



Voice of Rhode Island's Lodging, Restaurant, and Tourism Industry.



WASHINGTON BRIDGE CLOSURE

ECONOMIC IMPACT REPORT



SALVE REGINA
UNIVERSITY

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Executive Summary:

Requested by the Rhode Island Hospitality Association (RIHA), this comprehensive economic impact study analyzes the direct, indirect, and induced monetary effects of the bridge closure on hospitality related businesses across five Rhode Island counties and related employment impacts.

The bridge closure's economic impact extends beyond immediate transportation disruption, affecting various sectors and communities across Rhode Island. While the overall economic outlook appears challenging, there are some indications of growth.

The Washington Bridge closure, which began on December 11, 2023, has significant economic implications for Rhode Island, with a projected total statewide economic impact of \$114 million on local hospitality businesses during the first 12 months (December 2023 – November 2024) after the bridge closure compared to the comparable 12-month period preceding the closure. Traffic volumes on westbound I-95 in the Washington Bridge area have returned to approximately 90% of pre-closure volumes, but the long-term economic impacts on due to the necessary I-95 lane modifications, planned demolition and bridge reconstruction will remain significant for many years. Our total economic impact projections on local hospitality businesses through 2029, adjusted for inflation assumptions, are estimated to be \$748 million assuming the construction phases described previously and continued lane restrictions.

Key findings show that the most substantial negative economic impact during the first 12-months after the Washington Bridge closure was experienced by Providence County at \$56.7 million. The bridge closure also resulted in a projected statewide job loss of 1,342 hospitality-related positions during the first year compared to the year preceding the closure.



Interestingly, Bristol County experienced a \$6.6 million positive economic impact during this same period. Additionally, total hospitality revenue declined by 1.49% during the first 12 months after the bridge closure, as most Rhode Island counties saw decreased revenue except for Bristol County (2.33% revenue increase).

The economic impact analysis utilized the Regional Input-Output Modeling System (RIMS II) economic multiplier model developed by the Bureau of Economic Analysis and hospitality-related categories from the North American Industry Classification System (NAICS). The study also has several assumptions to quantify the economic impact, outlined later in the report. The report covers the time from the December 2023 bridge closure to a conservative projected year of new bridge completion in 2029.

Statewide Impact by County:

Although the total economic impact of the closure totals \$114 million, each county experiences a different impact, especially due to their proximity to the bridge. Kent County has seen a \$29.8 million decrease during the first 12 months after the bridge closure in comparison to non-closure projections. Newport County has seen a \$16.5 million decrease in comparison to non-closure projections. Providence County has seen a \$56.7 million decrease in comparison to non-closure projections. Washington County has seen a \$17.6 million decrease in comparison to non-closure projections. However, Bristol County has seen a \$6.6 million increase in comparison to non-closure projections.



Study Purpose:

This study was conducted at the request of the Rhode Island Hospitality Association (RIHA) to identify and analyze the impact that the Washington Bridge closure has and will continue to have on the Rhode Island Hospitality Industry.

The direct, indirect, and induced monetary effects were calculated for the entirety of the State, and for each individual county:

- Bristol County, RI
- Kent County, RI
- Newport County, RI
- Providence County, RI
- Washington County, RI

Definition of Washington Bridge Closure Study Time Periods

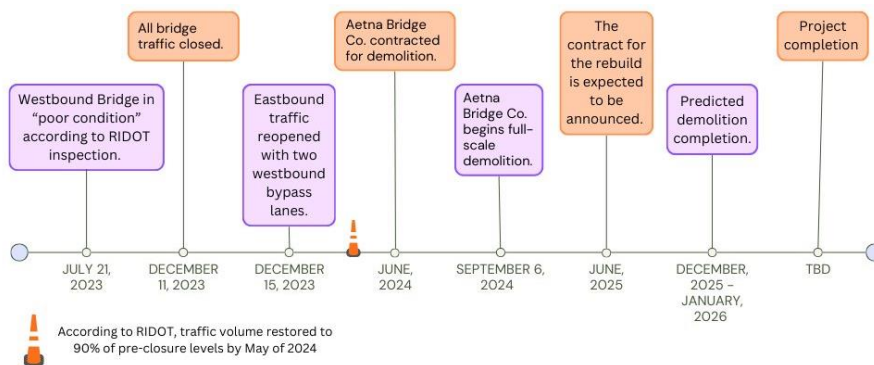
The Salve Regina University ECN-240 class calculated the revenue and employment differences within the following period:

- **Defined as December through November based on December 2023 bridge closure**
- December 2022 – November 2023 before the bridge was shut down
- December 2023 – November 2024 = first year of bridge closure
- Study analyzed future years through December 2028 through November 2029



General Background, Washington Bridge Closure:

The Washington Bridge on I-195 in Rhode Island, originally constructed in 1930, was closed on December 11, 2023 and slated for demolition due to severe structural failures. Critical issues, including sheared pins in its support system, deteriorating concrete, outdated design standards, and increasing strain from modern traffic volumes, rendered the bridge unsafe for traffic. Inspections revealed that the damage was extensive and irreparable, leading to the decision to replace the structure entirely. The bridge served as a crucial link between Providence and East Providence, handling traffic of more than 96,000 vehicles each day. However, its aging infrastructure, combined with these failures, underscored the urgent need for a complete replacement to restore safe and reliable transportation for the region.



