

Date **September 9, 2011**

To **Rhode Island Turnpike and Bridge Authority**

From **Jacobs Engineering Group, Inc.**

Subject **T&R Update and Toll Adjustment Forecast**

Introduction

The purpose of this memorandum is to present an update of future traffic revenue (“T&R”) and net toll revenue estimates for the Rhode Island Turnpike and Bridge Authority under the Base Case and Toll Increase schedule presented in the March 25, 2010 Official Statement, as well as a proposed new schedule of tolls and fees which better meet the Authority’s financial needs. Forecasts were last prepared at the beginning of this year for the February 4, 2011 Forecast Update.

Assumptions used in formulating these estimates are presented throughout this memorandum. While open-road tolling (ORT) lanes for E-ZPass vehicles is currently under consideration, the effects of ORT on revenues and costs are not included in these estimates.

Traffic and Revenue Update, Without Toll Adjustments

Actual FY 2011 data is now available. The following table presents Jacobs’ 2009 and February 2011 forecasts of FY 2011 traffic and revenue compared to actual data.

Table 1: Comparison of Jacobs’ Previous Forecasts to Actual FY 2011 T&R

	Actual FY11	2009 OS Forecast for FY 11		Feb 2011 Forecast for FY 11	
		Forecast	Difference	Forecast	Difference
E-Zpass Transactions	8,211	7,474	737	8,048	162
Cash Transactions	1,753	2,025	272	1,957	203
Revenue	\$ 18.2	\$ 18.0	\$ (0.2)	\$ 18.1	\$ (0.1)
%ETC Car	82.6%	78.7%	3.9%	80.5%	2.1%
%ETC Truck	80.1%	79.5%	0.6%	78.9%	1.3%
%ETC Overall	82.4%	78.7%	3.7%	80.4%	2.0%
2-Ax Traffic	9,821	9,381	440	9,888	(67)
3+Axle Traffic	135	118	17	117	18
Average # Axles, 3+ Axle Vehicles	3.90	4.02	(0.12)	3.90	-
Class 1 %E-Zpass that is Home (RI)	89.0%	89.6%	-0.6%	90.5%	-1.5%
Percent of Class 1 Home E-Zpass Trips:*					
\$40/Month Unlimited Trip Plan	0.9%	13.3%	-12.4%	13.3%	-12.4%
6-Trip Frequency Plan (\$5.46/6 trips)	1.8%	4.7%	-2.8%	4.6%	-2.7%
No Discount Plan	0.7%	0.0%	0.7%	0.0%	0.7%
RI Resident Plan	96.6%	82.0%	14.5%	82.1%	14.4%

*Estimated based on April 2011 Data

This shows that overall traffic was similar to Jacobs had estimated in the February forecast, while the E-ZPass share of transactions - most of which are discounted - was greater than what Jacobs had estimated. The most noticeable difference, however, was the estimated split of Class 1 Home (RI) E-ZPass trips by plan. There is a significantly higher share of Class 1 Home E-ZPass trips on the resident plan than was estimated, and far fewer trips made by customers on the other discount plans. Estimates of customers and trips switching to the \$40/month unlimited plan and 6-trip plan had not been updated since the 2009 OS forecast, before the plans began (in February 2010). We changed various factors in our T&R model in order to calibrate it to the actual FY 2011 traffic and revenue numbers, and produce forecasts more in line with current trends, including the following:

- E-ZPass market shares for cars and trucks were increased.
- Since the E-ZPass share has increased more/faster than expected, we capped it at 85% for both cars and trucks by 2016.
- In light of recent economic trends, we predict future growth in car and truck traffic to be less than what we had previously estimated, especially in the short term.
- The estimated number of trips made by customers switching to less-expensive E-ZPass plans was updated, and it was assumed that in future years an even greater share would switch to the plan that benefits them most.
- Data before and after the FY 2010 toll increase indicated that there was less traffic loss than predicted, therefore we reduced the toll elasticities in our model

