

# **SR 520 Floating Bridge Self-Insurance Evaluation**

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## **--Introduction**

State Route 520 is a major commuter corridor connecting Seattle on the west side of Lake Washington with Bellevue and Redmond to the east. The highway connects I-5 and I-405 and, together with the I-90 floating bridge, is one of two motor routes across Lake Washington. SR 520 crosses Lake Washington on a six-lane floating bridge. The 7,710-foot-long bridge is the longest floating bridge in the world. Tolls are collected electronically at the entrances to the bridge. Construction and upgrades to the bridge have been funded by the sale of bonds. Money from the tolls is used, in part, to pay the debt owed on the bonds. The bonds are governed by a Master Bond Resolution.

The Master Bond Resolution requires that the state maintain insurance on the bridge to ensure payment continues on the bonds, even if tolling income is inhibited. The resolution provides that insurance may be provided via commercial insurance policies, or through an actuarially sound self-insurance system. Historically, WSDOT has purchased commercial insurance to comply with the requirements of the Master Bond Resolution.

In recent years, the cost of maintaining commercial insurance policies on the bridge have increased substantially. The state has maintained commercial insurance coverage since Fiscal Year 2012. The level of coverage has been relatively consistent throughout that period, although the insured value of the bridge has increased regularly to compensate for inflation. In 2012, the annual premium was \$1,651,646.07. The premium for FY 2022 is \$5,806,323.43. This represents a 352% increase in the last decade. The increase from Fiscal Year 2021 to Fiscal Year 2022 alone was 43.58%. Current insurance market conditions indicate that further increases can be expected in future years.

During the 2021 legislative session, the Legislature requested WSDOT evaluate the costs and benefits of a pursuing a self-insurance option for coverage on the bridge, rather the current commercial insurance model. The proviso language reads:

**--Proviso Language**

(9) \$1,516,000 of the state route number 520 corridor account—state appropriate is provided solely for the increased costs of insurance for the state route number 520 floating bridge. The department shall conduct an evaluation of the short and long-term costs and benefits including risk mitigation of self-insurance as compared to the commercial insurance option for the state route number 520 floating bridge, as allowed under the terms of the state route number 520 master bond resolution. By December 15, 2021, the department shall report to the legislature on the result of this evaluation.

[Substitute Senate Bill 5165, Section 209 (9)]

Tolls collected on SR 520 help pay off bonds issued to reconstruct the highway. Tolls also pay for SR 520 operations and maintenance, debt service, future repairs, insurance, and deferred sales tax. Washington State bonds for the SR 520 program are sold in public markets through coordination with the Office of the State Treasurer and are governed by a Master Bond Resolution. Section 7.07 of the Master Bond Resolution governs the insurance requirements for bonds sold to fund SR 520 bridge expenses. That section reads:

**Section 7.07 Insurance**

The State covenants that it will keep the System and its use and operation thereof insured (including through self-insurance pool insurance) at all times in such amounts, subject to such exceptions and deductibles and against such risks, as are customary for similar facilities, including business interruption insurance. All insurance policies shall be carried with a responsible insurance company or companies authorized to do business in the State or shall be provided under a self-insurance program; any self-insurance program shall be actuarially sound in the written opinion of an accredited actuary, which opinion shall be filed with WSDOT at least annually. At any time and from time to time, the State may elect to terminate self-insurance of a given type. Upon making such election, the State shall obtain and maintain comparable commercial insurance.

The State covenants that it will take actions as it deems necessary to demand, collect and sue for any proceeds that may become due and payable to it under any insurance policy. To the extent that the State receives insurance payments under a business interruption insurance policy, those amounts shall be deposited into the Toll Facilities Account. To the extent that the State receives liquidated damages for delayed completion under a construction contract relating to the acquisition or construction of a Project, those amounts shall be deposited into the Toll Facilities Account.

**“System of Eligible Toll Facilities”** or **“System”** means the SR 520 Corridor, together with any Additional Eligible Toll Facilities.

**“SR 520 Corridor”** means that portion of State Route 520 between its junctions with Interstate 5 and State Route 202.

In summary, the Master Bond Resolution requires:

- The use and operation of the bridge system be insured in amount customary for similar facilities;
- Business interruption insurance must be included in the insurance program;
- WSDOT may use commercial insurance policies or a self-insurance program;
- If the state uses a self-insurance program, that program must:
  - Be actuarially sound in the written opinion of an accredited actuary
  - The written opinion of the accredited actuary must be filed with WSDOT at least annually;
- The state may opt out of the self-insurance program and revert back to the commercial insurance system in whole or in part.

