)	\$ 7,849,000	\$ 7,017,000	\$ 1,359,135
FY 2010	\$ 3,630,000	\$ 3,421,000	\$ 1,599,434
FY 2011	\$ 3,722,000	\$ 3,557,000	\$ 1,462,765
FY 2012	\$ 3,823,000	\$ 3,703,000	\$ 1,486,315
FY 2013	\$ 3,927,000	\$ 3,903,000	\$ 1,557,190
FY 2014	\$ 4,039,000	\$ 4,053,000	\$ 1,589,615

For purposes of this study and as used in the scenario estimating tool, WSDOT estimated bridge insurance costs as follows. The FY 2014 level of \$1.75 million reflects the appropriation. The insurance policy for FY 2014 was executed in June 2013, after the budget was adopted and the final cost was less than the appropriation. The costs shown below are inflated by the full IPD inflation rate.

Exhibit 17		TNB Bridge Insurance Costs	
FY 2014	\$	1,750,000	
FY 2015	\$	1,750,000	
FY 2016	\$	1,775,402	
FY 2017	\$	1,801,680	
FY 2018	\$	1,827,831	
FY 2019	\$	1,858,320	
FY 2020	\$	1,890,847	
FY 2021	\$	1,925,348	
FY 2022	\$	1,960,595	
FY 2023	\$	1,996,814	
FY 2024	\$	2,033,995	
FY 2025	\$	2,071,519	
FY 2026	\$	2,109,793	
FY 2027	\$	2,148,602	
FY 2028	\$	2,187,864	
FY 2029	\$	2,228,055	
FY 2030	\$	2,268,998	

Source: WSDOT

## Increasing insurance costs

WSDOT forecasted the cost of insurance for the TNB to increase from \$1.5M in FY 2013 to \$1.75M in FY 2014 due to recent cost experience and feedback from providers. There are several large construction projects in the Puget Sound area planned or underway, and insurers perceive that insuring multiple large projects in the same geographic area increases risk for the insurer.

## Maintenance and preservation (R&R) costs

WSDOT's Olympic Region staff have projected maintenance and preservation costs for the new bridge, the roadway, and portions of the tolling system through 2030.

Maintenance costs are operating costs needed to keep the facility in current working order, such as bridge deck repair, sweeping and cleaning, snow and ice control, pavement striping and signing, and mechanical system maintenance.

Preservation or R&R (renewal and replacement) costs are capital costs to preserve or extend the life of a facility, such as resurfacing the bridge deck and replacing key components of the tolling system.

State law requires both maintenance and preservation costs to be paid by TNB toll payers while debt service is still owed on the bridge.

Maintenance costs of a facility increase with the age of the facility. Preservation costs are less linear in their growth, as various systems or facility elements need preservation work at various times.

Exhibit 18 below shows WSDOT's current estimates of maintenance and preservation costs for the new TNB through 2030, the date debt service is expected to be fully paid. FY 2014 and FY 2015 align with current appropriations, except for the \$119,735 in FY 2015 preservation costs. While this represents the cost of federal-mandated bridge inspections, the Legislature has not appropriated funds to cover these costs. Beginning in FY 2016 and as shown below, maintenance costs are inflated by the full IPD inflation rate after FY 2017. Preservation (R&R) costs are inflated by the Construction Cost Index (CCI).

Exhibit 18

	Maintenance	Preservation (R&R)
FY 2014	\$ 270,000	\$ -
FY 2015	\$ 305,000	\$ 119,735
FY 2016	\$ 340,000	\$ 4,543,189
FY 2017	\$ 375,000	\$ 1,002,473
FY 2018	\$ 380,443	\$ 3,078,198
FY 2019	\$ 386,789	\$ 12,496
FY 2020	\$ 393,559	\$ 118,364
FY 2021	\$ 400,740	\$ 2,685,064
FY 2022	\$ 408,077	\$ 1,128,348
FY 2023	\$ 415,615	\$ 3,436,681
FY 2024	\$ 423,354	\$ 47,449
FY 2025	\$ 431,164	\$ 2,768,062
FY 2026	\$ 439,130	\$ 1,463,344
FY 2027	\$ 447,208	\$ 1,903,942
FY 2028	\$ 455,380	\$ 720,359
FY 2029	\$ 463,745	\$ 599,489
FY 2030	\$ 472,267	\$ 2,573,403
<b>TOTAL</b>	<b>\$ 6,807,473</b>	<b>\$ 26,200,595</b>

Source: WSDOT

## **12.5% sufficient minimum balance requirement**

While the TNB bonds do not have a reserve or coverage ratio requirement (unlike facilities funded with toll-backed bonds), the Transportation Commission decided prudent fiscal policy called for some level of ending balance in the TNB Account, to ensure sufficient toll revenue will be available to pay costs if toll collections fall below projections. The Commission began discussions with the Office of the State Treasurer (OST) in 2009 regarding the sufficient minimum balance (SMB) requirement, and adopted a SMB policy in 2010.

In 2009, the OST recommended that the Commission set tolls to generate net revenues equal at least 110% of debt service. The OST also recommended a “sufficiency” requirement, such that tolls generate revenues sufficient to cover all expected expenditures in a given year (already required by law). This approach focused on coverage requirements rather than reserves because of the rapid growth in debt service over the life of the bonds. At the time of the OST’s recommendation in December, 2009, it was estimated that their proposal would have generated a 23% fund balance after all costs were covered in FY 2011, and would have driven a \$1.00 toll increase to meet the recommended reserve level.

The OST’s recommendations were intended to provide the same levels of coverage that tolled facilities generally are required to achieve. They thought this was especially important, saying investors would look to Washington’s experience with the TNB when evaluating subsequent proposals to finance the SR 520 bridge or other tolled facilities using toll-backed bonds. The SR 520 bonds that eventually were sold had debt service coverage requirements and other more stringent reserve requirements specified in the Master Bond Resolution and identified in bond covenants, which locked the State into a legal contract with investors.

Such was not the case with the TNB, where the determination of appropriate reserves is a policy decision, and not one driven by bond covenants. The 2002 TNB financial plan assumed debt service coverage of 1.00 beginning in 2010, meaning tolls were expected to be set to cover 100% of costs. This was legally possible because the TNB financing was legally backed with Motor Vehicle Account funds and not toll revenues; the legal bond documents for the TNB do not mention toll revenues.

Because there was no reserve or coverage ratio requirement in the TNB bond covenants, tolls originally were set to cover costs as required in law. To contemplate any type of reserve or coverage at the start of tolling would have resulted in higher tolls. However, the Commission ultimately deemed it prudent to create a policy for some level of ending balance, in order to provide some fiscal cushion in the financial plan. This led to the adoption of the Sufficient Minimum Balance policy.

The Commission adopted the TNB Toll Setting Policy on March 17, 2010. It required the Commission to “set rates in a manner so as to maintain an established Sufficient Minimum Balance (SMB) that is equivalent to 45 days of working capital”, and that it will “not be less than approximately 12.5% of annual total TNB costs”. The purpose of the SMB is to cover revenue shortfalls and legitimate cost increases, which include debt service payments, operating and maintenance expenditures, and deferred sales tax. (<http://www.wstc.wa.gov/HighwayTolling/documents/FinalTNBTollSettingPolicy.pdf>).

The Commission amended the SMB policy in February 2013 to clarify how the SMB level is established. Rather than requiring the SMB be “12.5% of total annual costs”, it was modified to be more responsive to the fluctuations of the fund balance throughout the year due to the varying size and timing of debt payments. The modified policy now requires that the SMB be measured on a retrospective three-month rolling average fund balance.

## **Deferrals or loans requiring repayment by tolls**

The Legislature approved two mechanisms during bridge construction and start-up to temporarily reduce the expenditures tolls had to finance, but which state law says must be repaid.

### **Sales tax deferral (\$57.6 million), first payment due December 31, 2018**

The Legislature enacted [RCW 47.46.060](#) in 1998, which allowed WSDOT to defer payment of state and local sales taxes on TNB construction costs until five years after the commencement of tolling, and then to pay back in equal payments over the course of ten years. A total of \$57.6 million in deferred sales tax is to be repaid over ten years to the state's general fund.

This tax deferral was intended to allow toll revenue to grow before the taxes were paid, and was expected to help keep the opening toll at no more than \$3.00.

A memo from the State Attorney General in October 2010 confirmed that tolls could be used to repay the deferred sales tax, because "the tax deferral contributed directly to the financing of the tolled facility."

The first payment on the deferred sales taxes was originally due on December 31, 2012. However, in an effort to postpone the need for toll payers to pay this tax bill, the 2012 Legislature passed SSB 6073 which further deferred sales tax repayment by another six years. The first payment now due on December 31, 2018.

### **2007 loan from the Motor Vehicle Account (\$5.288 million)**

In 2007, the Legislature approved a \$5.288 million transfer from the Motor Vehicle Account to the TNB Account to help cover operating expenditures and establish a minimal level of reserves before tolling started (ESSB 1094, Section 1005(15)). The Legislature apparently intended this transfer to be considered a loan, to be repaid from tolls. However, while it may have been considered a loan during legislative discussions, but no specific language appears in statute saying this \$5.288 million is a loan.

Subsequent legislative efforts continued to treat this transfer as a loan. Before repayment began, the Legislature identified non-toll revenues to repay the \$5.288 million. In 2010, the Legislature enacted ESSB 6499 (RCW 46.63.160(9)) which identified the TNB toll civil penalty as the revenue source to pay back the \$5.288 million, until June 30, 2013.\* An adopted committee amendment offered by Senator Derek Kilmer in 2010 to PSSB 6499 stated that beginning on July 1, 2011, civil penalties deposited into the Tacoma Narrows toll bridge account must be used initially for repayment of funds *loaned from the Motor Vehicle Account to the toll bridge account*. (PSSB 6499 (S-4076.3/10))

The civil penalty includes a fine of \$40, plus the original toll amount and associated fees. This civil penalty replaced toll violations. The civil penalties are issued by WSDOT, while toll violations are issued by Washington State Patrol. This new civil process added the cost of adjudication administration to the TNB Account, while at the same time reducing violation enforcement costs. The civil penalty process took effect when TNB photo tolling began in December 2011.

The Appendix (p. 87) contains a full history of the \$5.288 million loan.

\* While RCW 46.63.160(9) requires civil penalties in excess of adjudication costs to go first toward repaying the \$5.288 million loan, there was no language provided in the 2011-13 budget authorizing the Treasurer's Office to make the transfer. To resume repayment of the loan with civil penalties will require an amendment in future appropriations bills, or a statutory amendment.

## **Other Related Cost-Efficiencies Studies**

As this JTC study was underway, three related studies were being conducted to identify Toll Division cost efficiencies. These studies include the State Auditor's performance audit of the Toll Division; the Toll Division's Cost of Service study; and a WSDOT review of Toll Division operations using Lean management principles. These three studies are summarized below.

### **Washington's Tolling Program: Lessons Learned from Project Delays (8/2/2013)** **State Auditor's Office Performance Audit**

Following a 22 year hiatus, in 2007, Washington State began collecting tolls again to pay for highway construction. A new Toll Division was created to manage toll systems and projects. Washington is one of only four states relying on statewide all-electronic tolling. The FHWA Urban Partnership grant provided \$86 million of federal funds for tolling system development on the SR 520/I-90 corridor. The original agreement between WSDOT and FHWA provided for a September 2009 start date of SR 520 tolling. Tolling began on December 29, 2011.

#### Lessons learned:

- WSDOT must adequately plan for and manage project risk, proactively manage tolling projects, and hold vendors accountable throughout the project.
- WSDOT's executive team actions must strengthen the project management team's decision-making authority and procedures established to effectively manage the project.

#### Weaknesses in project risk management stemmed from:

- WSDOT managed the project as a relatively low risk engineering service project and not as a complex high risk information technology project.
- Risks identified in the project management plan were not incorporated into the RFP or vendor selection.
- Ongoing management/monitoring of vendor performance based on high level milestones not useful for monitoring the delivery of an IT project.
- When the vendor began struggling, appropriate corrective actions were not taken and contract penalties were not used effectively.

#### Executive team leadership needs to strengthen:

- Cross-functional collaboration among WSDOT divisions/offices with the Toll Division.
- Clarity of roles, responsibilities, and decision-making of different divisions.
- Expectations for communication protocols and unified performance outcomes.

The full audit report can be found at the following link:

<http://www.sao.wa.gov/AuditReports/AuditReportFiles/ar1010219.pdf>

## WSDOT Cost of Service Analysis

The 2009 Legislature directed WSDOT to determine fixed and variable costs of key customer service account and payment method activities, and to establish a management process to report on these costs for use in potential modification of business rules. A baseline study was conducted in 2010. The Toll Division has recently analyzed quarterly data for fiscal years 2012 and 2013.

The analysis has focused on expenses paid by WSDOT rather than the actual costs incurred by the vendor. Information is available for all three currently tolled facilities, including the Tacoma Narrows Bridge.

As part of the cost of service study, WSDOT reviewed the financial statements of seven other public tolling agencies for purposes of comparing WSDOT costs to experiences elsewhere. The range of costs to operate and maintain was from \$0.33 to \$2.55. Four agencies, including WSDOT, have costs between \$0.54 and \$0.68. WSDOT's average cost per transaction to operate and maintain all of its tolled facilities was \$0.61.

For the most recent fiscal year, the cost to operate and maintain the Tacoma Narrows Bridge was \$0.66 per transaction. Shown below are the costs per transaction of toll collections for FY 2013.

Exhibit 19

### **Tacoma Narrows Bridge, Cost per Transaction FY 2013, Q1-Q4 Results**

<b>Payment method</b>	<b>Transaction Count</b>	<b>Cost to Operate and Maintain</b>	<b>Cost to Collect</b>
Good to Go pass	9,093,586	\$0.43	\$0.30
Tollbooth	3,297,580	\$1.20	\$1.05
Pay by Mail	658,260	\$1.21	\$1.07
Pay by Plate	565,304	\$0.53	\$0.40
Non-Revenue	3,650	\$0.38	\$0.24
Short Term Account	563	\$6.94	\$6.71
Weighted Average	13,618,943	\$0.66	\$0.52

Source: WSDOT

## WSDOT review of the Toll Division operations using Lean management principles

ESHB 5024 (2013) directed the Toll Division to review its operations using Lean management principles to eliminate inefficiencies and redundancies and to identify ways to conduct business more effectively.

Lean management is a culture organizations use to eliminate waste and reduce costs while improving quality. It is a process of continuous improvement that examines individual processes with high potential to be more effective and less costly, and to incrementally improve over time.

Key findings relating to toll collections costs include the following:

1. Cost to collect: Compared to peer agencies, WSDOT's cost per transaction across payment method and facility is reasonable. Two areas warrant further Lean review: TNB cash collection and the use of short term accounts for all facilities.
2. Increased emphasis on transponder accounts: Transponder accounts are the most cost effective method of toll collection. The Toll Division will seek to increase marketing of transponders.
3. Reductions in WSDOT staff: Each position was evaluated to validate the function served and to determine long-term need. Four positions were identified for elimination.
4. Reductions in consultant staff: Consultant activities were evaluated to identify ongoing work better performed by WSDOT staff. Three and one-quarter positions were identified for elimination.
5. Operational efficiencies: Lean workshops were held and 70 potential Lean projects were identified. Three Lean reviews are currently underway.
6. Re-evaluation of toll program funding needs: WSDOT reviewed the impacts of the five percent budget cuts made in the 2013-15 budget and determined that the cuts are not sustainable.

The report includes results to-date of Lean analyses of three operational processes, described below:

1. Pay by Plate fee reversals. For customers without a transponder or whose transponder is not working, tolls are posted to their account based on a license plate image, plus an additional \$0.25 fee. There have been more than 600 requests to reverse this fee. The reversal process is labor intensive: the average customer contact costs \$9.15 to reverse \$1.50 in fees (six \$0.25 fees). An audit of past reversal calls showed a majority of reversal requests stem from customer transponder or account errors. The Lean review recommended education to reduce customer error, empowering customer service representatives to process reversals without referral, and streamlining the gathering of back-up documentation. The goal is to reduce processing time by 40 percent, saving \$27,000.
2. Escalated customer inquiries. Each day WSDOT receives about one new customer inquiry that has been escalated from the Customer Service Center (CSC). On average, three hours of staff time is needed to respond to each inquiry. The Lean objective is to reduce the number of escalated inquiries by 40 percent, saving \$15,600 in staff time annually. Process improvements will focus on customer education and broadening the authority of CSC staff to resolve customer complaints.
3. Image review of photo enforced transactions. In Pay By Mail transactions, a license plate number is retrieved using optical character recognition software as a vehicle travels on a photo-tolling facility. A third of these transactions require manual review; 1.1% of the images are rejected. The rejections resulted uncollected revenue of about \$1.6 million annually. Analysis suggests that process improvements can reduce rejections and increase revenues by 10 to 20 percent. Improvements will include adjusting light sensors on roadside toll cameras; improved resources for reading specialty license plates; streamlining the actions required of image reviewers; establishing standard operating procedures for all image review activities; and customer education on issues such as obstructed plates or missing front plates.

# **Revenue Factors Affecting Toll Rates**

## Revenue Factors Affecting Toll Rates

State law requires tolls to be set sufficient to pay debt service and O&M costs for the bridge, preservation costs, insurance costs, and the deferred construction sales and use tax. Other revenues also contribute to the financial plan, including fees and fines, transponder sales, and miscellaneous revenues, and appropriations approved by the Legislature.

Toll revenues are affected by traffic volumes across the bridge, and as a result, traffic forecasts are an important factor considered by the Transportation Commission when setting toll rates.

### Sources of revenue in financial plan

In 2002, two sources of revenue were identified in the financial plan – tolls and interest earnings. Today TNB revenue also includes violation fines or civil penalties, revenue from the sale of transponders, and miscellaneous fees such as the customer service fee or a reprocessing fee. In addition are the loans and transfers authorized by the Legislature. These additional revenue sources represent 7.4% of all facility revenues through June 2013, with toll revenues and interest earnings representing the balance.

Exhibit 20

Tacoma Narrows Bridge Operating Sources and Uses of Funds <i>nominal dollars in millions</i>		
	July 2013 Financial Plan	July 2002 Financial Plan
	<i>Through June 2013</i>	
<b>Sources of Funds</b>		
Miscellaneous Revenue	\$4.1	-
Interest Earnings	1.4	1.6
Fines and Fees	7.3	-
Transponder Sales	3.3	-
Toll Revenue	266.5	366.1
Loan from Motor Vehicle Account	5.3	-
Transfers from Other Accounts	1.3	-
<b>Total Sources of Funds</b>	<b>\$289.2</b>	<b>\$367.7</b>
Debt Service	(\$207.7)	(\$262.3)
<b>Remaining Funds</b>	<b>\$81.4</b>	<b>\$105.5</b>
<b>Uses of Funds</b>		
WSDOT Management Costs	\$18.2	\$21.9
Toll Systems Operations (Vendor Contract)	42.8	33.2
Insurance	10.1	23.0
Enforcement and Security	1.4	5.1
Maintenance	1.2	6.3
Deferred Sales Tax*	-	9.0
<b>Total Uses of Funds</b>	<b>\$73.8</b>	<b>\$98.4</b>
<i>The 2002 Financial Plan anticipated the bridge opening April 2007. Actual bridge opening was July 2007</i>		
*Deferred sales tax is a capital expenditure, to be repaid by tolls.		

Source: WSDOT

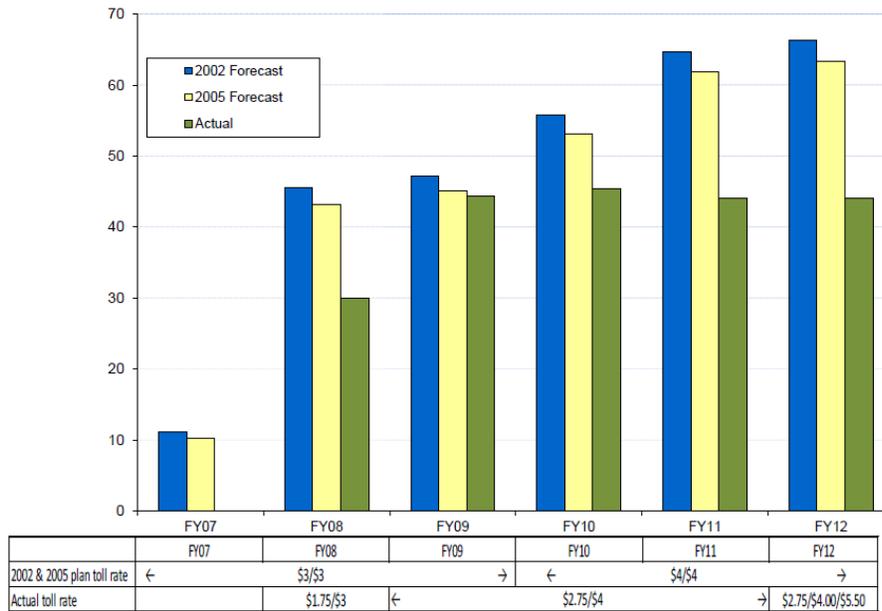
## Toll revenue collections, actuals compared to forecasts

Exhibit 21 below shows the actual TNB toll revenues through FY 2012, compared to the 2002 and 2005 forecasts. The green bar shows actual collections, which have been consistently below 2002 and 2005 projections each year.