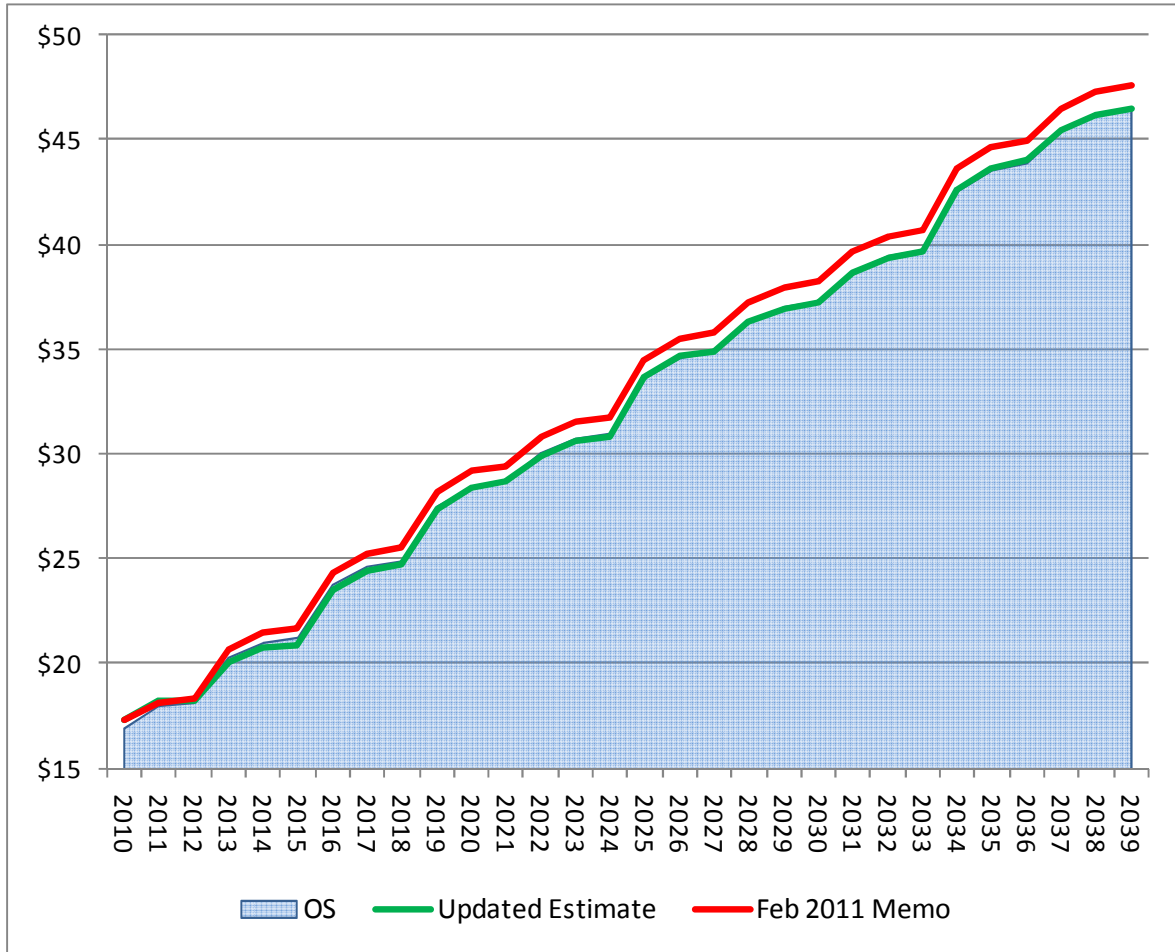
The end result of these changes was modeled FY 2011 T&R numbers that closely matched the actual numbers in Table 1.

Table 2 presents our revised estimates of Traffic and Revenue, both without toll increases (“Base Case”) and with the original scheduled toll increases every three years as shown in the OS and Table 5. Fiscal Year 2011 revenue was 1.2% greater than our original OS forecast (with toll increases), and 0.5% greater than our February 2011 estimate. We estimate that FY 2012 revenue will be 0.7% less than our February estimate but 0.3% greater than our original estimate. In the later years of the forecast, our new estimates are somewhat lower than those we produced in February; however, they are nearly equal to our OS forecasts. A comparison of the updated gross toll revenue estimate with toll increases to the two previous forecasts is further illustrated in Figure 1.

**Table 2: Jacobs' Updated Traffic and Toll Revenue Estimates
Without Toll Adjustments**

Fiscal Year	Base Case				With Toll Increases				Rev Diff from Feb Memo (with toll increase)	Rev Diff from OS (with toll increase)
	Annual Transactions (000s)			Annual Revenue (Ms)	Annual Transactions (000s)			Annual Revenue (Ms)		
	ETC	Cash	Total		ETC	Cash	Total			
2011	8,215	1,740	9,956	\$ 18.2	8,215	1,740	9,956	\$ 18.2	0.5%	1.2%
2012	8,457	1,640	10,098	\$ 18.2	8,457	1,640	10,098	\$ 18.2	-0.7%	0.3%
2013	8,536	1,595	10,131	\$ 18.1	8,477	1,572	10,050	\$ 20.1	-2.9%	-1.1%
2014	8,624	1,567	10,190	\$ 18.1	8,558	1,555	10,113	\$ 20.7	-3.4%	-1.4%
2015	8,713	1,553	10,266	\$ 18.2	8,668	1,545	10,213	\$ 20.9	-3.8%	-1.8%
2016	8,792	1,552	10,344	\$ 18.4	8,677	1,525	10,201	\$ 23.5	-3.6%	-1.4%
2017	8,860	1,564	10,424	\$ 18.5	8,742	1,543	10,286	\$ 24.4	-3.2%	-1.0%
2018	8,928	1,576	10,504	\$ 18.7	8,834	1,560	10,393	\$ 24.7	-3.1%	-0.9%
2019	8,988	1,587	10,575	\$ 18.8	8,835	1,552	10,387	\$ 27.4	-2.9%	-0.5%
2020	9,048	1,597	10,646	\$ 19.0	8,892	1,570	10,462	\$ 28.4	-2.7%	-0.3%
2021	9,107	1,608	10,715	\$ 19.2	8,970	1,583	10,553	\$ 28.6	-2.7%	-0.3%
2022	9,164	1,618	10,782	\$ 19.3	9,019	1,577	10,595	\$ 29.9	-2.9%	-0.6%
2023	9,220	1,628	10,848	\$ 19.4	9,060	1,600	10,660	\$ 30.6	-2.9%	-0.7%
2024	9,275	1,637	10,912	\$ 19.6	9,120	1,610	10,731	\$ 30.8	-2.9%	-0.6%
2025	9,327	1,647	10,974	\$ 19.7	9,123	1,604	10,726	\$ 33.6	-2.5%	-0.2%
2026	9,380	1,656	11,036	\$ 19.9	9,172	1,619	10,791	\$ 34.6	-2.4%	0.0%
2027	9,433	1,665	11,098	\$ 20.0	9,241	1,631	10,872	\$ 34.9	-2.4%	0.0%
2028	9,486	1,675	11,160	\$ 20.1	9,286	1,626	10,912	\$ 36.3	-2.6%	-0.3%
2029	9,539	1,684	11,223	\$ 20.3	9,326	1,647	10,973	\$ 37.0	-2.6%	-0.3%
2030	9,592	1,693	11,286	\$ 20.4	9,384	1,657	11,041	\$ 37.2	-2.5%	-0.3%
2031	9,646	1,703	11,348	\$ 20.6	9,430	1,652	11,082	\$ 38.6	-2.6%	-0.5%
2032	9,699	1,712	11,411	\$ 20.7	9,471	1,672	11,143	\$ 39.3	-2.6%	-0.5%
2033	9,752	1,722	11,474	\$ 20.8	9,529	1,682	11,211	\$ 39.6	-2.6%	-0.5%
2034	9,806	1,731	11,537	\$ 21.0	9,537	1,679	11,216	\$ 42.6	-2.3%	-0.1%
2035	9,859	1,740	11,600	\$ 21.1	9,588	1,693	11,280	\$ 43.7	-2.1%	0.1%
2036	9,913	1,750	11,663	\$ 21.2	9,655	1,704	11,359	\$ 44.0	-2.1%	0.1%
2037	9,966	1,759	11,725	\$ 21.4	9,700	1,701	11,402	\$ 45.4	-2.3%	-0.1%
2038	10,019	1,769	11,788	\$ 21.5	9,743	1,720	11,463	\$ 46.2	-2.3%	-0.2%
2039	10,072	1,778	11,850	\$ 21.6	9,799	1,730	11,529	\$ 46.5	-2.3%	-0.1%

