#### PRELIMINARY OFFICIAL STATEMENT DATED JANUARY 11, 2022

#### NEW ISSUE/BOOK-ENTRY ONLY

#### **RATINGS: See "RATINGS" herein.**

In the opinion of Bond Counsel, under existing law and assuming compliance with the tax covenants described herein and the accuracy of certain representations and certifications made by the Metropolitan Washington Airports Authority (the "Airports Authority") described herein, interest on the Airports Authority's Dulles Toll Road Second Senior Lien Revenue Refunding Bonds, Series 2022A (Dulles Metrorail and Capital Improvement Projects) (the "Series 2022A Bonds") is excluded from gross income for federal income tax purposes under Section 103 of the Internal Revenue Code of 1986, as amended (the "Code"). Bond Counsel is also of the opinion that such interest on the Series 2022A Bonds is not treated as a preference item in calculating the alternative minimum tax imposed under the Code. Interest on the Airports Authority's Dulles Toll Road Second Senior Lien Revenue Refunding Bonds, Series 2022B (Dulles Metrorail and Capital Improvement Projects) (Federally Taxable) (the "Series 2022B Bonds" and together with the Series 2022A Bonds, the "Series 2022 Bonds") is not excluded from gross income for federal income tax purposes under the Code. Bond Counsel is also of the opinion that under existing law, interest on the Series 2022 Bonds is exempt from income taxation by the Commonwealth of Virginia and is exempt from all taxation of the District of Columbia, except estate, inheritance and gift taxes. See "TAX MATTERS – SERIES 2022A BONDS" and "TAX MATTERS – SERIES 2022B BONDS."



# METROPOLITAN WASHINGTON AIRPORTS AUTHORITY

\$739,815,000\*

**DULLES TOLL ROAD REVENUE REFUNDING BONDS, SERIES 2022** 

(Dulles Metrorail and Capital Improvement Projects)

consisting of

\$418,640,000\*

Dulles Toll Road Second Senior Lien Revenue Refunding Bonds, Series 2022A \$321,175,000\* Dulles Toll Road Second Senior Lien Revenue Refunding Bonds, Series 2022B (Federally Taxable)

#### **Dated: Date of Delivery**

Due: October 1, in the years as shown herein

The Airports Authority will issue the Series 2022 Bonds as current interest bonds in authorized denominations of \$5,000 or any integral multiple thereof. Interest on the Series 2022 Bonds will accrue from their date of delivery and will be payable semi-annually on each April 1 and October 1, commencing October 1, 2022.

The Series 2022 Bonds will be issued as fully registered bonds, registered in the name of Cede & Co., as nominee of The Depository Trust Company, New York, New York ("DTC"), to which payments of principal, premium, if any, and interest will be made. Purchasers will acquire beneficial interests in the Series 2022 Bonds in bookentry form only. DTC will remit such payments to its participants who will be responsible for remittance to beneficial owners. See "THE SERIES 2022 BONDS – Book-Entry Only System."

Proceeds of the Series 2022 Bonds, together with other funds available under the Master Indenture (as defined herein), will be used to (i) refund the outstanding Series 2014A Bonds and Series 2009C Bonds (each as defined herein), (ii) fund the Series 2022 Debt Service Reserve Requirement (as defined herein), (iii) capitalize a portion of interest payments on the Series 2022 Bonds through October 1, 2024 and (iv) pay the costs of issuance of the Series 2022 Bonds.

The Series 2022 Bonds will be issued under and secured by the Master Indenture of Trust, dated as of August 1, 2009, and the Thirteenth Supplemental Indenture of Trust, dated as of February 1, 2022, each by and between the Airports Authority and Manufacturers and Traders Trust Company, as the trustee (as amended and supplemented to the date hereof, the "Master Indenture"), as Second Senior Lien Bonds (as defined herein). Except to the extent payable from a portion of the proceeds of the Series 2022 Bonds and any other moneys available for such payment, and subject to the prior payment of Operation and Maintenance Expenses of the Airports Authority relating to the Dulles Toll Road as well as current debt service due on (and certain reserve fund restoration deposits, if necessary, relating to) any Outstanding First Senior Lien Bonds (as defined herein), the Series 2022 Bonds, together with the Outstanding Second Senior Lien Bonds previously issued under the Master Indenture, and any additional Second Senior Lien Bonds issued by the Airports Authority, are payable primarily from, and are secured by a pledge of, the Toll Road Revenues derived by the Airports Authority from the operation of the Dulles Toll Road, as more fully described herein. See "SECURITY AND SOURCES OF PAYMENT FOR THE BONDS—Lien Structure" and "—Flow of Funds."

