



Executive Summary

VIRGINIA DEPARTMENT OF TRANSPORTATION – A STUDY OF THE FEASIBILITY OF PURCHASING ALL OR PART OF THE DULLES GREENWAY



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EXECUTIVE SUMMARY

During the 2019 General Assembly session, SJR 254 (attached to this report as Appendix A) was enacted requesting that the Virginia Department of Transportation (VDOT) study the feasibility of purchasing all or part of the Dulles Greenway (Greenway) and report on its findings. SJR 254 includes four specific actions for VDOT to complete, which are summarized below:

1. conduct a review of Toll Road Investors Partnership II's (TRIP II) outstanding bonds, focusing on the 1999 series A and B bonds, which are callable, to determine if the bonds could be replaced with lower rate revenue bonds;
2. devise an optimized buy-back plan to allow the Commonwealth to obtain partial ownership in the Greenway in order to pass along to the public any resulting cost reductions as toll rate reductions to motorists, with a dollar-for-dollar reduction in tolls and implementation of distance-based pricing;
3. determine the ownership percentage the Commonwealth would need in order to enact toll-reducing measures, including granting tax-free status to the Greenway, eliminating fees charged for State Police patrols while allowing for VDOT-performed operations and maintenance (O&M); and
4. evaluate the feasibility of distance-based tolling.

VDOT worked with the Office of the Attorney General and bond counsel to complete the study. The State Corporation Commission's (SCC) Division of Utility Accounting and Finance, which oversees the Greenway, provided publicly available information. Independent traffic, revenue, financial, and tolling operations experts also conducted supporting analyses.

The Greenway was developed, constructed, and is the only roadway that operates under the Virginia Highway Corporation Act of 1988 (Act) as an extension of Route 267 into Loudoun County.¹ The Greenway is regulated by the SCC in accordance with the Act. The Act is included as Appendix B of this report.

The report concludes that:

- Based on the Act and other legal limitations, the Commonwealth cannot require TRIP II to refinance its outstanding debt obligations at a lower rate even if such debt instruments were available.

¹ The Route 267 corridor also includes the Dulles Toll Road (DTR) and Dulles Airport Access Road (DAAR).

- Further, in accordance with the Act, VDOT cannot assume the cost of O&M (inclusive of snow removal), and State Police charges cannot be eliminated even if the Commonwealth or another public entity owned the Greenway.
- An optimized buy-back plan would require General Assembly action and TRIP II’s cooperation. For purposes of this analysis, buy-back is defined as the acquisition of all or a portion of the rights and obligations of TRIP II in order for the Commonwealth to obtain ownership interests or operational control of the Greenway. This report does not examine other aspects of a potential buy-back, such as the assumption of operational and revenue risks inherent in the takeover by the Commonwealth of a more than 20-year-old facility.
- Assuming General Assembly action and TRIP II cooperation, a buy-back plan could involve use of distance-based tolling revenue to issue 9(c) general obligation bonds or the creation of a 63-20 corporation. But each option has limitations. While 9(d) bonds are also a potential financing option, the Commonwealth’s debt capacity could be impacted by this option.
- VDOT, working with the Office of the Attorney General and bond counsel, has determined that with General Assembly action, tax-free status² for the Greenway could be granted if the Commonwealth or another public entity were the exclusive owner of the Greenway or if Greenway assets were redefined as indirectly owned by the Commonwealth. Existing sources of law do not provide clarity on the effects of a partial ownership structure.

The following table details key findings for each of the action items.

SJR 254 Review Requirements/Actions	Findings
<p>Conduct a review of TRIP II’s outstanding bonds and determine if the bonds could be replaced with lower rate revenue bonds</p>	<p>The Commonwealth cannot require TRIP II or its bondholders to refinance its outstanding debt obligations at a lower rate even if such debt instruments were available (Finding #1).</p> <p>Assuming that conditions would allow, replacement of the existing bonds would require that they be retired and new bonds issued. The cost of retiring the \$1.0 billion in outstanding bonds (as of December 31, 2018) would have totaled an estimated \$1.6 to \$1.9 billion. This estimate assumes a call or optional redemption of the 1999 bonds, and the payment of an additional early repayment fee (“make whole premium”), required</p>

² Unless expressly noted otherwise, this report uses the term “tax-free status” to equate to exemption from state and local taxation pursuant to Article X, §6(a)(1) of the *Virginia Constitution* and §58.1-3606(A)(1) of the *Code of Virginia*.

	<p>under the indenture agreements. The calculation of the make whole premium is linked to U.S. Treasury rates, so the cost can vary significantly based on the financial markets. Since the 2005 bonds are not callable, they must be defeased. The required defeasance amount was calculated assuming interest earnings on the account using the same U.S. Treasury rates used in calculating the make whole premiums for the 1999 bonds. (Finding #2)</p>
<p>Devise an optimized buy-back plan to allow the Commonwealth to have partial ownership in order to pass along to the public any resulting cost reductions as toll rate reductions (including reductions resulting from distance-based tolling)</p>	<p>In an optimized buy-back plan the Commonwealth would retire all TRIP II debt, with tax-exempt debt. The debt options explored were (Finding #7, #12 to #15):</p> <ul style="list-style-type: none"> • 9(c) debt, which is currently precluded by the Act, could cover the associated costs but may not be sufficient to cover any perceived loss of future income to TRIP II and its investors. • 9(d) debt could impact debt capacity of the Commonwealth and may not be sufficient to cover any perceived loss of future income to TRIP II partners and its investors. • 63-20 corporation, which is currently precluded to serve as the Greenway operator by the Act, has constraints on the amount of debt that can be issued requiring cash flow adjustments <p>The financing options were based on distance-based toll revenue, calculated by converting the existing toll rates to per mile rates. Because of the distances traveled, this resulted in lower average tolls for most Greenway users. For users traveling the entire length, distance-based tolling resulted in an increased toll. Distance-based tolling has associated costs which must be considered. (Finding #10)</p> <p>Another option is to authorize negotiation of a comprehensive agreement with TRIP II under PPTA requirements instead of the Act. (Finding #8) A 63-20 corporation option could be explored under the PPTA as well. (Finding #14)</p>
<p>Determine the ownership percentage the Commonwealth would need in order to enact toll-reducing measures, including granting tax-free status to the Greenway and eliminating charges for State Police patrol and VDOT-performed O&M</p>	<p>There is no specific prohibition for partial ownership but such an arrangement would raise many legal questions that do not have established answers, since the Act does not allow for a public operator. (Finding #3)</p> <p>Regarding state and local taxation, case law has applied proportional taxation to mixed-ownership assets; i.e., the percentage owned by a public entity is tax-free and the percentage owned by a</p>

	<p>private entity is subject to state and local taxation. Accordingly, tax-free status could be achieved with complete ownership by the Commonwealth. Another option is a revision to §58.1-3606(A)(1) of the <i>Code of Virginia</i> that would redefine the Greenway assets as being indirectly owned by the Commonwealth. (Finding #4, #5)</p> <p>The Act and Comprehensive Agreement require all O&M costs paid or reimbursed by TRIP II to be reviewed annually by the SCC and recovered through tolls.³ The same requirement applies for costs such as State Police law enforcement services. (Finding #9)</p>
<p>Evaluate the feasibility of distance-based tolling</p>	<p>In 2016, TRIP II and VDOT generally determined that distance-based tolling was not feasible. This study confirms that conclusion. TRIP II implementation of distance-based tolling based on conversion of the existing toll rates does not generate sufficient revenue to meet its financial and other contractual obligations. Lower revenue is collected because of an increase in the number of shorter trips and cost increases to manage congestion. (Finding #10)</p> <p>VDOT also explored whether distance-based tolling would be feasible with public ownership. Using the same starting toll rate, the analysis concluded that it would be feasible with TRIP II cooperation and legislative changes to the Act, allowing Commonwealth debt or a 63-20 corporation to finance and operate the facility.</p> <p>VDOT, MWAA, TRIP II, and Fairfax and Loudoun counties are currently undertaking a joint effort to examine traffic operations and safety issues and develop mitigation measures in the corridor, particularly around Route 28.</p> <p>With the information from this report and the joint examination, the General Assembly may consider directing VDOT to expand the feasibility analysis of distance-based tolling to the entire Route 267 corridor and beyond, including its use as a congestion management tool. (Finding #11)</p>

³ See, e.g., § 56-542(C) of the *Code of Virginia* (operator has duty to provide verified reports annually to SCC for its review, including SCC's review of operator costs for any improper or excessive costs and review of affiliate contracts). See also, *Bd. of Supervisors v. State Corp. Comm'n*, 292 Va. 444, 459 (2016) (for discussion of toll rates as mechanism whereby TRIP II is meant to recover its operations and maintenance costs).

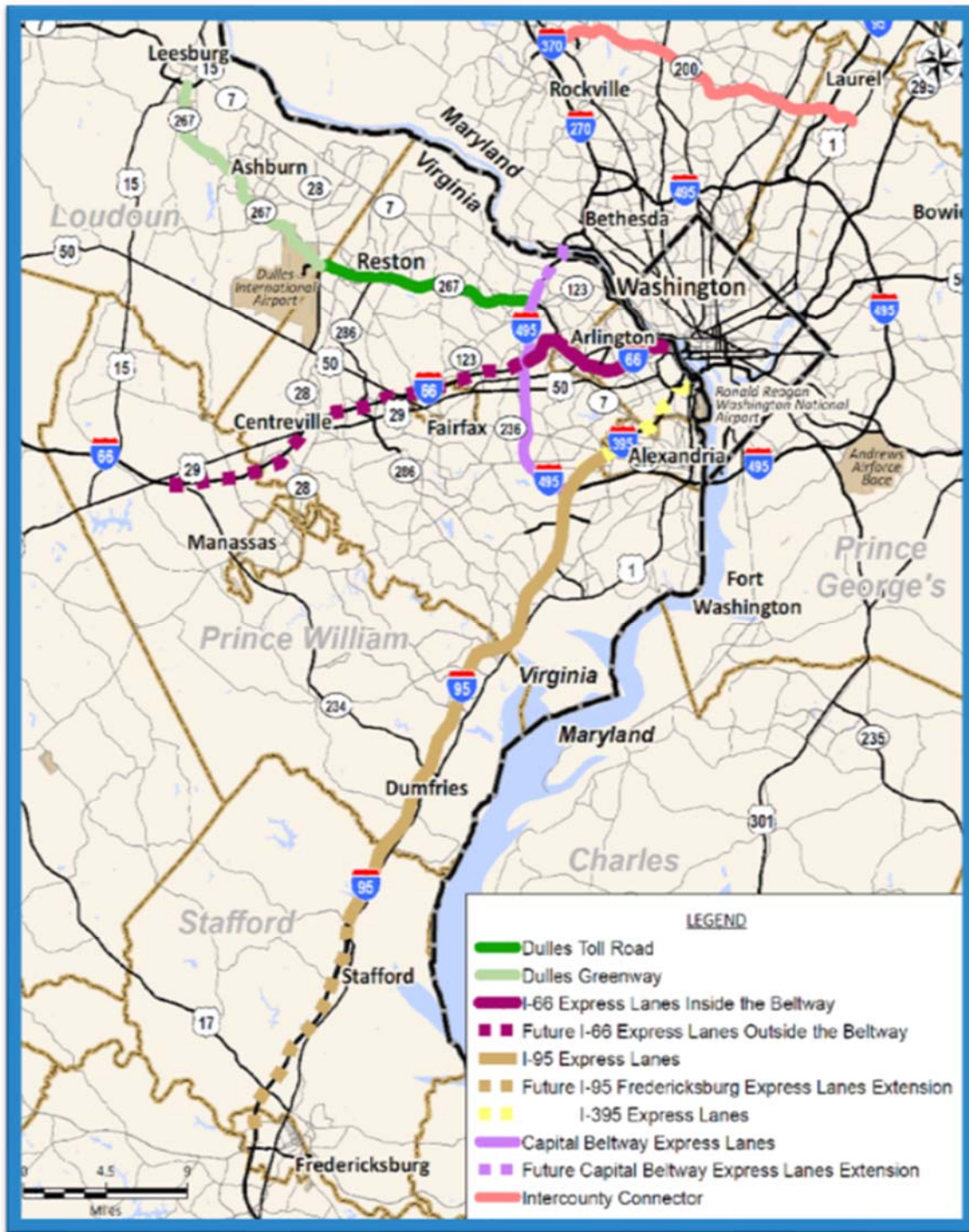
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1. BACKGROUND

The Greenway was developed and is currently regulated under the Virginia Highway Corporation Act of 1988 (Act) and opened to traffic in 1995. In 2018, 18.3 million toll transactions occurred generating \$90.4 million in toll revenue. The Greenway is a six-lane tolled roadway (generally three lanes in each direction) that extends approximately 14 miles from the Dulles Toll Road (DTR) through Loudoun County and terminates in the town of Leesburg.

While it is the only private toll road, the Greenway is one of six existing toll facilities in the Washington D.C. region, as shown in Figure 1. Four additional toll facilities (all express lanes) are under construction as of October 1, 2019.

Figure 1. Dulles Greenway and other toll roads in the Washington D.C. region

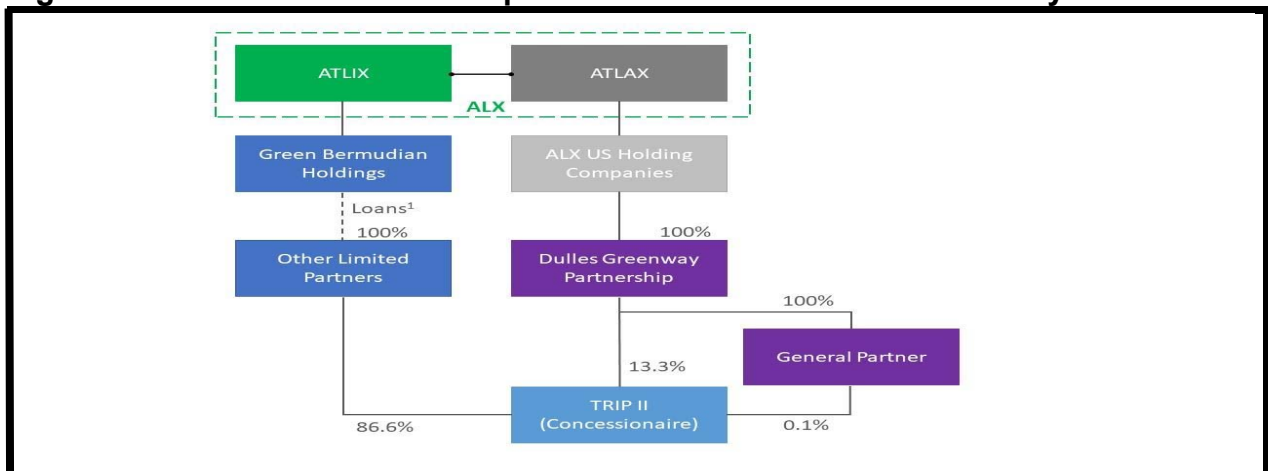


Source: Figure 1-2, Dulles Toll Road Comprehensive Traffic and Revenue 2018 Update Final Report dated December 20, 2018.

The Greenway is the only roadway to be constructed and operated under the Act. In 1993, the State Corporation Commission (SCC) issued Toll Road Investors Partnership II, L.P. (TRIP II) a certificate of authority to develop and operate the Greenway. Also in 1993, TRIP II and the Virginia Department of Transportation (VDOT) entered into a Comprehensive Agreement outlining their contractual relationship during the construction and operation phases. During the operation phase, TRIP II and VDOT shall coordinate on any proposed or anticipated changes to operating procedures through an agreement between VDOT’s Commissioner of Highways and TRIP II’s Chief Operating Officer. VDOT shall also have complete access to TRIP II’s inhouse and outside audits of toll revenue collection. The 1993 certificate of authority and Comprehensive Agreement remain in effect.