Figure 1: Gross Toll Revenue Forecast Comparison



Operations and Maintenance (O&M) Update, Without Toll Adjustments

We worked closely with RITBA to identify, evaluate, and forecast O&M costs from 2012 to 2039. The forecast was developed by determining an estimate of each cost item for the base year, 2012. Base year data was then escalated annually from 2013 onward. Data sources that were used in this analysis include RITBA’s 2012 budget as well as RITBA’s FY11 audited financial statements, which were used to provide a “reasonableness” check and to identify one-time expenditures. Where appropriate, these expenses were excluded from the forecast. To maintain consistency, this update applied the same escalation rates that were used in the 2010 Official Statement. The following assumptions were used in this forecast:

- Personnel Services costs consist of payroll, benefits, and payroll taxes. In accordance with the recently negotiated union contract, wages and salaries were escalated at 2.0% for 2012, 2.5% for 2013, and 3.0% for 2014. A 2.0% escalation rate was used for the remainder of the forecast period. Professional services costs were derived from FY10 actual and the FY11 budget.

- Under the terms of the most recent insurance policy, rates will remain largely constant through 2014. Thereafter, insurance costs were increased by 1% per year. Insurance expenses were derived from the FY12 budget and based on the cost of each insurance policy held by RITBA.
- Annualized maintenance expenses specific to the Newport/Pell Bridge and Mount Hope Bridge were drawn from RITBA's Approved Capital Program from 2012 to 2021. A 6% escalation factor was incorporated into these estimates. An average of the annualized maintenance expenses for the bridges during the preceding 10 years was used for FY22. This estimate was escalated by 2.9% per annum for each year, thereafter.
- Most of the "other" costs were escalated at 2.9% annually for the entire forecast.
- E-ZPass costs were broken down into 5 categories—IAG subscription, trailer, credit card, toll equipment maintenance, and postage. IAG subscription expense was kept constant, while the other items were inflated by 2.9%/year. An IAG Assessment charge and similar one-time expense were identified, deemed to be unrepresentative, and excluded from the forecast.
- Transponder costs were based on a Jacobs model that estimates how many new transponders will be distributed, both to new customers, and as replacements when the old transponders reach their life span. However, a new type of transponder will be issued starting around December 2012 that has a nine-year life span. Due to many transponders reaching their life span in the same year, there are "spikes" in the forecasts to reflect replacement costs.
- Transaction processing is based on a cost per E-ZPass transaction, based on the ACS contract. ACS charges RITBA 12.5 cents per transaction this year (FY 2012), and 9.3 cents in FY 2013-2015. We assumed that in 2016 the cost would increase again at a rate of 2.9 percent per year for the rest of the forecast.
- Depreciation, environmental remediation and general fund expenses were not included.

Table 3 provides a summary of the base year assumptions included in the forecast. Tables 4-5 summarize the O&M costs with the original toll increase scenario. O&M costs for other toll scenarios are not appreciably different for the No Toll Increase (Base Case) and other toll scenarios tested; there are only slight differences in the transaction processing costs.

Table 3: Summary of the O&M Assumptions and Data Sources

Cost Line Item	Base Year Assumption	Source
Salary and Benefits	3,779,011	RITBA FY12 Budget
Utilities, Telephone, & Office Supplies	179,000	RITBA FY12 Budget
Insurance	812,461	RITBA FY12 Budget
Professional Services	567,095	RITBA FY12 Budget
Routine Maintenance		
Electrical Contractor and Engineering	120,000	RITBA FY12 Budget
Bridge Maintenance	15,000	RITBA FY12 Budget
Maintenance and Supplies	140,000	RITBA FY12 Budget
Uniforms	71,000	RITBA FY12 Budget
Vehicle Maintenance	18,000	RITBA FY12 Budget
Capital Maintenance	Varies by Year	RITBA Approved Capital Program, 2012-21. Data provided by First Southwest.
Other Expenses & Costs		
Dues, Subscriptions, and Marketing Contributions	40,400	RITBA FY12 Budget
Travel and Meetings	15,000	RITBA FY12 Budget
Miscellaneous Capital Expenditures	45,000	RITBA FY11 Budget
Host Community (Town of Jamestown)	27,000	RITBA FY11 Actual
Contingency reserve	91,324	RITBA FY11 Actual
Miscellaneous	27,000	RITBA FY12 Budget
E-ZPass Expenses		
E-Z Pass IAG Subscription	17,500	RITBA FY12 Budget
Trailer	21,000	RITBA FY12 Budget
Credit Card Fees	304,302	RITBA FY11 Actual
Toll Equipment Maintenance	210,000	RITBA FY12 Budget
Postage	72,000	RITBA FY11 Budget
Transaction Processing		
June 2011	0.125	ACS Contract
June 2012-2039	0.093	ACS Contract – grown 2.9% from FY 2016 on