The Series 2022 Bonds will not be subject to acceleration upon an event of default or otherwise. The Series 2022 Bonds are subject to optional and mandatory redemption prior to maturity as more fully described herein.

THE SERIES 2022 BONDS SHALL NOT CONSTITUTE A DEBT OF THE DISTRICT OF COLUMBIA OR OF THE COMMONWEALTH OF VIRGINIA, OR ANY POLITICAL SUBDIVISION, AGENCY, DEPARTMENT OR INSTRUMENTALITY THEREOF, NOR A PLEDGE OF THE FAITH AND CREDIT OF THE DISTRICT OF COLUMBIA OR OF THE COMMONWEALTH OF VIRGINIA, OR ANY POLITICAL SUBDIVISION, AGENCY, DEPARTMENT OR INSTRUMENTALITY THEREOF. THE ISSUANCE OF THE SERIES 2022 BONDS UNDER THE PROVISIONS OF THE DISTRICT ACT AND THE VIRGINIA ACT (EACH AS DEFINED HEREIN) SHALL NOT DIRECTLY, INDIRECTLY OR CONTINGENTLY OBLIGATE THE DISTRICT OF COLUMBIA OR THE COMMONWEALTH OF VIRGINIA, OR ANY POLITICAL SUBDIVISION, AGENCY, DEPARTMENT OR INSTRUMENTALITY THEREOF, TO THE PAYMENT THEREOF OR TO THE LEVY OR PLEDGE OF ANY FORM OF TAXATION WHATSOEVER. PAYMENT OF THE PRINCIPAL OF, PREMIUM, IF ANY, AND INTEREST ON THE SERIES 2022 BONDS IS NOT AN OBLIGATION OF THE COMMONWEALTH OF VIRGINIA, OR ANY POLITICAL SUBDIVISION, AGENCY, DEPARTMENT OR INSTRUMENTALITY THEREOF, MORAL OR OTHERWISE. THE AIRPORTS AUTHORITY HAS NO TAXING POWER.

Subject to a determination by the Airports Authority to obtain bond insurance, the scheduled payment of principal of and interest on all or a portion of the Series 2022 Bonds when due will be guaranteed under an insurance policy to be issued concurrently with the delivery of the Series 2022 Bonds by Assured Guaranty Municipal Corp.\* See "THE SERIES 2022 BONDS – Bond Insurance."



The Series 2022 Bonds are offered when, as and if issued and received by the Underwriters. Legal matters with respect to the issuance of the Series 2022 Bonds are subject to the approval of Bond Counsel and Disclosure Counsel to the Airports Authority, Nixon Peabody LLP, Washington, D.C. Certain legal matters will be passed upon for the Airports Authority by Johnna S. Spera, Senior Vice President and General Counsel to the Airports Authority, and for the Underwriters by their counsel, Squire Patton Boggs (US) LLP, Washington, D.C. It is expected that the Series 2022 Bonds will be available for delivery in book-entry form only through the facilities of DTC in New York, New York, on or about February 16, 2022.

This cover page contains certain information for quick reference only. It is not a summary of this Official Statement. Investors must read the entire Official Statement, including the Appendices hereto, to obtain information essential to making an informed investment decision, paying particular attention to the matters discussed in the sections entitled "INVESTMENT CONSIDERATIONS" and "TERMINATION AND EXPIRATION OF THE PERMIT AND OPERATING AGREEMENT."