Since 1993, there have been a number of TRIP II ownership changes, each approved by the SCC. Appendix C details the ownership structure changes; the current owner is Atlas Arteria (ALX). As shown in Figure 3, all TRIP II equity investors (partners) are also affiliated with Atlas Arteria.

Figure 2. Atlas Arteria Ownership/Economic Interest in the Greenway*



Source: <https://www.atlasarteria.com/portfolio/dulles-greenway>

*Note: simplified ownership structure diagram.

1. Estimated economic interest held through approximately 86.6% subordinated loans secured against the equity held by other limited partners. Remaining 13.4% interest held through equity.

Upon termination of the certificate of authority in February 2056, the authority and duties of TRIP II will cease and the highway assets and improvements will be turned over to the Commonwealth.

1.1 Overview of the Virginia Highway Corporation Act of 1988 Requirements

This section highlights key components and requirements of the Act in the context of the regulation and operation of the Greenway.

- A private entity wishing to construct, operate, or enlarge a roadway must first obtain from the SCC a certificate of authority. Prior to submitting the application, the Commonwealth Transportation Board (CTB) must approve the project.
 - The CTB approved the Greenway project in 1989, and the SCC approved the application in July 1993 and issued a certificate of authority.
- The operator must enter into a comprehensive agreement with VDOT.
 - TRIP II entered into the Comprehensive Agreement with VDOT in September 1993. TRIP II, the concessionaire, is also defined as the “operator.”
 - Under the Comprehensive Agreement, TRIP II has two outstanding construction obligations because conditions do not yet warrant their completion: 1) widen the Route 659 overpass at Exit 4 and 2) other ancillary ramp improvements.
- An operator can be a person, corporation, partnership, joint venture, or other business entity but it cannot be the state, a state agency, any local government or municipal corporation.
- The operator has no power of eminent domain.
- The operator must pay all costs, including services provided by the Department of State Police and any services provided by VDOT, such as maintenance and inspection.
 - Department of State Police reimbursed costs in 2018 were \$926,406 and in 2017, \$844,478.
- The roadway must have a toll or similar use charge imposed.
 - Table 1 illustrates current Greenway E-ZPass toll rates.

Table 1. Current Dulles Greenway E-ZPass Toll Rates (as of April 2019), selected axles

	2-Axle	4-Axle	6-Axle or more
Entire Length			
Base Toll	\$4.75	\$12.15	\$17.00
Peak Period*	\$5.80	\$14.60	\$20.45
From Mainline plaza			
To Exit 3 (Shreve Mill Rd)			
Base Toll	\$3.10	\$7.70	\$10.65
Peak Period*	\$3.10	\$7.70	\$10.65
To Exits 4, 5, and 6**			
Base Toll	\$3.55	\$8.80	\$12.25
Peak Period*	\$4.65	\$11.45	\$15.95

*Peak period is 6:30 am to 9:00 am eastbound and 4:00 pm to 6:30 pm westbound. An additional \$1.50 is collected at the Mainline plaza and remitted to Metropolitan Washington Airports Authority (MWA).

** Exit 4 is Belmont Ridge Road; Exit 5 is Claiborne Parkway, and Exit 6 is Ashburn Village Boulevard.

- Cash and credit cards may also be used to pay tolls. Those toll rates are higher than the E-ZPass rates by 10 to 87 percent.
- The Greenway VIP Frequent Users Program provides a cash-back bonus based on the number of trips during a 12-month period. The cash-back bonuses range from 5 to 15 percent after a minimum 180 trips per year. In 2018, \$708,000 was paid back to users enrolled in the program.
- The SCC must approve or revise the toll rates charged by the operator. The SCC must ensure that the toll rate 1) is reasonable to the user in relation to the benefit obtained, 2) will not materially discourage use of the roadway by the public, and 3) will provide the operator no more than a reasonable rate of return as determined by the SCC.
 - The SCC has consistently found that the toll rate increases proposed by TRIP II comply with these requirements after minor adjustments.
 - The SCC-approved formula for the rate of return⁴ (which return is not guaranteed to TRIP II) is as follows.

⁴ In testimony before the SCC, both TRIP II and SCC staff have acknowledged that TRIP II is not guaranteed a return based on these approved rates. After a review of the records, it is not clear how these rates of return may be used by the SCC, if at all, in its rate setting duties.

- 30% until 1.15 x debt service coverage, or 5 years, whichever is longer
 - 25% until 1.25 x debt service coverage, or 2 years, whichever is longer
 - 20% until 1.50 x debt service coverage, or 4 years, whichever is longer
 - 15% until 1.75 x debt service coverage, or 5 years, whichever is longer
 - 14% for remaining term
- There is no guarantee that any rate of return will be earned.
- Until January 1, 2020, the SCC shall approve a toll rate percentage increase since the prior increase that is the greatest among 1) the increase in Consumer Price Index (CPI) plus 1 percent; 2) increase in the real gross domestic product (GDP); or 3) 2.8 percent. Additionally, a toll increase can be included to cover the percentage increase in local property taxes paid in the previous year. This provision of the Act took effect on January 1, 2013 and allowed for a toll rate increase request to be filed once within any 12-month period.
 - In February 2019 TRIP II applied for a toll increase and in April 2019 the SCC approved a 2.91 percent increase, reflected in Table 1. (Details at <https://www.dullesgreenway.com/toll-calculator/>)
 - In 2018 TRIP II paid \$4.4 million in real estate taxes. This resulted in a \$.0004 per toll increase in 2018 to recover the incremental tax increase.
 - Although TRIP II is legally structured as a limited partnership, the SCC regulates TRIP II as a public service corporation and requires annual reports regarding contracts, reporting to determine improper or excessive costs, and verification that affiliate contracts “are no less favorable or unfavorable to the operator than what it could obtain in an arm’s length transaction.”
 - The SCC can revoke TRIP II’s certificate of authority only if there is an event of material and continuing default or a failure to comply with the 1993 Comprehensive Agreement and a failure to cure the default. The Commonwealth, including VDOT, is not obligated to assume any financing obligations or other obligations if the certificate is revoked.

1.2 Development of the Dulles Greenway

The Greenway was first conceived in the 1970s when a growing number of regional residents were attracted to Loudoun County because of the relatively low housing costs and the opening of Dulles International Airport.

With the adoption of the Act in 1988, a proposal/application to privately build and finance the extension of the DTR from Route 28 to Leesburg was submitted to the CTB. In July 1989 the CTB approved the project, project construction cost, project location, and project design of the Greenway (then referred to as the “Dulles Toll Road Extension”) and its connections with other roads under CTB jurisdiction. CTB approval was subject to the operator entering into the Comprehensive Agreement with VDOT, approval by the SCC, and compliance with the Act.

The CTB resolution referred to the Act in its resolution, including the following statements:

- “...there was a compelling public need for rapid construction of safe and efficient highways” ;” and
- “...it was in the public interest to encourage construction of additional, safe, convenient, and economic highway facilities by private parties, provided that adequate safeguards are provided against default in the construction and operation obligations of the operators of roadways; such public interest including without limitation the relative speed and relative cost efficiency of private construction of the project.”

The Metropolitan Washington Airports Authority (MWAA) provided its support of the proposal/application to the CTB in a 1989 resolution that among other things required:

- the MWAA general manager to grant an easement to either the Commonwealth or the private developer to construct and operate a toll road from the termination of the existing DTR to points west of the Airport;
- MWAA to be adequately compensated, either in benefits or monetary compensation; and
- any toll revenues in excess of the obligation for the project to be dedicated to transportation needs, principally rail, in the Dulles Corridor.

Greenway construction was completed in 1995. The Greenway is the only roadway and toll facility to be constructed and operated under the Act; and is likely to remain the only such roadway developed and operated under the Act.

In part because of concerns with implementation of the Act, the 1995 General Assembly passed the Public Private Transportation Act (PPTA). Since then, any public-private partnership (P3) toll facility has been developed and operated under PPTA

requirements. Key components of the Act and PPTA are compared in Section 2.2, Table 5.

PPTA P3 toll facilities operating in Virginia include the Pocahontas Parkway, the I-495 and I-95 HOV/HOT Lanes (inclusive of the 395 Express Lanes and the Fredericksburg Extension), Elizabeth River Tunnels, and I-66 Outside the Beltway (under construction). The PPTA is set out in Chapter 18 of Title 33.2 of the *Code of Virginia*.

1.3 Greenway Obligations to Metropolitan Washington Airports

Authority (MWAA)

There are three relationships between the Greenway and MWAA relating to the following: Dulles Airport Access Road (DAAR), DTR, and granted easements.

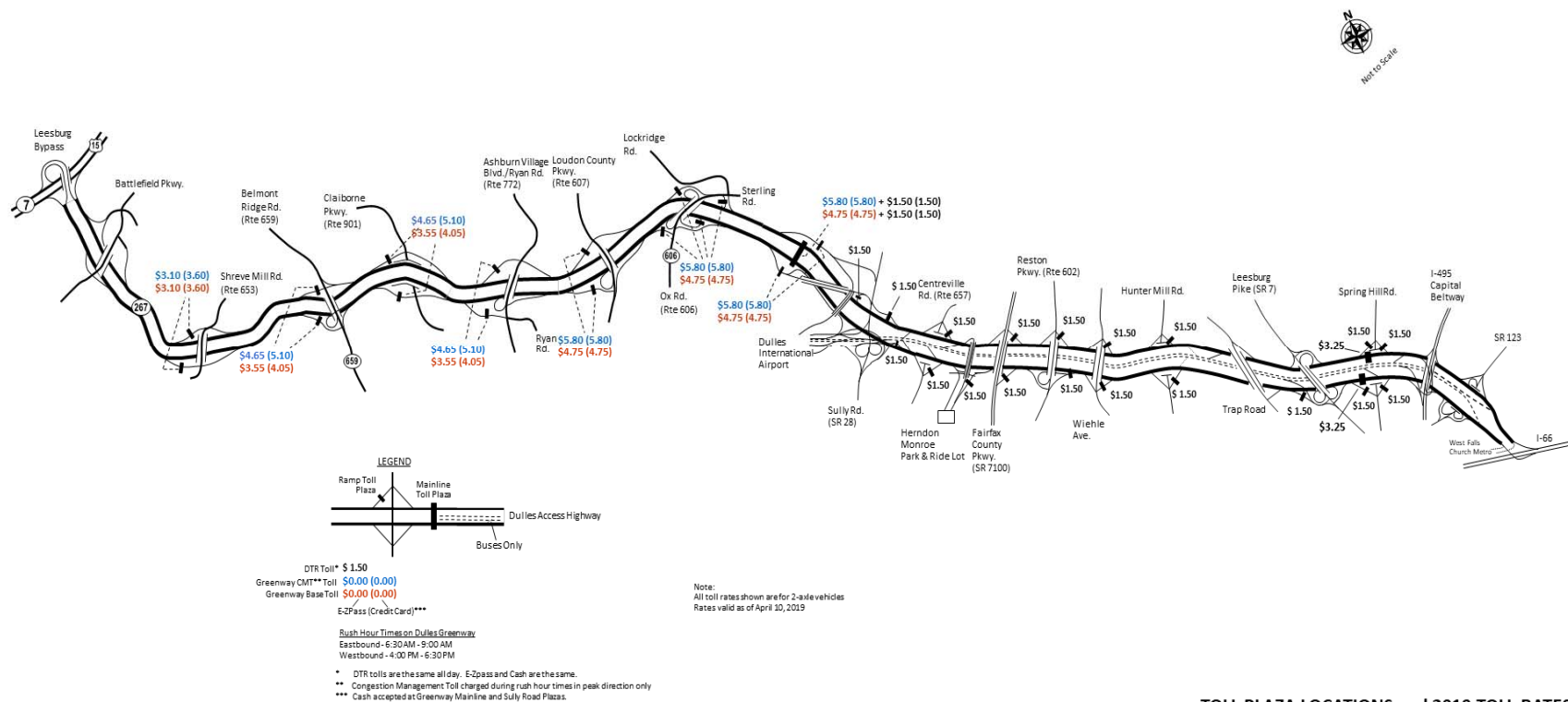
Dulles Airport Access Road. When the Airport was constructed, the DAAR was constructed by the Federal Aviation Administration to provide Airport users free, dedicated access to and from I-495 with limited intermediate exits.

Dulles Toll Road. The Greenway is the western extension of the DTR. The highest volume of toll transactions on the Greenway occurs at its intersection with the DTR (near the Greenway's Mainline plaza): more than 80 percent of toll transactions in the peak periods and 75 percent of total daily transactions. At the Mainline plaza, the Greenway collects a \$1.50 toll on behalf of MWAA. This \$1.50 toll is in addition to the toll paid for use of the Greenway.

As of September 2019 an E-ZPass user of both toll roads traveling from Leesburg to I-66 or I-495 pays a total one-way toll of \$10.55 during peak periods. Figure 4 depicts both facilities, including their Mainline plazas and ramps/intersections.

Easements for use of DAAR and Washington Dulles International Airport property. Approximately 2.5 miles of the 14-mile Greenway are on property for which MWAA granted easements to Toll Road Corporation of Virginia, predecessor of TRIP II. In accordance with the conditions of the easements, TRIP II annually pays MWAA in exchange for their grant. From 2014 through 2018 the annual payment was \$1.1 million. In 2037, the annual easement payment will increase to a minimum of \$2 million, with the amount payable subject to adjustment in accordance with the formula established in a contract between MWAA and TRIP II.

Figure 3. Dulles Greenway and Dulles Toll Road



TOLL PLAZA LOCATIONS and 2019 TOLL RATES

1.4 Financing the Greenway

[Note: As part of the financial analyses for this report, VDOT and its advisors have relied upon publicly available financial and operating information. The information includes operating statements, trust indentures, audited financial statements, SCC filings and reports, and other TRIP II public information. VDOT and its advisors have had no access to Greenway financial models or other equity financial agreements. In addition to the five outstanding bond series, there may be other long-term financial obligations owed by TRIP II. VDOT has no information on any outstanding subordinate loans or other financial obligations, if any.]

Development and construction of the Greenway was initially funded through equity contributions and private financing agreements. No public funds or tax-exempt bonds were used in the financing. During 1995 and 1996, TRIP II defaulted on its financial obligations, including not making interest payments or reimbursing VDOT the amounts owed. As a result, lenders declared the Greenway's notes and accrued interest payable immediately.

In 1999, after additional equity investment and work with lenders and VDOT to cure the default, TRIP II refinanced all outstanding debt obligations with four different series of taxable bonds. The outstanding bonds are insured by two insurance policies issued by MBIA Insurance Corporation.

In 2005 additional bonds were issued by TRIP II, in part to retire two of the four 1999 series of bonds, repay some intercompany loans among TRIP II affiliates, and raise additional capital.⁵

Table 2 details the approximately \$1.0 billion in outstanding bonds as of December 31, 2018. Final maturity dates range from 2021 to 2056, which corresponds to the scheduled termination of TRIP II's certificate of authority. The average annual debt service for the outstanding bonds ranges from \$2 to \$27 million. The bonds carry an interest rate/implied interest rate of between 5.425% and 7.30%. TRIP II's outstanding bonds are traded in the private marketplace.