Regional Input-Output Modeling System (RIMS II) Framework:

To complete calculations and analysis, the Regional Input-Output Modeling System (RIMS II) economic model was applied. RIMS II is a regional economic modeling tool developed by the Bureau of Economic Analysis to objectively assess the potential economic impacts of various projects on a geographic region. The idea driving the RIMS II model is that an initial change in economic activity results in additional rounds of spending.

The RIMS II Multipliers consist of four different categories: Value Added, Earnings, Total Output, and Employment multipliers. The Value-Added multiplier reflects the total change in the regional market value of goods and services by the NAICS hospitality categories referenced below. Earnings multipliers reflect the total change in household earnings per dollar of economic activity directly generated by the NAICS hospitality categories factored into the study. Total Output reflects the total regional economic impact per industry dollar expenditure, including both earnings and value-added contributions. Finally, the Employment multiplier reflects the total change in the number of local jobs per dollar of economic activity generated by the NAICS hospitality categories represented in the study.



NAICS Hospitality Codes & Categories:

The North American Industry Classification System is a two- to six-digit number used by US Federal statistical agencies to classify businesses by industry (*What is a NAICS (or SIC) Code?* - LibAnswers, 2022).

For this study, the categories include the following:

NAICS Code	Category
712000	Museums, historical sites, zoos, and parks
713100	Amusement parks and arcades
713200	Gambling industries (except casino hotels)
713900	Other amusement and recreation industries
312120	Breweries
312130	Wineries
312140	Distilleries
721000	Accommodation
722110	Full-service restaurants
722A00	All other food and drinking places
445000	Food and beverage stores
711100	Performing arts companies

Regional Input-Output Modeling System (RIMS II) Assumptions:

Under the RIMS II model, six assumptions were made to continue analysis of the study results. These assumptions include:

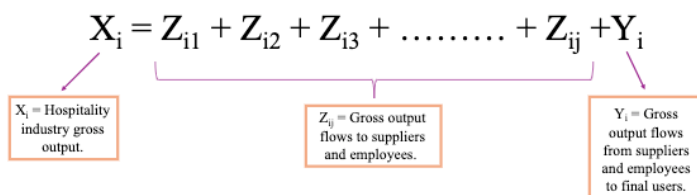
1. Backward Linkages: Assumes that an increase in the demand for output results in an increase in the demand for inputs.
2. Fixed Purchase Patterns: Assumes that industries do not change the mix of inputs used to product outputs.



3. No Regional Feedback: Ignores interactions with other regions (i.e., Seekonk, MA; Fall River, MA)
4. Industry Homogeneity: Assumes that all businesses in an industry use the same production processes.
5. No Supply Constraints: Assumes no price adjustments in response to supply constraints.
6. No Time Destination: Ignores adjustment times of economic impacts.

Without these assumptions, the results of the study would not be obtainable. As such, the assumptions allow for study results to be fully analyzed with context and understanding of the assumptions.