**Wells Fargo Securities** 

BofA Securities Citigroup Siebert Williams Shank & Co., LLC

iminary Official Statement and the information contained herein are subject to completion, amendment or other change without notice. The securities described herein may not be sold nor may offers to buy be accepted prior to the Official Statement is delivered in final form. Under no circumstances shall this Preliminary Official Statement constitute an offer to sell or the solicitation of an offer to buy, nor shall there be any sale of these securities in any jurisdiction such offer, solicitation or sale would be unlawful prior to registration or qualification under the securities laws of any such incidition. Official This Preli date the ( in which

January . 2022

**Academy Securities Inc.** 

Goldman Sachs & Co.

**Cabrera Capital Markets LLC** 

# **Metropolitan Washington Airports Authority**

#### \$418,640,000\*

#### Dulles Toll Road Second Senior Lien Revenue Refunding Bonds, Series 2022A

Year	Principal	Interest			
October 1 <sup>*</sup>	<u>Amount</u> *	Rate	<b>Yield</b>	<b>Price</b>	<u>CUSIP† No.</u>
2051	\$134,110,000				
2052	139,475,000				
2053	145,055,000				

# \$321,175,000\* Dulles Toll Road Second Senior Lien Revenue Refunding Bonds, Series 2022B (Federally Taxable)

Year	Principal	Interest		
October 1 <sup>*</sup>	<u>Amount</u> *	Rate	<b>Price</b>	CUSIP <sup>†</sup> No.
2025	\$ 3,655,000			
2026	3,730,000			
2027	3,815,000			
2028	3,910,000			
2029	4,010,000			
2030	4,125,000			
2031	4,245,000			
2032	4,375,000			
2033	4,515,000			
2034	4,665,000			
2035	4,820,000			
2036	4,990,000			
2037	5,175,000			
2038	56,160,000			
2039	35,165,000			
2040	65,275,000			
2041	108,545,000			

<sup>\*</sup> Preliminary, subject to change.

<sup>&</sup>lt;sup>†</sup> CUSIP® is a registered trademark of the American Bankers Association. CUSIP Global Services (CGS) is managed on behalf of the American Bankers Association by S&P Global Market Intelligence. Copyright© 2022 CUSIP Global Services. All rights reserved. CUSIP® data herein is provided by CUSIP Global Services. This data is not intended to create a database and does not serve in any way as a substitute for the CGS database. CUSIP® numbers are provided for convenience of reference only. None of the Airports Authority, the Underwriters or their agents or counsel assume responsibility for the accuracy of such numbers.

# WASHINGTON D.C. AREA REGIONAL MAP



# **METROPOLITAN WASHINGTON AIRPORTS AUTHORITY**

1 Aviation Circle Washington, D.C. 20001-6000 (703) 417-8700

# **MEMBERS OF THE AIRPORTS AUTHORITY\***

William E. Sudow, *Chairperson* Thorn Pozen, *Vice Chairperson* Judith N. Batty John A. Braun Albert J. Dwoskin Honorable Katherine K. Hanley Honorable Robert W. Lazaro, Jr. Mamie Mallory Timothy Poole Warner H. Session Honorable David G. Speck Honorable J. Walter Tejada Mark Uncapher Joslyn N. Williams

# SENIOR MANAGEMENT

President and Chief Executive Officer	John E. Potter
Senior Vice President and General Counsel	Johnna S. Spera
Senior Vice President for Finance and Chief Financial Officer	Andrew T. Rountree
Senior Vice President and Chief Engineer and Development Officer	Roger Natsuhara
Senior Vice President and Chief Human Resources and Administrative	
Services Officer	Anthony Vegliante
Acting Senior Vice President for Dulles Corridor Metrorail Project	Andrew Hascall
Senior Vice President for Technology and Chief Information Officer	Goutam Kundu
Vice President and Secretary	Monica R. Hargrove
Vice President for Engineering	
Acting Vice President for Audit	Marilou Parayaoan
Vice President for Supply Chain Management	
Vice President and Airport Manager – Reagan National Airport	
Vice President and Airport Manager – Dulles International Airport	Richard Golinowski
Vice President for Public Safety	Bryan Norwood
Acting Vice President for Operations Support	
Vice President of Diversity, Inclusion and Social Impact	Tanisha Lewis
Acting Executive Vice President and Chief Revenue Officer	
Vice President for Communications and Government Relations	
Acting Vice President for Airline Business Development	
Acting Vice President for Marketing and Consumer Strategy	Deven Judd

# **CONSULTANTS**

Bond Counsel and Disclosure Counsel	Nixon Peabody LLP
Financial Advisors	Frasca & Associates, LLC and Mercator Advisors LLC
Traffic and Revenue Consultant	Stantec Consulting Services Inc.