Since 2005 the Greenway has struggled to achieve financial expectations and to meet some covenants of its bond financings, including minimum debt service coverage ratios, that are required to permit distributions to equity investors. While TRIP II Financial Statements indicate that operating and debt service expenses are currently being met, payments to equity investors (often referred to as "distributions") are often not possible.

⁵ See Pre-Filed Testimony of Lawrence T. Oliver, March 13, 2007, SCC PUE-2006-00081, for detail on the history of TRIP II financing of the Greenway.

Table 2. Dulles Greenway Outstanding Bonds as of December 31, 2018, all taxable

Bond Series	Description	Nominal Outstanding*	Rate	Average Annual Debt Service Payment (\$000)	Year Paid Off (retired)	Call or Defeas	Call Provision
1999A	Senior CIBs	\$ 34,963,051	7.14%	\$ 2	2035	Call	Make Whole Premium
1999B	Senior Zero Coupon	\$ 479,294,895	7.30%	\$ 27	2035	Call	Make Whole Premium
2005A	Senior Callable Zero Coupon	\$ 36,562,079	5.43%	\$ 7	2021	Defeas	n/a
2005B	Senior Callable Zero Coupon	\$116,960,495	5.70%	\$ 6	2035	Defeas	n/a
2005C	Senior Zero Coupon	\$ 373,905,162	5.55 - 5.65%	\$ 22	2056	Defeas	n/a
	Total	\$1,041,685,682					

*Balance as of 12/31/2018

1.5 The Greenway's Reported Revenues and Expenses

Greenway toll revenues have averaged growth of 3.9 percent since 2012. But in 2018 toll revenue declined as compared to 2017. Atlas Arteria, TRIP II's owner, attributed the decline to federal government shutdowns, significantly above average rainfall, and improvements on surrounding roadways. However, as summarized in Table 3, the toll revenue decline was offset by an increase in interest income.

The largest Greenway expense by far is the annual debt service payments. In FY 2018 these payments totaled \$52 million; real estate taxes were the next highest expense category at \$4.4 million. TRIP II increased its cash balance by \$20.7 million in FY 2018 (Table 3).

Table 3. Greenway Sources and Uses, actuals, cash basis

	FY 2017	FY 2018
Sources		
Toll revenues, net	\$91,737,849	\$90,417,155
Other revenue	430,810	431,519
Interest income	1,115,942	2,906,696
Total Sources	\$93,284,601	\$93,755,370
Uses		
O&M	4,083,346	3,915,537
General and admin	2,558,648	2,495,177
Project improvement expenses	971,816	3,604,588
Real estate property taxes	4,308,583	4,392,322
Electric toll / credit card processing fees	3,297,457	3,265,422
Department of State Police	844,478	926,406
Other operating expenses	2,626,341	2,559,633
Debt service	62,993,750	51,993,750
Net fixed asset costs	107,045	200,346
Movement in working capital	(679,436)	(256,870)
Increase in cash balance	12,172,573	20,659,059
Total Uses	\$93,284,601	\$93,755,370

Source: TRIP II Financial Statements: December 31, 2017 and 2018

1.6 Operating the Greenway

As shown in Table 1, Greenway toll rates vary by vehicle type and time of day. Credit card and cash users pay higher tolls when traveling less than the entire length. Greenway participates in the Commonwealth's E-ZPass Program, with approximately 86 percent of transactions paid using an E-ZPass transponder. Another 8 percent pay with credit cards. Cash (but not coins) can be used to pay the Mainline plaza toll during certain hours which vary by direction and day of week. No cash is accepted at the tolled ramps.

On average, nearly 57,500 vehicles used the Greenway each weekday in the first half of 2019, with the majority using the roadway during the 6:30 am to 9 am and 4 pm to 6:30 pm peak periods. The roadway is a commuter route with heavier traffic eastbound toward I-495 and I-66 in the morning and westbound towards Leesburg in the evening.

In 2017 the average speed during the AM peak period was above 50 mph from Leesburg to Route 606/Ox Road (Exits 1 to 8), with speeds decreasing to 30 to 50 mph in the final 2.25 miles to the Mainline plaza (Exit 9). The same heavy congestion occurs during the PM peak period westbound, building from SR 659/Belmont Ridge Road through the 5.6 miles to Leesburg (Exits 4 to 1). Traffic volumes around the untolled/free exit ramp at Battlefield Parkway contribute to this PM peak period congestion, when speeds average less than 20 mph.

The Comprehensive Agreement requires TRIP II to maintain a level of service D for most of the Greenway and level of service C within the town of Leesburg. If these service levels are not maintained, the Greenway must be expanded to accommodate the traffic volumes or the Comprehensive Agreement must be amended.

2. SJR 254 STUDY REQUIREMENTS AND FINDINGS

SJR 254, attached to this report as Appendix A, was enacted during the 2019 General Assembly session. SJR 254 requested that VDOT study the feasibility of purchasing all or part of the Greenway and report its findings to the 2020 General Assembly. SJR 254 requires VDOT to:

- 1) conduct a review of TRIP II's outstanding bonds, focusing on the 1999 series A and B bonds, which are callable, to determine if the bonds could be replaced with lower rate revenue bonds;
- 2) devise an optimized buy-back plan that would allow the Commonwealth to obtain partial ownership in the Greenway in order to pass along resulting cost reductions to motorists, with a dollar-for-dollar reduction in tolls and implementation of distance-based pricing;
- 3) determine the ownership percentage the Commonwealth would need in order to enact toll-reducing measures, such as granting tax-free status to the Greenway, eliminating the fees charged for State Police patrols, and allowing VDOT to operate and maintain the road, including snow removal; and
- 4) evaluate the feasibility of distance-based tolling.

VDOT worked closely with the Office of the Attorney General and bond counsel to conduct this study. The SCC's Division of Utility Accounting and Finance, which oversees the Greenway, provided publicly available information. In addition, independent traffic, revenue, financial, and tolling operations experts conducted analyses.

It is important to recognize that the results of the analyses and related findings cannot be acted upon without changes in law and/or the cooperation of TRIP II.

SJR 254 ANCHOR CONCEPTS

The discussion below breaks down the anchor concepts presented in SJR 254, and is organized as follows:

2.1 TRIP II's Outstanding Obligations

- Finding #1 - #2

2.2 Commonwealth Partial Ownership

- Finding #3 - #8

2.3 Ownership Percentage to Enact Toll-Reducing Measures

- Finding #9

2.4 Distance-Based Tolling

- Finding #10 - #11

2.5 Optimized Buy-Back Plan

- Finding #12 - #15

2.1 Review of TRIP II's Outstanding Bonds

The first SJR 254 required action is to determine whether the 1999 bonds could be replaced with lower rate revenue bonds. To answer this question requires a review of all of TRIP II's outstanding bonds – which consists of the 1999 series and 2005 bonds.

All TRIP II bonds are governed by a master indenture of trust, which is supplemented by nine supplemental indentures of trust (collectively, the trust indentures). These governance documents, executed between the lenders and TRIP II, outline the approval rights of existing bondholders, MBIA (the insurer of certain bonds), and the trustee. It is important to stress here that any proposed restructuring of the bonds that “impairs the rights of the bondholders to receive all payments due on the bonds” must be approved by the bondholders. Impairment can include the repayment of the bonds before they become due because the action would result in an economic loss to the bondholders. Thus, without the cooperation of TRIP II, and an agreement of existing bondholders, MBIA, and the trustee, the Commonwealth has no authority to require or direct TRIP II to replace any of its debt with lower rate revenue bonds.

The 1999 bonds and 2005 bonds have a key difference in structure. The 1999 bonds are callable and the 2005 bonds are not. This means that TRIP II can pay the 1999 bonds off early but an additional payment (“make whole premium”) must be made in most cases in order to do so. The 2005 bonds are structured so that interest compounds year over year (“accretes”) and they cannot be paid off early. For the 2005 bonds, money can be set aside, accruing interest, to make future payments; this is referred to as defeasance.

1999 Outstanding Bonds. The two outstanding 1999 bond series are structured with a call provision that allows the bonds to be retired prior to maturity at a pre-determined price, i.e., the make whole premium. As shown in Table 4, the make whole premium for the 1999 outstanding bonds could add from \$200 to \$265 million based on U.S. Treasury rates as of December 31, 2018 and October 1, 2019, respectively. The actual cost would be calculated on the date the bonds are called; however, with these assumptions, the total cost to call the 1999 bonds would be between \$714 and \$779 million.

2005 Outstanding Bonds. The 2005 bond series do not have a call provision and must be “defeased,” meaning that cash or other bonds sufficient to service the outstanding debt is set aside, interest earned, and then drawn upon as required to pay the total accreted value.

As shown in Table 4, the amount required to be set aside to defease the outstanding 2005 bonds is presently estimated to be \$917 million to \$1.1 billion. That is, it is estimated that interest earnings generated from setting aside this amount would cover the total accreted value of the 2005 bonds. The set aside amount to defease the outstanding 2005 bonds would be the same no matter who defeases the bonds, whether TRIP II or the Commonwealth.

VDOT estimates that to retire all of TRIP II's outstanding debt would cost an estimated \$1.6 to \$1.9 billion (costs to call the 1999 bonds and defease the 2005 bonds.)

Table 4. Greenway Outstanding Debt and Estimated Cost to Buy Back (\$million)

TRIP II Bond Series	Nominal Outstanding Balance as of 12/31/2018	Estimated Range of Defeasance Set Aside*	Estimated Range of Make Whole Premium**	Current Cost to Buy Back (Nominal Outstanding Balance + Defeasance Set Aside + Make Whole Premium)
1999A	35	n/a	18 - 24	53 - 59
1999B	479	n/a	182 - 241	661 - 720
Subtotal	\$ 514		\$ 200 - \$ 265	\$ 714 - \$ 779
2005A	37	1 - 1	n/a	38 - 38
2005B	117	32 - 45	n/a	149 - 162
2005C	374	356 - 540	n/a	730 - 914
Subtotal	\$ 528	\$ 389 - \$ 586		\$ 917 - \$ 1,114
TOTAL	\$ 1,042			\$ 1,631 - \$ 1,893

*Defeasance set aside is the estimated set aside required based on U.S. Treasury State and Local Government Series (SLGS) rate (as of 12/31/2018 and 10/1/2019).

**For purposes of calculating the make whole premium range on the 1999 bonds, the U.S. Treasury SLGS3rate (as of 12/31/2018 and 10/1/2019) was interpreted as the "Treasury Yield."

Finding #1: The Commonwealth has no authority to require or direct TRIP II to refinance or restructure its outstanding Greenway debt to secure a lower cost. Further, due to trust indenture obligations to the bondholders on early repayment (for the 1999 bonds) and defeasance (for the 2005 bonds), it is not clear that there would be any economic benefit in doing so.

Finding #2: For the purposes of determining the cost of a buy-back of the Greenway, the Commonwealth should assume an estimated \$1.6 to \$1.9 billion, of which \$917 million to \$1.1 billion would be set aside to defease the 2005 bonds.

2.2 Allow the Commonwealth to Obtain Partial Ownership

The second SJR 254 required action is to devise an optimized buy-back plan that would allow the Commonwealth to obtain partial ownership in the Greenway in order to pass along resulting cost reductions to motorists, with a dollar-for-dollar reduction in tolls and implementation of distance-based pricing. For this analysis, partial ownership by the Commonwealth or any public entity of the Greenway and an optimized buy-back plan are considered separately because partial ownership raises certain legal issues including the tax-exempt status of public property.

Legal Concepts to be Considered. The following concepts were legally analyzed: 1. the Commonwealth's ability to obtain partial ownership of the Greenway and the implications of such shared ownership status; 2. the ownership percentage the Commonwealth would need in order to grant state and local tax-free status to the Greenway; and 3. limitations on the General Assembly's authority to enact remedial legislation to enable adjustments to TRIP II's current rights and obligations with respect to the Greenway.

1. **Partial Ownership:** There is no obvious prohibition on the Commonwealth obtaining partial ownership of an asset that is also partially owned by a private entity.⁶ But in the case of the Greenway the implications of mixed ownership are not clear because the Act does not contemplate public ownership; instead it grants the SCC regulatory oversight of the "operator," which by definition cannot include "the state or any local government or agency thereof, or any municipal corporation or other corporate body." Accordingly, while partial ownership may be permitted generally, it is unclear whether the SCC would continue to regulate the Greenway under the Act with such an ownership structure; and it is equally unclear what alternative regulatory regime would apply if not the Act.

Finding #3: Because the Act does not contemplate public ownership, the legal implications of a partial ownership arrangement are unclear.

⁶ The Supreme Court of Virginia has noted in *dicta* more than one arrangement where a Virginia public entity has been a partial owner or shareholder of an asset. In *City of Richmond v. Suntrust Bank*, 283 Va. 439 (2012), the court noted in the underlying facts an arrangement where the Richmond Redevelopment and Housing Authority (RRHA) owned two parcels of real property as tenants in common with Suntrust Bank, which arrangement was unchallenged in the opinion. Similarly, in *RF&P Corp. v. Little*, 247 Va. 309 (1994), in its recitation of the relevant historical facts the court noted the Virginia Retirement System, an agency of the Commonwealth, at one point owned approximately 20% of the stock in RF&P Corporation, which itself was a for-profit holding company conducting business individually and in co-ventures with private entrepreneurs. Accordingly, there is no obvious legal prohibition against the Commonwealth obtaining partial ownership interest in the Greenway for the purpose of enacting toll-reducing measures.

One potential solution is for the General Assembly to modify the Act to expressly permit the Commonwealth to be a part owner, to establish the corresponding regulatory regime, and to address as many other legal gaps as possible within the statutory modification.

2. **Tax-Free Status:** The Supreme Court of Virginia has held that parcels of real property owned by public and private entities as tenants in common are taxable based on the percentage owned by the private entity, with the percentage owned by the public entity exempted from state and local taxation.⁷ Thus, if the Commonwealth were to become a partial owner of the Greenway then the percentage owned by the Commonwealth would likely be exempt from state and local taxation under Article X, §6(a)(1) of the *Virginia Constitution*. The portion owned by TRIP II would likely remain subject to state and local taxation.

Accordingly, for the Greenway to be granted tax-free status the Commonwealth would likely have to be the 100 percent owner. As shown in Table 3, local real estate taxes for the Greenway totaled \$4.4 million in FY 2018. TRIP II has been consistently one of Loudoun County's top property taxpayers.⁸

Finding #4: For the Greenway to be granted state and local tax-free status based on direct public ownership, the Commonwealth would have to be the 100 percent owner.

Another approach the General Assembly could consider is to enact a statute providing that roadways developed under the Act are deemed property owned indirectly by the Commonwealth. There is an analogous provision (§58.1-3606.1 of the *Code of Virginia*) that applies to qualifying transportation facilities developed under the PPTA, exempting such facilities from state and local taxation on the basis that they are indirectly owned by the Commonwealth.

Finding #5: To achieve tax-free status without direct Commonwealth ownership, the General Assembly could enact legislation analogous to §58.1-3606.1 of the *Code of Virginia*, which would provide that roadways developed under the Act are property indirectly owned by the Commonwealth.

3. **Contract Clauses:** The General Assembly's ability to craft a legislative remedy with respect to the Greenway is constrained by provisions of both the *Constitution of Virginia* and the *Constitution of the United States* (Contract Clauses) that prohibit

⁷ *City of Richmond v. Suntrust Bank*, 283 Va. 439, (2012).

⁸ Loudoun County Comprehensive Annual Financial Reports, 2013 to 2018.

state legislators from passing laws substantially impairing the obligations of contracts, unless the laws are drawn in an appropriate and reasonable way to advance a significant and legitimate public purpose. Both the U.S. Supreme Court and the Supreme Court of Virginia have articulated similar tests.