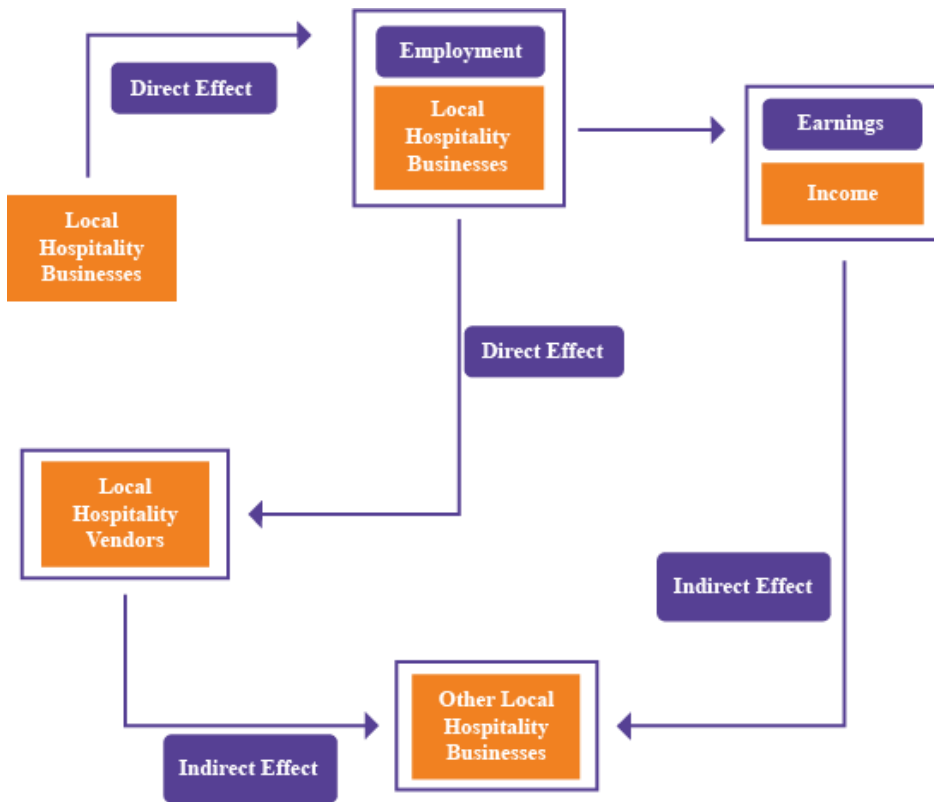
To calculate the potential impact, I-O accounts are used to organize producers of goods and services into micro-industries (n); it is assumed each business within each micro-industry uses the same general type of business activities and process throughout the overall operation. These industries produce gross output (X) which is measured in dollars. This gross output is used or “sold” to the other business entries in the defined geographic area as intermediate users (Z) or final users (Y).



Types of Spending Effects:

There are both direct and indirect impacts of spending on the economic environment. Local hospitality businesses directly spend money on their employees and vendors. Then, the employees and vendors re-spend that money indirectly on their own variety of expenses. Spending habits of these employees (of both vendors and businesses) reflect the economic impact of the bridge closure. Essentially, with more discretionary income comes more discretionary spending. This converse relationship functions for both an increase and decrease in income.

Flow Chart of Spending Effects:



Rhode Island Economic Multipliers:

RIMS-II economic multipliers developed by the BEA for the Hospitality activities in the five Rhode Island counties are shown in the following table. The multipliers were used to develop economic projections in the report.

	Total Output	Earnings Dollars	Value Added Dollars	Employment Jobs*
712000 Museums, historical sites, zoos, and parks	1.8206	0.4615	1.0774	10.7725
713100 Amusement parks and arcades	1.6858	0.4572	1.0635	11.8598
713200 Gambling industries (except casino hotels)	1.7745	0.4337	1.0259	6.8914
713900 Other amusement and recreation industries	1.894	0.5537	1.0781	15.2221
312120 Breweries	1.6219	0.2638	0.7931	6.1063
312130 Wineries	1.5376	0.2635	0.7289	5.5657
312140 Distilleries	1.5413	0.2554	0.857	4.9634
721000 Accommodation	1.7488	0.4474	1.0682	9.5158
722110 Full-service restaurants	1.8438	0.5532	1.0869	14.6112
722211 Limited-service restaurants	1.8558	0.434	0.9561	12.8303
722A00	1.9312	0.6518	1.1834	19.5043

Commented [MP1]: Swap employment jobs and value added \$ columns



All other food and drinking places				
445000 Food and beverage stores	1.7031	0.4656	1.0739	11.9527
711100 Performing arts companies	1.8428	0.5774	1.113	23.2652
Average Multiplier	1.753938462	0.447553846	1.008107692	11.7739

2023-2024 Closure/Non-Closure Hospitality Revenue Comparison (Dollars in Millions)

Counties	2022-23 Closure	2023-2024 Non-Closure	Difference	% Change
Bristol	\$164.4	\$160.66	\$3.74	2.33%
Kent	\$677.1	\$694.10	(\$17.00)	-2.45%
Newport	\$638.1	\$647.55	(\$9.45)	-1.46%
Providence	\$2,173.6	\$2,205.91	(\$32.31)	-1.46%
Washington	\$636.1	\$646.18	(\$10.08)	-1.56%
Total	\$4,289.4	\$4,354.4	(\$65.00)	-1.49%

- **The total statewide Hospitality revenue has seen a 1.49% decrease in comparison to non-closure projections.**
- Bristol County has seen a **2.33%** increase in comparison to non-closure projections.



- Kent County has seen a **2.45%** decrease in comparison to non-closure projections.
- Newport County has seen a **1.46%** decrease in comparison to non-closure projections.
- Providence County has seen a **1.46%** decrease in comparison to non-closure projections.
- Washington County has seen a **1.56%** decrease in comparison to non-closure projections.