**Table 4: Updated O&M Estimates
 E-ZPass Costs, Original Toll Increase Case**

Fiscal Year	Transaction Processing	Credit Card Fees	Toll System Maintenance	Transponder Costs	Other E-ZPass Costs*	Total E-ZPass
2012	\$1,057	\$304	\$210	187	\$111	\$1,869
2013	\$788	\$313	\$210	117	\$113	\$1,542
2014	\$796	\$322	\$216	119	\$116	\$1,570
2015	\$806	\$332	\$216	122	\$119	\$1,594
2016	\$830	\$341	\$216	124	\$122	\$1,634
2017	\$861	\$351	\$222	666	\$125	\$2,225
2018	\$895	\$361	\$222	437	\$128	\$2,043
2019	\$921	\$372	\$222	232	\$131	\$1,878
2020	\$954	\$382	\$229	151	\$134	\$1,850
2021	\$990	\$394	\$235	138	\$138	\$1,895
2022	\$1,025	\$405	\$242	160	\$141	\$1,973
2023	\$1,059	\$417	\$249	163	\$145	\$2,033
2024	\$1,097	\$429	\$257	166	\$149	\$2,097
2025	\$1,129	\$441	\$264	170	\$152	\$2,157
2026	\$1,168	\$454	\$272	715	\$156	\$2,765
2027	\$1,211	\$467	\$279	486	\$160	\$2,604
2028	\$1,252	\$481	\$288	281	\$164	\$2,466
2029	\$1,294	\$495	\$296	200	\$169	\$2,454
2030	\$1,340	\$509	\$305	188	\$173	\$2,515
2031	\$1,386	\$524	\$313	211	\$178	\$2,612
2032	\$1,432	\$539	\$322	216	\$182	\$2,691
2033	\$1,483	\$555	\$332	220	\$187	\$2,776
2034	\$1,527	\$571	\$341	225	\$192	\$2,856
2035	\$1,579	\$587	\$351	774	\$197	\$3,489
2036	\$1,637	\$604	\$362	544	\$202	\$3,349
2037	\$1,692	\$622	\$372	339	\$208	\$3,233
2038	\$1,749	\$640	\$383	260	\$213	\$3,244
2039	\$1,810	\$658	\$394	249	\$219	\$3,330

* IAG Subscription, Trailer, Postage

**Table 5: Updated O&M Estimates
 Total Costs, Original Toll Increase Case**

Fiscal Year	Personnel Services	Insurance	Repairs and Maintenance	Other	E-ZPass	Total Operating Costs
2012	\$3,838	\$812	\$1,383	\$992	\$1,869	\$8,894
2013	\$3,913	\$812	\$1,454	\$1,021	\$1,542	\$8,742
2014	\$4,089	\$812	\$1,777	\$1,050	\$1,570	\$9,298
2015	\$4,152	\$821	\$1,624	\$1,181	\$1,594	\$9,372
2016	\$4,217	\$829	\$1,460	\$1,112	\$1,634	\$9,251
2017	\$4,374	\$837	\$1,256	\$1,144	\$2,225	\$9,836
2018	\$4,442	\$845	\$1,116	\$1,277	\$2,043	\$9,723
2019	\$4,510	\$854	\$1,187	\$1,212	\$1,878	\$9,641
2020	\$4,681	\$862	\$895	\$1,247	\$1,850	\$9,535
2021	\$4,784	\$871	\$908	\$1,383	\$1,895	\$9,841
2022	\$4,890	\$880	\$1,294	\$1,320	\$1,973	\$10,356
2023	\$4,998	\$889	\$1,331	\$1,358	\$2,033	\$10,609
2024	\$5,109	\$897	\$1,395	\$1,498	\$2,097	\$10,996
2025	\$5,223	\$906	\$1,435	\$1,438	\$2,157	\$11,159
2026	\$5,338	\$916	\$1,477	\$1,480	\$2,765	\$11,976
2027	\$5,457	\$925	\$1,519	\$1,623	\$2,604	\$12,128
2028	\$5,578	\$934	\$1,563	\$1,567	\$2,466	\$12,108
2029	\$5,702	\$943	\$1,609	\$1,612	\$2,454	\$12,320
2030	\$5,829	\$953	\$1,655	\$1,759	\$2,515	\$12,711
2031	\$5,959	\$962	\$1,703	\$1,707	\$2,612	\$12,944
2032	\$6,092	\$972	\$1,753	\$1,757	\$2,691	\$13,264
2033	\$6,227	\$982	\$1,804	\$1,908	\$2,776	\$13,697
2034	\$6,366	\$991	\$1,856	\$1,860	\$2,856	\$13,929
2035	\$6,508	\$1,001	\$1,910	\$1,914	\$3,489	\$14,822
2036	\$6,654	\$1,011	\$1,965	\$2,070	\$3,349	\$15,049
2037	\$6,802	\$1,021	\$2,022	\$2,027	\$3,233	\$15,106
2038	\$6,955	\$1,032	\$2,081	\$2,086	\$3,244	\$15,397
2039	\$7,110	\$1,042	\$2,141	\$2,246	\$3,330	\$15,869

Net Revenues, Without Toll Adjustments

Tables 6 and 7 present the updated toll revenues, transponder revenues, O&M, and net revenues for the Base Case (no toll increases) and original Toll Increase Scenario, respectively. With anticipated new capital projects and renewal and replacement expenses, neither of these scenarios provides the necessary debt service coverage.