<sup>\*</sup> Presently, the three seats appointed by the President of the United States are vacant.

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This Official Statement is provided in connection with the issuance of the Series 2022 Bonds described herein and may not be reproduced or used, in whole or in part, for any other purpose. The information contained in this Official Statement has been derived from information provided by the Airports Authority and other sources which are believed to be reliable. The Underwriters have provided the following sentence for inclusion in this Official Statement. The Underwriters have reviewed the information in this Official Statement in accordance with, and as part of, their respective responsibilities to investors under the federal securities law as applied to the facts and circumstances of this transaction, but the Underwriters do not guarantee the accuracy or completeness of such information.

A wide variety of information, including financial information, concerning the Airports Authority and the Dulles Toll Road is available from a number of publications and websites. No such information is a part of or incorporated into this Official Statement, whether or not the address for such website appears herein as an active hyperlink, unless specifically stated as so incorporated. Unless otherwise specified, no website mentioned in this Official Statement is intended to be an active hyperlink, and information on any such website that is inconsistent with the information set forth in this Official Statement should be disregarded.

No dealer, broker, salesman or other person has been authorized by the Airports Authority or the Underwriters to give any information or to make any representations other than those contained in this Official Statement, and, if given or made, such information or representations must not be relied upon as having been authorized by any of the foregoing. This Official Statement does not constitute an offer to sell or the solicitation of an offer to buy, nor shall there be any sale of, the Series 2022 Bonds by any person in any jurisdiction in which it is unlawful for such person to make such offer, solicitation or sale. The information and expressions of opinion herein speak as of their date unless otherwise noted and are subject to change without notice. Neither the delivery of this Official Statement nor any sale made hereunder shall under any circumstances create any implication that there has been no change in the affairs of the Airports Authority since the date hereof.

In connection with offers and sales of the Series 2022 Bonds, no action has been taken by the Airports Authority that would permit a public offering of the Series 2022 Bonds, or possession or distribution of any information relating to the pricing of the Series 2022 Bonds, this Official Statement or any other offering or publicity material relating to the Series 2022 Bonds, in any non-U.S. jurisdiction where action for that purpose is required. Accordingly, the Underwriters are obligated to comply with all applicable laws and regulations in force in any non-U.S. jurisdiction in which it purchases, offers or sells the Series 2022 Bonds or possesses or distributes this Official Statement or any other offering or publicity material relating to the Series 2022 Bonds and will obtain any consent, approval or permission required by it for the purchase, offer or sale by it of the Series 2022 Bonds under the laws and regulations in force in any non-U.S. jurisdiction to which it is subject or in which it makes such purchases, offers or sales and the Airports Authority shall have no responsibility therefor.

Neither the United States Securities and Exchange Commission ("SEC") nor any state securities commission has approved or disapproved the Series 2022 Bonds or passed upon the adequacy or accuracy of this Official Statement. Any representation to the contrary is a criminal offense.

The order and placement of information in this Official Statement, including the appendices, are not an indication of relevance, materiality or relative importance, and this Official Statement, including the appendices, must be read in its entirety. The captions and headings in this Official Statement are for convenience only and in no way define, limit or describe the scope or intent, or affect the meaning or construction, of any provision or section in this Official Statement. [THIS PAGE INTENTIONALLY LEFT BLANK]

For purposes of compliance with SEC Rule 15c2-12, as amended, this Official Statement constitutes an official statement of the Airports Authority that has been deemed final by the Airports Authority as of its date except for the omission of no more than the information permitted by Rule 15c2-12.