Finding #6: The General Assembly's power to legislate any particular outcome relative to a partial buy-back plan may be limited by the Contract Clauses.

TRIP II's most fundamental right under the Act and the Comprehensive Agreement is the right to impose and collect tolls at the rates approved by the SCC. Accordingly, any unilateral limitation or impairment of that particular right (as compared to the new structure, whatever it is) would require careful attention and analysis prior to implementation. Further, in addition to the estimated \$1.6 to \$1.9 billion to retire TRIP II debt, loss of perceived economic value to TRIP II and its investors may be a consideration during negotiation for change of ownership.

Finding #7: In addition to the \$1.6 to \$1.9 billion in debt pay-off costs, the Commonwealth may need to pay some share of the perceived loss of future income to TRIP II investors.

Converting the Greenway from a Roadway under the Act to a Qualifying Transportation Facility under the PPTA. Since the Greenway opened, VDOT has entered into nine comprehensive agreements for 14 roadway improvement projects, including seven toll revenue risk P3s with long-term concessions. These comprehensive agreements have been entered into under the requirements of Chapter 18 of Title 33.2 of the *Code of Virginia*, the PPTA. The key statutory elements of the Act and PPTA are highlighted in Table 5.

It is important to note that §33.2-1823 of the *Code of Virginia* states specifically that the PPTA shall not be construed to repeal or change in any manner the Act, and that the Act shall not apply to PPTA projects. Therefore, in order for the General Assembly to give VDOT, TRIP II, and Atlas Arteria the authority to negotiate in good faith a potential shift to the PPTA, legislative action would be required. A shift from the Act to the PPTA as the governing act would mean, among other things, that the SCC would no longer set toll rates or regulate the Greenway. Rather, rates would be established under the provisions of a comprehensive agreement, which would be administered by VDOT.

Negotiation of any agreement under the PPTA would focus on appropriate risk allocation between the parties to ensure best value for the Commonwealth, a network approach to congestion management, optimized toll rate structures, and appropriate protections to TRIP II and existing bondholders. The General Assembly could establish parameters around any mutually agreed upon PPTA comprehensive agreement.

Finding #8: The PPTA may provide an alternative approach to a buy-back or restructuring that appropriately allocates risk between the Commonwealth and concessionaire, and would relieve the SCC from its regulatory role over the Greenway. Legislative amendments to the PPTA would be required to allow such a process to occur.

Table 5: Comparison of the Act of 1988 and PPTA of 1995

	Act of 1988 (§56-535 et seq of the <i>Code of VA</i>)	PPTA of 1995 (§33.2-1800 et seq of the <i>Code of VA</i>)
Approval of Process/Project	CTB; SCC issues certificate of authority; local governments must receive application materials and have opportunity to comment and approve any necessary local permits and plans	CTB; Transportation Public-Private Partnerships Steering Committee; must be in appropriate local, regional, and state plans; must recognize responsible local entity; notice to local governments who have opportunity to comment and approve any necessary local permits and plans
Competition Required for Project	No	Yes, also requires public sector analysis
Finding of Public Interest	CTB; SCC	VDOT Commissioner; CTB; Transportation Public-Private Partnership Steering Committee
Comprehensive Agreement	Yes	Yes
Oversight/Regulation	SCC regulates like a public service company; VDOT design, construction, and maintenance of roadway	VDOT oversight of the concessionaire; if federal funds or project, USDOT oversight
Toll Rate Setting	Private entity with approval by SCC	Private entity with parameters established in comprehensive agreement
Required Toll Financing	Yes	No, may include other types of financing and funding. A 63-20 can be formed as part of the agreement.
Local Taxation	Yes	No, considered property indirectly owned by a government (§58.1-3606.1 of the <i>Code of Virginia</i>)
Right of Way	No public property	CTB/VDOT right of way processes; real property is typically publicly-owned and under the control of a concessionaire pursuant to a permit
Affiliates and arm's-length transaction	Yes	Yes
Transparency	Hearing process; annual audited financial statements and statement of operator's ownership; notice to localities where project is located	Public sharing of business terms; RFQ/RFP; comprehensive agreement, independent audit; certification to Governor and General Assembly that agreement is within public interest; regular operating performance and financial reporting, including annual audited financial statements

	Virginia Highway Corporation Act (§56-535 et seq of the Code of VA)	PPTA of 1995 (§33.2-1800 et seq of the Code of VA)
Insurance	Yes	Yes
Rate of Return	SCC approved; established with approval of application	VDOT and concessionaire; parameters established in comprehensive agreement and base case financial model
Policing	Department of State Police at operator's cost	Department of State Police at concessionaire's cost
Default	Material and continuing failure to comply with terms of comprehensive agreement; after hearing and reasonable cure period, SCC may revoke certificate of authority and VDOT assume operations and rights and title to asset for certain compensation	Default defined in comprehensive agreement; material default defined in <i>Code of Virginia</i> as default in performance that jeopardizes adequate service to the public and remains uncured after a reasonable cure period has elapsed
Termination	SCC establishes date of end of certificate of authority which is 10 years from end of the term of financing; project may be refinanced if determined to be in public interest; Act does not speak to other types of termination	End of term established in comprehensive agreement; comprehensive agreement includes reasons and processes for termination for other reasons, such as convenience and bankruptcy

2.3 Determine Ownership Percentage to Enact Toll-Reducing Measures

The Act specifically requires TRIP II to agree with the Virginia Department of State Police on reasonable terms and conditions for the State Police to patrol and police the Greenway. Payment for State Police services is the same as for other toll roads in Virginia. In 2017, the PPTA was amended to require any comprehensive agreement to include a provision requiring funding for adequate staffing by the State Police for general law enforcement services. In addition to individual toll roads paying these costs, VDOT is required by the Appropriation Act to provide \$8.2 million a year for general patrol services to the Department of State Police. Any change in the payment for the Greenway's State Police services would be a cost transfer and not a reduction.

The Act prohibits VDOT from providing services to TRIP II and the Greenway without the costs being reimbursed. This includes routine operations and maintenance, including snow removal. These restrictions are also in the Comprehensive Agreement. Accordingly, modifications to the Act and Comprehensive Agreement would be required for VDOT to undertake these services directly, rather than providing these services to TRIP II.

Finding #9: Both the Act and Comprehensive Agreement require that the State Police and VDOT be paid for all Greenway services. Any change in how the State Police are paid for services on the Greenway would be a cost transfer, not a cost reduction. The Act and Comprehensive Agreement would have to be modified in order for VDOT to provide services to the Greenway directly, rather than on behalf of TRIP II.

2.4 Evaluate the Feasibility of Distance-Based Tolling

SJR 254 directed VDOT to evaluate the feasibility of distance-based tolling and consider it as part of an optimized buy-back plan.

The feasibility of distance-based tolling on the Greenway was last evaluated by the Commonwealth in 2016 based on direction from the SCC to “confer on the efficacy of performing detailed feasibility studies of distance-based pricing.” TRIP II concluded that 1) the Greenway was not designed for distance-based pricing, 2) it would be prohibitively expensive to properly study and implement distance-based pricing, 3) such pricing would threaten the financial viability of TRIP II, and 4) it would result in higher tolls for some users and/or overwhelm the capacity of the interconnection with the DTR, causing significant congestion. (2016 Trip II Analysis) VDOT generally concurred with the findings and did not find value in additional studies at that time.

Distance-Based Tolling by TRIP II. Currently, a form of zone-based pricing is implemented. Greenway users entering or exiting within these zones are charged the same rate. For example, as shown in Table 6, users traveling anywhere within Loudoun County Parkway to the Mainline plaza (Exits 7 to 9) pay a Greenway toll of \$5.80 in the AM peak hours; whereas users traveling from SR 659 Belmont Ridge Road to Ashburn Village Blvd. (Exits 4 to 6) pay \$4.65.

Table 6. Current 2019 AM Peak Period E-ZPass Rates, 2-axle vehicles

2019 Baseline AM Peak Period Toll (E-ZPass) - 2 axle vehicles

From		To								
		SR7/US15	Battlefield Pkwy.	Shreve Mill Rd.	SR659 Belmont Ridge Rd.	Claiborne Pkwy.	Ashburn Village Blvd.	Loudoun Cty. Pkwy.	SR606	DTR ML/Sully Rd.
		Exit 1	Exit 2	Exit 3	Exit 4	Exit 5	Exit 6	Exit 7	Exit 8	Exit 9
SR7/US15	Exit 1	\$0.00	\$0.00	\$3.10	\$4.65	\$4.65	\$4.65	\$5.80	\$5.80	\$5.80
Battlefield Pkwy.	Exit 2	\$0.00	\$0.00	\$3.10	\$4.65	\$4.65	\$4.65	\$5.80	\$5.80	\$5.80
Shreve Mill Rd.	Exit 3	\$3.10	\$3.10	\$0.00	\$4.65	\$4.65	\$4.65	\$5.80	\$5.80	\$5.80
SR659 Belmont Ridge Rd.	Exit 4	\$3.55	\$3.55	\$3.55	\$0.00	\$4.65	\$4.65	\$5.80	\$5.80	\$5.80
Claiborne Pkwy.	Exit 5	\$3.55	\$3.55	\$3.55	\$3.55	\$0.00	\$4.65	\$5.80	\$5.80	\$5.80
Ashburn Village Blvd.	Exit 6	\$3.55	\$3.55	\$3.55	\$3.55	\$3.55	\$0.00	\$5.80	\$5.80	\$5.80
Loudoun Cty. Pkwy.	Exit 7	\$4.75	\$4.75	\$4.75	\$4.75	\$4.75	\$4.75	\$0.00	\$5.80	\$5.80
SR606/Ox Rd.	Exit 8	\$4.75	\$4.75	\$4.75	\$4.75	\$4.75	\$4.75	\$4.75	\$0.00	\$5.80
DTR ML/Sully Rd.	Exit 9	\$4.75	\$4.75	\$4.75	\$4.75	\$4.75	\$4.75	\$4.75	\$4.75	\$0.00

*Colors demarcate zones.

All users traveling to and from the Mainline plaza at distances ranging from 2.25 miles to 13.12 miles are charged the same \$5.80 rate during the AM and PM peak periods. Notably, 88 percent of users travel to and from the Mainline plaza and pay the

\$5.80 toll. At the Mainline plaza, Greenway users also pay \$1.50 for use of the DTR, with the toll remitted to MWAA.

As a starting point to examine distance-based tolling, current toll rates were converted to a per mile toll. The concept of distance-based tolling has frequently been suggested as a more equitable alternative to the current toll rate structure. By applying a uniform rate per mile, users are charged based on the actual distance traveled. Converting current E-ZPass toll rates⁹ to distance-based pricing results in a per mile toll rate of \$0.39/mile (off-peak) and \$0.49/mile (peak) in 2020. The converted E-ZPass rates are shown in Table 7.

Table 7. 2020 AM Peak E-ZPass Rates, Converted Rate/Mile Distance-Based Pricing, 2-axle vehicles

2020 AM Peak Period Toll (E-ZPass) - 2 axle vehicles under Converted Rate/Mile Distance-Based Pricing

From		To								
		SR7/US15	Battlefield Pkwy.	Shreve Mill Rd.	SR659 Belmont Ridge Rd.	Claiborne Pkwy.	Ashburn Village Blvd.	Loudoun Cty. Pkwy.	SR606	DTR ML/Sully Rd.
		Exit 1	Exit 2	Exit 3	Exit 4	Exit 5	Exit 6	Exit 7	Exit 8	Exit 9
SR7/US15	Exit 1	\$0.00	\$0.00	\$1.10	\$2.20	\$2.70	\$3.60	\$4.25	\$4.85	\$5.95
Battlefield Pkwy.	Exit 2	\$0.00	\$0.00	\$1.10	\$2.20	\$2.70	\$3.60	\$4.25	\$4.85	\$5.95
Shreve Mill Rd.	Exit 3	\$0.85	\$0.85	\$0.00	\$1.15	\$1.60	\$2.50	\$3.15	\$3.75	\$4.85
SR659 Belmont Ridge Rd.	Exit 4	\$1.75	\$1.75	\$0.90	\$0.00	\$0.50	\$1.35	\$2.05	\$2.60	\$3.75
Claiborne Pkwy.	Exit 5	\$2.15	\$2.15	\$1.30	\$0.40	\$0.00	\$0.90	\$1.55	\$2.15	\$3.25
Ashburn Village Blvd.	Exit 6	\$2.85	\$2.85	\$2.00	\$1.10	\$0.70	\$0.00	\$0.65	\$1.25	\$2.35
Loudoun Cty. Pkwy.	Exit 7	\$3.40	\$3.40	\$2.55	\$1.65	\$1.25	\$0.55	\$0.00	\$0.55	\$1.70
SR606/Ox Rd.	Exit 8	\$3.85	\$3.85	\$3.00	\$2.10	\$1.70	\$1.00	\$0.45	\$0.00	\$1.10
DTR ML/Sully Rd.	Exit 9	\$4.75	\$4.75	\$3.90	\$3.00	\$2.60	\$1.90	\$1.35	\$0.90	\$0.00

Applying these distance-based toll rates to traffic volumes results in an overall toll revenue reduction due to 1) an increase in the volume of shorter distance trips (between Ashburn Village Boulevard to the Mainline plaza (Exits 6 to 9) and 2) no significant change in volume of end-to-end trip users. For example, users traveling from Loudoun County Parkway to the Mainline plaza (Exit 7 to Exit 9) account for about 12 percent of daily transactions. E-ZPass users on this segment currently paying \$4.75 in the AM Peak would pay \$1.35 under a distance-based system (in addition to the \$1.50 DTR toll). While the lower toll attracts more trips to this movement, the increase in traffic does not offset the average loss in toll revenue of \$3.40 per transaction.

The analysis also indicated higher congestion as a result of the lower toll rates. Conversion to distance-based tolling results in significant congestion at the eastern (Exits

⁹ Assuming current volumes, traveling the full length of the Greenway (12.03 miles of the 14 miles of Greenway is tolled) costs \$5.80, which equates to \$0.48/mile during peak periods and \$0.38/mile off-peak. Applying a 2.4% inflation rate, this equates to \$ 0.49/mile at peak periods and \$0.39/mile during off-peak in 2020.

6 to 9) and western ends (Exits 2 to 1) of the Greenway by 2040. As described previously, the Comprehensive Agreement requires a level of service D for most of the route and level of service C within the town of Leesburg to assure users that significant congestion will not occur. If congestion increases, TRIP II is required to implement improvements, so additional costs would be incurred. Improvements to mitigate the resulting congestion may include widening the median and some bridges at the Greenway's east end and adding a lane between Battlefield Parkway and Leesburg, with estimated capital costs of approximately \$100 million.

These capital costs are in addition to those required to convert the Greenway to a distance-based tolling facility. Eastbound users are currently recorded only when they exit the facility through the Mainline toll plaza, and not where or when they get on the Greenway. Conversely, westbound users are recorded only when they enter the road, not when they get off. Conversion of the system would involve installation of new gantry structures, systems, and equipment to capture each user's entrance or exit in order to measure actual miles traveled. These system changes result in projected upfront capital costs of \$11 million (assuming an E-ZPass/cash/credit card collection system) to \$35 million (assuming an electronic toll collection system only).

This analysis therefore confirms the conclusion of the 2016 TRIP II analysis. Distance-based tolling based on conversion of existing approved Greenway toll rates would not allow TRIP II to meet its financial obligations¹⁰ and level of service obligations, or to cover the costs of converting to a distance-based tolling facility. VDOT estimates that in order for TRIP II to meet its obligations under a distance-based tolling approach, the per mile rate would be \$0.75/mile (peak) compared to \$0.49/mile used in this analysis.