**Table 6: Updated Gross Revenue, O&M, and Net Revenue Estimates (\$M)
Without Toll Adjustments
Base Case (No Toll Increases)**

FY	Toll Revenues	Transponder Revenues	Total Revenue	O+M	Net Revenue
2012	\$ 18.2	\$ 0.2	\$ 18.4	\$ 8.9	\$ 9.5
2013	\$ 18.1	\$ 0.1	\$ 18.2	\$ 8.7	\$ 9.5
2014	\$ 18.1	\$ 0.1	\$ 18.3	\$ 9.3	\$ 9.0
2015	\$ 18.2	\$ 0.1	\$ 18.3	\$ 9.4	\$ 9.0
2016	\$ 18.4	\$ 0.1	\$ 18.5	\$ 9.3	\$ 9.2
2017	\$ 18.5	\$ 0.7	\$ 19.2	\$ 9.8	\$ 9.3
2018	\$ 18.7	\$ 0.4	\$ 19.1	\$ 9.7	\$ 9.4
2019	\$ 18.8	\$ 0.2	\$ 19.1	\$ 9.7	\$ 9.4
2020	\$ 19.0	\$ 0.2	\$ 19.2	\$ 9.6	\$ 9.6
2021	\$ 19.2	\$ 0.1	\$ 19.3	\$ 9.9	\$ 9.4
2022	\$ 19.3	\$ 0.2	\$ 19.5	\$ 10.4	\$ 9.1
2023	\$ 19.4	\$ 0.2	\$ 19.6	\$ 10.6	\$ 9.0
2024	\$ 19.6	\$ 0.2	\$ 19.8	\$ 11.0	\$ 8.7
2025	\$ 19.7	\$ 0.2	\$ 19.9	\$ 11.2	\$ 8.7
2026	\$ 19.9	\$ 0.7	\$ 20.6	\$ 12.0	\$ 8.6
2027	\$ 20.0	\$ 0.5	\$ 20.5	\$ 12.2	\$ 8.3
2028	\$ 20.1	\$ 0.3	\$ 20.4	\$ 12.1	\$ 8.3
2029	\$ 20.3	\$ 0.2	\$ 20.5	\$ 12.3	\$ 8.1
2030	\$ 20.4	\$ 0.2	\$ 20.6	\$ 12.7	\$ 7.9
2031	\$ 20.6	\$ 0.2	\$ 20.8	\$ 13.0	\$ 7.8
2032	\$ 20.7	\$ 0.2	\$ 20.9	\$ 13.3	\$ 7.6
2033	\$ 20.8	\$ 0.2	\$ 21.1	\$ 13.7	\$ 7.3
2034	\$ 21.0	\$ 0.2	\$ 21.2	\$ 14.0	\$ 7.2
2035	\$ 21.1	\$ 0.8	\$ 21.9	\$ 14.9	\$ 7.0
2036	\$ 21.2	\$ 0.5	\$ 21.8	\$ 15.1	\$ 6.7
2037	\$ 21.4	\$ 0.3	\$ 21.7	\$ 15.2	\$ 6.6
2038	\$ 21.5	\$ 0.3	\$ 21.8	\$ 15.4	\$ 6.3
2039	\$ 21.6	\$ 0.2	\$ 21.9	\$ 15.9	\$ 5.9

**Table 7: Updated Gross Revenue, O&M, and Net Revenue Estimates (\$M)
 Without Toll Adjustments
 Original Toll Increase Scenario**