The difference in FY 2012 is substantial – approximately \$44 million collected, compared to a 2002 projections of about \$68 million, and a 2005 projection of \$65 million. The shortfall is due to a combination of lower tolls and lower traffic volumes in 2012 than were projected in 2002 and 2005.

Exhibit 21

**Tacoma Narrows Bridge Toll Revenue**  
**Actual vs. 2002 Forecast and 2005 Forecast**  
*nominal dollars in millions*



Source: WSDOT

## Appropriations to the TNB

Legislative appropriations have provided a limited revenue source to help cover TNB costs. Since 1999, the Legislature has approved two such appropriations:

- 1999 -- \$50 million was appropriated as a cash contribution for the development of the public private initiatives (PPI) project at Tacoma Narrows. The funds were to be used for the acquisition of right of way and studies of the existing bridge, including the purchase of equipment to conduct the studies. (ESHB 1125, Section 219 (9)) In 2000, the Legislature altered the uses of the \$50 million, saying the funds were for costs associated with the location, development, design, right of way, and construction of the TNB improvements. (E2SSB 6499, Section 219 (8)(a)(b))
- 2006 – The Legislature appropriated \$1.3 million from the Multimodal Transportation Account, in order to allow a toll discount of up to 50% for toll payers using transponders while the existing bridge was retrofitted. The \$1.3 million was characterized by the Legislature as a state contribution to the project, not requiring repayment. (SSB 6241, 2006; and ESHB 1094, 2007). The 2006 Budget Highlights note that as a result of this appropriation, “It is estimated that the initial toll for electronic toll payers will be \$1.50 instead of \$3.00.” On April 30, 2007, the Transportation Commission adopted the initial toll at \$1.75 for electronic toll payers, which was the toll recommended by the Citizens Advisory Committee.

## Traffic forecasts

Traffic volumes affect the level of toll collections. As a result, traffic forecasts are an essential element considered by the Transportation Commission in setting toll rates.

The 2002 financial plan forecasted annual traffic on the TNB through 2030. It did not, however, predict the 2007-2009 economic recession, which contributed to lower-than-forecasted traffic as people lost jobs and stopped driving over the bridge.

Traffic levels have also been impacted by trip consolidation, as people reduced trips across the bridge in order to reduce the number of tolls paid, and the reduction in recreational trips across the bridge as business and amenities on the Peninsula have grown.

CDM Smith prepares a new traffic and revenue estimate before each quarterly transportation revenue forecast meeting. Their figures are used by the Transportation Commission to evaluate the TNB financial plan, as they decide on future toll rates.

Exhibit 22 below shows the historical traffic forecasts, and *actual* traffic volumes indicated in italics. Above the red line are the estimates used in the original 2002 finance plan and the 2005 update. These numbers were assumed in the financial plan used to structure the bond sales. The Exhibit shows that traffic levels have been consistently lower than originally projected in the 2002 finance plan and the 2005 update. For example, the 2009 forecast said 2012 traffic would be about 16.1 million, while in fact it was 13.9 million. The Exhibit also shows that traffic has declined in recent years. The lower traffic meant fewer tolls were paid and less toll revenue was collected than forecasted.

**Exhibit 22 Forecasted and *actual* TNB traffic**

	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013
2002 T&R Study	15,010,000	15,341,000	15,397,000	15,794,000	16,202,000	16,132,000
2005 T&R Update	14,311,000	14,670,000	14,710,000	15,084,000	15,468,000	15,664,000
Nov 2007 Forecast	13,738,058	14,471,000	14,469,000	14,893,000	15,272,000	15,564,000
Nov 2008 Forecast	<b>13,858,606</b>	14,259,848	14,111,314	14,892,799	15,282,103	15,564,000
Nov 2009 Forecast		<b>13,900,642</b>	14,719,333	15,512,149	16,087,746	16,251,000
Nov 2010 Forecast			<b>14,252,567</b>	14,787,266	15,679,037	16,298,693
Nov 2011 Forecast				<b>14,055,030</b>	14,143,768	14,457,000
Nov 2012 Forecast					<b>13,943,073</b>	13,849,623
Nov 2013 Forecast						<b>13,861,044</b>

*Italics indicate actual traffic levels*

Source: WSDOT

For purposes of this study, three levels of traffic were evaluated: the current official traffic forecast (September, 2013); a zero-growth scenario where traffic is flat through 2030; and a pessimistic scenario where traffic falls every year by 0.8%.

Exhibit 23 below compares traffic levels under four scenarios:

- The WSA 2005 traffic update is from the 2005 Wilbur Smith and Associates (WSA) (now CDM Smith) traffic and revenue update. This was done to update their 2002 estimates, and is the traffic level used in the 2005 official finance plan for the TNB.
- The current traffic forecast reflects the official September, 2013 forecast provided by the official Transportation Revenue Forecast Council.
- The zero growth traffic scenario is the flat-traffic scenario used in this study. It shows traffic remaining at the 2014 level through 2030.
- The pessimistic traffic scenario is the final traffic scenario used in this study. It shows an annual traffic decline of 0.8% each year through 2030.

Exhibit 23

<b>Current traffic forecast and two traffic scenarios compared to official 2005 traffic forecast</b>									
	WSA 2005 traffic update	Current traffic forecast	% of 2005 update	Zero growth traffic scenario	% of 2005 update	% of current forecast	Pessimistic traffic scenario	% of 2005 update	% of current forecast
2014	16,023,500	13,753,000	-14%	13,753,000	-14%	0%	13,753,000	-14%	0%
2015	16,388,500	14,004,000	-15%	13,753,000	-16%	-2%	13,642,976	-17%	-3%
2016	16,279,000	14,410,000	-11%	13,753,000	-16%	-5%	13,533,832	-17%	-6%
2017	16,461,500	15,005,000	-9%	13,753,000	-16%	-8%	13,425,562	-18%	-11%
2018	16,644,000	15,352,000	-8%	13,753,000	-17%	-10%	13,318,157	-20%	-13%
2019	16,863,000	15,728,000	-7%	13,753,000	-18%	-13%	13,211,612	-22%	-16%
2020	17,045,500	16,177,000	-5%	13,753,000	-19%	-15%	13,105,919	-23%	-19%
2021	17,301,000	16,418,000	-5%	13,753,000	-21%	-16%	13,001,072	-25%	-21%
2022	17,812,000	16,720,000	-6%	13,753,000	-23%	-18%	12,897,063	-28%	-23%
2023	17,556,500	16,983,000	-3%	13,753,000	-22%	-19%	12,793,886	-27%	-25%
2024	18,104,000	16,937,000	-6%	13,753,000	-24%	-19%	12,691,535	-30%	-25%
2025	18,359,500	17,082,000	-7%	13,753,000	-25%	-19%	12,590,003	-31%	-26%
2026	18,542,000	17,203,000	-7%	13,753,000	-26%	-20%	12,489,283	-33%	-27%
2027	18,724,500	17,342,000	-7%	13,753,000	-27%	-21%	12,389,369	-34%	-29%
2028	18,907,000	17,482,123	-8%	13,753,000	-27%	-21%	12,290,254	-35%	-30%
2029	19,126,000	17,623,378	-8%	13,753,000	-28%	-22%	12,191,932	-36%	-31%
2030	19,308,500	17,765,775	-8%	13,753,000	-29%	-23%	12,094,396	-37%	-32%

This exhibit compares the four traffic scenarios. It shows that

- WSA projected traffic to peak at 19.3 million trips in 2030. This is 1.5 million more trips than the current forecast, and 6-7 million more trips than the zero growth or pessimistic scenarios.
- If traffic remains flat through 2030, this will yield 2030 traffic levels a third lower than the 2005 update, and nearly 25% lower than the current official forecast.
- The pessimistic scenario yields 2030 traffic levels that are nearly 40% lower than the 2005 update, and a third lower than the official traffic forecast.

# **Evaluating Potential Internal Refinance Opportunities**

A key element of this study was the evaluation of potential for “internal refinance opportunities” to limit future toll rate increases on the Tacoma Narrows Bridge. The JTC-approved workplan describing the study defined internal refinance opportunities as changes that do not require the State Treasurer to re-issue debt, such as identifying non-toll revenue to help defray costs, reducing costs paid by tolls, or other potential alternatives. The workplan called for the staff workgroup to identify potential alternatives and to evaluate their potential to reduce toll increases.

## The Scenario Estimating Tool

In order to undertake the analysis, the staff workgroup worked with WSDOT staff to develop a Scenario Estimating Tool, and used it to evaluate a number of “what if” scenarios and their potential impact on toll rates through 2030 and beyond. The tool is an Excel spreadsheet. It is not a rate-setting tool, but allows policy makers to evaluate the relative scale of impacts of various scenarios.

Key elements of the tool include the following, all of which can be modified to evaluate the impact of changes on potential toll rates:

- traffic
- revenues
- expenses
- the sufficient minimum balance as required by the Transportation Commission, and
- the blended toll rate.

Traffic estimates. The tool allows the user to evaluate any number of traffic scenarios. In this study, and because traffic levels are such an important driver of toll revenues, three traffic scenarios were evaluated:

- the current official traffic forecast, based on the official September, 2013 transportation revenue forecast;
- a zero-growth scenario, where traffic is flat through 2030; and
- a pessimistic scenario, where is assumed to fall every year by 0.8%. This -0.8% reflects the average traffic growth on the bridge during the first five years of operation, a period that includes a significant economic recession.

Caveats. In evaluating results of the scenario estimating tool, it is important to keep in mind the following caveats and assumptions:

- the tool does not adjust for elasticity (traffic is not adjusted due to higher or lower toll rates);
- expenses increase at the full inflation rate, not half as in the current TNB financial plan;
- the toll rate is expressed as a blended rate (a weighted average of all toll rates);
- analysis begins with FY 2016 rates, because the Transportation Commission has already set toll rates for FY 2014 and FY 2015; and
- results are rough estimates, suggesting general trends but requiring further analysis for policy decisions.

While a very useful tool without which the study could not have been completed, the Scenario Estimating Tool is not a complex model. Furthermore, it was used to look 17 years into the future, so its results are speculative. By contrast, the Transportation Commission sets tolls one to two years in advance, so that rates are responsive to dynamic economic factors. This allows the Commission to achieve more accuracy and precision when setting toll rates.

Please see the Appendix, p. 88 for a detailed description of the elements in the Scenario Estimating Tool.

## Description of Scenarios Evaluated in this Study

Staff used the scenario estimating tool to evaluate a base case and seven scenarios under the three traffic scenarios, as described below. Results are described in terms of a “blended” toll rate, which is a weighted average of all toll rates. As a result, the blended rate is higher than the *Good To Go!* rate.

**Base case.** The base case reflects a current-law scenario. It illustrates potential toll rates under the three traffic scenarios, assuming tolls pay all costs as in current law, and costs are inflated by the full inflation rate.

Then seven different alternatives were analyzed. These seven alternatives, or scenarios, varied the level of expenses paid by tolls, or added sources of non-toll revenue that could contribute to payment of expenses otherwise the responsibility of TNB toll payers. The tool was used to estimate the effect on potential toll rates, and the level of additional revenue, needed to accomplish each scenario.

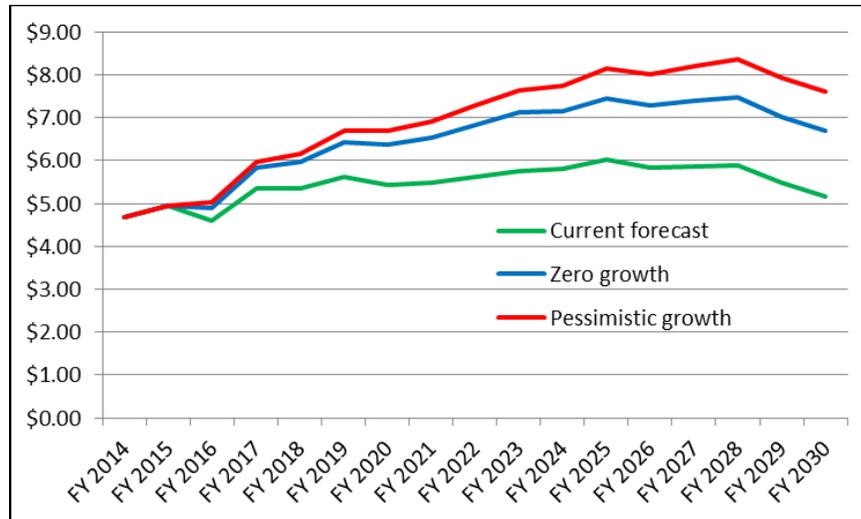
- Scenario 1.** A non-toll revenue source pays the deferred construction sales tax.
- Scenario 2.** Effect on tolls of a 5% cut in toll vendor and toll operations budgets.
- Scenario 3.** Effect on tolls if a non-toll revenue source pays preservation costs for the new bridge.
- Scenario 4.** Tolls only pay debt service – effect on tolls and the revenue source that pays the rest of the facility’s costs. Evaluated both as a “gift” from the other revenue source, and as a loan to be repaid by toll payers beginning in 2031.
- Scenario 5.** Loan to keep blended toll below \$6.00, with loan to be repaid by toll payers beginning in 2031.
- Scenario 6.** Loan to offset the effect of increasing debt service, with loan to be repaid by toll payers beginning in 2031.
- Scenario 7.** “Worst case” scenario. Is it likely tolls will reach double digits?

## Base case scenario

The base case reflects a current-law scenario. It illustrates potential toll rates under the three traffic scenarios, assuming tolls pay all costs as in current law, and costs are inflated by the full inflation rate.

### Base case -- Potential estimated blended toll rates

(Full IPD, tolls pay costs as in current law, three traffic scenarios)



**Results:** Through 2030, under the current traffic forecast, the blended toll is not likely to exceed \$6.00. In the pessimistic scenario, even if traffic fell every year by 0.8% and inflation is double the rate in the current TNB finance plan, the maximum blended toll is not likely to reach \$9.00.

- **Current traffic forecast:** The blended toll ranges between \$5.00 and \$6.00 through 2030.
- **Zero growth traffic scenario:** The blended toll ranges between \$6.00 and \$7.00 from 2018 – 2022, and between \$7.00 and \$7.50 through 2030.
- **Pessimistic traffic scenario:** The blended toll ranges between \$6.00 and \$7.00 through 2021; and between \$7.00 and \$8.50 through 2030.

The table below summarizes the results of the seven scenarios. It assumes the motor vehicle account is the non-toll revenue source. Each scenario will be discussed on the following pages. In all cases, it is the responsibility of the Transportation Commission to set toll rates.

Scenario		Potential impact on tolls (reduction from base case)	Potential impact on motor vehicle account	Other considerations
1	The \$58 million deferred sales tax is repaid by non-toll revenues, FY 2019-2028	35 – 45 cents	\$58 million, or about \$11 million a biennium	SR 520 deferred sales tax is \$144 million, FY 2022 – FY 2031. If also repaid by motor vehicle account, costs \$201 million, or \$30 - \$40 m/biennium
2	5% cut in toll vendor and toll operations budget	5 cents		Already enacted in FY 2013-15 budget
3	Non-toll revenues pay preservation costs of \$26 million through 2030	10 - 15 cents on average	\$26 million	Users of other tolled facilities will want similar treatment.
4 “gift”	Tolls only pay debt service – gift from motor vehicle account pays all other costs	\$1.10 - \$1.45 on average, FY 2016 - 2030	\$276 million FY 2016 – 2030, averaging \$30 - \$42 million/biennium	<ul style="list-style-type: none"> <li>• Users of other tolled facilities will want similar treatment.</li> <li>• Impact on other projects and programs funded from the motor vehicle account</li> </ul>
4 “loan”	Tolls only pay debt service; loan from motor vehicle account pays other costs; repayment toll paid 2031-2035	Same savings as above; repayment toll averages \$3.70 - \$5.75	\$276 million FY 2016 – 2030, avg \$30 - \$42 million/biennium repaid beginning 2031	<ul style="list-style-type: none"> <li>• Users of other tolled facilities will want similar treatment</li> <li>• Impact on other projects and programs funded from the motor vehicle account</li> </ul>
5 “loan”	Maximum \$6.00 toll; loan from motor vehicle account; repayment toll paid 2031 - 2035	80 cents - \$1.30 average savings; repayment toll averages \$3.05 - \$5.00	\$161 - \$242 million  Repaid beginning 2031	<ul style="list-style-type: none"> <li>• Affects only zero growth and pessimistic traffic scenarios because tolls don’t exceed \$6.00 in current traffic forecast</li> <li>• Users of other tolled facilities will want similar treatment</li> <li>• Impact on other projects and programs funded from the motor vehicle account</li> </ul>
6 “loan”	Level debt service beginning in FY 2016; loan from motor vehicle account; repayment toll paid 2031 - 2035	\$1.00 - \$1.30 average savings; repayment toll averages \$3.10 - \$4.75	\$231 million  Repaid beginning 2031	<ul style="list-style-type: none"> <li>• Loan from motor vehicle account would offset the effect of escalating debt service;</li> <li>• Impact on other projects and programs funded from the motor vehicle account</li> </ul>
7	Likelihood of double digit tolls	Not likely to reach double digit tolls	NA	Extremely unlikely scenarios may result in blended toll slightly above \$10 in the last 1-3 years of debt service payment: <ul style="list-style-type: none"> <li>• traffic falling 2% every year; or</li> <li>• 9% annual inflation; or</li> <li>• 1.5% annual traffic decline plus 5% annual inflation</li> </ul>

## Scenario 1: Deferred sales tax repayment (\$57.6 million)

Scenario 1 evaluated the potential impact on tolls if the Legislature used \$57.6 million in non-toll revenues to pay the deferred sales tax on TNB construction.

The Legislature enacted [RCW 47.46.060](#) in 1998, which allowed WSDOT to defer payment of state and local sales taxes on TNB construction costs until five years after the commencement of tolling, and then to pay back in equal payments over the course of ten years. A total of \$57.6 million in deferred sales tax is to be repaid over ten years to the state’s general fund.

This tax deferral was intended to allow toll revenue to grow before the taxes were paid, and was expected to help keep the opening day toll at no more than \$3.00.

The first payment on the deferred sales taxes was originally due on December 31, 2012. However, in an effort to postpone the need for toll payers to pay this tax bill, the 2012 Legislature passed SSB 6073 which further deferred sales tax repayment by another six years. The first payment is now due on December 31, 2018.

**Results:** This could affect blended tolls by 35 to 45 cents between FY 2019 and FY 2028, depending on the traffic scenario. This would be the potential savings from the base case (not from current toll rates). It would be up to the Transportation Commission to decide how to manage the toll rates. They would be considering many other changes in costs and revenue that cannot be foreseen at this time.

- **Current traffic forecast:** Average impact of 35 cents, FY 2019 – 2028.
- **Zero-growth traffic scenario:** Average impact of 43 cents, FY 2019 – 2028.
- **Pessimistic traffic scenario:** Average impact of 46 cents, FY 2019 -2028.

### Policy considerations:

1. **Sets a precedent.** Adopting this policy for the TNB would set a precedent for other tolled facilities.
2. **Cost to other fund source.** The Legislature would have to weigh this cost against other expenditures funded from that revenue source. For the TNB, it would cost other transportation fund sources \$57.6 million over 10 years. If the same policy were adopted for the SR 520 project, it would add nearly \$144 million in costs over 10 years. The table at right shows the potential \$201 million impact of Scenario 1.
3. **Risk of federal lawsuit.** Fully exempting state projects from sales tax would run afoul of the U.S. Supreme Court’s decision in *Washington v. United States* (460 U.S. 536 (1983)) (see Appendix page 90 for summary). However, the Department of Revenue has identified an alternative of exempting labor costs from the sales tax. This would tax state highway construction projects in the same manner as federal and local projects.