Finding #10: A conversion by TRIP II to distance-based tolling, with approved 2019 toll rates converted to a toll rate per mile, would not generate sufficient revenue for TRIP II to meet its contractual obligations, including those to bondholders.

Distance-Based Tolling by VDOT. The next step in the analysis was to evaluate whether distance-based tolling would be feasible if VDOT assumed ownership and debt financing was available. As a starting point, VDOT evaluated distance-based tolling by applying a uniform rate per mile based on TRIP II's 2019 toll rates, with the following considerations:

¹⁰ The master indenture of trust requires that net toll revenues be equal to at least 1.25x of the debt. Based on the analysis for this study, converting current toll rates to distance-based tolling would only provide TRIP II with a 0.89x debt coverage ratio.

- Converting current E-ZPass toll rates¹¹ to distance-based pricing results in a per mile toll rate of \$0.39/mile (off-peak) and \$0.49/mile (peak) in 2020.
- The credit card and cash toll rates are higher because of the increased complexity of collecting per mile tolls with these payment methods.
- Travel during the AM and PM peaks between SR 606/Ox Road and the Mainline plaza (Exits 8 to 9) averages 20 to 50 mph. This congestion expands through Ashburn Village Boulevard and Loudoun County Parkway (Exits 6 and 7) under the distance-based scenarios since the lower distance-based tolls attract more users. Even at a higher rate per mile, users of these segments would pay less than half of the current rate per trip. As a congestion management tool, higher per mile rates of 0.75/mile (peak) and \$0.60/mile (off-peak) could be charged for more congested segments, such as the segment from Ashburn Village Boulevard to the Mainline plaza (Exits 6 to 9).
- Travel between SR 7/US 15 to Battlefield Parkway (Exits 1 to 2) is currently not tolled. Of the 17,000 vehicles per day (in each direction) on this segment, about 4,200 (25 percent) travel for free while the remainder travel further east. This volume contributes to PM congestion in the westbound direction between SR 659 Belmont Ridge Road and SR 7/US 15 (Exits 4 to 1), when speeds average less than 20mph. As a congestion management tool, travel between SR 7/US 15 to Battlefield Parkway (Exits 1 to 2) could be tolled at the per mile rate of \$0.39/mile (off-peak) and \$0.49/mile (peak).

Four distance-based scenarios were analyzed to evaluate the feasibility of distance-based tolling under VDOT ownership:

1. Scenario A: Convert existing toll rate to a uniform rate of \$0.49/mile (peak) and \$0.39/mile (off-peak) for E-ZPass users for actual distance traveled; apply same per-mile rates for credit card and cash users for distance between the entry/exit interchange and Battlefield Parkway; increase tolls annually by CPI at 2.4 percent; and continue toll collection using E-ZPass, credit card, and cash.
2. Scenario B: Generally the same as Scenario A. As a congestion management tool, toll the movement from Battlefield Parkway to SR 7/US 15 interchange in Leesburg at \$0.49/mile (peak) and \$0.39/mile (off-peak), and implement higher \$0.75/mile (peak) and \$0.60/mile (off-peak) rates between the Mainline plaza and Ashburn Village Boulevard.

¹¹ Currently, traveling the full length of the Greenway (12.03 miles of the 14 miles of Greenway is tolled) costs \$5.80, which equates to \$0.48/mile during peak periods and \$0.38/mile off-peak. Applying a 2.4% inflation rate, this equates to \$ 0.49/mile during peak periods and \$0.39/mile during off-peak.

3. **Scenario C:** Convert existing toll rate to a uniform rate of \$0.49/mile (peak) and \$0.39/mile (off-peak); increase tolls annually by CPI at 2.4 percent; and implement all electronic toll collection (AET), including video tolling. Video tolling rates include the direct cost of invoicing and video processing cost and are less than double the amount of the base toll.
4. **Scenario D:** Generally the same as Scenario C. As a congestion management tool, toll the movement from Battlefield Parkway to SR 7/US 15 interchange in Leesburg at \$0.49/mile (peak) and \$0.39/mile (off-peak), and implement higher \$0.75/mile (peak) and \$0.60/mile (off-peak) rates between the Mainline plaza and Ashburn Village Road.

In all scenarios, conversion to distance-based tolling results in a revenue loss throughout the life of TRIP II's certificate of authority (present to 2056). VDOT's analysis concludes that under all distance-based tolling scenarios, lower toll rates per mile prompt an increase in short-distance, lower-cost trips but do not attract enough additional end-to-end trips to make up the difference in revenues. The increase in short-distance, lower-cost trips coupled with an overall reduction in rates leads to varying levels of revenue loss.

Scenario B results in the least revenue loss (7 to 19 percent) compared to the baseline for the first 10 years of distance-based tolling. Table 8 provides E-ZPass rates under Scenario B.

Table 8. 2020 AM Peak E-ZPass Rates, Scenario B, 2-Axle Vehicles

Scenario B

AM Peak Period Toll (E-ZPass) - 2 axle vehicles

From		To									
		Battlefield		Shreve	SR659		Ashburn		DTR		
		SR7/US15	d Pkwy.	Mill Rd.	Belmont Ridge Rd.	Claiborne Pkwy.	Village Blvd.	Loudoun Cty. Pkwy.	SR606	ML/Sully Rd.	
	Exit	Exit	Exit	Exit	Exit	Exit	Exit	Exit	Exit		
SR7/US15	Exit 1	\$0.00	\$0.55	\$1.60	\$2.75	\$3.25	\$4.10	\$5.15	\$6.00	\$7.70	
Battlefield Pkwy.	Exit 2	\$0.45	\$0.00	\$1.10	\$2.20	\$2.70	\$3.60	\$4.60	\$5.45	\$7.15	
Shreve Mill Rd.	Exit 3	\$1.30	\$0.85	\$0.00	\$1.15	\$1.60	\$2.50	\$3.50	\$4.40	\$6.05	
SR659 Belmont Ridge Rd.	Exit 4	\$2.20	\$1.75	\$0.90	\$0.00	\$0.50	\$1.35	\$2.40	\$3.25	\$4.95	
Claiborne Pkwy.	Exit 5	\$2.60	\$2.15	\$1.30	\$0.40	\$0.00	\$0.90	\$1.90	\$2.80	\$4.45	
Ashburn Village Blvd.	Exit 6	\$3.30	\$2.85	\$2.00	\$1.10	\$0.70	\$0.00	\$1.00	\$1.90	\$3.60	
Loudoun Cty. Pkwy.	Exit 7	\$4.10	\$3.70	\$2.80	\$1.90	\$1.55	\$0.80	\$0.00	\$0.85	\$2.55	
SR606	Exit 8	\$4.80	\$4.40	\$3.50	\$2.60	\$2.25	\$1.50	\$0.70	\$0.00	\$1.70	
DTR ML/Sully Rd.	Exit 9	\$6.15	\$5.75	\$4.85	\$3.95	\$3.60	\$2.85	\$2.05	\$1.35	\$0.00	

Table 9 details the projections from each of the four scenarios. VDOT developed the proxy baseline scenario, which represents its projections of rate increases, based on the history of SCC-approved Greenway toll rate increases. Between 2005 and 2010, the SCC approved Greenway toll rate increases of 13.4 percent compounded annually; between 2010 and 2013, approved toll increases averaged 2.9 percent compounded

annually. In 2013, TRIP II and the SCC agreed to annual toll increases equal to the CPI plus 1 percent, the real GDP plus 1 percent, or 2.8 percent, whichever was higher. MWAA recently published intentions to raise DTR through-trip tolls by an average of 4.5 percent compounded annually through 2033. To maintain a share of the corridor growth revenue, the baseline scenario in Table 8 assumes TRIP II will request and be approved for a 4 percent annual increase from 2020 to 2037. The assumed annual change decreases to 2.7 percent from 2037 to 2045, and to 2.4 percent from 2046 to 2056.

Table 9. Comparison of TRIP II Baseline and VDOT Distance-Based Tolling Scenarios, 2020 projected

	Baseline	Scenario A Total toll rate per mile conversion; same toll collection options	Scenario B Scenario A with higher congestion toll rates and tolling of Battlefield Parkway to Route 7/15	Scenario C All electronic tolling with total toll rate per mile conversion	Scenario D Scenario C with higher congestion toll rates and tolling of Battlefield Parkway to Route 7/15
E-ZPass toll rate per mile	N/A	\$0.39 (off-peak) \$0.49 (peak)	\$0.39 (off-peak; other segments) \$0.49 (peak; other segments) \$0.60 (off-peak; Mainline plaza to Ashburn Village Blvd.) \$0.75 (peak; Mainline plaza to Ashburn Village Blvd.)	\$0.39 (off-peak) \$0.49 (peak)	\$0.39 (off-peak; other segments) \$0.49 (peak; other segments) \$0.60 (off-peak; Mainline plaza to Ashburn Village Blvd.) \$0.75 (peak; Mainline plaza to Ashburn Village Blvd.)
Average E-ZPass toll per trip	\$5.33	\$2.65	\$3.33	\$2.66	\$3.35
Range of user E- ZPass toll rate reduction	N/A	(\$0.10) to (\$5.50)	(\$5.20) to \$1.65	(\$0.10) to (\$5.50)	(\$5.20) to \$1.65
Revenue and Trip Volume					
Toll revenue (\$ in thousands)	\$ 94,000	\$ 79,000	\$ 92,000	\$ 76,000	\$ 88,000
Average annual trips	18,269,000	28,977,000	27,264,000	28,635,000	26,541,000
Cumulative % revenue change for first 10 years of distance-based tolling compared to baseline	N/A	(20%)	(7%)	(23%)	(11%)
Costs (\$ in thousands)					
Average additional operating costs for first 10 years of distance-based tolling	N/A	\$ 600	\$ 1,131	\$ 1,364	\$ 2,185
Additional tolling system conversion capital costs	N/A	\$ 10,638	\$ 13,345	\$ 31,362	\$ 34,362

TRIP II and VDOT would both incur additional costs to implement distance-based tolling. For all four VDOT scenarios analyzed, increased E-ZPass transactions resulted in increased E-ZPass processing fees (Table 10).¹² Table 11 lists the major costs to implement distance-based toll collection.

Table 10. Projected E-ZPass Processing Fees, 2020

	Number of E-ZPass Transactions (000s)	E-ZPass Processing Fees (\$ in thousands)
Baseline	15,594	2,663
Scenario A	25,963	3,042
Scenario B	25,894	3,284
Scenario C	25,660	3,028
Scenario D	25,958	3,301

Table 11. Implementation Operating and Capital Costs, 2020 (\$ in thousands)

VDOT Distance-Based Tolling				
	Scenario A	Scenario B	Scenario C*	Scenario D*
Operating Cost: Transaction Processing Fees				
E-ZPass Processing Fees	3,042	3,284	3,028	3,301
Cash and credit card processing fees	261	272	0	0
Video transaction processing fees	0	0	3,485	3,867
Operating Cost: Other tolling costs including personnel	3,891	4,043	2,655	2,771
Operating Cost: Roadway	6,331	6,331	6,331	6,331
<i>Sub-total Operating Costs</i>	\$ 13,525	\$ 13,930	\$ 15,499	\$ 16,270
Capital Cost: Gantry and other structures	3,596	5,203	12,410	13,116
Capital Cost: Tolling equipment and systems	7,042	8,142	18,852	21,246
<i>Sub-total Capital Costs</i>	\$ 10,638	\$ 13,345	\$ 31,262	\$ 34,362
TOTAL COSTS	\$ 24,163	\$ 27,525	\$ 46,761	\$ 50,632

* For Scenarios C and D, the increased cost of video tolling is offset by reduced personnel and administrative costs associated with no longer collecting cash or credit cards at the Mainline plaza.

Further Potential Analysis of Distance-Based Tolling. In September 2019, the CTB authorized VDOT to enter into an agreement with TRIP II, MWA, and Fairfax and Loudoun counties to study traffic operations and safety conditions in the area surrounding the interchange of Route 28/Dulles Greenway/Dulles Airport Access Road/Dulles Toll

¹² VDOT establishes the E-ZPass processing fees annually. The fees are paid uniformly by every toll facility in the Commonwealth using the E-ZPass system, without regard to who owns or operates the facility.

Road. The objective of this study, to be completed in 2020, is to identify solutions to address existing and future issues.

In December 2018 MWAA's Traffic and Revenue Analysis concluded that more than 26 percent of DTR users are also daily Greenway users. Forty-nine percent of Greenway users remain on the DTR for its entire length, connecting with I-66, I-495, or Route 123.

The eastbound Greenway adjoins the DTR, which joins I-495 and I-66 Inside the Beltway. Both I-66 and I-495 have tolled lanes, with toll rates set to manage congestion and throughput. Accordingly, a further analysis of corridor-wide distance-based tolling and its use as a congestion management tool for the entire Route 267 corridor may also be considered. This analysis could also be expanded to the I-66 Inside the Beltway and I-495 corridors.

Finding #11: The analysis of distance-based tolling on the Greenway could be expanded to the DTR so that the entire Route 267 corridor is considered, particularly for congestion management. This analysis could also encompass the I-66 and I-495 corridors.

2.5 Devise an Optimized Buy-Back Plan

For purposes of this report, a Buy-back Plan is defined as the acquisition of all or a portion of the rights and obligations of TRIP II in order for the Commonwealth to obtain ownership interests or operational control of the Greenway. An important element of optimizing a buy-back plan for the Greenway would be to retire current debt with tax-exempt debt. Further, in an optimized buy-back plan, toll revenues must be sufficient to cover operating costs, debt service, major maintenance needs, capital improvement costs, and any perceived loss of future income to TRIP II investors.

Commonwealth of Virginia Debt Options for Any Buy-Back. An important element of optimizing a buy-back plan with debt is the tax-exempt status of that debt. Therefore, a key consideration is whether there is a legal limitation on “private use” for a government-issued bond to be eligible for tax-exempt status. For federal income tax-exempt status on any interest payable on a government-issued bond, no more than 10 percent of the bond proceeds may be used in the trade or business of any person or entity that is not a unit of government.

The ownership, leasing, or operation of property by a nongovernmental party such as TRIP II is classified as private business use for federal income tax purposes. Accordingly, as long as TRIP II retains all or a significant portion of the right to own and operate the Greenway, the Commonwealth may be unable to refinance the outstanding taxable debt with tax-exempt government bonds.

The impact of any debt on the Commonwealth’s debt capacity is also a consideration. Toll roads owned and operated by VDOT have traditionally been financed with debt issued under *Article X, Section 9(c) of the Constitution of Virginia* (9(c) debt). Projects financed with 9(c) debt do not impact the State’s debt capacity because they generate enough revenue to be self-sufficient. They also have the lowest interest rates because they have the full faith and credit of the Commonwealth available to them in the unlikely situation that toll revenues are insufficient to pay debt service.

For the Greenway, however, 9(c) debt is not available without an amendment to the Act because the Act prohibits the Commonwealth from “... obligat[ing] its full faith and credit on any financing of the operator”.

Finding #12: Unless amended, the Act prohibits the Commonwealth from issuing 9(c) debt for the Greenway.