2023-2024 Closure/Non-Closure Total Economic Impact Comparison (Dollars in Millions)

Counties	2023-2024 Closure	2023-2024 Non-Closure	Difference	% Change
Bristol	\$288.4	\$281.8	\$6.6	2.34%
Kent	\$1,187.6	\$1,217.4	(\$29.8)	(2.45)%
Newport	\$1,119.2	\$1,135.8	(\$16.5)	(1.45)%
Providence	\$3,812.3	\$3,869.0	(\$56.7)	(1.47)%
Washington	\$1,115.7	\$1,133.4	(\$17.6)	(1.55)%
Total	\$7,523.2	\$7,637.4	(\$114.1)	(1.50)%

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- **The 2023/2024 total statewide economic impact has seen a 1.50% decrease in comparison to non-closure projections.**
- Bristol County has seen a **2.34% increase** in comparison to non-closure projections.
- Kent County has seen a **2.45% decrease** in comparison to non-closure projections.
- Newport County has seen a **1.45% decrease** in comparison to non-closure projections.
- Providence County has seen a **1.47% decrease** in comparison to non-closure projections.
- Washington County has seen a **1.55% decrease** in comparison to non-closure projections.

Total Economic Impact by County: 2023-2029 (Dollars in Millions)

Counties	2023-2024	2024-2025	2025-2026	2026-2027	2027-2028	2028-2029	Total
Bristol	\$6.6	\$6.9	\$7.1	\$7.4	\$7.6	\$7.9	\$43.5
Kent	(\$29.8)	(\$30.9)	(\$32.0)	(\$33.1)	(\$34.3)	(\$35.4)	(\$195.5)
Newport	(\$16.5)	(\$17.2)	(\$17.8)	(\$18.4)	(\$18.9)	(\$19.6)	(\$108.4)
Providence	(\$56.7)	(\$58.9)	(\$60.9)	(\$63.1)	(\$65.2)	(\$67.4)	(\$372.2)



Washington	(\$17.6)	(\$18.4)	(\$18.9)	(\$19.6)	(\$20.3)	(\$20.9)	(\$115.7)
Total	(\$114)	(\$118.5)	(\$122.5)	(\$126.8)	(\$131.1)	(\$135.4)	(\$748.3)

- **The total statewide Economic Impact has seen a \$748.3 decrease in comparison to non-closure projections for the multi-year period 2023/2024 - 2029.**
- Bristol County has seen a **\$43.5 million increase** in comparison to non-closure projections for the multi-year period 2023/2024 - 2029.
- Kent County has seen a **\$195.5 million decrease** in comparison to non-closure projections for the multi-year period 2023/2024 - 2029.
- Newport County has seen a **\$108.4 million decrease** in comparison to non-closure projections for the multi-year period 2023/2024 - 2029.
- Providence County has seen a **\$372.2 million decrease** in comparison to non-closure projections for the multi-year period 2023/2024 - 2029.
- Washington County has seen a **\$115.7 million decrease** in comparison to non-closure projections for the multi-year period 2023/2024 - 2029.

Total Economic Impact Statewide by Year: Closure/Non-Closure (Dollars in Millions)

Year	2023-2024	2024-2025	2025-2026	2026-2027	2027-2028	2028-2029	Total
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Total	(\$114.0)	(\$118.5)	(\$122.5)	(\$126.8)	(\$131.1)	(\$135.4)	(\$748.3)
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Selected Total Negative Economic Impact Cities and Towns: 2023-2029 (Closure/Non-Closure)

City/Town	City/Town Total Economic Impact
Warwick	(\$20,978,157)
Providence	(\$51,335,536)
South Kingstown	(\$27,044,083)

Selected Total Positive Economic Impact Cities & Towns: 2023-2029 (Closure/Non-Closure)

City/Town	City/Town Total Economic Impact
Cranston	\$4,776,872
Glocester	\$7,298,409
North Providence	\$10,193,798
East Providence	\$1,952,982

County & Statewide Employment Analysis (Closure/Non-Closure)

Counties	2023-2024 Closure	2023-2024 Non-Closure	Difference	% Change
Bristol	3,396	3,318	78	2.30%
Kent	13,983	14,334	(351)	(2.51)%
Newport	13,178	13,372	(194)	(1.47)%



Providence	44,886	45,554	(668)	(1.49)%
Washington	13,136	13,344	(208)	(1.58)%
Total	88,579	89,922	(1,343)	(1.52)%

- **There is a total statewide job loss of 1,343 in comparison to non-closure projections.**
- Bristol County has seen an **increase of 78 jobs** in comparison to non-closure projections.
- Kent County has seen a **decrease of 351 jobs** in comparison to non-closure projections.
- Newport County has seen a **decrease of 194 jobs** in comparison to non-closure projections.
- Providence County has seen a **decrease of 668 jobs** in comparison to non-closure projections.
- Washington County has seen a **decrease of 208 jobs** in comparison to non-closure projections.