Deferred Sales Tax Repayment			
(\$ in 000s)			
Fiscal Year	TNB	520	Total
2018			\$ -
2019	\$ 5,760		\$ 5,760
2020	\$ 5,760		\$ 5,760
2021	\$ 5,760		\$ 5,760
2022	\$ 5,760	\$ 14,356	\$ 20,116
2023	\$ 5,760	\$ 14,356	\$ 20,116
2024	\$ 5,760	\$ 14,356	\$ 20,116
2025	\$ 5,760	\$ 14,356	\$ 20,116
2026	\$ 5,760	\$ 14,356	\$ 20,116
2027	\$ 5,760	\$ 14,356	\$ 20,116
2028	\$ 5,760	\$ 14,356	\$ 20,116
2029		\$ 14,356	\$ 14,356
2030		\$ 14,356	\$ 14,356
2031		\$ 14,356	\$ 14,356
<b>Total</b>	<b>\$57,600</b>	<b>\$ 143,563</b>	<b>\$ 201,163</b>

## **Scenario 2: 5% cut in toll vendor and toll operations budgets**

In 2013, the Legislature reduced WSDOT's toll vendor and toll operations budget by 5%. The legislative budget assumes this reduction will be maintained at the same level in the future.

Scenario 2 evaluated the potential impact on toll rates of this 5% budget reduction. The scenario was designed to reflect the scale of reductions that the Legislature frequently considers, to determine the impact on potential toll rates.

**Results:** This 5% budget reduction could affect tolls by about a nickel. However, the savings is small enough that it could be overshadowed by other changes in traffic or expenditures.

### Scenario 3: Another fund source pays preservation costs (R&R)

Preservation or R&R (renewal and replacement) costs are capital costs to preserve or extend the life of a facility, such as resurfacing the bridge deck and replacing key components of the tolling system.

Scenario 3 evaluated the potential impact on tolls if another fund source paid the TNB preservation (R&R) costs.

R&R costs are uneven, due to the nature of the work required in a particular year. For purposes of this study, WSDOT’s Olympic Region staff estimated the R&R costs for the bridge as shown below.

**Results:** If another fund source paid for bridge preservation costs, it could save ten to fifteen cents on the average toll level, but the savings in a particular year might be more or less than that, depending on the amount of preservation work that needed to be done.

- **Current traffic forecast:** Average 11 cent impact
- **Zero growth traffic scenario:** Average 13 cent impact
- **Pessimistic traffic scenario:** Average 14 cent impact

It would be up to the Transportation Commission to decide how to set tolls to accommodate these expenses, whether they’re paid by tolls or by other revenue sources.

**Policy considerations:**

1. **Sets a precedent.** Adopting this policy for the TNB would set a precedent for other facilities.
2. **Cost to other fund source.** For the TNB, it would cost other transportation fund sources \$26.2 million through 2030. If the same policy were adopted for the SR 520 project or other tolled facilities, it would cost additional millions of dollars. The Legislature would have to weigh the cost of paying toll facility preservation costs against other expenditures funded from that revenue source.

TNB Preservation (R&R) Costs	
Fiscal year	R&R cost
FY 2014	
FY 2015	\$ 119,735
FY 2016	\$ 4,543,189
FY 2017	\$ 1,002,473
FY 2018	\$ 3,078,198
FY 2019	\$ 12,496
FY 2020	\$ 118,364
FY 2021	\$ 2,685,064
FY 2022	\$ 1,128,348
FY 2023	\$ 3,436,681
FY 2024	\$ 47,449
FY 2025	\$ 2,768,062
FY 2026	\$ 1,463,344
FY 2027	\$ 1,903,942
FY 2028	\$ 720,359
FY 2029	\$ 599,489
FY 2030	\$ 2,573,403
<b>TOTAL</b>	<b>\$ 26,200,595</b>

## Scenario 4: Tolls pay only debt service, evaluated as a “gift” and a “loan”

Scenario 4 is the first of several larger scenarios, evaluating the potential impact on tolls if another revenue source pays a substantial amount of costs that currently are paid by toll payers.

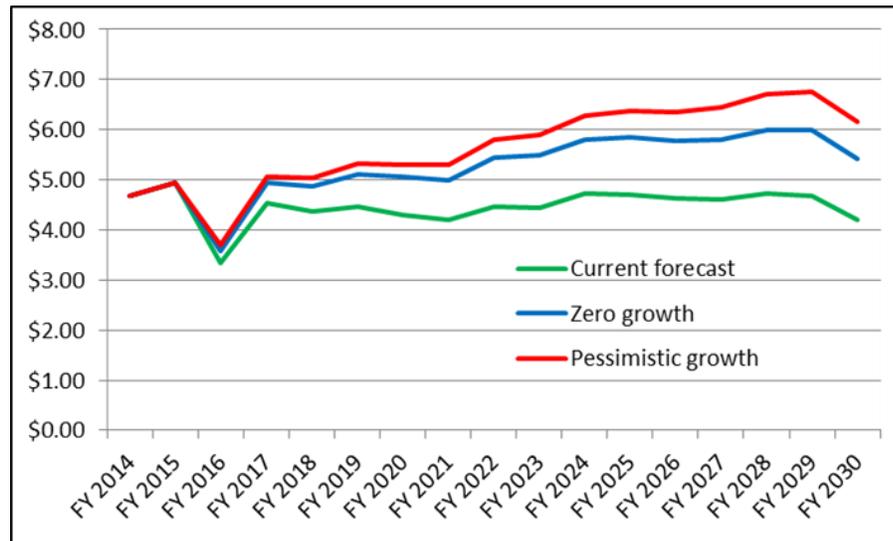
By law, tolls are required to pay debt service, toll vendor and toll operations costs, insurance, maintenance and preservation, and the deferred sales tax. If tolls only paid debt service beginning in FY 2016, another fund source would be required to pay everything else. “Everything else” amounts to 15% to 20% of annual bridge expenses, or between \$12 million and \$22 million a year, for a total of \$276 million.

	Total Expenditures	Debt Service	Non debt-service expenditures	% non-debt service expenditures
FY 2014	66,081,100	54,932,000	11,149,100	17%
FY 2015	66,003,635	54,735,000	11,268,635	17%
FY 2016	78,195,493	62,311,000	15,884,493	20%
FY 2017	82,633,607	70,092,000	12,541,607	15%
FY 2018	84,673,825	69,889,000	14,784,825	17%
FY 2019	90,534,392	72,861,000	17,673,392	20%
FY 2020	90,757,585	72,770,000	17,987,585	20%
FY 2021	93,253,250	72,478,000	20,775,250	22%
FY 2022	97,537,281	78,093,000	19,444,281	20%
FY 2023	101,323,580	79,339,000	21,984,580	22%
FY 2024	102,313,483	83,480,000	18,833,483	18%
FY 2025	106,095,426	84,301,000	21,794,426	21%
FY 2026	104,417,838	83,683,000	20,734,838	20%
FY 2027	105,470,990	84,047,000	21,423,990	20%
FY 2028	106,816,868	86,325,000	20,491,868	19%
FY 2029	101,411,410	86,542,000	14,869,410	15%
FY 2030	96,765,550	79,660,000	17,105,550	18%

**Other funds would pay this \$276 million**

Scenario 4 was evaluated both as a “gift” and a “loan”. As a “gift”, no repayment would be required. As a “loan”, repayment would be required beginning in FY 2031, after all debt service has been paid.

**Scenario 4: Could affect tolls by \$1.10 - \$1.45 on average compared to the base case**  
*It would be up to the Transportation Commission to decide the toll levels.*



**Results:** If another fund source paid \$276 million in non-debt service costs through 2030, it could affect the average toll by \$1.10 - \$1.45, depending on the traffic scenario.

- **Current traffic forecast:** \$1.10 average toll savings compared to base case toll
- **Zero growth scenario:** \$1.35 average toll savings compared to base case toll
- **Pessimistic scenario:** \$1.45 average toll savings compared to base case toll

**Policy considerations:**

1. **Sets a precedent.** Adopting this policy for the TNB could set a precedent for other tolled facilities. Users of other tolled facilities may ask legislators to make similar toll-rate-lowering investments in their facilities.
2. **Cost to motor vehicle account (MVA) or other fund sources.** If this \$276 million were a gift or a loan from the MVA, it would impact other programs and projects funded from the MVA by \$30 million to \$40 million a biennium.

To put this into perspective, \$30 million to \$40 million represents the value of 1 cent to 1.3 cents of gas tax collected in a single year. \$40 million is the amount WSDOT spends on a winter's worth of snow and ice control (plowing, sanding, de-icing and avalanche control). \$40 million also represents 70% of the ferry system's annual fuel budget.

**Scenario 4 evaluated as a “loan” from the motor vehicle account**

For simplicity purposes, the loan was evaluated as a zero-interest loan. Once debt service is paid off in 2030, a repayment toll would be imposed for a period of years in order to repay the \$276 million loan.

**Policy question: What would the repayment tolls repay?** It would be a policy question for the Legislature to decide what if any other expenses in addition to the actual loan amount toll payers would be required to pay during the repayment period.

There are five elements of costs in addition to the loan that could be borne by toll payers.

- First are the toll-related costs, the cost of the toll vendor and WSDOT’s toll operations. Since tolls would be imposed during the repayment period, it seems logical to allocate TNB’s share of those toll vendor and operations costs to the TNB toll payers during the repayment period.
- Second are the other bridge-related costs – insurance, maintenance and preservation.

**Policy question: How long is the repayment period?** It would be another policy question for the Legislature to decide how long the repayment period would be. For purposes of this study, two scenarios were evaluated: a five-year repayment period (FY 2031 – 2035) and a ten-year repayment period (FY 2031 – 2040). The shorter repayment period results in higher tolls, but lower extended costs (toll vendor, operations, insurance, maintenance, preservation) than the longer repayment period. The longer repayment period results in lower tolls but higher extended costs.

**Results:** To repay the \$276 million loan, if toll payers paid all associated costs (toll- and bridge-related costs), the repayment toll would average between \$2.30 and \$3.70 in a ten-year repayment scenario; and between \$3.70 and \$5.75 in a five-year repayment scenario.

In order to gain average toll savings of \$1.10 to \$1.45 from FY 2016 – 2030, toll payers would pay tolls averaging between \$2.30 and \$3.70 (depending on the traffic scenario) for an additional 10 years, from FY 2031 – 2040; or between \$3.70 and \$5.75 for an additional five years (FY 2031 – 2035).

<b>Scenario 4: Tolls pay only debt service, FY 2016 – 2030</b>			
<b>Loan, with repayment beginning 2031</b>			
	<b>Current traffic forecast</b>	<b>Zero traffic growth</b>	<b>Pessimistic traffic</b>
FY 2016 – 2030 loan	\$276 million		
Average toll level impact FY 2016 - 2030	\$1.10 to \$1.45 of potential savings		
<b>Repayment toll to repay loan*</b>			
Average repayment toll – 10 years FY 2031 - 2040	\$2.30 to \$3.70		
Average repayment toll – 5 years FY 2031 - 2035	\$3.70 to \$5.75		

\*Assumes repayment toll pays all costs – loan, toll vendor and toll operations, insurance, maintenance, and preservation costs. Toll is 20 to 40 cents lower if another fund source pays insurance, maintenance and preservation costs.

Another way to look at Scenario 4 (evaluated as a loan) is shown at right.

In the 10-year repayment scenario, the repayment toll includes the loan, and all toll- and bridge-related costs.

In order to gain average toll savings of \$1.10 to \$1.45 from FY 2016 – 2030, toll payers would pay tolls averaging between \$2.30 and \$3.70 (depending on the traffic scenario) for an additional 10 years, from FY 2031 - 2040.

- **Current traffic forecast:** \$2.30 avg toll
- **Zero-growth scenario:** \$3.10 avg toll
- **Pessimistic scenario:** \$3.70 avg toll

If the repayment toll did not include the bridge insurance, maintenance and preservation costs, the average toll would be 20 to 40 cents lower than the levels shown at above and at right.

	Loan	Impact on tolls	Repayment, all costs
FY 2016	\$15,884,493		
FY 2017	\$12,541,607		
FY 2018	\$14,784,825		
FY 2019	\$17,673,392		
FY 2020	\$17,987,585		
FY 2021	\$20,775,250		
FY 2022	\$19,444,281		
FY 2023	\$21,984,580		
FY 2024	\$18,833,483		
FY 2025	\$21,794,426		
FY 2026	\$20,734,838		
FY 2027	\$21,423,990		
FY 2028	\$20,491,868		
FY 2029	\$14,869,410		
FY 2030	\$17,105,550		
FY 2031			\$47,146,278
FY 2032			\$43,531,418
FY 2033			\$43,118,018
FY 2034			\$43,354,986
FY 2035			\$43,619,061
FY 2036			\$48,747,839
FY 2037			\$45,313,778
FY 2038			\$45,475,723
FY 2039			\$49,090,282
FY 2040			\$45,291,191
<b>TOTAL</b>	<b>\$276,329,579</b>		<b>\$454,688,573</b>

In the 5-year repayment scenario, the repayment toll includes the loan, and all toll- and bridge-related costs.

In order to gain average toll savings of \$1.10 to \$1.45 from FY 2016 – 2030, toll payers would pay tolls averaging between \$3.70 and \$5.75 (depending on the traffic scenario) for an additional 5 years, from FY 2031 – 2035.

- **Current traffic forecast:** \$3.70 avg toll
- **Zero-growth scenario:** \$4.95 avg toll
- **Pessimistic scenario:** \$5.75 avg toll

If the repayment toll did not include the bridge insurance, maintenance and preservation costs, the average toll would be 20 to 40 cents lower than the levels shown above and at right.

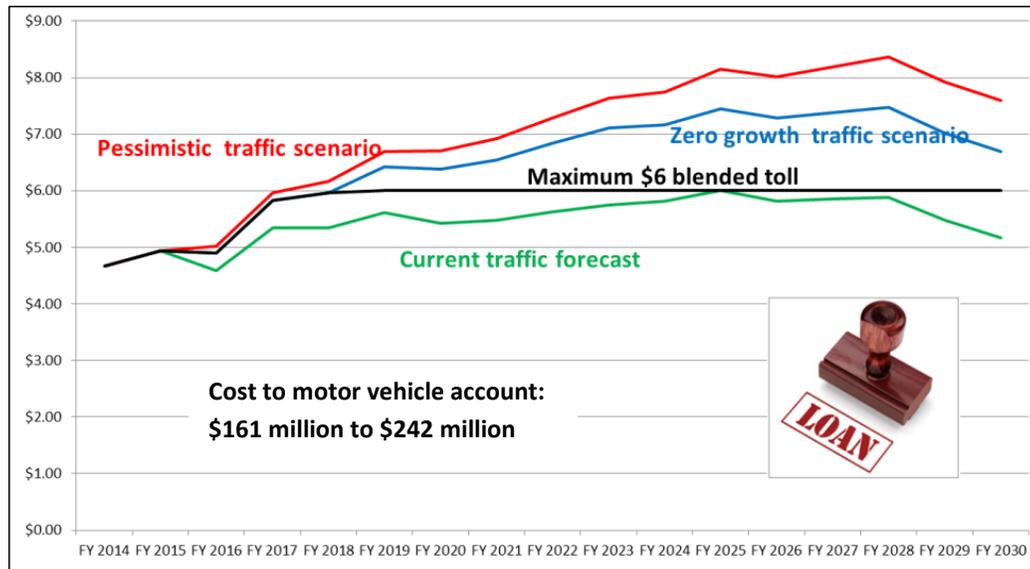
	Loan	Impact on tolls	Repayment, all costs
FY 2016	\$15,884,493		
FY 2017	\$12,541,607		
FY 2018	\$14,784,825		
FY 2019	\$17,673,392		
FY 2020	\$17,987,585		
FY 2021	\$20,775,250		
FY 2022	\$19,444,281		
FY 2023	\$21,984,580		
FY 2024	\$18,833,483		
FY 2025	\$21,794,426		
FY 2026	\$20,734,838		
FY 2027	\$21,423,990		
FY 2028	\$20,491,868		
FY 2029	\$14,869,410		
FY 2030	\$17,105,550		
FY 2031			\$74,779,235
FY 2032			\$71,164,376
FY 2033			\$70,750,976
FY 2034			\$70,987,944
FY 2035			\$71,252,018
<b>TOTAL</b>	<b>\$276,329,579</b>		<b>\$358,934,550</b>

## Scenario 5: Loan to achieve a maximum \$6.00 blended toll

When the bridge was originally financed in 2002, the maximum toll envisioned at that time was \$6.00. Tolls were to start at \$3.00, and increase by \$1.00 every three years until hitting \$6.00 in FY 2016, where they were to remain until the debt was paid off in 2030.

Scenario 5 evaluated what size of loan it might take to offset TNB costs such that the maximum blended toll rate did not exceed \$6.00.

**Scenario 5: Loan to achieve a maximum \$6 blended toll**



**Results:** Scenario 5 only affects the zero-growth and pessimistic traffic scenarios, because in the current traffic forecast, the blended toll does not exceed \$6.00. It would take a loan of between \$161 million and \$242 million to keep blended tolls below \$6.00 in the zero traffic growth and pessimistic traffic scenarios, which would achieve average blended toll savings of 80 cents to \$1.30 through FY 2030.

Scenario 5: Maximum blended toll \$6.00, FY 2016 – 2030 Loan, with repayment beginning 2031			
	Current traffic forecast	Zero traffic growth	Pessimistic traffic
FY 2016 – 2030 loan	NA	\$161 million to \$242 million	
Average toll level impact FY 2016 - 2030	NA	80 cents to \$1.30 of potential average savings	
Repayment toll to repay loan*			
Average repayment toll – 10 years, FY 2031 - 2040	NA	\$2.05 to \$3.15 average toll	
Average repayment toll – 5 years, FY 2031 - 2035	NA	\$3.05 to \$5.00 average toll	

\* Assumes repayment toll pays all costs – loan, toll vendor and toll operations, insurance, maintenance, and preservation costs. Toll is 20 to 40 cents lower if another fund source pays insurance, maintenance and preservation costs.

Loan to achieve maximum \$6.00 loan -- zero traffic growth		
Loan	Impact on tolls	Repayment, all costs
FY 2014		
FY 2015		
FY 2016		
FY 2017		
FY 2018		
FY 2019		
FY 2020		
FY 2021		
FY 2022		
FY 2023		
FY 2024		
FY 2025		
FY 2026		
FY 2027		
FY 2028		
FY 2029		
FY 2030		
FY 2031		\$ 35,594,957
FY 2032		\$ 31,980,097
FY 2033		\$ 31,566,697
FY 2034		\$ 31,803,665
FY 2035		\$ 32,067,740
FY 2036		\$ 37,196,518
FY 2037		\$ 33,762,457
FY 2038		\$ 33,924,402
FY 2039		\$ 37,538,961
FY 2040		\$ 33,739,870
<b>TOTAL</b>	<b>\$160,816,369</b>	<b>\$ 339,175,363</b>

The table to the left shows the potential toll savings from FY 2019 – 2030 resulting from a loan to keep the maximum blended toll at \$6.00 or less. It also shows the repayment toll, assuming a 10-year repayment schedule and the repayment toll pays all toll- and bridge-related costs.

The top table shows that under the zero traffic growth scenario, in order to achieve an 80 cent average toll savings from FY 2019 – 2030, toll payers would have to pay a toll of \$2.05 for another ten years (FY 2031 – 2040). If the repayment toll were for five years, the repayment toll would average \$3.45 from FY 2031 to 2035.

The lower table shows that under the pessimistic traffic scenario, in order to achieve a \$1.30 average toll savings from FY 2018 – 2030, toll payers would have to pay a toll of \$3.05 for another ten years (FY 2031 – 2040). If the repayment toll were for five years, the repayment toll would average \$5.00 from FY 2031 to 2035.

**Policy considerations:**

- Sets a precedent.** Adopting this policy for the TNB could set a precedent for other tolled facilities. To the extent other tolled facilities have tolls in excess of \$6.00 per round trip, users of those facilities may ask legislators to make similar toll-rate-lowering investments in their facilities.
- Cost to motor vehicle account (MVA) or other fund sources.** Scenario 5 would cost the MVA or other fund sources \$161 million to \$242 million through FY 2030.
  - In the zero growth traffic scenario, the loan ranges from \$11 to \$39 million a biennium.
  - In the pessimistic traffic scenario, the loan starts at \$2.1 million in FY 2018, and then ranges from \$18 million to \$56 million a biennium.