THIS OFFICIAL STATEMENT IS BEING PROVIDED TO PROSPECTIVE PURCHASERS EITHER IN BOUND PRINTED FORM ("ORIGINAL BOUND FORMAT") OR IN ELECTRONIC FORMAT ON THE FOLLOWING WEBSITE: www.munios.com. THIS OFFICIAL STATEMENT MAY BE RELIED UPON ONLY IF IT IS IN ITS ORIGINAL BOUND FORMAT OR AS PRINTED IN ITS ENTIRETY DIRECTLY FROM SUCH WEBSITE.

THE SERIES 2022 BONDS WILL NOT BE REGISTERED UNDER THE SECURITIES ACT OF 1933, AS AMENDED, OR ANY STATE SECURITIES LAWS IN RELIANCE UPON EXEMPTIONS CONTAINED IN SUCH LAWS. THE SERIES 2022 BONDS HAVE NOT BEEN RECOMMENDED BY THE SEC OR ANY OTHER FEDERAL, STATE OR FOREIGN SECURITIES COMMISSION OR REGULATORY AUTHORITY, AND NO SUCH COMMISSIONS AND REGULATORY AUTHORITIES WILL HAVE REVIEWED OR PASSED UPON THE ACCURACY OR ADEQUACY OF THIS OFFICIAL STATEMENT. ANY REPRESENTATION TO THE CONTRARY MAY BE A CRIMINAL OFFENSE.

Assured Guaranty Municipal Corp. ("AGM") makes no representation regarding the Series 2022 Bonds or the advisability of investing in the Series 2022 Bonds. In addition, AGM has not independently verified, makes no representation regarding, and does not accept any responsibility for the accuracy or completeness of this Official Statement or any information or disclosure contained herein, or omitted herefrom, other than with respect to the accuracy of the information regarding AGM supplied by AGM and presented under the heading "THE SERIES 2022 BONDS – Bond Insurance" and "APPENDIX H – Form of Bond Insurance Policy."

# INFORMATION CONCERNING OFFERING RESTRICTIONS IN CERTAIN JURISDICTIONS OUTSIDE THE UNITED STATES

THE AIRPORTS AUTHORITY (REFERRED TO IN THESE LEGENDS AS THE "ISSUER") MAKES NO REPRESENTATION AS TO THE ACCURACY, COMPLETENESS OR ADEQUACY OF THE INFORMATION UNDER THIS CAPTION. REFERENCES IN THIS SECTION TO THE "BONDS" MEAN THE SERIES 2022B BONDS OFFERED HEREBY. THESE LEGENDS ARE BEING PROVIDED SOLELY FOR THE CONVENIENCE OF THE UNDERWRITERS. COMPLIANCE WITH ANY RULES OR RESTRICTIONS OF ANY JURISDICTION RELATING TO THE OFFERING, SOLICITATION AND/OR SALE OF THE SERIES 2022B BONDS IS THE RESPONSIBILITY OF THE UNDERWRITERS AND THE AIRPORTS AUTHORITY SHALL NOT HAVE RESPONSIBILITY OR LIABILITY IN CONNECTION THEREWITH.

IN CONNECTION WITH OFFERINGS AND SALES OF THE SERIES 2022B BONDS, NO ACTION HAS BEEN TAKEN BY THE AIRPORTS AUTHORITY THAT WOULD PERMIT A PUBLIC OFFERING OF THE SERIES 2022B BONDS, OR POSSESSION OR DISTRIBUTION OF ANY INFORMATION RELATING TO THE PRICING OF THE SERIES 2022B BONDS, THIS OFFICIAL STATEMENT OR ANY OTHER OFFERING OR PUBLICITY MATERIAL RELATING TO THE SERIES 2022B BONDS, IN ANY NON-U.S. JURISDICTION WHERE ACTION FOR THAT PURPOSE IS REQUIRED.

# MINIMUM UNIT SALES

THE BONDS WILL TRADE AND SETTLE ON A UNIT BASIS (ONE UNIT EQUALING ONE BOND OF \$5,000 PRINCIPAL AMOUNT).