The Commonwealth could, subject to the request of the CTB and approval of the Treasury Board and Governor, issue bonds to retire outstanding indebtedness of the Greenway pursuant to *Article X, Section 9(d) of the Constitution of Virginia* (9(d) debt). While toll revenue is used to pay the debt service, 9(d) debt service is subject to appropriation by

the General Assembly, typically has some form of secondary payment source, and affects the State's debt capacity. According to the 2018 Debt Capacity Advisory Committee report, the amount of additional 9(d) debt that could be authorized and issued was \$671 million in each of the next 2 years for transportation, higher education, parks, public safety, and other long-term needs. Therefore, there may not be sufficient 9(d) debt capacity to retire all outstanding Greenway debt and pay the additional costs based on current analyses. (The Debt Capacity Advisory Committee will report its 2019 findings in late December 2019.)

In accordance with the Act, the pay-off of all outstanding debt triggers the termination of the certificate of authority. If the Commonwealth paid off all outstanding debt, it appears that the Commonwealth could assume ownership of the Greenway; but it is not clear how the Commonwealth would assume responsibility for operation of the Greenway in order to reduce costs once the 9(d) bonds were issued.

As discussed, the Commonwealth cannot qualify as the "operator" since this role by definition under the Act specifically excludes any state or local government or agency thereof. The Act does not address a scenario whereby the Commonwealth would assume all rights and obligations associated with the Greenway and TRIP II would retain responsibility to operate the toll road as a concessionaire.

Finding #13: Commonwealth 9(d) debt may be used to buy back the Greenway. However, the 2018 Debt Capacity Advisory Committee report indicates that there may not sufficient capacity for the Commonwealth to issue the required amount of 9(d) debt.

The Commonwealth may utilize a Virginia non-stock, not-for-profit corporation to issue tax-exempt bonds to retire the outstanding TRIP II taxable debt. In order to do so, the Act must be amended to allow a governmental corporation such as a 63-20 corporation to act as a toll road operator. Such 63-20 corporations organized pursuant to IRS Revenue Ruling 63-20 requirements have been utilized by the Commonwealth in the past to finance roadway projects such as the Pocahontas Parkway. Although 63-20 corporation's financings are recognized in the Commonwealth's annual financial statements, the incurrence of indebtedness does not impact the Commonwealth's debt capacity.

Under this scenario the SCC would still regulate the Greenway and TRIP II would need to voluntarily surrender its certificate of authority as operator. The SCC and/or the General Assembly and the CTB would then authorize the 63-20 corporation to take control of the toll road.

Finding #14: The creation of a 63-20 by the Commonwealth to assume the Greenway (existing debt and operations) will require modifications to the Act. However, this structure may be a viable alternative for any buy-back.

The Optimized Buy-back Plan. As part of the buy-back analysis, the CTB's financial advisor established 9(c), 9(d), and 63-20 debt models, generated from distance-based toll revenues. As detailed previously, current law does not allow Commonwealth 9(c) debt to be issued for the Greenway or for a 63-20 corporation to operate the Greenway, and there may be insufficient debt capacity to issue additional 9(d) debt. The established debt models are therefore considered to be hypothetical, and the analysis and results presented in Table 12 assume that these legal and capacity impediments do not exist.

The CTB's financial advisor provided preliminary information on whether any of the VDOT Distance-Based Toll Scenarios A-D generates sufficient revenue to pay all costs. The debt issued was assumed to be 35 years (subject to approval by the Treasury Board) and would be used to finance tolling system conversion capital costs and retire TRIP II existing debt.

For each hypothetical model, Scenario B generates the most toll revenue, which in turn allows the most debt to be issued while covering other costs. Scenario B incorporates:

- continuation of the exiting toll collection methods;
- distance-based toll rates of \$0.39/mile and \$0.49/mile during the off-peak and peak periods, respectively;
- tolling the currently free Battlefield Parkway to Route 7/15 in Leesburg segment; and
- distance-based toll rates of \$0.60/mile and \$0.75/mile during the off-peak and peak periods, respectively, to manage congestion from Ashburn Village Boulevard through the Mainline toll plaza.

Table 12. Debt Model Results with VDOT Distance-Based Toll Scenario B, effective FY 2020 (in million\$)

Debt Sources & Uses	9(c) Debt	9(d) Debt	63-20 Debt
Available Debt	\$2,163.3	\$2,123.2	\$1,535.9
Assumed Uses of Debt			
Financing Costs, Capitalized Interest & Debt Service Reserve Fund	(26.8)	(26.7)	(147.5)
Assumed Greenway Debt Retirement	(1,893.0)	(1,893.0)	(1,893.0)
Congestion Capital Improvements and Major Maintenance	(129.3)	(129.3)	
Balance of Debt Sources for Other Acquisition/Capital Costs	\$ 115.2	\$ 75.1	(\$ 503.6)
Toll Sources & Uses			
Toll Revenues	\$6,363.8	\$6,363.8	\$6,363.8
Uses			
Toll collection, O&M, administration	871.3	871.3	871.3
Real estate taxes	-	-	-
MWAA Easement	48.2	48.2	48.2
State Police	4.4	4.4	4.4
Debt Service	4,375.1	4,375.1	3,227.4
Major Maintenance	1,064.8	1,064.8	1,094.1
Congestion Capital Improvements			100.0
Total Uses	\$6,363.8	\$6,363.8	\$5,345.4
Difference in Sources & Uses during Operations	0	0	\$ 1,018.4
Key Statistics			
True Interest Cost	3.87%	3.99%	4.54%
Debt Service Coverage Ratio	1.15x	1.15x	1.50x

Based on the Scenario B toll revenue estimates, both the 9(c) and 9(d) debt models provide sufficient upfront debt proceeds to cover the \$1.89 billion estimated Greenway debt retirement cost while the 63-20 option falls short in addressing the retirement cost by an estimated \$504 million. Further, both the 9(c) and 9(d) debt models can cover O&M, major maintenance, and congestion capital improvement costs. We note, however, that these may not be sufficient to cover any perceived loss of future income to TRIP II investors.

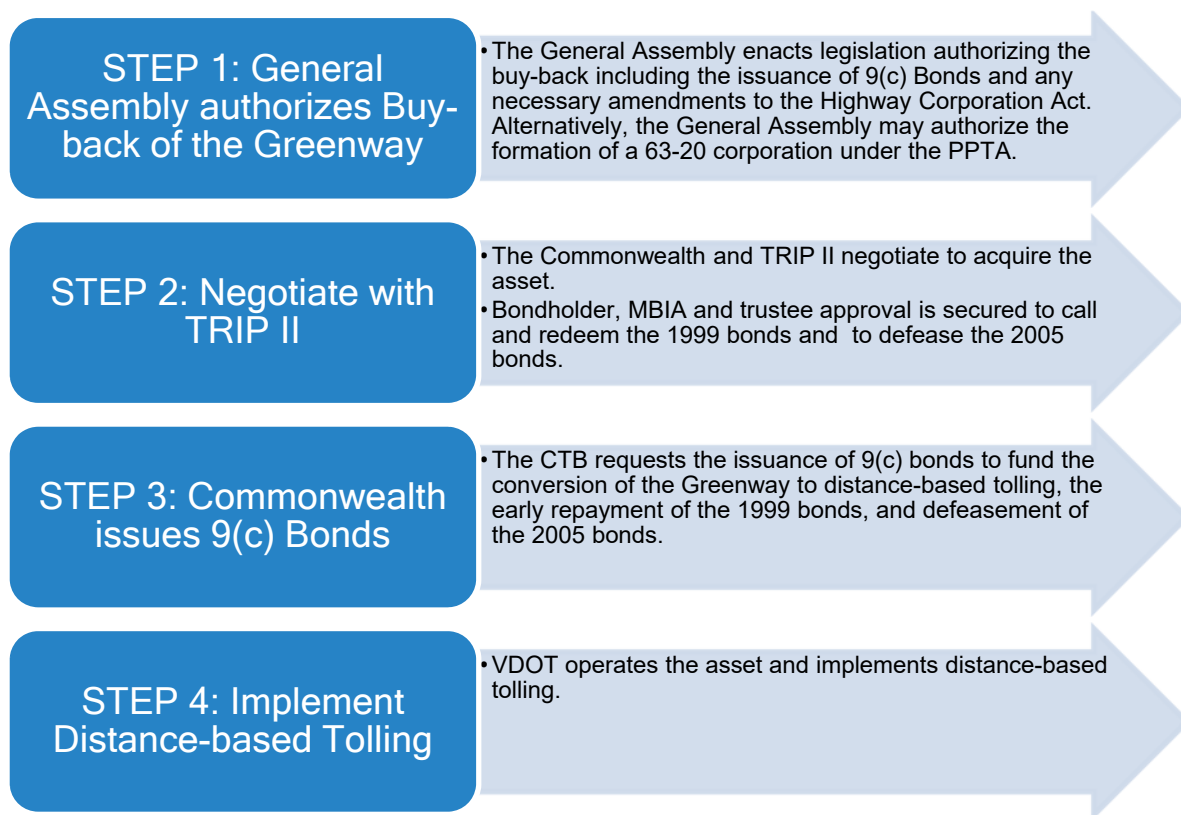
The reason for the 63-20 option shortfall is the higher interest cost of the debt and debt service coverage requirements. As shown in Table 12, the assumed true interest cost for the 63-20 debt is 4.54%, which is 0.55% higher than for 9(d) debt and 0.67% higher than for 9(c). Similarly, the required debt service coverage ratio is 1.5 times for the 63-20 debt as compared with 1.15 times for the 9(c) and 9(d) debt.

Over the 35-year period, toll revenue under the 63-20 option is estimated to exceed toll revenue uses by 1.02 billion. Therefore, if a 63-20 corporation is authorized, it may be feasible for the Commonwealth to buy-back the Greenway if the cash flow mechanics for retiring existing debt and needed capital improvements for distance-based tolling can be

addressed with other upfront sources and repaid over time. The \$1.02 billion 35-year revenue balance may be sufficient to manage the \$504 million upfront financing gap.

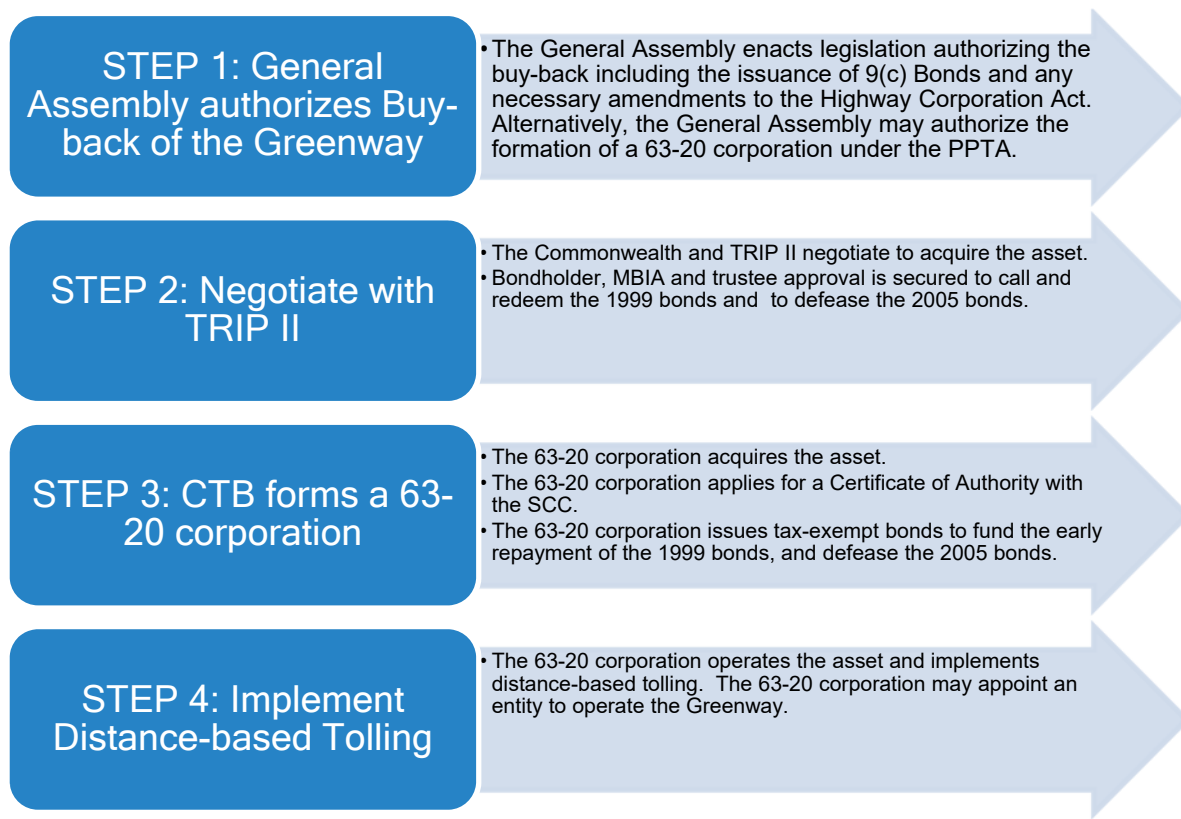
Thus, noting the above constraints, the closest approximation to an optimized buy-back plan would be based on a 9(c) debt model, generated from Scenario B toll revenues. A 9(d) debt model was not considered since the Commonwealth's debt capacity may not be sufficient to issue the level of debt required. This optimized buy-back plan would involve the steps in Figure 4.

Figure 4: Buy-Back Plan: 9(c) Debt Model



Alternatively, if other upfront sources can be identified to address cash flow mechanics, a buy-back plan based on a 63-20 debt model, generated from Scenario B toll revenues, would involve the steps in Figure 5.

Figure 5: Buy-Back Plan: 63-20 Debt Model



Finding #15: Assuming General Assembly authorization, TRIP II cooperation, and mitigation of Commonwealth debt capacity concerns, distance-based tolls can generate sufficient revenue to convert the Greenway to a distance-based tolling system, cover O&M, major maintenance, and congestion capital improvement costs, and retire TRIP II debt. However, projected distance-based toll revenue may not be sufficient to cover any perceived loss of future income to TRIP II investors.

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Appendix A
SJR 254
2019 SESSION

INTRODUCED

19100620D

SENATE JOINT RESOLUTION NO. 254
Offered January 9, 2019
Prefiled October 1, 2018

Requesting the Department of Transportation to study the feasibility of purchasing all or part of the Dulles Greenway. Report.

Patrons—Black and DeSteph

Referred to Committee on Rules

WHEREAS, the Dulles Greenway is a privately owned toll road extending 14 miles from Washington Dulles International Airport to the Town of Leesburg and connecting the same and is the first privately owned toll road in the Commonwealth since 1816; and

WHEREAS, the Dulles Greenway is regulated by the State Corporation Commission and the Virginia Highway Corporation Act of 1988; and

WHEREAS, the Dulles Greenway offers electronic toll collection through the Department of Transportation's Smart-Tag and E-ZPass program; and

WHEREAS, the owner of the Dulles Greenway, Toll Road Investors Partnership II, purchased all the land that the Dulles Greenway is situated on; and

WHEREAS, Toll Road Investors Partnership II completed a refinancing in 1999 that involved bonds that replaced all other outstanding agreements; now, therefore, be it

RESOLVED by the Senate, the House of Delegates concurring, That the Department of Transportation be requested to study the feasibility of purchasing all or part of the Dulles Greenway.

In conducting its study, the Department of Transportation shall (i) conduct a review of Toll Road Investors Partnership II's outstanding bonds, focusing on the 1999 series A and B bonds, which are callable, to determine if such bonds could be replaced with lower rate revenue bonds; (ii) devise an optimized buy-back plan that would allow the Commonwealth to obtain a partial ownership in the Dulles Greenway in order to pass along any resulting cost reductions to motorists with a dollar-for-dollar reduction in tolls and the implementation of distance-based pricing; and (iii) determine what ownership percentage the Commonwealth would need to hold to enact toll-reducing measures, including granting tax-free status to the Dulles Greenway and eliminating the current fees charged for State Police patrols while allowing the Department of Transportation to operate and maintain the road, including snow removal.