To put this cost into perspective, the biennial loan would be the equivalent of the following transportation appropriations:

- WSDOT’s structural bridge repair program -- \$10 million
- WSDOT’s stormwater costs -- \$20 million
- WSDOT’s pavement maintenance -- \$30 million
- A winter’s worth of snow and ice control, or 70% of a year’s worth of ferry fuel -- \$40 million
- The state contribution to WSDOT’s preservation program -- \$50 million

Loan to achieve maximum \$6.00 loan -- pessimistic traffic		
Loan	Impact on tolls	Repayment, all costs
FY 2014		
FY 2015		
FY 2016		
FY 2017		
FY 2018		
FY 2019		
FY 2020		
FY 2021		
FY 2022		
FY 2023		
FY 2024		
FY 2025		
FY 2026		
FY 2027		
FY 2028		
FY 2029		
FY 2030		
FY 2031		\$ 43,763,206
FY 2032		\$ 40,148,346
FY 2033		\$ 39,734,946
FY 2034		\$ 39,971,914
FY 2035		\$ 40,235,989
FY 2036		\$ 45,364,767
FY 2037		\$ 41,930,706
FY 2038		\$ 42,092,651
FY 2039		\$ 45,707,210
FY 2040		\$ 41,908,119
<b>TOTAL</b>	<b>\$ 242,498,857</b>	<b>\$ 420,857,854</b>

## Scenario 6: Loan for level debt service

When structuring financing for tolled facilities, the State Treasurer’s current practice is to strive for level debt service, rather than the escalating debt service is the case for the TNB. Scenario 6 was designed to mimic the Treasurer’s current practice. It identifies the size of a loan that would be required to offset the effect of increasing TNB debt service after FY 2016.

**Results:** A loan of \$231 million would be required under any of the three traffic scenarios to mimic the effect of level debt service on TNB toll payers.

Scenario 6: Level debt service, FY 2016 – 2030 Loan, with repayment beginning 2031			
	Current traffic forecast	Zero traffic growth	Pessimistic traffic
FY 2017 – 2030 loan	\$231 million		
Average toll level impact FY 2017 - 2030	\$1.00 to \$1.30 of potential savings		
Repayment toll to repay loan*			
Average repayment toll – 10 years FY 2031 - 2040	\$1.90 to \$3.00		
Average repayment toll – 5 years FY 2031 - 2035	\$3.10 to \$4.75		

\* Assumes repayment toll pays all costs – loan, toll vendor and toll operations, insurance, maintenance, and preservation costs. Toll is 20 to 40 cents lower if another fund source pays insurance, maintenance and preservation costs.

The table at right shows the potential toll savings from FY 2017 – 2030 resulting from a loan to mimic the effects of level debt service beginning in FY 2016.

It shows that in order to achieve average toll savings of \$1.00 and \$1.30 from FY 2017 – 2030 depending on the traffic scenario, toll payers would have to pay tolls of \$1.90 to \$3.00 for another ten years, from FY 2031 – 2040, depending on the traffic scenario.

This repayment includes all toll- and bridge-related costs. If the repayment period were for 5 years, the repayment toll would average between \$3.10 and \$4.75.

**Policy considerations:** The biennial loan amounts would range from \$15 million to \$56 million, with a resulting impact on programs and projects funded from the MVA. This would be the equivalent of most of WSDOT’s stormwater costs (\$20 million), up to an amount in excess of the biennial state contribution to WSDOT’s preservation budget (\$50 million).

Level debt service -- all traffic scenarios			
	Loan	Impact on tolls	Repayment, all costs
FY 2014			
FY 2015			
FY 2016			
FY 2017	\$ 7,781,000	Toll savings: \$1.00 to \$1.30 average toll savings over 14 years	
FY 2018	\$ 7,578,000		
FY 2019	\$ 10,550,000		
FY 2020	\$ 10,459,000		
FY 2021	\$ 10,167,000		
FY 2022	\$ 15,782,000		
FY 2023	\$ 17,028,000		
FY 2024	\$ 21,169,000		
FY 2025	\$ 21,990,000		
FY 2026	\$ 21,372,000		
FY 2027	\$ 21,736,000		
FY 2028	\$ 24,014,000		
FY 2029	\$ 24,231,000		
FY 2030	\$ 17,349,000		
FY 2031		Repayment toll: \$1.90 to \$3.00 on average, over 10 years	\$ 40,833,920
FY 2032			\$ 37,219,060
FY 2033			\$ 36,805,660
FY 2034			\$ 37,042,628
FY 2035			\$ 37,306,703
FY 2036			\$ 42,435,481
FY 2037			\$ 39,001,420
FY 2038			\$ 39,163,365
FY 2039			\$ 42,777,924
FY 2040			\$ 38,978,833
<b>TOTAL</b>	<b>\$ 231,206,000</b>		<b>\$391,564,994</b>

## Scenario 7: What is the likelihood of double digit tolls? Not much.

This final scenario evaluated the potential for double digit blended toll rates. What is the likelihood that the blended toll rate will exceed \$10.00 before debt service is paid off in 2030?

**Results:** While the potential exists, the evaluation yielded some very unlikely scenarios. As a result, unlikely the blended toll will reach \$10.00 or more. While the cash toll or the Pay by Mail toll may exceed \$10.00, the blended rate is unlikely to do so.

The following three unlikely scenarios yielded double digit tolls:

1. **Extreme traffic drops.** If traffic fell by 2% every year between FY 2016 and 2030, the blended toll rate may exceed \$10.00 in FY 2028. This unlikely level of traffic decline would yield traffic of 9.9 million trips in 2030 – another 2 million below the pessimistic scenario evaluated in this study.
2. **Extreme inflation and falling traffic.** Under the pessimistic traffic scenario, if inflation was 9% each year from FY 2016 – 2030, the blended toll may exceed \$10.00 in the last three years of debt service (FY 2028 – 2030). This unlikely scenario would yield non-debt service costs that are 250% higher in 2030 than in the base case, or \$43 million as compared with \$17.1 million. In FY 2014, the TNB's non-debt service costs are \$11.1 million.
3. **A combination of high traffic declines and high inflation.** A combination of 1.5% annual traffic drop and 5% annual inflation would yield blended toll rates above \$10.00 in FY 2028. This unlikely scenario doubles the annual traffic decline in the pessimistic scenario evaluated above, and more than doubles the inflation rate used in this study.

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## **Tacoma Narrows Bridge Internal Refinance Opportunities**

ESSB 5024, Sec 204(4) directs the Joint Transportation Committee (JTC) to convene a work group to identify and evaluate internal refinance opportunities for the Tacoma Narrows Bridge. The study must include a staff work group, including staff from the Office of Financial Management, the Transportation Commission, the Department of Transportation, the Office of the State Treasurer, and the legislative Transportation Committees. The JTC shall issue a report of its findings to the House of Representatives and the Senate Transportation Committees by December 31, 2013.

### **Background**

Recent increases in the cost of tolls for the Tacoma Narrows Bridge (TNB), and the likelihood that additional toll increases will be needed in the coming years in order to meet bond repayment requirements, has led legislators to investigate what can be done to reduce expected toll increases. The Office of the State Treasurer has reviewed strategies to restructure the bonds issued to fund the TNB and has determined that most of the bonds could not be restructured under current law, but that even if the law so allowed, a partial restructuring would cost up to \$500 million.

As a result, the Legislature wishes to consider other options to reduce the burden of toll increases on users of the Tacoma Narrows Bridge. The term “internal refinance opportunities” in the proviso directing this study refers to changes that do not require the State Treasurer to re-issue debt. This may include identifying non-toll revenue to help defray costs, reducing costs paid by tolls, or other potential alternatives.

### **Overall Study Approach**

This study will be conducted by a Staff Workgroup within existing funds. The Workgroup will meet approximately three times to review relevant studies and reports, identify potential alternatives, and evaluate their potential to reduce toll increases. The final report will define the problem, and summarize a series of alternatives that might warrant further analysis to reduce or prevent toll increases.

### **Study Outline**

JTC staff will summarize the history of Tacoma Narrows Bridge financing and tolling, using resources provided by WSDOT, the Office of the State Treasurer, the Transportation Commission, legislative staff, and others. This summary will also review how tolls are currently set, and the financial outlook for the TNB under a variety of toll rate scenarios evaluated by WSDOT and the Transportation Commission.

The Staff Workgroup will meet approximately three times to review materials, and receive presentations on three relevant studies:

1. WSDOT’s Tolling Cost of Service Study;
2. the State Auditor’s performance audit of the tolling customer service center; and
3. WSDOT’s Lean Management operating efficiencies proposals.

The Staff Workgroup will seek to find potential opportunities to reduce the costs to tollpayers, which may include proposals to

1. Use non-toll revenue to help defray costs;
2. Reduce any costs, which could then be used to reduce or prevent toll increases; and
3. Employ other alternatives.

The Workgroup will analyze the various alternatives, develop cost and savings estimates, consider impacts of the proposals on tollpayers, consider impacts of the proposals on other funds (e.g. the motor vehicle fund) and identify potential statutory changes needed.

**Proposed Study Timeline**

**May and June.** Review materials; interview legislators, staff from the Transportation Commission, Office of the State Treasurer, WSDOT, others. Draft opening chapter in report that defines the problem and provides historical background of TNB financing and tolling.

**July.** First meeting of Staff Workgroup. Receive reports on WSDOT cost of service study and State Auditor’s performance audit on the customer service center. Brainstorm potential alternatives to reduce costs to tollpayers, and assign staff to research the various alternatives.

**September.** Second meeting of the Staff Workgroup. Review results-to-date, identify additional areas for analysis.

**October.** Discuss findings-to-date with JTC at October 9<sup>th</sup> meeting in Tacoma. Later in the month, hold the third Staff Workgroup meeting to hear about WSDOT’s Lean Management operating efficiencies proposals, and review and discuss draft report.

**November.** Finalize draft report.

**December.** Present draft report to JTC on December 12.

**Staff Workgroup Members**

Mary Fleckenstein, Project Manager, and Beth Redfield	JTC
Clint McCarthy	Senate Transportation Cmte
Mark Matteson, Amy Skei and Alyssa Ball	House Transportation Cmte
Erik Hansen and Charles Knutson	OFM
Amy Arnis, Doug Vaughn, Rich Struna and Craig Stone	WSDOT
Ellen Evans and Scott Merriman	State Treasurer’s Office
Reema Griffith and Noah Crocker	Transportation Commission
Jackson Maynard, Lyset Cadena, Samantha Gatto, HDC Staff	Caucus staff

JTC Project Manager/Back-Up: Mary Fleckenstein, Beth Redfield  
 Appropriation: Within existing funds  
 Report due date: December 31, 2013

# Presentation to JTC on July 24, 2013 :

## Tacoma Narrows Bridge Internal Refinance Opportunities

Mary Fleckenstein, JTC Project Manager  
July 24, 2013

### Study Proviso

ESSB 5024, Sec. 204(4)

(4) The joint transportation committee shall convene a work group to **identify and evaluate internal refinance opportunities** for the Tacoma Narrows bridge. The study must include a staff work group, including staff from the office of financial management, the transportation commission, the department of transportation, the office of the state treasurer, and the legislative transportation committees. The joint transportation committee shall issue a report of its findings to the house of representatives and the senate transportation committees by December 31, 2013.

### How Did We Get Here?

- ▶ Financing structure, with escalating debt payments
- ▶ Toll rates lower than projected
- ▶ Traffic levels lower than projected

### Financing Structure

- ▶ Public-private partnerships (P3) initiative in the 1990s; TNB only project of six to advance.
- ▶ While ultimately publicly-financed, its finance structure reflects promises made by the P3 statute, namely the ability to construct projects **without tax dollars**.
- ▶ Washington Supreme Court: no tolls on existing bridge to finance new bridge
- ▶ Legislature: no gas tax dollars to finance debt service during construction

### Zero Coupon Bonds



- ▶ Needed funds for construction (2002 - 2007), that didn't require revenues to pay debt service until the bridge opened.
- ▶ State Finance Committee: Non-callable zero coupon bonds
  - Upside: No revenue stream needed for debt service during construction
  - Downside: Cannot be refinanced when interest rates drop

### Construction and Financing: \$300 Million Savings

	Dec-10 Financial Plan	Jul-02 Financial Plan
<b>Sources of Funds</b>		
Interest Earnings	9	10
Gross Bond Proceeds	684	800
Capitalized Interest	-4	-73
Toll Revenue Used for Financing Deferred Sales Tax	64	53
Expenditure from Motor Vehicle Account (MVA)	11	11
Transfers from MVA	30	39
<b>Total Sources of Funds for Capital</b>	<b>\$792</b>	<b>\$840</b>
<b>Uses of Funds</b>		
Cost of Interest	0	0
Capital Construction in TNB Account	717	731
Deferred Sales Tax	58	50
Capital Construction in MVA Account	11	11
<b>Total Uses of Funds for Capital</b>	<b>\$792</b>	<b>\$840</b>
Interest Rates on Bonds Sold*	4.93%	6.65%
Total Debt Service through FY 2030	1,492	1,783

## Toll Rates Lower than Projected

	2002 Planned toll	Actual <i>Good To Go!</i> toll	Weighted average toll
2008	\$3.00	\$1.75	\$2.12
2009	\$3.00	\$2.75	\$3.13
2010	\$4.00	\$2.75	\$3.13
2011	\$4.00	\$2.75	\$3.13
2012	\$4.00	\$2.75	\$3.13
2013	\$5.00	\$4.00	\$4.44
2014	\$5.00	\$4.25	\$4.57
2015	\$5.00	\$4.50	\$4.82
2016	\$6.00	TBD	TBD

## Traffic Levels Lower than Projected

	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013
2002 T&R Study	15,010,000	15,341,000	15,397,000	15,794,000	16,202,000	16,132,000
2005 T&R Update	14,311,000	14,670,000	14,710,000	15,084,000	15,468,000	15,664,000
Nov 2007 Forecast	13,738,058	14,471,000	14,469,000	14,893,000	15,272,000	15,564,000
Nov 2008 Forecast	<b>13,858,606</b>	14,259,848	14,111,314	14,892,799	15,282,103	15,564,000
Nov 2009 Forecast		<b>13,900,642</b>	14,719,333	15,512,149	16,087,746	16,521,000
Nov 2010 Forecast			<b>14,252,567</b>	14,787,266	15,679,037	16,298,693
Nov 2011 Forecast				<b>14,055,030</b>	14,143,768	14,457,000
Nov 2012 Forecast					<b>13,943,073</b>	13,849,623

Bold = actuals

## To date

- ▶ All the bills are being paid: debt service, operations and maintenance, insurance
- ▶ With tolls lower than projected
- ▶ And with traffic lower than projected

## What Does the Future Hold?



## Toll Payers are Concerned ...

	<i>Good To Go!</i> Toll	Weekly	Yearly
FY 2008	\$1.75	\$8.75	\$437.50
FY 2014	\$4.25	\$21.25	\$1062.50
?	\$6.00	\$30.00	\$1,500.00

... yet the state's financial obligations must still be met.

## Study Outline

- ▶ Summarize history of TNB financing and tolling
- ▶ Review and summarize results of three upcoming studies
  - Tolling Cost of Service Study (August, October)
  - SAO performance audit of contract management of the customer service center (August)
  - WSDOT's Lean Review Report (October)
- ▶ Sketch three financial scenarios, with a range of traffic outlooks, to see a range of potential toll rate schedules

## Evaluate Options

- ▶ Evaluate alternative scenarios to help cover the bridge’s ongoing costs.
  - loans
  - additional revenues
  - cost savings
  - extending the number of years tolls are paid



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## Tolls Pay Debt Service and Bridge Costs

- ▶ State law requires debt service on the TNB bonds to be paid from the Motor Vehicle Account.
- ▶ State law also requires tolls to reimburse the Motor Vehicle Account for that debt service, and to pay maintenance and operations costs, insurance costs, and other costs related to the new bridge.



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## Potential Gas Tax Loan

- ▶ Could loan from the Motor Vehicle Account cover some debt service or operating costs?
- ▶ Identify effect on potential toll rates, including length of repayment term.
- ▶ Identify potential impacts on other projects and operations funded from the Motor Vehicle Account.



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## Potential Cost Savings

- ▶ Deferred sales tax repayment -- \$58 million; 10 year repayment schedule, beginning Dec, 2018.
- ▶ 2007 gas tax loan -- \$5.288 million
- ▶ Cost savings identified in the 3 studies
- ▶ Brainstorm other potential cost savings – credit card fees, pay by mail adjudication costs, overhead charged by WSDOT, etc.



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## Potential Revenue Sources

- ▶ Are fees sufficient to cover the costs of transactions (Cost-of-Service study)?
- ▶ Brainstorm other potential revenue sources



## Staff Workgroup

WORKGROUP PARTICIPANT	ORGANIZATION
Mary Fleckenstein, Project Manager, and Beth Redfield	JTC
Clint McCarthy	Senate Transportation Committee
Alyssa Ball, Mark Matteson, Amy Skei	House Transportation Committee
Erik Hansen	OFM
Amy Arnis, Craig Stone, Rich Struna, Doug Vaughn	WSDOT
Ellen Evans, Svein Braseth, Kate Manley, Scott Merriman	State Treasurer’s Office
Reema Griffith and Noah Crocker	Transportation Commission
Jackson Maynard, Lyset Cadena, Samantha Gatto, HDC Staff	Caucus staff

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## Presentations to JTC

- ▶ July 24<sup>th</sup>, Centralia
- ▶ October 9<sup>th</sup>, Tacoma
- ▶ December 12<sup>th</sup>, Olympia

## Questions?



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# Presentation to JTC on October 9, 2013 :

## Tacoma Narrows Bridge Internal Refinance Opportunities

Mary Fleckenstein, JTC Project Manager  
Beth Redfield, JTC Senior Policy Analyst  
October 9, 2013

## Study Proviso

ESSB 5024, Sec. 204(4)

(4) The joint transportation committee shall convene a work group to **identify and evaluate internal refinance opportunities** for the Tacoma Narrows bridge. The study must include a staff work group, including staff from the office of financial management, the transportation commission, the department of transportation, the office of the state treasurer, and the legislative transportation committees. The joint transportation committee shall issue a report of its findings to the house of representatives and the senate transportation committees by December 31, 2013.

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## What are internal refinance opportunities?

The approved study workplan:

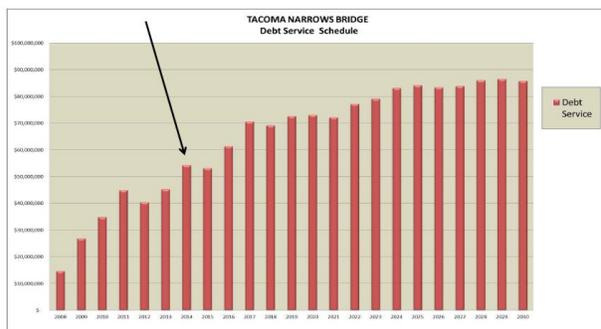
- ▶ ... the Legislature wishes to consider other options to reduce the burden of toll increases on users of the Tacoma Narrows Bridge.
- ▶ “The term “internal refinance opportunities” in the proviso directing this study refers to changes that do not require the State Treasurer to re-issue debt. This may include identifying non-toll revenue to help defray costs, reducing costs paid by tolls, or other potential alternatives.”

## Current TNB toll rates

	Effective 7/1/13	% using method	Effective 7/1/14	% using method
Good To Go!	\$4.25	73%	\$4.50	73%
Automatic payment via Pay by Plate (PBP)	\$4.50		\$4.75	
Cash paid at the toll booth	\$5.25	22%	\$5.50	21%
Short term account set up w/in 72 hrs of crossing	\$5.75		\$6.00	
Pay by Mail (PBM)	\$6.25	5%	\$6.50	6%
<b>Blended (weighted average) toll</b>	<b>\$4.57</b>		<b>\$4.82</b>	

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## TNB debt service



## Today's presentation: Scenarios

- ▶ How might different traffic, expenditure and revenue scenarios affect future toll rates

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# Considerations ...

- ▶ Setting a precedent for other tolled facilities
- ▶ Potential bond market reaction
  - OST: Negative market reaction if legislative bodies are involved with toll setting.
- ▶ Tolls are set by the Transportation Commission



# Scenario Estimating Tool

- ▶ Traffic – current forecast, zero growth, decline
- ▶ Revenue
  - Toll and other
- ▶ Expenses
  - Debt service – Bridge Maintenance
  - Toll vendor – Preservation (R&R)
  - Toll operations – Deferred sales tax
  - Bridge Insurance
- ▶ Sufficient minimum balance (SMB)



# Caveats and Assumptions

- ▶ Traffic
  - No elasticity assumptions built in (traffic not adjusted due to higher or lower toll rates)
- ▶ Expenses increase at IPD – not half IPD as in financial plan
- ▶ Toll rate is blended rate (GTC, cash, PBP, PBM, short term account – 2 axle vehicles)
- ▶ Analysis begins with FY 2016 rates
- ▶ Results are rough estimates
  - Suggest general trends, but need further detailed analysis to make informed decisions
- ▶ It's up to the Transportation Commission to set toll rates.