# NOTICE TO PROSPECTIVE INVESTORS IN JAPAN

THE BONDS HAVE NOT BEEN AND WILL NOT BE REGISTERED PURSUANT TO ARTICLE 4, PARAGRAPH 1 OF THE FINANCIAL INSTRUMENTS AND EXCHANGE ACT OF JAPAN (LAW NO. 25 OF 1948, AS AMENDED ("FIEA")) AND, ACCORDINGLY, NEITHER THE BONDS NOR ANY INTEREST IN THEM MAY BE OFFERED OR SOLD, DIRECTLY OR INDIRECTLY, IN JAPAN OR TO, OR FOR THE BENEFIT, OF ANY RESIDENT OF JAPAN OR TO OTHERS FOR RE-OFFERING OR RESALE, DIRECTLY OR INDIRECTLY, IN JAPAN OR TO A RESIDENT OF JAPAN EXCEPT UNDER CIRCUMSTANCES WHICH WILL RESULT IN COMPLIANCE WITH ALL APPLICABLE LAWS, REGULATIONS AND GUIDELINES PROMULGATED BY THE RELEVANT JAPANESE GOVERNMENTAL AND REGULATORY AUTHORITIES AND IN EFFECT AT THE RELEVANT TIME. FOR THE PURPOSES OF THIS PARAGRAPH, "RESIDENT OF JAPAN" MEANS A NATURAL PERSON HAVING HIS/HER PLACE OF DOMICILE OR RESIDENCE IN JAPAN, OR A LEGAL PERSON HAVING ITS MAIN OFFICE IN JAPAN. A BRANCH, AGENCY OR OTHER OFFICE IN JAPAN OF A NON-RESIDENT, IRRESPECTIVE OF WHETHER IT IS LEGALLY AUTHORIZED TO REPRESENT ITS PRINCIPAL OR NOT, SHALL BE DEEMED TO BE A RESIDENT OF JAPAN EVEN IF ITS MAIN OFFICE IS IN ANY COUNTRY OTHER THAN JAPAN. RESIDENT OF JAPAN SHALL EXCLUDE NON-RESIDENTS OF JAPAN, AS SUCH TERM IS DEFINED IN ARTICLE 6, PARAGRAPH 1, SUB-PARAGRAPH 6 OF THE FOREIGN EXCHANGE AND TRADE ACT OF JAPAN (ACT. NO. 228 OF 1949, AS AMENDED).

THE OFFERING OF THE BONDS IN JAPAN ARE BEING MADE BY MEANS OF A PRIVATE PLACEMENT TO QUALIFIED INSTITUTIONAL INVESTORS (TEKIKAKU-KIKAN-TOSHIKA) (WITHIN THE MEANING OF SUCH TERM PROVIDED FOR UNDER ARTICLE 2, PARAGRAPH 3, SUB-PARAGRAPH 1 OF THE FIEA AND ARTICLE 10, PARAGRAPH 1 OF THE CABINET OFFICE

ORDINANCE CONCERNING DEFINITIONS PROVIDED IN ARTICLE 2 OF THE FINANCIAL INSTRUMENTS AND EXCHANGE ACT IN JAPAN (MINISTRY OF FINANCE ORDINANCE NO.14 OF 1993, AS AMENDED)) ("QIIS"). THE OFFERING OF THE BONDS IN JAPAN SHALL BE MADE ON THE CONDITIONS THAT THE BONDS SHALL NOT BE TRANSFERRED TO ANY PERSON OTHER THAN QIIS AND A DOCUMENT INCLUDING THE INFORMATION ON THE BONDS AND TO BE DELIVERED TO A PROSPECTIVE PURCHASER SHALL STATE THAT THE BONDS SHALL NOT BE TRANSFERRED TO ANY PERSON OTHER THAN A QIIS.