All agencies of the Commonwealth shall provide assistance to the Department of Transportation for this study, upon request.

The Department of Transportation shall complete its meetings by November 30, 2019, and shall submit to the Governor and the General Assembly an executive summary and a report of its findings and recommendations for publication as a House or Senate document. The executive summary and report shall be submitted as provided in the procedures of the Division of Legislative Automated Systems for the processing of legislative documents and reports no later than the first day of the 2020 Regular Session of the General Assembly and shall be posted on the General Assembly's website.

INTRODUCED
SJR254

Appendix B

Virginia Highway Corporation Act of 1988

Code of Virginia

Virginia Highway Corporation Act of 1988

§ 56-535. Title

This chapter may be cited as the "Virginia Highway Corporation Act of 1988."

1988, c. 649.

§ 56-536. Definitions

As used in this chapter, unless the context requires a different meaning:

"Board" means the Commonwealth Transportation Board.

"Certificate" means the certificate of authority awarded pursuant to this chapter which allows operation of a roadway.

"Commission" means the State Corporation Commission.

"Department" means the Virginia Department of Transportation.

"Highway" means the entire width between the boundary lines of every way or place of whatever nature open to the use of the public under the provisions of this chapter for purposes of vehicular travel in this Commonwealth.

"Operation" means all functions and pursuits of the operator of any roadway under this chapter which are directly or indirectly related to acquisition, approval, construction, enlargement, maintenance, patrolling, toll collections, or connections of the roadway or highway with any other highway or with any street, road or alley. This term shall also include, without limitation, management and administrative functions attendant to actual physical operation of the roadway and management of the affairs of the operator.

"Operator" means the person who submits to the Commission an application for authority to construct, operate or enlarge a roadway, and which, after issuance of a certificate of authority, is responsible for operation of any roadway under the provisions of this chapter.

"Person" includes any natural person, corporation, partnership, joint venture, and any other business entity; however, "person" shall not include the state or any local government or agency thereof, or any municipal corporation or other corporate body.

"Roadway" means that portion of a highway improved, designed or ordinarily used for vehicular travel, exclusive of the shoulder. A highway may include two or more roadways if divided by a physical barrier or barriers or unpaved areas. "Roadway," as used in this chapter, shall include only privately owned or operated highways for use of which a toll or similar single-use charge is imposed.

"Toll" means the fee charged by the operator for a single use of all or a portion of the roadway.

1988, c. 649; 1991, c. 272.

§ 56-537. Policy [Not set out]

Not set out. (1988, c. 649; 1993, c. 732.)

§ 56-538. Prerequisite for construction and operation

No person may construct, operate or enlarge any roadway, as defined in § 56-536, within the Commonwealth without first having obtained a certificate of authority from the Commission authorizing such construction, operation or enlargement.

1988, c. 649.

§ 56-539. Certificate of authority

Any person may apply to the Commission for a certificate of authority to construct or operate a roadway, or to extend or enlarge a roadway for which a certificate has been issued under this chapter. If the Commission determines in writing, after notice and opportunity for a hearing, that the application is complete, that approval of the application is in the public interest, and that the applicant has complied with the provisions of this chapter, it shall approve the application, with or without modification, unless it receives a duly adopted resolution of the governing body of any jurisdiction through which the roadway passes, which requests that the Commission deny the application, in which case the Commission shall do so. If the application is approved the operator shall construct the roadway. Upon completion of construction and the opening of the roadway to the public, the roadway shall be kept at all times open for use by the public and made accessible to the public, upon payment of the toll established by the operator; provided that the roadway may be partially or completely closed, temporarily, with the concurrence of the Department, to protect the public safety or for reasonable construction or maintenance procedures. The certificate of authority may be transferred with the approval of the Commission if the Commission finds the transfer to be in the public interest after consultation with the Board and notice to the governing body of any jurisdiction through which the roadway passes.

1988, c. 649; 1991, c. 272.

§ 56-540. Application

The Commission may charge a reasonable application fee to cover the costs of processing, reviewing, and approving or denying the application. The application for a certificate of authority shall contain the following material and information:

1. The geographic area to be served by the roadway and a topographic map indicating the route of the roadway;
2. A list of the property owners through whose property the roadway or highway will pass or whose property will abut the roadway or highway;
3. The method by which the operator will secure all right-of-way required for the roadway, including a description of the nature of the interest in the lands to be acquired, which shall provide, at a minimum, for permanent dedication for transportation purposes, except that in cases in which the Department would not have authority to condemn land because of the identity of the owner, the interest to be acquired shall be of the same type and duration as that which the Department would obtain under the circumstances;
4. The comprehensive plan or plans for all counties, cities, and towns through which the roadway will pass and an analysis which shows that the roadway conforms to these comprehensive plans. To the extent that the roadway conforms to such plans, the fact that the operator is not the Commonwealth shall not affect the construction and operation of the roadway;
5. The operator's plan for financing the proposed construction or enlargement of the roadway,

including proposed tolls to be charged for use of the roadway, projected amounts to be collected from such tolls and anticipated traffic volume and detailed plans for distribution of funds, including the priority in which necessary expenditures will be made. The plan for financing may be structured to include, without limitation, provisions for the issuance of debt, equity, or other securities, lease financing, the pledge of revenues or other assets or rights of the operator, or any combination thereof;

6. The operator's plan for operation of the proposed roadway or enlargement thereof;

7. A list of all permits and approvals required for construction of the roadway from local, state, or federal agencies and a schedule for securing such approvals;

8. An overall description of the project, the project design, and all proposed interconnections with the state highway system, including any interstate highway, or secondary system of highways or the streets or roads of any county, city, or town not within the state highway system, accompanied by a copy of the approval of the project, the roadway design and interconnections from the Board, as well as the county, city, or town for connection with a street or road not under state control;

9. A list of public utility facilities to be crossed and plans for such crossings or relocations of such facilities;

10. A certificate of the operator that the roadway will be designed and constructed to meet Department standards, and substantially in accordance with a proposed timetable which is agreeable to the Department, and that the operator will provide a design, review, and inspection agreement with the Department which shall provide that the Department shall authorize construction upon review and approval of the plans and specifications for the roadway and its interconnection with other roads, and that it shall inspect periodically the progress of the construction work to ensure its compliance with the Department standards; and

11. Completion and performance bonds in form and amount satisfactory to the Commission, which amounts shall be set after consultation with the Department.

1988, c. 649; 1990, c. 180; 1991, c. 272.

§ 56-541. Eminent domain

The power of eminent domain shall not be exercised by the operator for the purpose of acquiring any lands or estates or interests therein, nor any other property used by the operator for the construction or enlargement of a roadway pursuant to this chapter.

1988, c. 649; 1991, c. 272.

§ 56-542. Powers of the Commission

A. As used in this section:

"CPI" means the Consumer Price Index -- U.S. City Averages for All Urban Consumers, All Items (not seasonally adjusted) as reported by the U.S. Department of Labor, Bureau of Labor Statistics; however, if the CPI is modified such that the base year of the CPI changes, the CPI shall be converted in accordance with the conversion factor published by the U.S. Department of Labor, Bureau of Labor Statistics, and if the CPI is discontinued or revised, such other historical index or computation approved by the Commission shall be used for purposes of this section that would obtain substantially the same result as would have been obtained if the CPI had not been

discontinued or revised.

"Real GDP" means the Annual Real Gross Domestic Product as reported by the U.S. Department of Commerce, Bureau of Economic Analysis.

B. The Commission shall have the power to regulate the operator under this title as a public service corporation. The Commission shall also have the power, and be charged with the duties of reviewing and approving or denying the application, of supervising and controlling the operator in the performance of its duties under this chapter and title, and of correcting any abuse in the performance of the operator's public duties.

C. Pursuant to § 56-36, the Commission shall require annually from the operator a verified report describing the nature of its contractual and other relationships with individuals or entities contracting with the operator for the provision of significant financial, construction, or maintenance services. The Commission shall review the report and such other materials as it shall deem necessary for the purpose of determining improper or excessive costs, and shall exclude from the operator's costs any amounts which it finds are improper or excessive. Included in such review shall be consideration of contractual relationships between the operator and individuals or entities that are closely associated or affiliated with the operator to assure that the terms of such contractual relationships are no less favorable or unfavorable to the operator than what it could obtain in an arm's-length transaction.

D. The Commission also shall have the duty and authority to approve or revise the toll rates charged by the operator. Initial rates shall be approved if they appear reasonable to the user in relation to the benefit obtained, not likely to materially discourage use of the roadway and provide the operator no more than a reasonable rate of return as determined by the Commission. Thereafter, the Commission, upon application, complaint or its own initiative, and after investigation, may order substituted for any toll being charged by the operator, a toll which is set at a level which is reasonable to the user in relation to the benefit obtained and which will not materially discourage use of the roadway by the public and which will provide the operator no more than a reasonable return as determined by the Commission.

E. If a change in the ownership of the facility or change in control of an operator occurs, whether or not accompanied by the issuance of securities as defined in subsection A of § 56-57 and § 56-65.1, the Commission, in any subsequent proceeding to set the level of a toll charged by the operator, shall ensure that the price paid in connection with the change in ownership or control, and any costs and other factors attributable to or resulting from the change in ownership or control, if they would contribute to an increase in the level of the toll, are excluded from the Commission's determination of the operator's reasonable return, in order to ensure that a change in ownership or control does not increase the level of the toll above that level that would otherwise have been required under subsection D or subdivision 13 if the change in ownership or control had not occurred. As used in this subsection, "control" has the same meaning as provided in § 56-88.1.

F. Pursuant to § 56-36, the Commission shall require an operator to provide copies of annual audited financial statements for the operator, together with a statement of the operator's ownership. The operator shall file such statement within four months from the end of the operator's fiscal year.

G. The proceeds and funding provided to the operator from any future bond indenture or similar

credit agreement must be used for the purpose of refinancing existing debt, acquiring, designing, permitting, building, constructing, improving, equipping, modifying, maintaining, reconstructing, restoring, rehabilitating, or renewing the roadway property, and for the purpose of paying reasonable arm's-length fees, development costs, and expenses incurred by the operator or a related individual or entity in executing such financial transaction, unless otherwise authorized by the Commission.

H. The Commission may charge a reasonable annual fee to cover the costs of supervision and controlling the operator in the performance of its duties under this chapter and pursuant to this section.

I. Effective January 1, 2013, through January 1, 2020, and notwithstanding any other provision of law:

1. Upon application of and public notification by the operator, filed not more often than once within any 12-month period, the Commission shall approve to become effective within 45 days any request to increase tolls by a percentage that (i) is equal to the increase in the CPI, as defined in subsection A, from the date the Commission last approved a toll increase, plus one percent, (ii) is equal to the increase in the real GDP, as defined in subsection A, from the date the Commission last approved a toll increase, or (iii) 2.8 percent, whichever is greatest, which increase in the tolls approved by the Commission is hereafter referred to as the "annual percentage increase."

2. The operator additionally may request in an application made pursuant to subdivision I 1, and the Commission shall further approve, an addition to the toll increase to allow the operator to include, in its tolls, the amount by which its local property taxes paid in the immediately preceding calendar year increased by more than the annual percentage increase above such payments for the previous calendar year.

3. Any request by the operator for an increase in the toll rates by a greater percentage than as provided in subdivision I 1 shall be considered for approval by the Commission only upon presentation of an independent grade traffic and revenue study and a finding by the Commission that (a) toll rates subject to the preceding paragraph will not be sufficient to permit the operator to maintain the minimum coverage ratio set forth in the rate covenant provisions of its bond indenture or similar credit agreement, (b) such greater proposed tolls are reasonable to the user in relation to the benefit obtained and will not materially discourage use of the roadway by the public, and (c) such greater proposed tolls provide the operator no more than a reasonable rate of return as determined by the Commission; however, the Commission shall not approve an increase in the toll rates pursuant to this subdivision that exceeds the percentage increase necessary to permit the operator to maintain the minimum coverage ratio described in clause (a). Such request by an operator shall not be made as a result of a change in control of the operator or the project roadway. As used herein, a "change in control of the operator" means the sale or transfer of 25 percent or more of the assets of the operator or the acquisition or disposal of 25 percent or more of the outstanding shares of stock of the operator, if it is a corporation, or analogous interest if the operator is another form of entity.

1988, c. 649; 1991, c. 272; 2008, cc. 841, 844.

§ 56-543. Powers and duties of roadway operator

A. The operator shall have all power allowed by law generally to persons having the same form of

organization as the operator, including, without limitation, the authority to operate the roadway and charge tolls for the use thereof, and may pledge any revenue net of operational expenses realized from tolls charged for the use of the roadway in order to secure repayment of any obligations incurred for the construction, enlargement or operation of such roadway. Any financing of the acquisition, construction, enlargement, or operation of the roadway may be in such amounts and upon such terms and conditions as may be deemed necessary or appropriate by the operator to provide for the acquisition, construction, enlargement, and operation of the roadway, issuance costs, other financing obligations, and reasonable reserves. The Commonwealth shall not obligate its full faith and credit on any financing of the operator. Assumption of operation of the project shall not obligate the Commonwealth to pay any obligation of the operator whether secured or otherwise, from sources other than toll revenue. Subject to applicable permit requirements, the operator shall have the authority to cross any canal or navigable watercourse so long as the crossing does not unreasonably interfere with navigation and use of the waterway. In operating the roadway, the operator may:

1. Classify traffic according to reasonable categories for assessment of tolls; and
 2. With the consent of the Department, make and enforce reasonable regulations, including regulations:
 - a. Which set maximum and minimum speeds that shall conform to Department and state practices;
 - b. Which exclude undesirable vehicles or cargoes or materials from the use of the roadway; or
 - c. Which establish commuter lanes for use during all or any part of a day and limit the use of such lanes to certain traffic.
 3. The enumeration of powers in this subsection shall not limit the power of the operator to do anything it deems necessary and appropriate in the operation of the roadway, provided that the practice is reasonable and nondiscriminatory. The powers granted to the operator in this subsection shall not be deemed to limit the authority of the Commission to regulate the operator under this title.
- B. The operator shall have the following duties:
1. It shall file and maintain at all times with the Commission an accurate schedule of rates charged to the public for use of all or any portion of the roadway and it shall also file and maintain a statement that such rates will apply uniformly to all users within any such reasonable classification as the operator may elect to implement. These rates shall be neither applied nor collected in a discriminatory fashion, and free vehicular passage shall be permitted to those persons referred to in subsection A of § 33.2-613.
 2. It shall construct and maintain the roadway for anticipated use according to appropriate standards of the Department for public highways operated and maintained by the Department, and enlarge or expand the road when unsatisfied demand for use of the roadway makes it economically feasible to do so. The operator shall agree with the Department for inspection of construction work by the Department at appropriate times during any construction or enlargement. In addition, it shall cooperate fully with the Department in establishing any interconnection with the roadway that the Department may make.
 3. It shall contract with the Commonwealth for enforcement of the traffic and public safety laws

by state authorities, and may similarly contract with appropriate local authorities for those portions of the roadway within the local jurisdiction.

1988, c. 649; 1991, c. 272; 1993, c. 732.