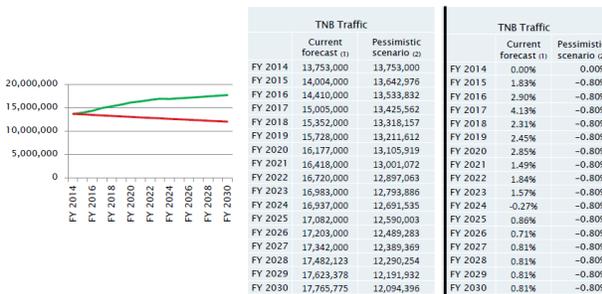
	Debt Service	Toll Vendor	Toll Operations	Bridge Insurance	Bridge Maintenance	Preservation (R&R)	Deferred Sales Tax	Total Expenditures
FY 2014	54,932,000	5,453,500	3,675,600	1,750,000	270,000	0	0	66,081,100
FY 2015	54,735,000	5,453,500	3,640,400	1,750,000	305,000	119,735	0	66,003,635
FY 2016	62,311,000	5,532,660	3,693,242	1,775,402	340,000	4,543,189	0	78,195,493
FY 2017	70,092,000	5,614,549	3,747,905	1,801,680	375,000	1,002,473	0	82,633,607
FY 2018	69,889,000	5,696,045	3,802,307	1,827,831	380,443	3,078,198	0	84,673,825
FY 2019	72,861,000	5,791,056	3,865,731	1,858,320	386,789	12,496	5,759,000	90,534,392
FY 2020	72,770,000	5,892,420	3,933,395	1,890,847	393,559	118,364	5,759,000	90,757,585
FY 2021	72,478,000	5,999,934	4,005,164	1,925,348	400,740	2,685,064	5,759,000	93,253,250
FY 2022	78,093,000	6,109,775	4,078,486	1,960,595	408,077	1,128,348	5,759,000	97,537,281
FY 2023	79,339,000	6,222,642	4,153,829	1,996,814	415,615	3,436,681	5,759,000	101,323,580
FY 2024	83,480,000	6,338,510	4,231,175	2,033,995	423,354	47,449	5,759,000	102,313,483
FY 2025	84,301,000	6,455,447	4,309,234	2,071,519	431,164	2,768,062	5,759,000	106,095,426
FY 2026	83,683,000	6,574,718	4,388,852	2,109,793	439,130	1,463,344	5,759,000	104,417,838
FY 2027	84,047,000	6,695,656	4,469,582	2,148,602	447,208	1,903,942	5,759,000	105,470,990
FY 2028	86,325,000	6,818,009	4,551,257	2,187,864	455,380	720,359	5,759,000	106,816,868
FY 2029	86,542,000	6,943,257	4,634,864	2,228,055	463,745	599,489	0	101,411,410
FY 2030	79,660,000	7,070,847	4,720,035	2,268,998	472,267	2,573,403	0	96,765,550

Source: WSDOT, 9/24/14



# TNB Traffic

## Current Forecast vs. Pessimistic Scenario



(1) Current forecast September 2013 Transportation Revenue Forecast  
 (2) Source - generated for this study by legislative staff



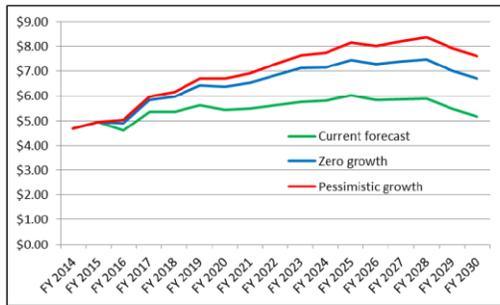
# What you'll see today

- ▶ Potential toll rates in a base case scenario
- ▶ Seven scenarios affecting expenditures & potential toll rates
  1. Deferred sales tax repayment
  2. 5% cut in toll operations and vendor costs
  3. Another fund source pays preservation costs
  4. Tolls only pay debt service
  5. Loan to keep blended toll below \$6
  6. Loan to offset effect of increasing debt service
  7. Worst case scenario



## Potential estimated blended toll rates – Base Case

(Full IPD, tolls pay costs as in current law, three traffic scenarios)



## What happens if we change expenditure assumptions?

- ▶ Deferred sales tax repayment
- ▶ 5% budget cut to toll operations costs
- ▶ Another fund source pays preservation (R&R)

## Scenario 1: Deferred sales tax repayment

- ▶ \$58 million deferred construction sales tax, to be repaid between FY 2019 and FY 2028
- ▶ If the Legislature used \$58 million in non-toll revenues to make this repayment, could affect tolls by **35 to 45 cents**, depending on the traffic scenario

## Deferred sales tax: Policy considerations

Could cost \$201 million to adopt this policy

- ▶ Sets a precedent for other facilities
- ▶ For the TNB, would cost other transportation fund sources \$58 million over ten years (FY 2019 – FY 2028)
- ▶ The same policy for SR 520 would cost other fund sources \$144 million over ten years (FY 2022 – FY 2031)

Fiscal Year	TNB	520	Total
2018			\$ -
2019	\$ 5,760		\$ 5,760
2020	\$ 5,760		\$ 5,760
2021	\$ 5,760		\$ 5,760
2022	\$ 5,760	\$ 14,356	\$ 20,116
2023	\$ 5,760	\$ 14,356	\$ 20,116
2024	\$ 5,760	\$ 14,356	\$ 20,116
2025	\$ 5,760	\$ 14,356	\$ 20,116
2026	\$ 5,760	\$ 14,356	\$ 20,116
2027	\$ 5,760	\$ 14,356	\$ 20,116
2028	\$ 5,760	\$ 14,356	\$ 20,116
2029		\$ 14,356	\$ 14,356
2030		\$ 14,356	\$ 14,356
2031		\$ 14,356	\$ 14,356
Total	\$57,600	\$ 143,563	\$ 201,163

## Deferred sales tax: Policy considerations

Risk of federal lawsuit

- ▶ Department of Revenue guidance: Risk of federal lawsuit if turned into an exemption
  - Options which preserve payment of the sales tax are preferred (payment by other sources)
  - Could treat state projects like federal/local projects and exempt labor costs from sales tax
  - TNB's design-build contract did not detail labor vs. other costs; a retro-active exemption of labor costs would have to be estimated

## Scenario 2: 5% cut in toll vendor and toll operations budget

- ▶ 2013 Legislature reduced toll vendor and toll operations budget by 5%.
- ▶ Legislative budget assumes this reduction will be maintained at the same level in the future
- ▶ Could affect tolls by about a nickel,
  - But the savings is small enough that it could be overshadowed out by other changes in traffic or expenditures.

### Scenario 3: Another fund source pays preservation costs (R&R)

- R&R costs are uneven, due to the nature of the work required in a particular year.
- If another fund source paid for R&R, it could save **ten to fifteen cents on average**, but the savings in a particular year might be more or less than that.
- Would cost Motor Vehicle Fund (or other revenue source) \$26 million

	Preservation (R&R)
FY 2014	\$ 119,735
FY 2015	\$ 4,543,189
FY 2017	\$ 1,002,473
FY 2018	\$ 3,078,198
FY 2019	\$ 12,496
FY 2020	\$ 118,364
FY 2021	\$ 2,685,064
FY 2022	\$ 1,128,348
FY 2023	\$ 3,436,681
FY 2024	\$ 47,449
FY 2025	\$ 2,768,062
FY 2026	\$ 1,463,344
FY 2027	\$ 1,903,942
FY 2028	\$ 720,359
FY 2029	\$ 599,489
FY 2030	\$ 2,573,403
<b>TOTAL</b>	<b>\$ 26,200,595</b>

### Larger scenarios: Gifts and loans

- "Gifts" from other fund sources, no repayment required
- Loans, to be repaid after debt service is paid off in 2030.
  - 5 year and 10 year repayment scenarios

### Scenario 4: Tolls only pay debt service beginning in FY 2016

	Total Expenditures	Debt Service	Non debt-service expenditures	% non-debt service expenditures
FY 2014	66,081,100	54,932,000	11,149,100	17%
FY 2015	66,003,635	54,735,000	11,268,635	17%
FY 2016	78,195,493	62,311,000	15,884,493	20%
FY 2017	82,633,607	70,092,000	12,541,607	15%
FY 2018	84,673,825	69,889,000	14,784,825	17%
FY 2019	90,534,392	72,861,000	17,673,392	19%
FY 2020	90,757,585	72,779,000	17,987,585	19%
FY 2021	93,253,250	72,476,000	20,775,250	22%
FY 2022	97,537,281	78,063,000	19,444,281	20%
FY 2023	101,323,580	79,319,000	21,984,580	22%
FY 2024	102,313,483	83,460,000	18,833,483	18%
FY 2025	106,095,426	84,360,000	21,794,426	21%
FY 2026	104,417,838	83,863,000	20,794,838	20%
FY 2027	105,470,990	84,047,000	21,423,990	20%
FY 2028	106,816,868	86,325,000	20,491,868	19%
FY 2029	101,411,410	86,542,000	14,869,410	15%
FY 2030	96,765,550	79,660,000	17,105,550	18%

Other funds would pay this \$276 million

Consideration: Other facilities will want this, too.



### Tolls only pay debt service beginning in FY 2016

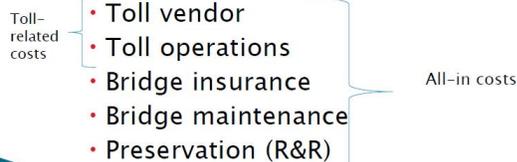
- "Gift" from other transportation fund sources of \$276 million over 15 years (FY 2016 - FY 2030)
- Could affect tolls by **\$1.10 to \$1.45** on average, depending on the traffic assumption



### Tolls only pay debt service beginning in FY 2016

Loan - What would tolls repay?

- The loan (\$276 million)
- Other TNB costs?



### Loan - How long a repayment period?

- 10 years (FY 2031 - 2040)
  - All-in costs
  - Toll-related costs

Lower average toll  
Paid 10 years  
Higher extended costs
- 5 years (FY 2031 - 2035)
  - All-in costs
  - Toll-related costs

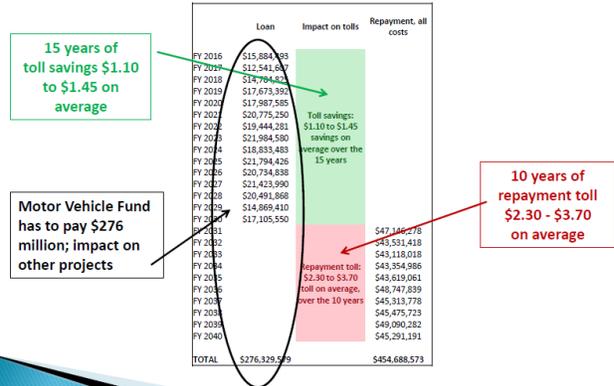
Higher average toll  
Paid 5 years  
Lower extended costs

**Loan: Tolls only pay debt service FY 2016 – 2030**  
10 year repayment includes loan and all bridge and toll-related costs

Tolls pay only debt service, FY 2016 – 2030			
Loan, with repayment beginning 2031			
	Current traffic forecast	Zero traffic growth	Pessimistic traffic
FY 2016 – 2030 loan		\$276 million	
Average toll level impact FY 2016 – 2030		\$1.10 to \$1.45 of potential savings	
Repayment toll to repay loan*			
Average repayment toll -- 10 years FY 2031 – 2040		\$2.30 to \$3.70	
Average repayment toll -- 5 years FY 2031 – 2035		\$3.70 to \$5.75	

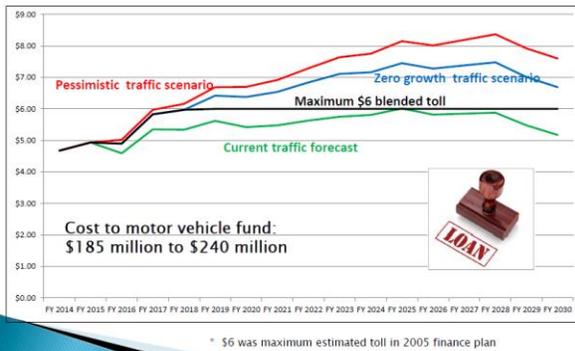
\* Assumes repayment toll pays all costs – loan, toll vendor and toll ops, insurance, M&O, R&R. Toll is 20–40 cents lower if another fund source pays insurance, M&O and R&R

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**Scenario 5: Maximum \$6 toll\***  
(blended toll)



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Maximum \$6 toll, FY 2016 – 2030			
Loan, with repayment beginning 2031			
	Current traffic forecast	Zero traffic growth	Pessimistic traffic
FY 2016 – 2030 loan	NA	\$185 million to \$240 million	
Average toll level impact FY 2016 – 2030	NA	80 cents to \$1.30 of potential average savings	
Repayment toll to repay loan*			
Average repayment toll -- 10 years FY 2031 – 2040	NA	\$2.25 to \$3.15 average toll	
Average repayment toll -- 5 years FY 2031 – 2035	NA	\$3.45 to \$5.00 average toll	

\* Assumes repayment toll pays all costs – loan, toll vendor and toll ops, insurance, M&O, R&R. Toll is 20–40 cents lower if another fund source pays insurance, M&O and R&R

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**Scenario 6: Level debt service**

- ▶ Treasurer’s current practice is for level debt service, rather than rising debt service as in TNB
- ▶ Scenario 6: Loan to offset effect of increasing debt service after FY 2016

Level debt service, FY 2016 – 2030			
Loan, with repayment beginning 2031			
	Current traffic forecast	Zero traffic growth	Pessimistic traffic
FY 2017 – 2030 loan		\$231 million	
Average toll level impact FY 2017 – 2030		\$1.00 to \$1.30 of potential average savings	
Repayment toll to repay loan*			
Average repayment toll -- 10 years FY 2031 – 2040		\$1.90 to \$3.00 average toll	
Average repayment toll -- 5 years FY 2031 – 2035		\$3.10 to \$4.75 average toll	

\* Assumes repayment toll pays all costs – loan, toll vendor and toll ops, insurance, M&O, R&R. Toll is 20–40 cents lower if another fund source pays insurance, M&O and R&R

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## Scenario 7: Double digit tolls?

**Not likely**

## Take-aways from today's presentation

- ▶ 1. Blended tolls not likely to reach double-digit.
- ▶ 2. Legislature can take action to reduce the impact of tolls on TNB users.
- ▶ 3. To have a significant impact on tolls, it will be costly, with implications for other projects and programs funded from the Motor Vehicle Fund.
- ▶ 4. There will be pressure to provide similar relief for users of other tolled facilities.
- ▶ 5. Transportation Commission sets toll rates – not the Legislature. Important consideration for bond market.
- ▶ 6. This is discussion-level work; expert analysis is needed before making significant policy decisions.

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## Next steps

- ▶ Write the draft report
  - Including any necessary statutory amendments
- ▶ Circulate for comments
- ▶ Final report to JTC in December

## Questions?



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2002 Finance Options Worksheet used by legislators and staff during 2002 legislative session

4/29/02

A	<b>Tacoma Narrows Bridge Financing Comparison</b> (dollars in millions)
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Illustrations only

	<u>State Financing</u> <u>Option A</u>	<u>State Financing</u> <u>Option C</u>	<u>State Financing</u> <u>Option E</u>
Final Bond Maturity	25 Years	25 Years	25 Years
All interest cost	4.98%	5.13%	5.19%
Debt Service	Level debt	Tied to revenue	Tied to revenue
Bond Type	Current	Current	Zero/Current
Date of First Issue	December-02	December-02	December-02
Months of Construction	55	55	55
Debt Repayment/Defeasance <sup>1</sup>	2032	2029	2029
<b><u>Project Costs</u><sup>2</sup></b>			
Fixed Price	\$ 584	\$ 584	\$ 584
Project Contingency	\$ 50	\$ 50	\$ 50
Toll Contract	\$ 11	\$ 11	\$ 11
Management and Oversight	\$ 41	\$ 41	\$ 41
Development Costs	\$ 40	\$ 40	\$ 40
(a) Sub-Total Project Costs	\$ 726	\$ 726	\$ 726
<b><u>Financing Costs</u></b>			
State Contribution	\$ 39	\$ 39	\$ 39
Net Capitalized Interest <i>during period of construction</i>	\$ -	\$ 86	\$ -
Cost of Issuance	\$ 7	\$ 7	\$ 7
(b) Sub-Total Financing Costs	\$ 46	\$ 132	\$ 46
<b>Adjusted Total (a+b)</b>	<b>\$ 772</b>	<b>\$ 858</b>	<b>\$ 772</b>
<i>Less Previous Appropriation of State Contribution</i>	<i>\$ 39</i>	<i>\$ 39</i>	<i>\$ 39</i>
<b>Total Bond Sales</b>	<b>\$ 733</b>	<b>\$ 819</b>	<b>\$ 733</b>
<b>Additional Financing needed during CN<sup>3</sup></b>	<b>\$ 118</b>	<b>\$ -</b>	<b>\$ -</b>
<b>Total Debt Service<sup>4</sup></b>	<b>\$ 1,285</b>	<b>\$ 1,617</b>	<b>\$ 1,554</b>
<b>Total Toll Revenues collected<sup>5</sup></b>	<b>\$ 1,670</b>	<b>\$ 1,917</b>	<b>\$ 1,937</b>

<sup>1</sup> Debt service for option A can be defeased prior to 2032.

<sup>2</sup> Costs are assumed for comparison purposes only. Price is yet to be negotiated.

<sup>3</sup> Additional funding to pay debt service during construction. This is paid back within the tolling period.

<sup>4</sup> Amount to repay debt including any capitalized interest.

<sup>5</sup> Assumes State management for toll collections, maintenance after construction. The existing bridge is maintained with State dollars.

2002 Finance Options Worksheet used by legislators and staff during 2002 legislative session

**Tacoma Narrows Bridge**  
Proposed Toll Schedules

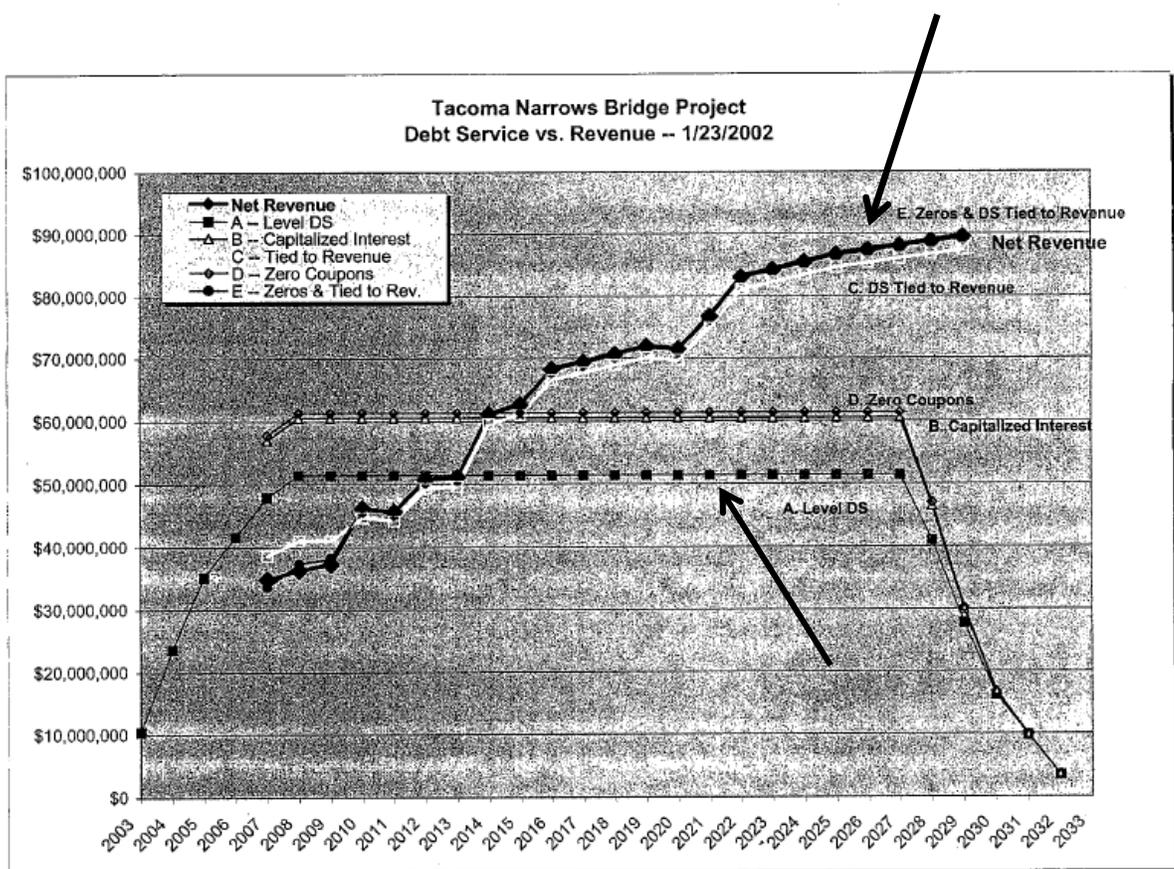
	State Financing	State Financing	State Financing
	a.) State Financing - Option A	a.) State Financing - Option C	a.) State Financing - Option E
	b.) DOT Manages Operations funded by tolls	b.) DOT Manages Operations funded by tolls	b.) DOT Manages Operations funded by tolls
	c.) State Funds used for Existing Bridge Maintenance	c.) State Funds used for Existing Bridge Maintenance	c.) State Funds used for Existing Bridge Maintenance
Year	d.) State Funds used for Existing Bridge Renewal and Replacement over life of tolling	d.) State Funds used for Existing Bridge Renewal and Replacement over life of tolling	d.) State Funds used for Existing Bridge Renewal and Replacement over life of tolling
2007	\$3.00	\$3.00	\$3.00
2008	\$3.00	\$3.00	\$3.00
2009	\$3.00	\$3.00	\$3.00
2010	\$3.00	\$3.00	\$3.00
2011	\$4.00	\$4.00	\$4.00
2012	\$4.00	\$4.00	\$4.00
2013	\$4.00	\$4.00	\$4.00
2014	\$4.00	\$4.00	\$4.00
2015	\$4.00	\$4.00	\$4.50
2016	\$4.50	\$4.50	\$4.50
2017	\$4.75	\$4.75	\$4.75
2018	\$4.75	\$4.75	\$4.75
2019	\$4.75	\$4.75	\$4.75
2020	\$4.75	\$4.75	\$4.75
2021	\$4.75	\$4.75	\$5.00
2022	\$5.00	\$5.00	\$5.00
2023	\$5.00	\$5.00	\$5.00
2024	\$5.00	\$5.00	\$5.00
2025	\$5.00	\$5.00	\$5.00
2026	\$5.00	\$5.00	\$5.00
2027	\$5.00	\$5.00	\$5.00
2028	\$5.00	\$5.00	\$5.00
2029	\$5.00	\$5.00	\$5.00
2030	-	-	-
2031	-	-	-
2032	-	-	-
2033	-	-	-

1. Tolls can most likely come off earlier than 2029.  
Option A also requires approximately \$118 million to cover debt service during construction.  
This is paid back during years 2018 through 2022.