THE SALES OF THE BONDS IN JAPAN ARE BEING MADE BY MEANS OF A PRIVATE SECONDARY DISTRIBUTION (SHIURIDASHI) LIMITED TO QUALIFIED INSTITUTIONAL INVESTORS (TEKIKAKU-KIKAN-TOSHIKA) (WITHIN THE MEANING OF SUCH TERM PROVIDED FOR UNDER ARTICLE 2, PARAGRAPH 3, SUB-PARAGRAPH 1 OF THE FIEA AND ARTICLE 10, PARAGRAPH 1 OF THE CABINET OFFICE ORDINANCE CONCERNING DEFINITIONS PROVIDED IN ARTICLE 2 OF THE FINANCIAL INSTRUMENTS AND EXCHANGE ACT IN JAPAN (MINISTRY OF FINANCE ORDINANCE NO.14 OF 1993, AS AMENDED)) ("QIIS"). THE REGISTRATION IN ACCORDANCE WITH ARTICLE 4, PARAGRAPH 1 OF THE FIEA HAS NOT BEEN MADE IN RESPECT OF SUCH SALE, BECAUSE SUCH SALE FALLS UNDER ARTICLE 2, PARAGRAPH 4, SUB-PARAGRAPH 2 (I) OF THE FIEA. THE SALES OF THE BONDS IN JAPAN SHALL BE MADE ON THE CONDITIONS THAT THE BONDS SHALL NOT BE TRANSFERRED TO ANY PERSON OTHER THAN QIIS AND A DOCUMENT INCLUDING THE INFORMATION ON THE BONDS AND TO BE DELIVERED TO A PROSPECTIVE PURCHASER SHALL STATE THAT THE BONDS SHALL NOT BE TRANSFERRED TO ANY PERSON OTHER THAN A QIIS.

UPON ANY SUBSEQUENT OFFER FOR SALE OR SOLICITATION OF OFFERS FOR THE PURCHASE OF SUCH BONDS BY A SELLER IN JAPAN, THE PROSPECTIVE PURCHASER SHALL BE NOTIFIED IN WRITING AND IN ADVANCE OF OR SIMULTANEOUSLY WITH SUCH SOLICITATION: (I) THAT THE REGISTRATION IN ACCORDANCE WITH ARTICLE 4, PARAGRAPH 1 OF THE FIEA HAS NOT BEEN MADE IN RESPECT OF SUCH SOLICITATION, BECAUSE SUCH SOLICITATION FALLS UNDER ARTICLE 2, PARAGRAPH 4, SUB-PARAGRAPH 2 (I) OF THE FIEA; AND (II) THAT A DOCUMENT INCLUDING THE INFORMATION ON THE BONDS AND TO BE DELIVERED TO A PROSPECTIVE PURCHASER SHALL STATE THAT THE BONDS SHALL NOT BE TRANSFERRED TO ANY PERSON OTHER THAN A QIIS.

# NOTICE TO PROPECTIVE INVESTORS IN TAIWAN

WELLS FARGO HAS NOT AND WILL NOT SECURE THE REQUIRED LICENSES IN ACCORDANCE WITH TAIWAN LAW FOR THE OFFER OF THE BONDS. THE OFFER OF THE BONDS HAS NOT BEEN AND WILL NOT BE REGISTERED OR FILED WITH OR APPROVED BY THE FINANCIAL SUPERVISORY COMMISSION OF TAIWAN, THE REPUBLIC OF CHINA ("TAIWAN") AND/OR OTHER REGULATORY AUTHORITY PURSUANT TO RELEVANT SECURITIES LAWS AND REGULATIONS OF TAIWAN AND MAY NOT BE ISSUED, OFFERED OR SOLD WITHIN TAIWAN THROUGH A PUBLIC OFFERING OR IN CIRCUMSTANCES WHICH CONSTITUTE AN OFFER WITHIN THE MEANING OF THE SECURITIES AND EXCHANGE ACT OF TAIWAN OR RELEVANT LAWS AND REGULATIONS THAT REQUIRES A REGISTRATION, FILING OR APPROVAL OF THE FINANCIAL SUPERVISORY COMMISSION OF TAIWAN AND/OR OTHER REGULATORY AUTHORITY OF TAIWAN. NO PERSON OR ENTITY IN TAIWAN HAS BEEN AUTHORIZED TO OFFER OR SELL THE BONDS IN TAIWAN.