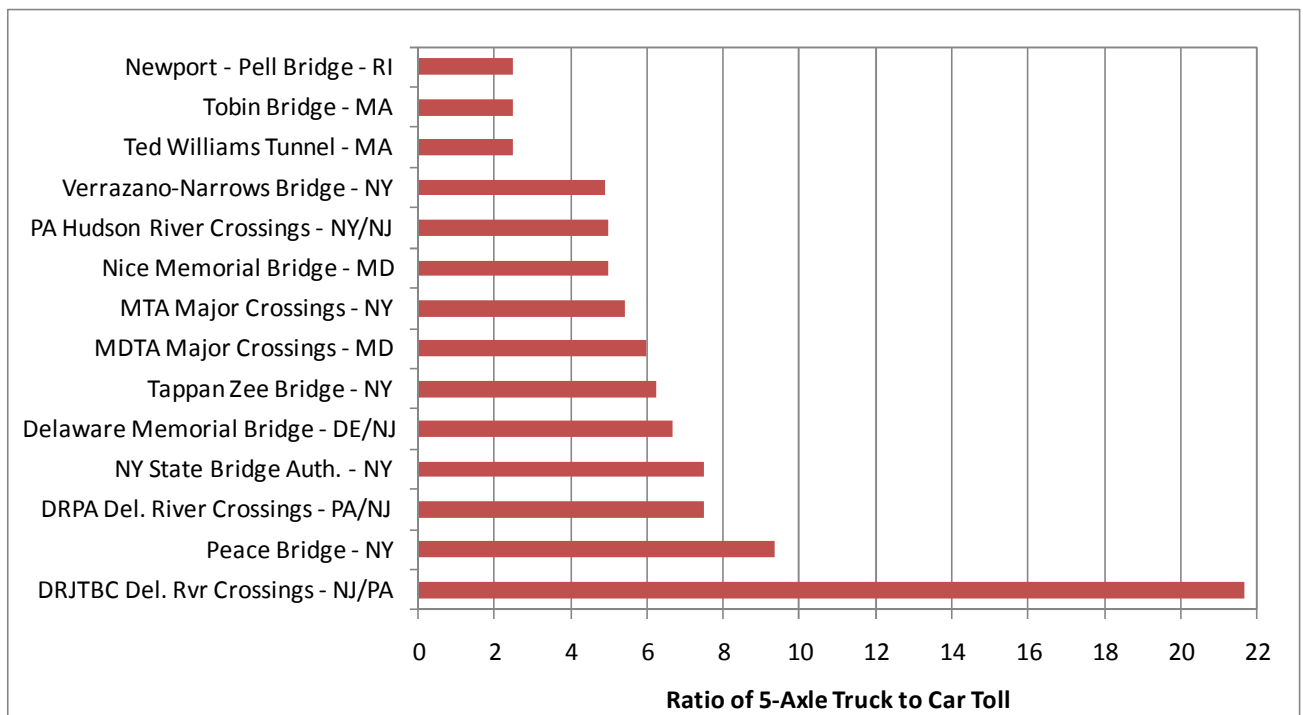
FY	Toll Revenues	Transponder Revenues	Total Revenue	O+M	Net Revenue
2012	\$ 18.2	\$ 0.2	\$ 18.4	\$ 8.9	\$ 9.5
2013	\$ 20.1	\$ 0.1	\$ 20.2	\$ 8.7	\$ 11.5
2014	\$ 20.7	\$ 0.1	\$ 20.8	\$ 9.3	\$ 11.5
2015	\$ 20.9	\$ 0.1	\$ 21.0	\$ 9.4	\$ 11.6
2016	\$ 23.5	\$ 0.1	\$ 23.6	\$ 9.3	\$ 14.3
2017	\$ 24.4	\$ 0.7	\$ 25.1	\$ 9.8	\$ 15.2
2018	\$ 24.7	\$ 0.4	\$ 25.1	\$ 9.7	\$ 15.4
2019	\$ 27.4	\$ 0.2	\$ 27.6	\$ 9.6	\$ 18.0
2020	\$ 28.4	\$ 0.2	\$ 28.5	\$ 9.5	\$ 19.0
2021	\$ 28.6	\$ 0.1	\$ 28.8	\$ 9.8	\$ 18.9
2022	\$ 29.9	\$ 0.2	\$ 30.1	\$ 10.4	\$ 19.7
2023	\$ 30.6	\$ 0.2	\$ 30.7	\$ 10.6	\$ 20.1
2024	\$ 30.8	\$ 0.2	\$ 31.0	\$ 11.0	\$ 20.0
2025	\$ 33.6	\$ 0.2	\$ 33.8	\$ 11.2	\$ 22.6
2026	\$ 34.6	\$ 0.7	\$ 35.3	\$ 12.0	\$ 23.4
2027	\$ 34.9	\$ 0.5	\$ 35.4	\$ 12.1	\$ 23.3
2028	\$ 36.3	\$ 0.3	\$ 36.5	\$ 12.1	\$ 24.4
2029	\$ 37.0	\$ 0.2	\$ 37.2	\$ 12.3	\$ 24.8
2030	\$ 37.2	\$ 0.2	\$ 37.4	\$ 12.7	\$ 24.7
2031	\$ 38.6	\$ 0.2	\$ 38.8	\$ 12.9	\$ 25.9
2032	\$ 39.3	\$ 0.2	\$ 39.5	\$ 13.3	\$ 26.3
2033	\$ 39.6	\$ 0.2	\$ 39.8	\$ 13.7	\$ 26.1
2034	\$ 42.6	\$ 0.2	\$ 42.8	\$ 13.9	\$ 28.9
2035	\$ 43.7	\$ 0.8	\$ 44.4	\$ 14.8	\$ 29.6
2036	\$ 44.0	\$ 0.5	\$ 44.5	\$ 15.0	\$ 29.5
2037	\$ 45.4	\$ 0.3	\$ 45.8	\$ 15.1	\$ 30.7
2038	\$ 46.2	\$ 0.3	\$ 46.4	\$ 15.4	\$ 31.0
2039	\$ 46.5	\$ 0.2	\$ 46.7	\$ 15.9	\$ 30.9

Potential Revenue-Increasing Measures

It was necessary to look at potential revenue-increasing measures to achieve the required debt service coverage. Several areas where additional revenue could be collected include:

- Increasing FY 2013 tolls a few months ahead of schedule, say, July 1st instead of the originally proposed September 1st date.
- Charging a higher per-axle toll for trucks. Trucks on the Newport Pell Bridge currently pay the same per-axle rate as undiscounted passenger cars, which means that a 5-axle truck pays 2.5 times the car toll. At most other E-ZPass facilities trucks are charged a higher toll per axle than cars. Figure 2 compares the ratio of 5-axle truck to car tolls at various E-ZPass crossings.

**Figure 2: Ratio of 5-Axle Truck to Car Tolls
 E-ZPass Crossings**



- Increasing tolls for cars with a RI discounted E-ZPass plan, non-RI E-ZPass cars, and/or cash-paying cars.
- Growing toll rates for discounted vehicles faster than the original Toll Increase Scenario. In the original scenario, tolls had been increased by 50 cents for undiscounted two-axle vehicles every three years, while Resident Plan tolls were increased only by a quarter every three to nine years.
- Charging an account fee. A nominal monthly fee could bring in significant revenue plus discourage the most infrequent customers from obtaining a Rhode Island E-ZPass.