### **--Summary of Current Coverage:**

In order to evaluate the potential for a self-insurance program, we must first understand what coverages are currently in place and what is required to comply with the Master Bond Resolution. The bond resolution expressly requires business interruption coverage be maintained on the bridge. This insurance is designed to replace lost revenue from the facility should it be

damaged or closed for a period of time. Business interruption coverage ensures that bond holders will continue to be paid, even if the bridge is not generating income for a period of time.

Additionally, the bridge property itself is covered for most perils, including earthquake, flood and terrorism. The total insured value of the SR 520 Bridge in FY22 is \$1,531,128,036. The amount of coverage has increased over the past three years to reflect inflation in replacement cost. The total increase in Total Insured Value (TIV) is 6.87% over three years. This is in sharp contrast to the 109.5% increase in premium for nearly identical coverage. Commercial insurers will not cover business interruption to the bridge without also covering the bridge itself. Since business interruption coverage is required by the Master Bond Resolution, when commercial insurance policies are used, coverage of the bridge structure itself is also mandated. A summary of the coverage on the bridge, including premiums, for the past three fiscal years and the fiscal year just begun is summarized in the graph below:

**--Cost of coverage for current fiscal year and trend over past four years:**

<b>State of Washington - 520 Bridge</b>	<b><u>2018-2019</u></b>	<b><u>2019-2020</u></b>	<b><u>2020-2021</u> (at 10/29/2020)</b>	<b><u>2021-2022</u></b>	<b><u>Variance</u></b>
Total Insurable Values (TIV):	\$1,432,670,000	\$1,492,278,737	\$1,487,345,331	\$1,531,128,036	2.94%
Earthquake TIV:	\$1,432,670,000	\$1,492,278,737	\$1,487,345,331	\$1,531,128,036	2.94%
Earthquake Limit:	\$100,000,000	\$100,000,000	\$100,000,000	\$100,000,000	0.00%
*Property Annual Cost:	\$2,772,013.86	\$3,320,404.12	\$4,043,922.26	\$5,806,323.43	43.58%
Cyber Liability Annual Cost:	N/A	N/A	N/A	N/A	N/A
Pollution Liability Annual Cost:	N/A	N/A	N/A	N/A	N/A
Total Account Rate (\$/100):	0.1934859	0.2225056	0.2718886	0.3792187	39.47%
**Total Annual Cost:	\$2,772,013.86	\$3,320,404.12	\$4,043,922.26	\$5,806,323.43	43.58%

\*Property Annual Cost includes: all premiums (except Cyber Liability and Pollution Liability), underwriting fees, commissions, loss control expenses, program administration charges, and applicable taxes

\*\* Total Annual Cost includes: Property Annual Cost, Cyber Liability Annual Cost and Pollution Liability Annual Cost (except Cyber BBR option, if purchased).

The trend of premium increase was more gradual in previous years. The table below displays the total annual premiums paid for FY12 through FY18:

Coverage Year	Premium
2012-2013	\$1,651,646.07
2013-2014	\$1,710,684.64
2014-2015	\$2,199,961.00
2015-2016	\$2,210,688.46
2016-2017	\$2,186,893.88
2017-2018	\$2,426,990.36

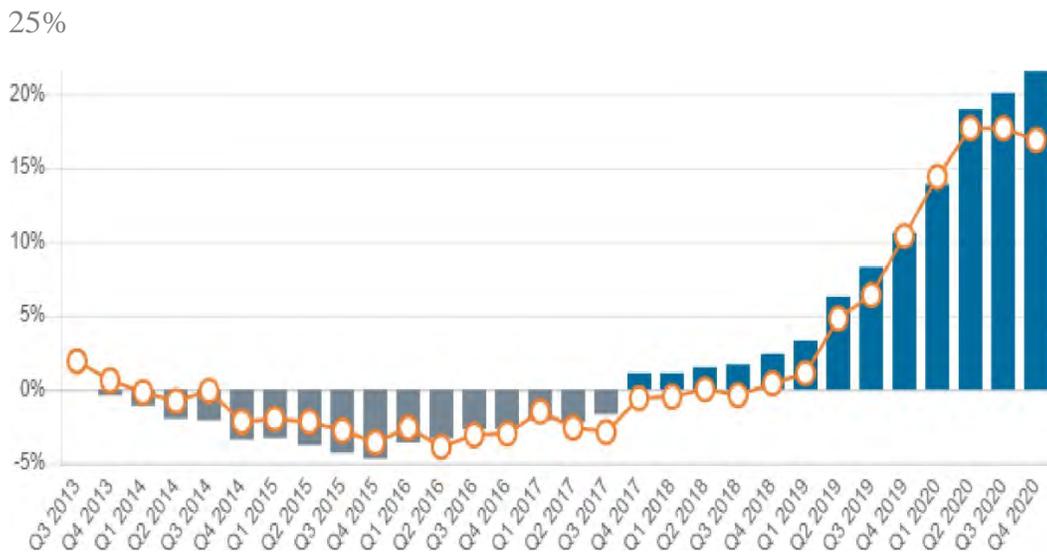
**--Trajectory of Increase is expected to continue due to forces beyond our control**