## 2002 Finance Options Worksheet used by legislators and staff during 2002 legislative session

This graph shows the debt service associated with some of the finance options the Legislature and the State Treasurers Office evaluated during the 2002 legislative session. The arrow at the bottom of the graph points to Option A, which proposed essentially level debt service at about \$51 million/year. It would have required a \$118 million state appropriation to cover debt service during the five year construction period, and for that reason, it was not selected. The arrow at the top of the graph points to the debt service for the finance plan that was selected – zero coupon bonds with accelerating debt service.

The proposed toll rates for each plan are shown on the previous page, and in both cases, the tolls start at \$3 for four years, and reach a maximum of \$5.00 for the final eight or nine years.



## Letter from OST to Senator Derek Kilmer re: alternative financing options

### MEMORANDUM

TO: Senator Derek Kilmer

FROM: Ellen Evans, Deputy Treasurer, Debt Management  
Office of the State Treasurer

DATE: January 30, 2012

Dear Senator Kilmer:

Our office has reviewed alternative strategies to restructure the bonds issued to fund the Tacoma Narrows Bridge, which are largely noncallable voter-approved motor vehicle fuel tax general obligation bonds. Even under "best case" results, a partial restructuring would cost from \$250-\$500 million. All restructuring strategies examined assume the maturities of the refunding bonds could extend beyond existing maturities. However, current statute states that any refunding bonds issued may not have final maturities that extend beyond the original bonds that they are refunding when the bonds to be refunded are voter approved general obligation bonds. Accordingly, the noncallable TNB bonds cannot be restructured under current statute.

#### Restructuring Strategies

Our office has recently reviewed options for restructuring the bonds issued to finance the Tacoma Narrows Bridge. The state borrowed approximately \$680 million in ten series of bonds issued from 2002 to 2007. At the end of FY 2011, approximately \$590 million was still outstanding. More than 90% of the bonds issued for this project were noncallable, i.e. they were structured and sold without call options which enable the state to reduce interest costs by refunding when interest rates decline.

Options for restructuring noncallable bonds include a "tender" and a "defeasance". Neither approach would produce debt service savings for the state. In fact, both would be quite costly. Moreover, both restructuring strategies assume that the new bonds have longer maturities than the existing debt.

A tender involves issuing new tax-exempt debt and using proceeds of the new bonds to buy a portion of the outstanding bonds back from investors. A tender is complicated by the lack of a publically available database showing which individuals, mutual funds, insurance companies or other money managers currently hold the state's bonds. Consequently, tenders are cumbersome and uncommon. In recent years, issuers have been successful in buying back between 25 to 40% of a given bond series. Our analysis assumes investors are paid the current market value of the securities they sell back in the tender plus a premium of 0.25%.

The second alternative, a defeasance, consists of issuing new taxable debt and using the proceeds to buy a portfolio of U.S. Treasuries that produces income sufficient to cover the debt service on the

## Letter from OST to Senator Derek Kilmer re: alternative financing options

outstanding TNB bonds. The outstanding TNB bonds would then in effect be repaid from income on the defeasance portfolio. While simpler to execute, this strategy is even more expensive. Low interest rates means that a relatively large portfolio of U.S. Treasuries would be needed to repay the TNB bonds.

To illustrate both strategies, we have selected a scenario which only partially adjusts the TNB debt service: FY 2013 debt service on the TNB bonds is reduced to approximately \$40 million in 2013, annual debt service increases annually by 6.5% through FY 2022 and annual debt service levels off thereafter. Financial advisors to the Office of the State Treasurer (Montague DeRose) have modeled the following scenarios (see attached chart):

**Tax Exempt Tender (2038):** OST issues tax-exempt current interest refunding bonds with a final maturity in 2038. For the next ten years, annual debt service increases by 6.5% and levels off at \$70MM.

**Tax Exempt Tender (2042):** OST issues tax-exempt current interest refunding bonds with a final maturity in 2042. For the next nine years, annual debt service increases by 6.5% and levels off at \$64MM thereafter.

**CABs Tax Exempt Tender (2037):** OST issues tax-exempt Capital Appreciation refunding bonds (CABs) with a final maturity in 2037. Annual debt service increases by 6.5% in the next ten years and levels off once it reaches \$70MM. (This scenario is theoretical at best; there may not be a robust market for zero-coupon refunding bonds.)

**Taxable Refunding (2041):** OST issues taxable current interest refunding bonds with a final maturity in 2041. Annual debt service increases by 6.5% in the next ten years and levels off once it reaches \$70MM.

This analysis estimates that the costs on these four strategies ranges from \$250 to \$550 million, or from \$38 to \$137 million on a net present value basis. In our opinion, these costs are "best case" results.

### **Statute restricts the maturities of refundings of voter-approved general obligation bonds**

Current statute states that any refunding bonds issued may not have final maturities that extend beyond the original bonds that they are refunding when the bonds to be refunded are voter approved general obligation bonds. The Tacoma Narrows Bridge bonds meet the criteria for this restriction.

### *Reasoning*

## Letter from OST to Senator Derek Kilmer re: alternative financing options

RCW 39.53.090, from the Refunding Bond Act, states that, "the various annual maturities of general obligation refunding bonds issued to refund voted general obligation bonds shall not extend over a longer period of time than the bonds to be refunded."

The Tacoma Narrows bonds were all approved to be issued pursuant to RCW 47.10.843 by the State Finance Committee, as described in the State Finance Committee Resolution that authorized each sale for the TNB.

RCW 47.10.843 comes from Chapter 321, Laws of 1998 and Chapter 334, Laws of 2006.

- Chapter 321, Laws of 1998: Sections 1-21 and 44-46 of Chapter 321, Laws of 1998 were submitted to the voters as Refendum 49, which was approved by voters in November 1998. Section 19 of Chapter 321 designates that bonds issued under its authority "shall distinctly state that they are a general obligation of the state of Washington" and are first payable from "the proceeds of the state excise taxes on motor vehicle and special fuels". Thus, bonds issued under this authorization are both general obligation and MVFT bonds.
- Chapter 334, Laws of 2006: Chapter 334, Laws of 2006 changed some language regarding which agency was authorized to request that bonds be sold. It did not affect the characterization of the bonds.

The TNB bonds authorized by the State Finance Committee are MVFT GO bonds. Because they are authorized in statute by legislation that was approved by voters, they are also voter approved bonds and subject to RCW 39.53.090.

### Looking forward

Debt for the SR 520 Corridor Program has been structured within a different framework. Most importantly, debt service on the SR 520 bonds increases only modestly from year to year, in line with projected revenues that assume no toll hikes over time for purposes of repaying the debt. In addition, and consistent with the Treasurer's Principles of Tolling, the bond documents in this financing include a contractual commitment to produce net toll revenues that pay for debt service and meet a specified coverage ratio with a cushion of reserves. All toll backed bonds with maturities beyond ten years are anticipated to be callable.

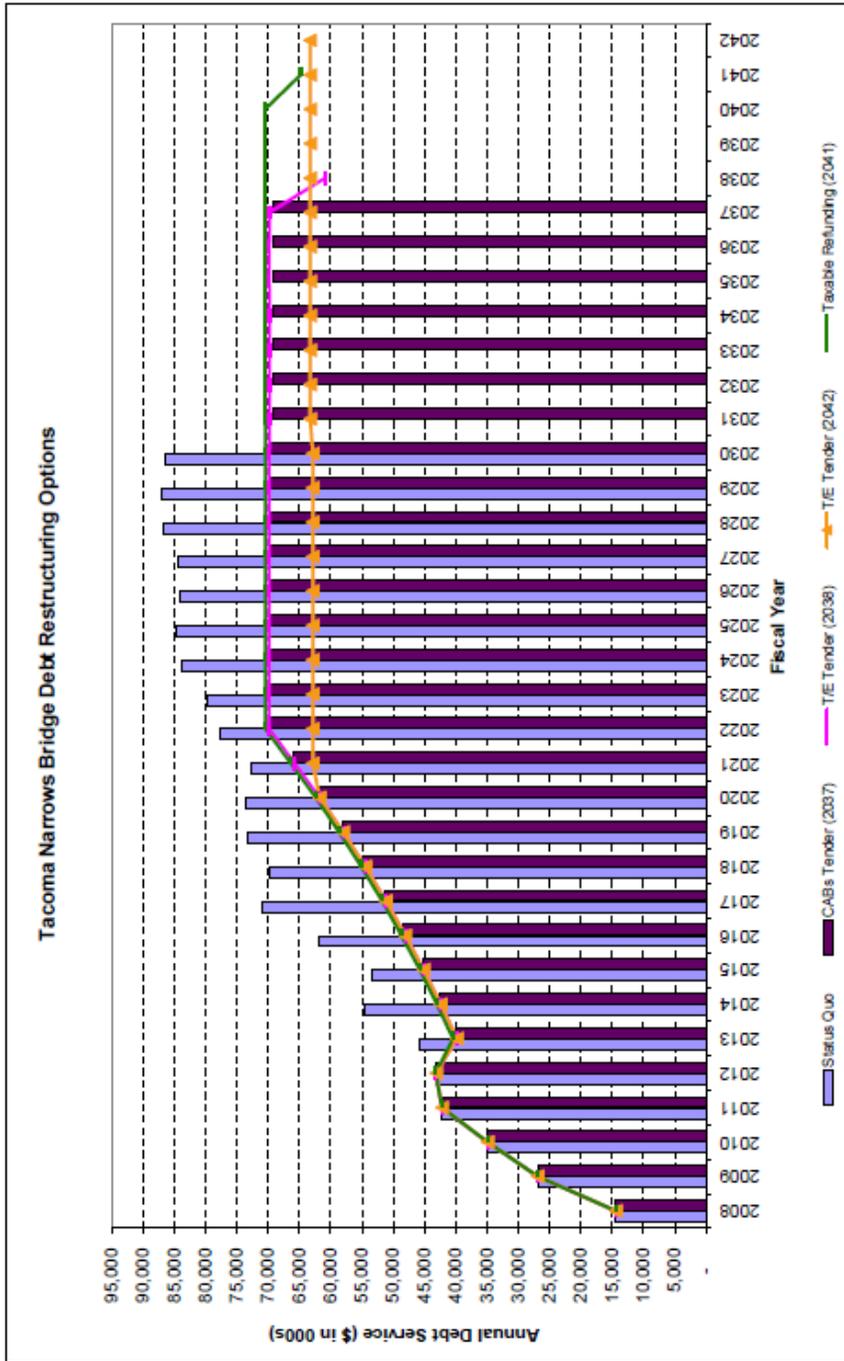
Sincerely,

Ellen L. Evans  
Deputy Treasurer, Debt Management

Enclosure

cc: Clint McCarthy, Senate Committee Services

Letter from OST to Senator Derek Kilmer re: alternative financing options



Financing Option Statistics:

	Total Debt Service	Gross Savings	PV Savings @ 4.10%	All-In Cost	New Bond Par	Required Fund Deposit	Refunded Par Face Value	New Interest Through 2030
Status Quo	1,491,879,358	-	-	N/A	-	-	-	-
Tax-Exempt Tender (2038)	1,906,006,318	(314,126,960)	(59,755,272)	4.10%	445,090,000	504,590,444	644,525,000	409,174,000
Tax-Exempt Tender (2042)	1,950,098,384	(458,219,026)	(83,567,907)	4.19%	560,915,000	631,333,395	816,860,000	515,652,000
CABs TE Tender (2037)	1,742,449,013	(250,569,655)	(37,948,821)	4.46%	182,721,744	181,308,135	234,300,000	-
Taxable Refunding (2041)	2,037,118,368	(545,239,009)	(137,160,993)	4.49%	598,425,000	594,929,323	714,140,000	489,803,000

Assumptions: Restructuring of debt occurs on January 12, 2012 using rates as of the same day. Numbers are preliminary and subject to change.

Montague DeRose and Associates LLC

## History of the \$5.288 million loan from the Motor Vehicle Account to the TNB Account

**2007 Legislative Session.** The Legislature approved a \$5.288 million transfer from the motor Vehicle Account to the Tacoma Narrows Bridge Account for operations and reserve. (ESSB 1094, Section 1005(15). This was to provide start-up capital to cover operational cash flow needs and provide a minimal level of reserves, before tolling began on July 16, 2007.

**2010 Legislative Session.** The Legislature passed ESSB 6499 (Chapter 249, Laws of 2010) which identified revenues from the civil penalty as the source of repayment. The bill amended RCW 46.63.160 to say “However, beginning on July 1, 2011, civil penalties deposited into the Tacoma Narrows toll bridge account created under RCW 47.56.165 must first be allocated toward repayment of operating loans and reserve payments provided to the account from the motor vehicle account under section 1005(15), chapter 518, Laws of 2007.”

**2011 Legislative Session.** In ESHB 1175, Section 705(9), the Legislature amended RCW 46.63.160 to only use civil penalties deposited into the TNB Account that are in excess of the administration costs of collection to be used for repayment (see below). Additionally, the Legislature initiated the repayment of the MVA loan by authorizing the State Treasurer to make an administrative transfer of \$543,000 from the Tacoma Narrows Bridge Account to the Motor Vehicle Account (ESHB 1175, Section 407(1)).

### **ESHB 1175, Section 705(9):**

***(9) Except as provided otherwise in this subsection, all civil penalties, including the photo toll and associated fees, collected under this section must be deposited into the toll facility account of the facility on which the toll was assessed. However, ~~((beginning on July 1, 2011))~~ through June 30, 2013, civil penalties deposited into the Tacoma Narrows toll bridge account created under RCW 47.56.165 that are in excess of amounts necessary to support the toll adjudication process applicable to toll collection on the Tacoma Narrows bridge must first be allocated toward repayment of operating loans and reserve payments provided to the account from the motor vehicle account under section 1005(15), chapter 518, Laws of 2007. Additionally, all civil penalties, resulting from nonpayment of tolls on the state route number 520 corridor, shall be deposited into the state route number 520 civil penalties account created under section 4, chapter 248, Laws of 2010 but only if chapter 248, Laws of 2010 is enacted by June 30, 2010.***

**2012 Legislative Session.** The administrative transfer language provided to the State Treasurer’s Office in 2011 was stricken in the 2012 Transportation Budget (ESHB 2190), eliminating the legal mechanism for transferring the civil penalty funds to the Motor Vehicle Account. However, Section 705(9) which modifies RCW 46.63.160 was not deleted. The effect was to cancel the \$543,000 repayment; the balance to be repaid remained at \$5.288 million.

**2013 Legislative Session.** The 2013 Transportation Budget, ESSB 5024, directed the State Treasurer’s Office to transfer \$950,000 in 2013-15 from the TNB Toll Bridge Account to the Motor Vehicle Account, to begin repaying the \$5.288 million loan. (Section 407(15))

Because the 2011 statutory amendment was enacted in a budget bill (ESHB 1175, Section 705(9)), the language in the budget expired on June 30, 2013. The RCW reverted back to Chapter 249, Laws of 2010 (ESSB 6499), requiring all TNB civil penalties deposited in the TNB Account to go towards repayment of the MVA loan if the Legislature provides administrative transfer authority to the State Treasurer’s Office in the future.

## Elements of the Scenario Estimating Tool

Working with JTC staff and staff workgroup staff, WSDOT developed a spreadsheet which we called the Scenario Estimating Tool, to allow us to evaluate a number of “what if” scenarios for this study.

The tool included estimates of traffic, revenues, expenditures, the sufficient minimum balance, and produced a “blended” toll rate. All of these elements can be changed to evaluate different assumptions and scenarios.

While the tables on the right show elements through FY 2030, when TNB debt service is paid off, the tool extended the evaluation timeframe through 2047. This allowed us to evaluate the repayment tolls, and to calculate the additional costs for each expenditure category according to stated assumptions (such as inflating costs at the full IPD – implicit price deflator).

Toll and other revenues are based on the September, 2013 Transportation Revenue Forecast Council forecast. Other revenues include transponder sales, civil penalties, fees (late payment, NSF check, statement and transaction fees), and miscellaneous revenues.

	<b>Beginning Balance</b>	<b>Traffic Volume</b>	<b>Change in Traffic from Previous Year</b>
FY 2014	11,577,991	13,707,000	-
FY 2015	13,397,879	13,957,160	1.8%
FY 2016	19,043,647	14,361,803	2.9%
FY 2017	14,739,957	14,954,812	4.1%
FY 2018	8,987,439	15,300,652	2.3%
FY 2019	2,772,786	15,675,394	2.4%
FY 2020	(7,441,230)	16,122,892	2.9%
FY 2021	(15,645,828)	16,363,086	1.5%
FY 2022	(24,634,560)	16,664,076	1.8%
FY 2023	(36,075,565)	16,926,197	1.6%
FY 2024	(50,028,187)	16,880,350	-0.3%
FY 2025	(65,269,745)	17,024,865	0.9%
FY 2026	(83,609,321)	17,145,461	0.7%
FY 2027	(99,713,377)	17,283,996	0.8%
FY 2028	(116,221,643)	17,423,650	0.8%
FY 2029	(133,477,674)	17,564,433	0.8%
FY 2030	(144,684,287)	17,706,353	0.8%

	<b>Revenue</b>		
	<b>Toll Revenue</b>	<b>Other Revenues</b>	<b>Gross Revenue</b>
FY 2014	64,068,988	3,832,000	67,900,988
FY 2015	68,861,903	2,787,500	71,649,403
FY 2016	70,798,404	3,093,400	73,891,804
FY 2017	73,663,788	3,217,300	76,881,088
FY 2018	75,307,273	3,151,900	78,459,173
FY 2019	77,094,276	3,226,100	80,320,376
FY 2020	79,236,088	3,316,900	82,552,988
FY 2021	80,359,318	3,905,200	84,264,518
FY 2022	81,772,575	4,323,700	86,096,275
FY 2023	82,999,458	4,371,500	87,370,958
FY 2024	82,711,425	4,360,500	87,071,925
FY 2025	83,359,251	4,396,600	87,755,851
FY 2026	83,886,481	4,427,300	88,313,781
FY 2027	84,499,424	4,463,300	88,962,724
FY 2028	85,061,538	4,499,300	89,560,838
FY 2029	85,669,497	4,535,300	90,204,797
FY 2030	86,281,444	4,571,300	90,852,744

	Expenditures							
	Debt Service	Toll Vendor	Toll Operations	Bridge Insurance	Bridge Maintenance	Preservation (R&R)	Deferred Sales Tax	Total Expenditures
FY 2014	54,932,000	5,453,500	3,675,600	1,750,000	270,000	-	-	66,081,100
FY 2015	54,735,000	5,453,500	3,640,400	1,750,000	305,000	119,735	-	66,003,635
FY 2016	62,311,000	5,532,660	3,693,242	1,775,402	340,000	4,543,189	-	78,195,493
FY 2017	70,092,000	5,614,549	3,747,905	1,801,680	375,000	1,002,473	-	82,633,607
FY 2018	69,889,000	5,696,045	3,802,307	1,827,831	380,443	3,078,198	-	84,673,825
FY 2019	72,861,000	5,791,056	3,865,731	1,858,320	386,789	12,496	5,759,000	90,534,392
FY 2020	72,770,000	5,892,420	3,933,395	1,890,847	393,559	118,364	5,759,000	90,757,585
FY 2021	72,478,000	5,999,934	4,005,164	1,925,348	400,740	2,685,064	5,759,000	93,253,250
FY 2022	78,093,000	6,109,775	4,078,486	1,960,595	408,077	1,128,348	5,759,000	97,537,281
FY 2023	79,339,000	6,222,642	4,153,829	1,996,814	415,615	3,436,681	5,759,000	101,323,580
FY 2024	83,480,000	6,338,510	4,231,175	2,033,995	423,354	47,449	5,759,000	102,313,483
FY 2025	84,301,000	6,455,447	4,309,234	2,071,519	431,164	2,768,062	5,759,000	106,095,426
FY 2026	83,683,000	6,574,718	4,388,852	2,109,793	439,130	1,463,344	5,759,000	104,417,838
FY 2027	84,047,000	6,695,656	4,469,582	2,148,602	447,208	1,903,942	5,759,000	105,470,990
FY 2028	86,325,000	6,818,009	4,551,257	2,187,864	455,380	720,359	5,759,000	106,816,868
FY 2029	86,542,000	6,943,257	4,634,864	2,228,055	463,745	599,489	-	101,411,410
FY 2030	79,660,000	7,070,847	4,720,035	2,268,998	472,267	2,573,403	-	96,765,550

Above are the expenditures included in the scenario estimating tool. Debt service includes withholding amounts needed to make the payments to bond holders. Toll vendor, operations, insurance and maintenance costs are inflated by the full IPD. Olympic Region staff estimated the preservation costs.