Jacobs discussed these measures with RITBA, and estimated some of the potential revenues each would generate individually. A final combination was chosen which we refer to as the “Purple Scenario.” This scenario included:

- An increase to \$5.00 tolls in July 2012 for cars paying by cash or undiscounted E-ZPass. This would increase by \$1.00 every six years thereafter.
- A \$1.00 E-ZPass Resident Plan toll, as envisioned in the 2010 Official Statement. This toll would come into effect in July 2012, increasing every three years by 20 cents. There would be proportional increases to the Unlimited Plan and 6-Trip Plan.
- A \$2.75 per axle toll for trucks in July 2012, increasing by 50 cents a year per axle.
- The continuation of *no* E-ZPass account fees for RI accountholders
- Maintaining the current \$20.95 cost to customers for new E-ZPass transponders

The following table compares the tolls and fees of the original Toll Increase Scenario and the Purple Scenario.

Table 8: Toll Rates and Fees

	Current Rates	FY 2013	FY 2016	FY 2019	FY 2022	FY 2025	FY 2028	FY 2031	FY 2034	FY 2037
ORIGINAL TOLL INCREASE SCENARIO										
Cars (Cash & Undiscounted E-ZPass)	\$ 4.00	\$ 4.50	\$ 5.00	\$ 5.50	\$ 6.00	\$ 6.50	\$ 7.00	\$ 7.50	\$ 8.00	\$ 8.50
Cars (Home E-ZPass, Resident Rate)	\$ 0.83	\$ 1.00	\$ 1.25	\$ 1.50	\$ 1.50	\$ 1.75	\$ 1.75	\$ 1.75	\$ 2.00	\$ 2.00
Cars (Home E-Zpass, 30-Day Unlimited)	\$ 40.00	\$ 48.00	\$ 60.00	\$ 72.00	\$ 72.00	\$ 84.00	\$ 84.00	\$ 84.00	\$ 96.00	\$ 96.00
Cars (Home E-Zpass, 6 trip/30 Days)	\$ 5.46	\$ 6.58	\$ 8.22	\$ 9.87	\$ 9.87	\$ 11.51	\$ 11.51	\$ 11.51	\$ 13.16	\$ 13.16
Trucks - PER AXLE	\$ 2.00	\$ 2.25	\$ 2.50	\$ 2.75	\$ 3.00	\$ 3.25	\$ 3.50	\$ 3.75	\$ 4.00	\$ 4.25
Transponder Price	\$ 20.95	\$ 20.95	\$ 20.95	\$ 20.95	\$ 20.95	\$ 20.95	\$ 20.95	\$ 20.95	\$ 20.95	\$ 20.95
Monthly Account Fee	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
"PURPLE" SCENARIO										
Cars (Cash & Undiscounted E-ZPass)	\$ 4.00	\$ 5.00	\$ 5.00	\$ 6.00	\$ 6.00	\$ 7.00	\$ 7.00	\$ 8.00	\$ 8.00	\$ 9.00
Cars (Home E-ZPass, Resident Rate)	\$ 0.83	\$ 1.00	\$ 1.20	\$ 1.40	\$ 1.60	\$ 1.80	\$ 2.00	\$ 2.20	\$ 2.40	\$ 2.60
Cars (Home E-Zpass, 30-Day Unlimited)	\$ 40.00	\$ 48.00	\$ 58.00	\$ 68.00	\$ 78.00	\$ 88.00	\$ 98.00	\$ 108.00	\$ 118.00	\$ 128.00
Cars (Home E-Zpass, 6 trip/30 Days)	\$ 5.46	\$ 6.00	\$ 7.20	\$ 8.40	\$ 9.60	\$ 10.80	\$ 12.00	\$ 13.20	\$ 14.40	\$ 15.60
Trucks - PER AXLE	\$ 2.00	\$ 2.75	\$ 3.25	\$ 3.75	\$ 4.25	\$ 4.75	\$ 5.25	\$ 5.75	\$ 6.25	\$ 6.75
Transponder Price	\$ 20.95	\$ 20.95	\$ 20.95	\$ 20.95	\$ 20.95	\$ 20.95	\$ 20.95	\$ 20.95	\$ 20.95	\$ 20.95
Monthly Account Fee	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -

Note: Shaded boxes represent rates different from the original Toll Increase Scenario

Forecasts with Toll Adjustments

The Purple Scenario assumptions were entered into Jacobs' traffic and revenue forecasting model. Results are shown in Table 9. The difference in toll revenue compared to the original toll increase

schedule is shown to the right of the table; the Purple Scenario brings in \$1.6 to \$2.0M additional gross toll revenue than with the original toll increase case in the early years of the forecast.

Transponder revenues and O&M were also estimated for this scenario. These and the resulting net revenue estimates are presented in Table 10. The difference between the Purple Scenario net revenues and the results with the original toll scenario are shown to the right of the table. In the first few years after the FY 2013 toll increase, net revenues are \$1.8 to \$2.2M greater than with the original toll increase schedule. Throughout the forecast, there are “bumps” in the transponder revenues that correspond to replacement of transponders as they reach the end of their life span, about seven to eight years for the old transponders and nine years for the new and improved ones. Towards the end of the forecast period, the Purple Scenario brings in nearly \$10M more in net revenues than with the original toll increase schedule.