§ 56-544. Board approval; inspection agreement with Department

A. The applicant for a certificate of authority to construct or enlarge a roadway pursuant to this chapter shall first secure the approval of the Board for the project, the project construction costs, the location and design of the roadway, and its connection with any road under the jurisdiction of the Board, at proper and convenient places, in order to provide for the convenience of the public. The Board shall approve or deny approval by the later to occur of (i) sixty days following receipt of a description of the proposed location and design of the roadway and its connection with all other roads, or (ii) forty-five days following the conduct of a hearing contemplated by subsection B of § 33.2-208, if such a hearing is held and provided that the notice requirements of that section are fulfilled by the Department within thirty days of receipt of the application, a project design, and a description of the project and the public need for the project. The Board shall approve the project and its interconnections with other roads if there is a public need for a road project of the type proposed and the project and its interconnections are compatible with the existing road network. It shall approve the project construction costs if they are reasonable. If interconnections with an interstate highway or other federal facility are contemplated, the Board's approval shall be conditioned upon ultimate approval of any interconnection if such federal approvals are required and have not been obtained by the time the Board acts. Approval of the roadway design shall not be withheld if it conforms materially with Department practices for toll facilities of similar size and with similar usage patterns. In making its determinations, the Board shall keep in mind the public interest, which may include, without limitation, such considerations as the relative speed of the construction of the project and the allocation of the technical, financial and human resources of the Department. The approval granted by the Board shall be conditioned upon subsequent compliance by the applicant with the agreement contemplated by subsection B of this section. If the roadway is to be built partially or completely along existing state highway right-of-way, the Board shall grant the applicant authority to use such right-of-way only after approval of this use of the right-of-way by the General Assembly.

B. If approval of the project, project design, and connections of the roadway is granted by the Board, the Department shall thereafter enter into a comprehensive agreement with the operator which provides, inter alia, that the Department shall review and approve plans and specifications for the roadway if they conform to state practices; that the Department will inspect and approve construction of the roadway if it conforms to the plans and specifications or state construction and engineering standards; that the Department will, throughout the life of the roadway project, monitor the maintenance practices of the operator and take such actions as are appropriate to ensure the performance of maintenance obligations; and that the Department shall be reimbursed its direct project costs, by the operator, for the services performed by the Department. The agreement shall also provide, inter alia, that the operator will establish and fund accounts which shall ensure that funds are available to meet the obligations of the operator; including reasonable reserves for contingencies and maintenance replacement activities. The approval of plans and specifications, and construction may be undertaken in phases, but no construction may commence until approval of plans including that phase of construction. The services for which the Department shall be reimbursed include project development costs, such as those attendant to preparation of environmental impact statements, which are necessary for the construction of the roadway by a private operator but have been performed by the

Department. The agreement may include a provision that the Department will perform services necessary for project development on behalf of the operator, and in such a case, the Department shall be fully reimbursed by the operator for its direct costs.

1988, c. 649; 1991, c. 272.

§ 56-545. Insurance; sovereign immunity

Any operator who constructs, operates or enlarges a roadway pursuant to this chapter shall secure and maintain a policy or policies of public liability insurance in form and amount satisfactory to the Commission and sufficient to insure coverage of tort liability to the public and employees, and to enable the continued operation of the roadway. Proofs of coverage and copies of policies shall be filed with the Commission. Nothing in this chapter shall be construed as or deemed a waiver of the sovereign immunity of the Commonwealth with respect to its participation or approval of all or any part of the roadway application or operation, including but not limited to interconnection of the roadway with the state highway system. Counties, cities and towns through which a roadway passes shall possess sovereign immunity with respect to roadway construction and operation.

1988, c. 649.

§ 56-546. Local approvals

A. Prior to the issuance of a certificate of authority by the Commission and contemporaneously with the filing of any application materials with the Commission, the applicant shall provide the local governing body of each jurisdiction through which any part of the roadway passes with the application information and materials required by § 56-540 and an overall description of the project and its benefits. The governing body may participate in procedures conducted by the Board or the Commission concerning the application.

B. When the operator wishes to occupy lands owned by any county, city, town, or any agency or instrumentality of the federal government, including the streets or alleys of a city or town, or the roads of any county, it shall first obtain a franchise allowing such occupancy or it may obtain the necessary interests through grant or other appropriate conveyance to the operator for a period of time, in the case of a franchise, not to exceed the term of the certificate.

C. Where the applicant wishes to interconnect with the streets of any city or town, or the road system of any county, and the locality is willing to allow the interconnection, it shall submit appropriate plans for the connection to the governing body, which shall approve the connection if it determines that the connection meets all appropriate engineering requirements.

D. The operator and the county, city, or town may also agree on any supplemental or related matters in addition to the matters specified in § 15.2-2026, according to such terms and conditions as are reasonable, appropriate, and in the public interest, and any such county, city, or town is hereby enabled to enter into such an agreement.

E. Prior to commencement of construction, the operator shall survey and plat the right-of-way in accordance with local requirements.

1988, c. 649; 1990, c. 180.

§ 56-547. Utility crossings

The applicant shall include in the application a list of public utility facilities and rights-of-way to

be crossed or otherwise affected in the construction of the roadway and a plan and schedule for such crossings. The operator and each public utility whose works are to be crossed or affected shall each have the duty to cooperate fully with the other in planning and arranging of the manner of the crossing or relocation of the facilities. Any public service corporation possessing the powers of eminent domain is hereby expressly granted such powers in connection with the moving or relocation of facilities to be crossed by the roadway or which must be relocated to the extent that such moving or relocation is made necessary by construction of the roadway, which shall be construed to include construction of temporary facilities for the purpose of providing service during the period of construction. Should the applicant or operator and the public utility whose facilities are to be crossed or relocated not be able to agree upon a plan for such crossing or any necessary relocation, either party may request the Commission to inquire into the need for the crossing or relocation and to decide whether such crossing or relocation should be compelled, and if so, the manner in which such crossing or relocation is to be accomplished and any damages due either party arising out of the crossing or relocation. The Commission may in its discretion employ expert engineers who shall examine the location and plans for such crossing or relocation, hear any objections and consider modifications, and make a recommendation to the Commission. In such a case, the cost of the experts is to be borne equally by the applicant and the public utility, unless the Commission determines that it would be unjust, in which case the cost shall be borne as the Commission decides. Railroads shall be included within the scope of the term "public utility" for purposes of this section.

1988, c. 649.

§ 56-548. Highway and roadway crossings

No crossing of a railway, highway, street, road or alley shall be at grade, but shall pass above or below the railway, highway, street, road, or alley, and such crossings are hereby permitted, subject to the provisions of this chapter.

1988, c. 649.

§ 56-549. Default

In the event of material and continuing default in the performance of the operator's construction or operation duties or failure of the operator to comply with the terms of its agreement with the Department, in either case, after notice thereof and an opportunity to cure, or in the event that construction has not begun within two years of the issuance of a certificate, the Commission, after a hearing in which the applicant or operator has notice and opportunity to participate, may revoke the certificate of authority for the roadway, declare a default in the construction or operation of the roadway, and make or cause to be made the appropriate claim or claims under any completion or performance bonds, or take such other action as it may deem appropriate under the circumstances. The Department may participate in or initiate such proceedings. In case of revocation of a certificate, the applicant or operator shall thereafter be without any authority to construct or operate the roadway, and the Department may take over construction and operation of the roadway, and may proceed thereafter to take any steps which are in the public interest, including completion of construction or additions to the roadway, closing the roadway, or any intermediate step. The Department shall receive the full proceeds of any payments due to claims against bonding companies or sureties for this purpose. In addition, in such event, the operator shall grant to the Department all of its right, title and interest in the assets of the operator. Nothing herein shall be construed to limit the Department's exercise of the power of eminent domain. In either case, the operator may obtain compensation from the Department for

such assets, except that the Department shall first deduct from the value of such assets all of its costs incurred in connection with completion or fulfillment of the unperformed obligations of the operator including the payment of any obligations assumed by the Department, and any other costs associated with the events contemplated in this section. The Department shall take into account moneys received from the proceeds of any payment or completion bond in calculating the amount due the operator.

1988, c. 649; 1991, c. 272.

§ 56-550. Police powers; violations of law

A. The roadways and highways constructed or operated under this chapter may be policed in whole or in part by officers of the Department of State Police, even though all or some portion of any such projects lie within the corporate limits of a municipality or other political subdivision, and just as if the roadway and highway were a part of the state highway system. The operator and the Department of State Police shall agree upon reasonable terms and conditions pursuant to which the activities contemplated in this section may take place. Such officers shall be under the exclusive control and direction of the Superintendent of State Police and shall be responsible for the preservation of public peace, prevention of crime, apprehension of criminals, protection of the rights of persons and property, and enforcement of the laws of the Commonwealth, within the limits of any highway and roadway. All other police officers of the Commonwealth and of each county, city, town or other political subdivision of the Commonwealth through which any roadway, or portion thereof, extends shall have the same powers and jurisdiction within the limits of such roadways and highways as they have beyond such limits and shall have access to the highway and roadway at any time for the purpose of exercising such powers and jurisdiction. This authority does not extend to the private offices, buildings, garages and other improvements of the operator to any greater degree than the police power extends to any other private buildings and improvements.

B. The traffic and motor vehicle laws of the Commonwealth shall apply to persons and motor vehicles on the roadway or highway, as shall Chapter 8 (§ 33.2-800 et seq.) of Title 33.2, and the powers of arrest of police officers shall be the same as those applying to conduct on the state highway system. Punishment for offenses shall be as prescribed by law for conduct occurring on the state highway system.

1988, c. 649.

§ 56-551. Termination of certificate; dedication of assets

Within ninety days of the completion and closing of the original permanent financing, the operator shall provide full details of the financing, including the terms of all bonds, to the Commission; and shall certify the term of the original permanent financing and its termination date. The Commission may require that the operator provide copies of any relevant documents, and shall review the financing and determine the date of termination of the original permanent financing. After establishing this date, the Commission shall enter an order terminating the operator's authority pursuant to the certificate of authority on a date which shall be ten years from the end of the term of the original permanent financing. At the request of the operator or the Department, or on its own initiative, the Commission may revise its order to modify the date for termination of the certificate of authority in order to take into account any refinancing of the original permanent financing, where the refinancing or modification is in the public interest, or any refinancing for the purpose of expansion, or early termination of the original permanent

financing. Upon the termination of the certificate of authority, the authority and duties of the operator under this chapter shall cease, and the highway assets and improvements of the operator shall be dedicated to the Commonwealth for highway purposes.

1988, c. 649; 1991, c. 272.

§ 56-552. Improvement Fund

There shall be a fund established by the Commonwealth Transportation Board, from the toll revenues described in this section, for the purpose of funding transportation improvements which are related to or affected by the toll road. Toll rates shall be set in multiples of five cents; however, the Commission shall order that that percentage of each toll by which the toll established exceeds that necessary to provide the operator with an amount necessary to meet the operator's obligations under § 56-543 and earn a reasonable return shall be committed to the fund. In addition the operator, the Board, and the local governments through which the road passes may jointly petition the Commission to establish an additional toll amount to be committed to this fund.

1988, c. 649.

Appendix C Greenway Ownership History

Ownership Year	Operator	Operator Ownership			
1989 - 1992	Toll Road Corporation of Virginia	The Goldman Sachs Group, L.P.	<i>The Shenandoah Group:</i>	Autostrade International Equity, Inc. (AIE)	Brown & Root Toll Road Investors Partners, Inc.
1993 - 1998	Toll Road Investors Partnership II, L.P. (TRIP II)		<i>The Shenandoah Group:</i>	AIE	Brown & Root Toll Road Investors Partners, Inc.
1999 - 2000	TRIP II		<i>The Shenandoah Group:</i>	AIE	Brown & Root Toll Road Investors Partners, Inc.
			Shenandoah Greenway Corporation (General Partner)		
			Shenandoah Limited Partnership		
			Shenandoah I LLC ¹³		

¹³ In connection with a debt refinancing in 1998-1999, the Original Partnership Agreement dated September 29, 1993 was amended by the Amended and Restated Agreement of Limited Partnership (the "Amended Partnership Agreement") executed on April 29, 1999. The Amended Partnership Agreement was executed between Shenandoah Greenway Corporation as General Partner; and Shenandoah Limited Partnership, AIE, Brown & Root Toll Road Investors Partners, Inc., and Shenandoah 1 LLC as limited partners.

2001 - 2004	TRIP II		<p><i>The Shenandoah Group:</i></p> <p>Shenandoah Greenway Corporation (General Partner)</p> <p>Shenandoah Limited Partnership</p> <p>Shenandoah I LLC</p>	AIE LLC ¹⁴	Brown & Root Toll Road Investors Partners, Inc.
2005	TRIP II	<p><i>The Macquarie Group:</i>¹⁵</p> <p>Shenandoah Greenway Corporation/Dulles Greenway Partnership (General Partner)¹⁶</p> <p>Macquarie Infrastructure Group (MIG) Investments 2 (US) LLC</p>	<p><i>The Shenandoah Partners:</i>¹⁷</p> <p>Shenandoah Limited Partnership</p> <p>Shenandoah I LLC</p>	AIE LLC	
2006 - 2009	TRIP II	<p><i>The Macquarie Group:</i></p> <p>Shenandoah Greenway/Dulles Greenway Partnership (General Partner)</p> <p>MIG</p> <p>Macquarie Infrastructure Partners (MIP)¹⁸</p>	<p><i>The Shenandoah Partners:</i></p> <p>Shenandoah Limited Partnership</p> <p>Shenandoah I LLC</p>	AIE LLC	

¹⁴ In December 2000, all of the stock of Autostrade International Equity Incorporated (AIE) was acquired by an unrelated third party. In January 2001, Autostrade merged into AIE LLC, a newly formed Virginia limited liability corporation (TRIP II Audited Financial Statement).

¹⁵ In September 2005, MIG acquired 100% of Shenandoah Greenway Corporation and all of Brown and Root's 13.3% interest for \$84.5 million (2005 Audited Financial Statement; Pre-Filed Testimony of Lawrence T. Oliver, March 13, 2007, SSC PUE-2006-00081).

¹⁶ Shenandoah Greenway Corporation is 100% owned by Dulles Greenway Partnership. In turn, Dulles Greenway Partnership is 50% owned by MIP and 50% owned by MAR (2010 Audited Financial Statement).

¹⁷ In addition, MIG provided \$500 million in subordinated loans to the Shenandoah Partners and AIE LLC, who service this debt solely from the cash flow distributions arising from TRIP II. That is, the debt is secured through the equity held by Shenandoah Partners and AIE LLC. MIG also paid the Shenandoah Partners and AIE LLC \$9 million for the option to buy the Shenandoah Partners and AIE LLC's ownership interests in TRIP II outright during some specified period of time in the future (Pre-Filed Testimony of Lawrence T. Oliver, March 13, 2007, SSC PUE-2006-00081).

¹⁸ In December 2006 MIG completed the sale of 50% of its interest in the Greenway to MIP (Pre-Filed Testimony of Lawrence T. Oliver, March 13, 2007, SSC PUE-2006-00081).

<p>2010 2018</p>	<p>-</p> <p>TRIP II</p>	<p>The Macquarie Group: Shenandoah Greenway/Dulles Greenway Partnership (General Partner) MIP Macquarie Atlas Roads (MAR)/Atlas Arteria¹⁹</p>	<p><i>The Shenandoah Partners:</i> Shenandoah Limited Partnership Shenandoah I LLC</p>	<p>AIE LLC</p>	
<p>2018 Present</p>	<p>-</p> <p>TRIP II</p>	<p>Atlas Arteria</p>	<p><i>The Shenandoah Partners:</i> Shenandoah Limited Partnership Shenandoah I LLC</p>	<p>AIE LLC</p>	

¹⁹ In 2018 MAR was renamed Atlas Arteria.