	Calculated Beginning Balance	Calculated Gross Revenue	Calculated Net Revenue	Calculated Ending Balance	Calculated Sufficient Minimum Balance	Calculated Toll Rate to Meet SMB
FY 2014	11,577,991	67,900,988	1,819,888	13,397,879	8,260,138	4.67
FY 2015	13,397,879	71,649,403	5,645,768	19,043,647	8,250,454	4.93
FY 2016	19,043,647	69,014,074	(9,181,420)	9,862,227	9,774,437	4.59
FY 2017	9,862,227	83,225,546	591,940	10,454,167	10,329,201	5.35
FY 2018	10,454,167	84,857,381	183,556	10,637,722	10,584,228	5.34
FY 2019	10,637,722	91,321,815	787,423	11,425,145	11,316,799	5.62
FY 2020	11,425,145	90,702,977	(54,609)	11,370,537	11,344,698	5.42
FY 2021	11,370,537	93,574,913	321,663	11,692,200	11,656,656	5.48
FY 2022	11,692,200	98,142,449	605,168	12,297,368	12,192,160	5.63
FY 2023	12,297,368	101,697,130	373,550	12,670,918	12,665,447	5.75
FY 2024	12,670,918	102,435,336	121,853	12,792,771	12,789,185	5.81
FY 2025	12,792,771	106,716,041	620,615	13,413,386	13,261,928	6.01
FY 2026	13,413,386	104,213,881	(203,957)	13,209,429	13,052,230	5.82
FY 2027	13,209,429	105,574,675	103,685	13,313,115	13,183,874	5.85
FY 2028	13,313,115	106,950,363	133,495	13,446,610	13,352,109	5.88
FY 2029	13,446,610	100,788,393	(623,017)	12,823,593	12,676,426	5.48
FY 2030	12,823,593	96,113,147	(652,403)	12,171,190	12,095,694	5.17

Toll rates are expressed as “blended” toll rates, which equate to the weighted average toll rate of all 2-axle toll payers. As such, the blended toll rate is always higher than the *Good To Go!* rate paid by drivers with transponders. To generate blended toll rates, the tool calculated the amount of revenue necessary to meet the 12.5% sufficient minimum balance requirement, considering the traffic, expenditure and revenue assumptions used to evaluate the scenario.

## Summary of U. S. Supreme Court 1983 decision on taxation of transportation projects

### **Washington v. United States**

**No. 81-969, United States Supreme Court, March 29, 1983**

APPEAL FROM THE UNITED STATES COURT OF APPEALS FOR THE NINTH CIRCUIT

#### Syllabus

Washington state statutes impose a sales tax on federal contractors with respect to the sale of materials to such contractors for work on federal projects, but with regard to nonfederal construction projects, the tax is imposed on the landowner, who pays tax on the full price of the project, including the contractor's labor costs and markup, as well as the cost of tangible personal property sold to the contractor. The United States filed suit in Federal District Court, seeking declaratory and injunctive relief and an order requiring a refund of sales taxes for which the Federal Government had reimbursed its contractors. The District Court granted partial summary judgment for the United States, holding that the statutes discriminate against federal contractors in violation of the Supremacy Clause of the Federal Constitution, and the Court of Appeals affirmed.

*Held:* The Washington statutes are not invalid under the Supremacy Clause. Pp. 540-546.

(a) The Federal Government's constitutional immunity from state taxation may not be conferred on a third party simply because the tax has an effect on the United States, or even because the Federal Government shoulders the entire economic burden of the levy. Nor can immunity be conferred simply because the state tax falls on the earnings of a contractor providing services to the Government. *United States v. New Mexico*, 455 U.S. 720, 734. "So long as the tax is not directly laid on the Federal Government, it is valid if nondiscriminatory . . . or until Congress declares otherwise." *United States v. County of Fresno*, 429 U.S. 452, 460. P. 540.

(b) Washington's tax is not invalid on the asserted ground that the State has circumvented the Federal Government's tax immunity by identifying a federal activity for different tax treatment. Washington imposes a sales tax of the same rate on all purchases from nonfederal contractors. The only deviation from equality between the Federal Government and federal contractors on one hand, and every other taxpayer on the other hand, is that the former are taxed on a smaller proportion of the value of the project than the latter. Thus the Federal Government and its contractors are *better off* than other taxpayers, which is not the mistreatment of the Federal Government against which the Supremacy Clause protects. A tax is not invalid simply because it treats those who [103 S.Ct. 1346] deal with the Federal Government differently than it treats others. *Phillips Chemical Co. v. Dumas Independent School District*, 361 U.S. 376, distinguished. *Cf. United States v. County of Fresno, supra; United States v. City of Detroit*, 355 U.S. 466. Pp. 541-544.

(c) The important consideration is not whether the State differentiates in determining what entity shall bear the legal incidence of the tax, but whether the tax is discriminatory with regard to the economic burdens that result. The State does not discriminate against the Federal Government and those with whom it deals unless it treats someone else better than it treats them. Here, Washington has not singled out contractors who work for the United States for discriminatory treatment. It has merely accommodated for the fact that it may not impose a tax directly on the United States as the project owner. Pp. 544-546.

654 F.2d 570, reversed.

**Tacoma Narrows Toll Bridge Account  
Sources and Uses by Fiscal Year • Dollars**

**2002 TNB Financial Plan**

Fiscal Years	Total through FY 2008 (Construction Period)	2002							2009		2010		2011		2012		2013		2014		2015	
		2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015							
Beginning Balance		-	8,349,000	38,060,000	34,852,000	22,707,000	24,750,000	20,142,000	1,664,000	1,756,000	1,914,000	2,240,000	2,577,000	2,897,000	3,242,000							
Less Minimum Fund Balance		-	6,000,000						-	-	-	-	-	-	-							
Adjusted Balance		-	<b>2,349,000</b>	<b>38,060,000</b>	<b>34,852,000</b>	<b>22,707,000</b>	<b>24,750,000</b>	<b>20,142,000</b>	<b>1,664,000</b>	<b>1,756,000</b>	<b>1,914,000</b>	<b>2,240,000</b>	<b>2,577,000</b>	<b>2,897,000</b>	<b>3,242,000</b>							
<b>Sources</b>																						
Bond Proceeds (Transfer-In from MVF)		-	230,000,000	200,000,000	115,000,000	102,000,000	72,000,000	7,000,000	-	-	-	-	-	-	-							
Transfer-In from MVF		39,000,000	-	-	-	-	-	-	-	-	-	-	-	-	-							
Interest Earnings		44,000	1,995,000	2,525,000	2,154,000	1,876,000	1,439,000	486,000	298,000	304,000	317,000	330,000	342,000	355,000	376,000							
Toll Revenue		-	-	-	-	-	11,101,000	45,549,000	47,211,000	55,796,000	64,691,000	66,361,000	75,424,000	84,739,000	86,964,000							
Other Revenue		-	-	-	-	-	-	-	-	-	-	-	-	-	-							
<b>Total Sources, including adjusted balance</b>		<b>39,044,000</b>	<b>234,344,000</b>	<b>240,585,000</b>	<b>152,006,000</b>	<b>126,583,000</b>	<b>109,290,000</b>	<b>73,177,000</b>	<b>49,173,000</b>	<b>57,856,000</b>	<b>66,922,000</b>	<b>68,931,000</b>	<b>78,343,000</b>	<b>87,991,000</b>	<b>90,582,000</b>							
<b>Uses</b>																						
Cost of Issuance		-	2,125,000	1,900,000	1,263,000	1,165,000	940,000	253,000	-	-	-	-	-	-	-							
Debt Service Payments (Transfer to MVF)		-	-	-	-	-	4,810,000	31,106,000	34,095,000	42,396,000	50,735,000	49,066,000	54,883,000	63,668,000	63,358,000							
<b>Uses Sub-Total</b>		<b>-</b>	<b>2,125,000</b>	<b>1,900,000</b>	<b>1,263,000</b>	<b>1,165,000</b>	<b>5,750,000</b>	<b>31,359,000</b>	<b>34,095,000</b>	<b>42,396,000</b>	<b>50,735,000</b>	<b>49,066,000</b>	<b>54,883,000</b>	<b>63,668,000</b>	<b>63,358,000</b>							
<b>Net Available</b>		<b>39,044,000</b>	<b>232,219,000</b>	<b>238,685,000</b>	<b>150,743,000</b>	<b>125,418,000</b>	<b>103,540,000</b>	<b>41,818,000</b>	<b>15,078,000</b>	<b>15,460,000</b>	<b>16,187,000</b>	<b>19,865,000</b>	<b>23,460,000</b>	<b>24,323,000</b>	<b>27,224,000</b>							
<b>Capital Construction</b>																						
Phase 1 Development Costs (1)	<b>40,000,000</b>	30,000,000	10,000,000	-	-	-	-	-	-	-	-	-	-	-	-							
Finalize Contracts UIW Scope of Work (2)	<b>540,000</b>	260,000	280,000	-	-	-	-	-	-	-	-	-	-	-	-							
Finalize Contracts (Contract Attorney) (3)	<b>165,000</b>	120,000	45,000	-	-	-	-	-	-	-	-	-	-	-	-							
Construction Management & Oversight (4)	<b>40,864,000</b>	315,000	3,888,000	7,699,000	9,006,000	7,758,000	7,060,000	5,138,000	-	-	-	-	-	-	-							
Design Build Contract (5)	<b>615,000,000</b>	-	177,358,000	195,726,000	117,261,000	75,421,000	43,139,000	6,095,000	-	-	-	-	-	-	-							
Toll System Supply -- still being negotiated (6)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-							
Project Contingency and Toll System Supply(7)	<b>63,840,000</b>	-	2,588,000	408,000	1,491,000	16,392,000	26,945,000	16,016,000	-	-	-	-	-	-	-							
<b>Total Capital Uses</b>	<b>760,409,000</b>	<b>30,695,000</b>	<b>194,159,000</b>	<b>203,833,000</b>	<b>127,758,000</b>	<b>99,571,000</b>	<b>77,144,000</b>	<b>27,249,000</b>	<b>-</b>													
<b>Operations &amp; Maintenance</b>																						
Management Costs (8)		-	-	-	278,000	1,097,000	2,323,000	2,963,000	2,925,000	2,968,000	3,044,000	3,126,000	3,211,000	3,303,000	3,402,000							
Toll Systems Operations (9)		-	-	-	-	-	2,525,000	4,942,000	4,892,000	5,011,000	5,139,000	5,276,000	5,420,000	5,575,000	5,742,000							
Maintenance of the New Bridge (10)		-	-	-	-	-	197,000	706,000	1,030,000	1,055,000	1,082,000	1,111,000	1,142,000	1,174,000	1,209,000							
Incident Response, Security, and Enforcement (11)		-	-	-	-	-	364,000	736,000	754,000	772,000	792,000	813,000	835,000	859,000	885,000							
Insurance (12)		-	-	-	-	-	845,000	3,460,000	3,544,000	3,630,000	3,722,000	3,823,000	3,927,000	4,039,000	4,160,000							
Deferred Sales Tax (13)		-	-	-	-	-	-	-	-	-	-	2,987,000	5,974,000	5,974,000	5,974,000							
Renewal and Replacement (R&R) on New Bridge (14)		-	-	-	-	-	-	98,000	177,000	110,000	168,000	152,000	54,000	157,000	2,088,000							
<b>Total Operations and Maintenance Uses</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>278,000</b>	<b>1,097,000</b>	<b>6,254,000</b>	<b>12,905,000</b>	<b>13,322,000</b>	<b>13,546,000</b>	<b>13,947,000</b>	<b>17,288,000</b>	<b>20,563,000</b>	<b>21,081,000</b>	<b>23,460,000</b>							
<b>Total Project Uses</b>		<b>30,695,000</b>	<b>194,159,000</b>	<b>203,833,000</b>	<b>128,036,000</b>	<b>100,668,000</b>	<b>83,398,000</b>	<b>40,154,000</b>	<b>13,322,000</b>	<b>13,546,000</b>	<b>13,947,000</b>	<b>17,288,000</b>	<b>20,563,000</b>	<b>21,081,000</b>	<b>23,460,000</b>							
<b>Ending Balance</b>		<b>8,349,000</b>	<b>38,060,000</b>	<b>34,852,000</b>	<b>22,707,000</b>	<b>24,750,000</b>	<b>20,142,000</b>	<b>1,664,000</b>	<b>1,756,000</b>	<b>1,914,000</b>	<b>2,240,000</b>	<b>2,577,000</b>	<b>2,897,000</b>	<b>3,242,000</b>	<b>3,764,000</b>							

Biennial Totals	01-03	03-05	05-07	07-09	09-11	11-13	13-15
<b>Capital</b>	<b>224,854,000</b>	<b>331,591,000</b>	<b>176,715,000</b>	<b>27,249,000</b>	<b>-</b>	<b>-</b>	<b>-</b>
<b>Operations &amp; Maintenance</b>	<b>-</b>	<b>278,000</b>	<b>7,351,000</b>	<b>26,227,000</b>	<b>27,493,000</b>	<b>37,851,000</b>	<b>44,541,000</b>
<b>Total</b>	<b>224,854,000</b>	<b>331,869,000</b>	<b>184,066,000</b>	<b>53,476,000</b>	<b>27,493,000</b>	<b>37,851,000</b>	<b>44,541,000</b>
<b>Toll Rate</b>			\$3.00	\$3.00	\$3.00	\$4.00	\$5.00
<b>Toll Revenue (15)</b>			11,101,000	45,549,000	47,211,000	55,796,000	64,691,000
<b>Estimated Net Toll Revenue (16)</b>			4,847,000	32,644,000	33,889,000	42,250,000	50,744,000

**Tacoma Narrows Toll Bridge Account  
Sources and Uses by Fiscal Year • Dollars**

Fiscal Years	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
Beginning Balance	3,764,000	4,061,000	4,098,000	4,316,000	4,737,000	5,359,000	6,117,000	6,931,000	7,841,000	8,776,000	9,676,000	10,529,000	11,239,000	11,962,000	12,768,148
Less Minimum Fund Balance															
Adjusted Balance	<b>3,764,000</b>	<b>4,061,000</b>	<b>4,098,000</b>	<b>4,316,000</b>	<b>4,737,000</b>	<b>5,359,000</b>	<b>6,117,000</b>	<b>6,931,000</b>	<b>7,841,000</b>	<b>8,776,000</b>	<b>9,676,000</b>	<b>10,529,000</b>	<b>11,239,000</b>	<b>11,962,000</b>	<b>12,768,148</b>
<b>Sources</b>															
Bond Proceeds (Transfer-In from MVF)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Transfer-In from MVF	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Interest Earnings	387,000	388,000	397,000	413,000	437,000	466,000	497,000	532,000	568,000	603,000	636,000	663,000	691,000	722,000	708,000
Toll Revenue	96,698,000	106,385,000	108,568,000	110,796,000	113,070,000	115,286,000	117,262,000	119,085,000	120,929,000	122,802,000	124,737,000	126,418,000	127,806,000	129,207,000	130,623,000
Other Revenue	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
<b>Total Sources, including adjusted balance</b>	<b>100,849,000</b>	<b>110,834,000</b>	<b>113,063,000</b>	<b>115,525,000</b>	<b>118,244,000</b>	<b>121,111,000</b>	<b>123,876,000</b>	<b>126,548,000</b>	<b>129,338,000</b>	<b>132,181,000</b>	<b>135,049,000</b>	<b>137,610,000</b>	<b>139,736,000</b>	<b>141,891,000</b>	<b>144,099,148</b>
<b>Uses</b>															
Cost of Issuance															
Debt Service Payments (Transfer to MVF)	71,250,000	81,647,000	82,811,000	85,124,000	88,565,000	89,810,000	93,677,000	96,263,000	97,825,000	100,040,000	99,205,000	98,960,000	101,020,000	103,030,000	99,545,000
<b>Uses Sub-Total</b>	<b>71,250,000</b>	<b>81,647,000</b>	<b>82,811,000</b>	<b>85,124,000</b>	<b>88,565,000</b>	<b>89,810,000</b>	<b>93,677,000</b>	<b>96,263,000</b>	<b>97,825,000</b>	<b>100,040,000</b>	<b>99,205,000</b>	<b>98,960,000</b>	<b>101,020,000</b>	<b>103,030,000</b>	<b>99,545,000</b>
<b>Net Available</b>	<b>29,599,000</b>	<b>29,187,000</b>	<b>30,252,000</b>	<b>30,401,000</b>	<b>29,679,000</b>	<b>31,301,000</b>	<b>30,199,000</b>	<b>30,285,000</b>	<b>31,513,000</b>	<b>32,141,000</b>	<b>35,844,000</b>	<b>38,650,000</b>	<b>38,716,000</b>	<b>38,861,000</b>	<b>44,554,148</b>
<b>Capital Construction</b>															
Phase 1 Development Costs (1)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Finalize Contracts UIW Scope of Work (2)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Finalize Contracts (Contract Attorney) (3)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Construction Management & Oversight (4)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Design Build Contract (5)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Toll System Supply -- still being negotiated (6)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Project Contingency and Toll System Supply(7)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
<b>Total Capital Uses</b>	<b>-</b>														
<b>Operations &amp; Maintenance</b>															
Management Costs (8)	3,558,000	3,674,000	3,748,000	3,874,000	4,007,000	4,144,000	4,287,000	4,436,000	4,591,000	4,753,000	4,960,000	5,113,000	5,221,000	5,381,852	5,548,000
Toll Systems Operations (9)	5,921,000	6,114,000	6,319,000	6,533,000	6,756,000	6,988,000	7,229,000	7,480,000	7,742,000	8,015,000	8,280,000	8,535,000	8,799,000	9,070,000	9,350,000
Maintenance of the New Bridge (10)	1,247,000	1,288,000	1,331,000	1,376,000	1,423,000	1,472,000	1,523,000	1,576,000	1,631,000	1,688,000	1,744,000	1,798,000	1,853,000	1,910,000	1,969,000
Incident Response, Security, and Enforcement (11)	912,000	942,000	974,000	1,007,000	1,041,000	1,077,000	1,114,000	1,153,000	1,193,000	1,235,000	1,276,000	1,315,000	1,356,000	1,398,000	1,441,000
Insurance (12)	4,290,000	4,430,000	4,579,000	4,735,000	4,896,000	5,064,000	5,239,000	5,421,000	5,610,000	5,808,000	5,988,000	6,174,000	6,365,000	6,562,000	6,765,000
Deferred Sales Tax (13)	5,974,000	5,974,000	5,974,000	5,974,000	5,974,000	5,974,000	2,987,000	-	-	-	-	-	-	-	-
Renewal and Replacement (R&R) on New Bridge (14)	3,636,000	2,667,000	3,011,000	2,165,000	223,000	465,000	889,000	2,378,000	1,970,000	966,000	3,067,000	4,476,000	3,160,000	1,771,000	7,061,000
<b>Total Operations and Maintenance Uses</b>	<b>25,538,000</b>	<b>25,089,000</b>	<b>25,936,000</b>	<b>25,664,000</b>	<b>24,320,000</b>	<b>25,184,000</b>	<b>23,268,000</b>	<b>22,444,000</b>	<b>22,737,000</b>	<b>22,465,000</b>	<b>25,315,000</b>	<b>27,411,000</b>	<b>26,754,000</b>	<b>26,092,852</b>	<b>32,134,000</b>
<b>Total Project Uses</b>	<b>25,538,000</b>	<b>25,089,000</b>	<b>25,936,000</b>	<b>25,664,000</b>	<b>24,320,000</b>	<b>25,184,000</b>	<b>23,268,000</b>	<b>22,444,000</b>	<b>22,737,000</b>	<b>22,465,000</b>	<b>25,315,000</b>	<b>27,411,000</b>	<b>26,754,000</b>	<b>26,092,852</b>	<b>32,134,000</b>
<b>Ending Balance</b>	<b>4,061,000</b>	<b>4,098,000</b>	<b>4,316,000</b>	<b>4,737,000</b>	<b>5,359,000</b>	<b>6,117,000</b>	<b>6,931,000</b>	<b>7,841,000</b>	<b>8,776,000</b>	<b>9,676,000</b>	<b>10,529,000</b>	<b>11,239,000</b>	<b>11,962,000</b>	<b>12,768,148</b>	<b>12,420,148</b>