Table 9: Jacobs' "Purple Scenario" Traffic and Toll Revenue Estimates*

Fiscal Year	Annual Transactions (000s)			Annual Revenue (Ms)	Rev Diff from Updated OS Toll Increase Forecast
	ETC	Cash	Total		
2011	8,215	1,740	9,956	\$ 18.2	\$ -
2012	8,457	1,640	10,098	\$ 18.2	\$ -
2013	8,447	1,535	9,982	\$ 22.1	\$ 2.0
2014	8,528	1,550	10,077	\$ 22.3	\$ 1.6
2015	8,647	1,542	10,189	\$ 22.5	\$ 1.7
2016	8,671	1,540	10,211	\$ 24.2	\$ 0.8
2017	8,750	1,545	10,295	\$ 24.8	\$ 0.4
2018	8,832	1,559	10,391	\$ 25.1	\$ 0.4
2019	8,835	1,534	10,369	\$ 28.5	\$ 1.1
2020	8,875	1,567	10,442	\$ 29.9	\$ 1.5
2021	8,958	1,581	10,539	\$ 30.2	\$ 1.6
2022	8,973	1,591	10,564	\$ 32.1	\$ 2.1
2023	9,037	1,595	10,632	\$ 32.7	\$ 2.1
2024	9,100	1,606	10,707	\$ 33.0	\$ 2.2
2025	9,108	1,585	10,692	\$ 36.6	\$ 2.9
2026	9,142	1,614	10,756	\$ 38.0	\$ 3.4
2027	9,214	1,626	10,840	\$ 38.4	\$ 3.4
2028	9,233	1,635	10,868	\$ 40.3	\$ 4.1
2029	9,291	1,640	10,931	\$ 41.0	\$ 4.0
2030	9,351	1,651	11,002	\$ 41.3	\$ 4.1
2031	9,366	1,633	10,999	\$ 45.1	\$ 6.5
2032	9,402	1,660	11,062	\$ 46.6	\$ 7.3
2033	9,471	1,672	11,143	\$ 47.0	\$ 7.4
2034	9,495	1,681	11,176	\$ 49.1	\$ 6.5
2035	9,553	1,686	11,239	\$ 49.8	\$ 6.2
2036	9,612	1,697	11,308	\$ 50.2	\$ 6.2
2037	9,631	1,681	11,313	\$ 54.1	\$ 8.6
2038	9,669	1,707	11,375	\$ 55.6	\$ 9.5
2039	9,735	1,718	11,453	\$ 56.1	\$ 9.6

*Toll revenues only. Additional revenues are raised through transponder costs.

**Table 10: Gross Revenue, O&M, and Net Revenue Estimates (\$M)
 “Purple Scenario”**

FY	Toll Revenues	Transponder Revenues	Total Revenue	O+M	Net Revenue	<i>Diff From Updated OS Toll Increase Forecast</i>
2012	\$ 18.2	\$ 0.3	\$ 18.5	\$ 8.9	\$ 9.6	\$ 0.1
2013	\$ 22.1	\$ 0.3	\$ 22.3	\$ 8.7	\$ 13.6	\$ 2.2
2014	\$ 22.3	\$ 0.3	\$ 22.6	\$ 9.3	\$ 13.3	\$ 1.8
2015	\$ 22.5	\$ 0.3	\$ 22.8	\$ 9.4	\$ 13.5	\$ 1.8
2016	\$ 24.2	\$ 0.3	\$ 24.5	\$ 9.3	\$ 15.3	\$ 0.9
2017	\$ 24.8	\$ 1.6	\$ 26.4	\$ 9.8	\$ 16.5	\$ 1.3
2018	\$ 25.1	\$ 1.0	\$ 26.1	\$ 9.7	\$ 16.4	\$ 1.0
2019	\$ 28.5	\$ 0.5	\$ 29.0	\$ 9.6	\$ 19.4	\$ 1.4
2020	\$ 29.9	\$ 0.4	\$ 30.2	\$ 9.5	\$ 20.7	\$ 1.7
2021	\$ 30.2	\$ 0.3	\$ 30.5	\$ 9.8	\$ 20.7	\$ 1.7
2022	\$ 32.1	\$ 0.4	\$ 32.4	\$ 10.4	\$ 22.1	\$ 2.4
2023	\$ 32.7	\$ 0.4	\$ 33.1	\$ 10.6	\$ 22.5	\$ 2.3
2024	\$ 33.0	\$ 0.4	\$ 33.4	\$ 11.0	\$ 22.4	\$ 2.4
2025	\$ 36.6	\$ 0.4	\$ 37.0	\$ 11.2	\$ 25.8	\$ 3.2
2026	\$ 38.0	\$ 1.7	\$ 39.7	\$ 12.0	\$ 27.7	\$ 4.3
2027	\$ 38.4	\$ 1.1	\$ 39.5	\$ 12.1	\$ 27.4	\$ 4.1
2028	\$ 40.3	\$ 0.7	\$ 41.0	\$ 12.1	\$ 28.9	\$ 4.4
2029	\$ 41.0	\$ 0.5	\$ 41.5	\$ 12.3	\$ 29.2	\$ 4.3
2030	\$ 41.3	\$ 0.4	\$ 41.8	\$ 12.7	\$ 29.1	\$ 4.4
2031	\$ 45.1	\$ 0.5	\$ 45.6	\$ 12.9	\$ 32.6	\$ 6.8
2032	\$ 46.6	\$ 0.5	\$ 47.1	\$ 13.3	\$ 33.8	\$ 7.6
2033	\$ 47.0	\$ 0.5	\$ 47.5	\$ 13.7	\$ 33.8	\$ 7.7
2034	\$ 49.1	\$ 0.5	\$ 49.6	\$ 13.9	\$ 35.7	\$ 6.8
2035	\$ 49.8	\$ 1.8	\$ 51.6	\$ 14.8	\$ 36.8	\$ 7.2
2036	\$ 50.2	\$ 1.3	\$ 51.5	\$ 15.0	\$ 36.4	\$ 6.9
2037	\$ 54.1	\$ 0.8	\$ 54.9	\$ 15.1	\$ 39.8	\$ 9.1
2038	\$ 55.6	\$ 0.6	\$ 56.3	\$ 15.4	\$ 40.9	\$ 9.8
2039	\$ 56.1	\$ 0.6	\$ 56.7	\$ 15.9	\$ 40.8	\$ 9.9