According to the State’s Insurance Broker of Record:

[O]ver the past few years, natural catastrophe losses such as Hurricanes Harvey, Irma and Maria in 2017, California Wildfires in 2018, 2019 and 2020, Winter Storm Uri in 2021, and the Coronavirus Pandemic are key drivers of continuing rate pressure. These catastrophes along with increased attritional losses resulted in another unprofitable year for most property insurers in 2020. Lack of profitability has resulted in carriers continuing to re-evaluate their books and seeking increased pricing and reduced terms and conditions. Those insureds that have significant shock loss(es) or persistent attritional losses will experience larger rate increases. In keeping with the programs’ general history, however, we still expect overall rates to, in many cases, remain below that which can be achieved in the open market for similar coverage.

Alliant Property Insurance Program (APIP), Executive Summary, Alliant Insurance Services, Inc. (June 10, 2021).

The world is experiencing the worst insurance market in over 30 years. “Higher premiums are unavoidable, even for loss-free accounts”<sup>1</sup> Losses over the past several years have forced insurance companies to raise rates in order to maintain profitability. Insurance companies are reducing their risk profile by avoiding entire classes of business. The impact of COVID-19 on the insurance market will exacerbate the problem. In May 2020, Lloyds of London projected that their loss impact from COVID-19 related claims will be over \$4 Billion. The estimated impact on the industry as a whole ranges from \$40 Billion to \$100 Billion.<sup>2</sup> The following chart displays the significant percentage increase in insurance premiums over the past several years:



Source: Marsh, Global Insurance Market Index – 2020 Q4

<sup>1</sup> Advisen/AXA XL; Alliant Insurance Services, Inc. June 25, 2020.

<sup>2</sup> Alliant Insurance Services, Inc. June 25, 2020.

Based on prior years of increasing premiums and the current state of the insurance market, it is reasonable to assume that the state will continue to experience annual increases in premiums for commercial coverage of the SR 520 Bridge. The rate of increase is unpredictable. However, evaluating a range of possible increases can provide a benchmark for comparison to the potential costs associated with a self-insurance program for the bridge. The lowest percentage of premium increase in the recent past was 19.78% from FY19 to FY20. Assuming that rate of increase continues, the premium cost for the current commercial insurance would be \$14,316.035 in five years, with the FY27 renewal. The highest percentage increase occurred at the last renewal for FY22, when the state experienced a 43.58% increase. If the high rate of increase were to continue for the next five years, the state could expect to pay \$35,429,982 per year in FY27 for the same level of coverage currently in place. The average rate of increase over the past three years has been 28.38%. Assuming premiums increase at the average rate they have over the past three years, the state could expect to pay approximately \$20,248,275 per year for the current level of coverage.

#### **--Self-Insurance option alternative**

The state currently maintains a self-insurance program for payment of tort claims and lawsuits filed against the state. This program is governed by RCW 4.92.130 and provides a means of comparison for a potential self-insurance program for the SR 520 Bridge or other bond and toll funded projects maintained by the Department of Transportation. In the state's self-insurance program for torts, claims and defense, costs are paid from the Self-Insurance Liability Account (SILA) (Fund 547), which is funded by the actuarially based premiums assessed on state agencies. "Actuarially based" relates to the fact that an independent actuary develops and

certifies the estimated amount of funds to be set aside to meet future obligations. These obligations are based on past losses, current reserves (which are estimated values of pending claims) and predicted trends. An independent actuarial study is performed every two years to provide estimates of the state's total outstanding liabilities at the end of the fiscal year and project liabilities over the next several years. The study also estimates total funding needs as well as the amount needed to make claim payments over the next biennium, and allocates premiums to state agencies. The estimates are provided to the Office of Financial Management as part of a decision package, submitted prior to each biennial legislative session. The Office of Financial Management (OFM) makes a recommendation on funding for inclusion in the Governor's proposed budget. The final budget is determined by the Legislature and appropriated in the omnibus operating budget.