Biennial Totals	15-17	17-19	19-21	21-23	23-25	25-27	27-29
Capital	-	-	-	-	-	-	-
Operations & Maintenance	50,627,000	51,600,000	49,504,000	45,712,000	45,202,000	52,726,000	52,846,852
<b>Total</b>	<b>50,627,000</b>	<b>51,600,000</b>	<b>49,504,000</b>	<b>45,712,000</b>	<b>45,202,000</b>	<b>52,726,000</b>	<b>52,846,852</b>
<b>Toll Rate</b>	\$6.00	\$6.00	\$6.00	\$6.00	\$6.00	\$6.00	\$6.00
<b>Toll Revenue (15)</b>	96,698,000	106,385,000	108,568,000	110,796,000	113,070,000	115,286,000	117,262,000
<b>Estimated Net Toll Revenue (16)</b>	71,160,000	81,296,000	82,632,000	85,132,000	88,750,000	90,102,000	93,994,000

**Tacoma Narrows Toll Bridge Account (511)**
**Financial Plan - Updated on December 11, 2012**
**Revenue estimate is based on adopted November 2012 Revenue Forecast**
**Expenditures for FY12 represent actual experience and FY13 are based on agency allotment plan.**
*(dollars in thousands)*

Fiscal Year	Actuals										Forecast										Total Through 2023		
	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022		2023	
Toll Rate (Pre-Pay)						\$ 1.75	\$ 2.75	\$ 2.75	\$ 2.75	\$ 2.75	\$ 4.00	\$ 5.00	\$ 5.00	\$ 5.00	\$ 5.00	\$ 5.00	\$ 5.00	\$ 5.00	\$ 5.00	\$ 5.00	\$ 5.00	\$ 5.00	
Toll Rate (Cash)						\$ 3.00	\$ 4.00	\$ 4.00	\$ 4.00	\$ 4.00	\$ 5.50	\$ 6.00	\$ 6.00	\$ 6.00	\$ 6.00	\$ 6.00	\$ 6.00	\$ 6.00	\$ 6.00	\$ 6.00	\$ 6.00	\$ 6.00	
Toll Rate (Pay-By-Mail)																							
<b>Beginning Unreserved Fund Balance</b>	-	36,524	34,597	17,076	44,723	17,753	9,418	16,290	16,413	8,124	3,912	10,340	7,467	2,753	(6,889)	(22,574)	(37,816)	(57,049)	(74,230)	(92,255)	(113,669)		
<b>Operations and Maintenance</b>																							
<b>Sources of Funds <sup>1</sup></b>																							
Interest Earnings from Tacoma Narrows Account (511) <sup>2</sup>	-	-	-	8	52	232	281	341	145	51	154	112	84	(78)	(319)	(513)	(758)	(1,011)	(1,239)	(1,578)	(1,912)	(5,949)	
Interest Earnings from Toll Collection Account (495) <sup>2</sup>	-	-	-	-	-	3	115	71	33	21	29	29	30	31	32	33	34	35	36	36	37	606	
Toll Revenue - Pre-Pay & Cash	-	-	-	-	-	29,960	44,323	45,353	44,049	44,103	57,875	57,734	59,073	60,202	62,243	64,008	65,906	67,760	69,062	70,156	70,711	912,518	
Toll Revenue - Pay-By-Mail	-	-	-	-	-	-	-	-	-	-	3,323	4,109	4,664	5,233	5,705	5,810	5,931	6,048	6,162	6,258	6,307	59,550	
Transponder Sales Revenue	-	-	-	-	-	760	608	629	644	353	354	355	365	375	390	401	413	424	436	445	451	7,403	
Violations	-	-	-	-	-	467	598	594	489	131	22	-	-	-	-	-	-	-	-	-	-	2,300	
Civil Penalties Gross Revenue	-	-	-	-	-	-	-	-	-	469	698	708	730	749	778	800	824	847	870	888	900	9,261	
Civil Penalties (Contractual Damages)	-	-	-	-	-	-	-	-	-	16	-	-	-	-	-	-	-	-	-	-	-	16	
Transfers from/(to) Other Accounts <sup>3</sup>	-	-	-	1,300	5,288	-	(10)	-	-	-	(284)	(708)	(730)	(749)	(778)	(800)	(824)	(415)	-	-	-	1,290	
Fees <sup>4</sup>	-	-	-	-	-	1	56	104	76	166	373	373	385	395	410	422	434	447	459	469	475	5,044	
Contractual Damages <sup>13</sup>	-	-	-	-	-	-	-	-	-	1,462	400	291	133	133	133	-	-	-	-	-	-	2,553	
Miscellaneous Revenue <sup>5</sup>	-	-	-	-	913	279	0	16	768	205	2	2	2	2	2	2	2	2	2	2	2	2,202	
Inventory Reserve <sup>6</sup>	-	-	-	-	(343)	(234)	380	(190)	387	-	-	-	-	-	-	-	-	-	-	-	-	-	
Debt Service Payment <sup>7</sup>	-	-	-	-	-	(14,389)	(26,915)	(34,925)	(42,200)	(43,267)	(45,330)	(54,344)	(53,175)	(61,420)	(70,584)	(69,150)	(72,647)	(73,158)	(72,174)	(77,193)	(79,144)	(890,016)	
Debt Service Withholding <sup>7</sup>	-	-	-	-	-	(300)	0	22	(2,755)	2,824	(506)	226	(1,560)	(891)	(492)	(739)	(214)	388	(304)	(900)	(196)	(5,396)	
<b>Total Sources of Funds for Operations and Maintenance</b>	-	-	-	1,308	5,910	16,777	19,435	12,013	1,636	6,534	17,111	8,887	10,002	3,982	(2,480)	275	(898)	1,367	3,309	(1,417)	(2,368)	101,382	
<b>Uses of Funds <sup>8</sup></b>																							
WSDOT Oversight & Admin. of Toll Operations <sup>9</sup>	-	-	-	172	1,866	2,180	2,278	2,301	2,260	2,336	2,815	2,922	3,116	3,173	3,230	3,289	3,343	3,399	3,455	3,512	3,569	49,217	
WSDOT Oversight & Admin. of Adjudication Process	-	-	-	-	-	-	-	-	-	401	497	518	520	529	537	546	555	564	573	583	593	6,416	
Toll Operator Contract	-	-	-	490	2,759	9,852	6,932	6,781	5,621	4,984	5,459	5,183	5,231	5,515	5,571	5,628	5,721	5,815	5,911	6,008	6,107	99,569	
Insurance	-	-	-	-	-	2,680	1,339	1,602	1,463	1,486	1,600	1,750	1,750	1,750	1,750	1,750	1,750	1,750	1,750	1,750	1,750	27,670	
Washington State Patrol	-	-	-	-	-	572	315	271	209	15	-	-	-	-	-	-	-	-	-	-	-	1,381	
Maintenance of New Bridge	-	-	-	-	-	103	268	229	211	187	240	270	305	340	375	384	394	404	414	424	435	4,983	
Preservation of New Bridge, Roadway & Toll Systems	-	-	-	-	-	-	-	-	113	-	-	-	-	-	-	-	-	-	-	-	-	113	
Intangible Asset (Software, etc.)	-	-	-	-	-	-	-	-	-	1,346	-	-	-	-	-	-	-	-	-	-	-	-	
Compensation Adjustment <sup>12</sup>	-	-	-	-	-	-	-	-	-	(28)	(39)	-	-	-	-	-	-	-	-	-	-	(67)	
Contingency <sup>14</sup>	-	-	-	-	-	-	-	-	-	-	-	1,009	893	704	746	787	800	813	827	840	854	8,273	
<b>Total Uses of Funds for Operations and Maintenance</b>	-	-	-	662	4,625	15,387	11,132	11,184	9,876	10,726	10,573	11,653	11,815	12,011	12,209	12,385	12,563	12,745	12,929	13,117	13,308	198,901	
<b>Current Year Balance for Ops. And Maint. (Sources - Uses)</b>	-	-	-	646	1,285	1,390	8,302	829	(8,240)	(4,192)	6,537	(2,766)	(1,813)	(8,029)	(14,689)	(12,110)	(13,462)	(11,377)	(9,620)	(14,534)	(15,676)		
<b>Cumulative Balance for Ops. And Maint.</b>	-	-	-	646	1,931	3,321	11,624	12,453	4,213	21	6,558	3,792	1,979	(6,050)	(20,739)	(32,849)	(46,310)	(57,688)	(67,308)	(81,842)	(97,519)		
<b>Capital Improvements</b>																							
<b>Sources of Funds</b>																							
Interest Earnings <sup>2</sup>	2,125	1,239	774	1,523	1,802	824	400	-	-	-	-	-	-	-	-	-	-	-	-	-	-	8,687	
Bond Net Proceeds <sup>10</sup>	231,207	197,234	108,634	111,986	16,002	12,716	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	677,780	
Capitalized Interest (Debt Service)	-	-	-	(1,792)	(2,580)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	(4,372)	
Toll Revenue Used for Financing Deferred Sales Tax	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Charges for Services	-	-	4	2	145	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	152	
Transfers from Motor Vehicle Account (MVA)	39,000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	39,000	
<b>Total Sources of Funds for Capital</b>	<b>272,332</b>	<b>198,473</b>	<b>109,412</b>	<b>111,720</b>	<b>15,369</b>	<b>13,540</b>	<b>400</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>721,246</b>	
<b>Uses of Funds</b>																							
Capital Expenditures <sup>11</sup>	235,808	200,400	127,046	84,720	43,623	23,319	2,230	707	50	-	-	-	-	-	-	-	-	-	-	-	-	717,902	
Preservation of New Bridge, Roadway & Toll Systems	-	-	-	-	-	-	-	-	-	20	109	107	2,902	1,612	997	3,132	12	44	2,646	1,120	3,437	16,138	
Deferred Sales Tax	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	5,759	5,759	5,759	5,759	5,759	28,796	
Prior Period Recoveries	-	-	(113)	-	-	(54)	(400)	-	(1)	-	-	-	-	-	-	-	-	-	-	-	-	(568)	
<b>Total Uses of Funds for Capital</b>	<b>235,808</b>	<b>200,400</b>	<b>126,933</b>	<b>84,720</b>	<b>43,623</b>	<b>23,266</b>	<b>1,830</b>	<b>707</b>	<b>49</b>	<b>20</b>	<b>109</b>	<b>107</b>	<b>2,902</b>	<b>1,612</b>	<b>997</b>	<b>3,132</b>	<b>5,772</b>	<b>5,803</b>	<b>8,405</b>	<b>6,879</b>	<b>9,196</b>	<b>762,269</b>	
<b>Current Year Balance for Capital (Sources - Uses)</b>	<b>36,524</b>	<b>(1,927)</b>	<b>(17,521)</b>	<b>27,001</b>	<b>(28,254)</b>	<b>(9,726)</b>	<b>(1,430)</b>	<b>(707)</b>	<b>(49)</b>	<b>(20)</b>	<b>(109)</b>	<b>(107)</b>	<b>(2,902)</b>	<b>(1,612)</b>	<b>(997)</b>	<b>(3,132)</b>	<b>(5,772)</b>	<b>(5,803)</b>	<b>(8,405)</b>	<b>(6,879)</b>	<b>(9,196)</b>		
<b>Cumulative Balance for Capital Improvements</b>	<b>36,524</b>	<b>34,597</b>	<b>17,076</b>	<b>44,077</b>	<b>15,822</b>	<b>6,097</b>	<b>4,667</b>	<b>3,960</b>	<b>3,911</b>	<b>3,891</b>	<b>3,782</b>	<b>3,675</b>	<b>774</b>	<b>(839)</b>	<b>(1,835)</b>	<b>(4,967)</b>	<b>(10,739)</b>	<b>(16,542)</b>	<b>(24,947)</b>	<b>(31,826)</b>	<b>(41,023)</b>		
<b>Ending Unreserved Fund Balance</b>	<b>36,524</b>	<b>34,597</b>	<b>17,076</b>	<b>44,723</b>	<b>17,753</b>	<b>9,418</b>	<b>16,290</b>	<b>16,413</b>	<b>8,124</b>	<b>3,912</b>	<b>10,340</b>	<b>7,467</b>	<b>2,753</b>	<b>(6,889)</b>	<b>(22,574)</b>	<b>(37,816)</b>	<b>(57,049)</b>	<b>(74,230)</b>	<b>(92,255)</b>	<b>(113,669)</b>	<b>(138,542)</b>		

Fiscal Year	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
<b>Ending Unreserved Fund Balance</b>	<b>36,524</b>	<b>34,597</b>	<b>17,076</b>	<b>44,723</b>	<b>17,753</b>	<b>9,418</b>	<b>16,290</b>	<b>16,413</b>	<b>8,124</b>	<b>3,912</b>	<b>10,340</b>	<b>7,467</b>	<b>2,753</b>	<b>(6,889)</b>	<b>(22,574)</b>	<b>(37,816)</b>	<b>(57,049)</b>	<b>(74,230)</b>	<b>(92,255)</b>	<b>(113,669)</b>	<b>(138,542)</b>
<b>Days of Expenses Covered by Ending Fund Balance</b>					128	57				26	67	41	15	(34)	(98)	(163)	(229)	(295)	(360)	(427)	(497)
<b>Sufficient Fund Balance = TNB Ending Fund Balance / (Total Uses of Fund + Debt Service Payment)</b>								35.1%	15.6%	7.2%	18.5%	11.3%	4.1%	-9.2%	-26.9%	-44.7%	-62.7%	-80.9%	-98.7%	-117.0%	-136.3%
<b>12.5% Sufficient Minimum Balance</b>								5,852	6,516	6,752	7,001	8,263	8,486	9,381	10,474	10,583	11,373	11,463	11,689	12,149	12,706
<b>Additional Fund Balance Needed to Reach 12.5% Sufficient Minimum Balance</b>										2,840	(3,338)	795	5,734	16,269	33,048	48,399	68,422	85,693	103,944	125,818	151,248

See Notes on Reverse

NOTES

<sup>1</sup> For GAAP purposes, Interest Earnings, Donations, Debt Service and Transfers displayed as Operations Sources of Funds are considered to be Nonoperating Activities.

<sup>2</sup> Interest income displayed is net of the cost of investment activities. The interest earning estimates from TNB account in FY14 to FY17 assume the annual ending fund balance will reach the required 12.5% Sufficient Minimum Balance.

<sup>3</sup> As required by RCW 46.63.160 (9), through June 30, 2013, TNB civil penalty revenue that are in excess of amounts necessary to support TNB toll adjudication process must be allocated toward repayment of the \$5.288 million MVA loan.

<sup>4</sup> Includes NSF check, Customer Service Center administration fees, and the reprocessing fee associated with the second PBM statement.

<sup>5</sup> Includes contractor liquidated damages for late project delivery, cash over, prior period recoveries, \$102k of donations for grand opening in FY08, \$2,350 down-payment for the \$21,501 sale of surplus right of way in FY10, and the \$164 monthly payment for the same real estate sale starting from FY11 for 19 years. The \$10,000 in FY09 reflects a transfer to the Health Care Authority Admin. Account for the state insurance accounting system supporting FTEs assigned to the TNB. In FY11, \$763,297 was paid by toll vendor as the contractual damages. Among the \$763,297, \$11,556 was from TransCore and \$396,000 was from ETCC due to vendor system issues which caused a decrease in toll revenue; another \$355,741 was paid by ETCC to repay related TNB costs.

<sup>6</sup> Inventory Reserve represents the change in consumable inventory of transponders from year to year. For governmental fund financial reporting, inventory balances are recorded as a reservation of fund balance so they are not spendable resources. In 2010, a new law (Chapter 249, Laws of 2010, Sec. 8(3)) authorizes the use of the Toll Collection Account (495) to record transponder inventory upon certification of the new statewide tolling operations center and photo toll system are fully operational. This certification occurred in December 2011.

<sup>7</sup> Debt Service Payment represents Principal and Interest payments paid out of the Highway Bond Retirement Account for bonds sold for TNB Account construction costs. Debt Service Withholding represents the amount transferred in a given fiscal year from the TNB Account, more or less than the Debt Service Payment. RCW 47.10.847 requires the State Treasurer to withhold amounts for as required by the bond proceedings into the Highway Bond Retirement Account, which is on a monthly basis prior the due dates of the debt service payment.

<sup>8</sup> Uses of Funds for Operations in FY13 reflect agency proposed 2011-13 allotment plan. Operation and maintenance uses except for insurance, maintenance, preservation is inflated from FY14 to FY17 using half the rate of IPD. Maintenance and preservation are from WSDOT plan updated in January 2012.

<sup>9</sup> Oversight & Admin of Toll Operations includes Credit Card and Bank Fees, Transponder COGS, Salaries and Benefits, Personal Service Contracts, and Capital Outlays for use in TNB Operations. Forecasted Oversight & Admin of Toll Operations show revised numbers that have been changed based on updated assumptions to transponder costs. These figures do not align with the 13-15 budget request for Tacoma Narrows Bridge (Decision Package PLBB).

<sup>10</sup> The \$677.78m bond net proceeds for Tacoma Narrows Bridge include \$681.17m PAR amount, \$3.03m premium, and \$6.42m underwriter discount/cost of issuance.

<sup>11</sup> In addition to the \$718 million capital expenditures from TNB account, \$11 million was spent on the TNB capital improvement from MVA account in the 1999-2001 and 2001-2003 Biennia prior to the creation of Tacoma Narrows Toll Bridge Account.

<sup>12</sup> The compensation adjustment is based on the assumption of a 3% salary reduction which is expected to be included in the 2011-13 general fund operations budget.

<sup>13</sup> WSDOT and the Electronic Transaction Consultants Corporation (ETC) entered into a Settlement Agreement to settle certain claims associated with a delay in the start of establishing and operating a Statewide Tolling System for Washington State, and the commencement of tolling of State Route 520. These claims impacted multiple WSDOT toll facilities including the Tacoma Narrows Bridge. The agreement modifies the original December 22, 2009 contract between the two parties along with its subsequent changes orders. The Settlement Agreement was executed June 30, 2012. The total settlement value attributable for all toll facilities was:

- \$2.4 million in operational payment reductions (\$400,000 per year x 6 years). This will result in \$946k in revenue for TNB over the next 5 years.
- \$4.0 million royalty free, non-exclusive, perpetual, irrevocable and non-transferable license to use the ETCC RITE system source code and related software and background documents necessary to operate the WSDOT Statewide Tolling Customer Service Center. The value of this intellectual property was established by an independent consultant. To properly account for the RITE System License and report this asset in the financial records, accounting entries (expenses offset by revenue) were processed that impacted all toll facilities. For TNB, this resulted in a \$1.33M expense in FY12 which was offset by the same amount of revenue in the same fiscal period.

<sup>14</sup> Contingency includes 2 position vacancies (FY14), allowance for step increases to vendor payments, costs for sudden vendor service separation, and variable transponder purchase capability.