By comparison, a self-insurance program for the SR 520 Bridge required coverage could follow a similar path. Implementation of such a program would require the Legislature to create a specific fund wherein a "reserve" amount of money could be kept as a self-insurance fund for the SR 520 Bridge or other designated projects. The state would need to procure an actuarial firm with expertise to provide an "actuarially sound" opinion as to the funding level necessary to self-insure the bridge and the revenue required by the Master Bond Resolution. An actuarial opinion would likely require a probable loss study. The study would analyze the likelihood of damage or closure of the bridge due to some circumstance that necessitates a portion of the insurance fund be disbursed to pay bond-holders until the bridge could be restored to usable, revenue-generating condition.

In the State's Self-Insurance Liability account for torts, only a portion of the total estimated liability of the state is set aside by the legislature to cover payouts. For instance, in

the last actuarial study of the SILA account, the actuary estimated the state's outstanding, pending tort liability to be \$1.145 billion as of June 30, 2020. The prior study estimated the outstanding retained losses at \$604 Million as of June 30, 2018.<sup>3</sup> The actuary recommended the Self-Insurance Account be funded at \$300 Million for the FY21-23 biennium to cover outlays from the account for the biennium. It is likely that any self-insurance program would require a substantial up-front cost to provide a sufficient cash reserve to cover probable losses to the bridge to be considered actuarially sound. This money would also need to be statutorily segregated from other state resources to provide assurance that the money would be available to cover probable losses.

Similarly, in a self-insurance program for the SR 520 Bridge, only a portion of the money required to cover lost income and bridge repair would likely need to be reserved in the account to ensure actuarial soundness as required by the Master Bond Resolution. The necessary amount of money would be influenced by the probability of loss in a given period of time, anticipated tolling revenues on the bridge, and estimates of time and cost needed to bring the bridge back to a functional level based on the types of losses determined probable. Until a qualified actuarial firm can be procured to provide an estimate, it is not possible to determine the cost of a self-insurance program. However, the expense of procuring an actuary to perform a probable loss study is more definable. In 2017, the state procured a maximum probable loss study prior to the Alaska Way Viaduct demolition project for \$50,000. The most recent biennial actuarially study of the SILA fund cost \$19,000. The actuarial recommendation would likely require a portion of the replacement cost of the bridge as well as a portion of the tolling revenue be held in reserve. Adjusted gross toll

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<sup>3</sup> *State of Washington Actuarial Overview Self-Insurance Liability Program (SILP)*, Aon Global Risk Consulting, (June 25, 2020),

revenue in FY 2021 was \$47 million.<sup>4</sup> Forecasts of future toll revenue are published periodically by the Transportation Revenue Forecast Council and can be viewed here:

<https://ofm.wa.gov/budget/budget-instructions/transportation-revenue-information>

One advantage of a self-insurance program is the potential for economies of scale. The Washington State Department of Transportation maintains several projects in which tolls are collected to pay the bonds used to fund and maintain the project. The Tacoma Narrows Bridge is an example of a tolled span for which WSDOT purchases commercial insurance to cover the bridge itself as well as potential lost revenue from tolling on the bridge should funding end due to some peril. Similarly, the SR 99 Tunnel under Seattle and other WSDOT projects, present and future, could be covered via a self-insurance program once the statutory infrastructure and funding is in place.

## **--Conclusion**

The state is required to maintain insurance on the SR 520 Bridge as part of the funding mechanism used to finance the project. This coverage can be maintained through the current system of purchasing commercial insurance policies or through a self-insurance program. Although estimated costs for the status quo commercial policies can be estimated based on current and past costs and assumptions about increases going forward, the cost of a self-insurance program is less determinable. The analysis of a qualified actuary and the conduct of a probable loss study on the bridge will be necessary to accurately estimate the amount of money necessary to fund a self-insurance program that complies with the requirement of the bond resolution.

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<sup>4</sup> As reported in the adopted September 2021 Traffic and Revenue Forecast:  
<https://ofm.wa.gov/budget/transportation-revenue-information>