# NOTICE TO PROSPECTIVE INVESTORS IN KOREA

THE BONDS HAVE NOT BEEN REGISTERED WITH THE FINANCIAL SERVICES COMMISSION OF KOREA PURSUANT TO THE FINANCIAL INVESTMENT SERVICES AND CAPITAL MARKET ACT OF KOREA AND THE REGULATIONS THEREUNDER. EACH OF THE UNDERWRITERS HAVE REPRESENTED AND AGREED THAT THEY HAVE NOT AND WILL NOT, DIRECTLY OR INDIRECTLY, SELL OR DELIVER ANY BONDS IN KOREA OR TO, OR, FOR THE ACCOUNT OR BENEFIT OF, ANY RESIDENT OF KOREA (AS SUCH TERM IS DEFINED IN THE FOREIGN EXCHANGE TRANSACTION ACT OF KOREA) OR TO OTHERS FOR REOFFERING OR RESALE, DIRECTLY OR INDIRECTLY, IN KOREA OR TO, OR FOR THE ACCOUNT OR BENEFIT OF, ANY RESIDENT OF KOREA, EXCEPT AS OTHERWISE PERMITTED BY APPLICABLE LAWS AND REGULATIONS OF KOREA.

# NOTICE TO PROSPECTIVE INVESTORS IN HONG KONG

WARNING - THE CONTENTS OF THIS DOCUMENT HAVE NOT BEEN REVIEWED BY ANY REGULATORY AUTHORITY IN HONG KONG. YOU ARE ADVISED TO EXERCISE CAUTION IN RELATION TO THE OFFER. IF YOU ARE IN ANY DOUBT ABOUT ANY OF THE CONTENTS OF THIS DOCUMENT YOU SHOULD OBTAIN INDEPENDENT PROFESSIONAL ADVICE.

BY THE SECURITIES LEGISLATION OF HONG KONG THE BONDS HAVE NOT BEEN OFFERED OR SOLD AND WILL NOT BE OFFERED OR SOLD IN HONG KONG, BY MEANS OF ANY DOCUMENT, OTHER THAN (A) TO "PROFESSIONAL INVESTORS" AS DEFINED IN THE SECURITIES AND FUTURES ORDINANCE (CAP. 571) OF HONG KONG AND ANY RULES MADE UNDER THAT ORDINANCE; OR (B) IN OTHER CIRCUMSTANCES WHICH DO NOT RESULT IN THE DOCUMENT BEING A "PROSPECTUS" AS DEFINED IN THE COMPANIES (WINDING UP AND MISCELLANEOUS PROVISIONS) ORDINANCE (CAP. 32) OF HONG KONG OR WHICH DO NOT CONSTITUTE AN OFFER TO THE PUBLIC WITHIN THE MEANING OF THAT ORDINANCE. NO ADVERTISEMENT, INVITATION OR DOCUMENT RELATING TO THE BONDS HAS BEEN OR MAY BE ISSUED, OR HAS BEEN OR MAY BE IN THE POSSESSION OF ANY PERSON FOR THE PURPOSES OF ISSUE, OR WILL BE ISSUED OR WILL BE IN THE POSSESSION OF ANY PERSON FOR THE PURPOSES OF ISSUE, WHETHER IN HONG KONG OR ELSEWHERE, WHICH IS DIRECTED AT. OR THE CONTENTS OF WHICH ARE LIKELY TO BE ACCESSED OR READ BY, THE PUBLIC OF HONG KONG (EXCEPT IF PERMITTED TO DO SO UNDER THE SECURITIES LAWS OF HONG KONG) OTHER THAN WITH RESPECT TO THE BONDS WHICH ARE OR ARE INTENDED TO BE DISPOSED OF ONLY TO PERSONS OUTSIDE HONG KONG OR ONLY TO "PROFESSIONAL INVESTORS" AS DEFINED IN THE SECURITIES AND FUTURES ORDINANCE AND ANY RULES MADE UNDER THAT ORDINANCE.

## NOTICE TO PROSPECTIVE INVESTORS IN THE UNITED KINGDOM

# PROHIBITION ON SALES TO UK RETAIL INVESTORS

THE BONDS ARE NOT INTENDED TO BE OFFERED, SOLD OR OTHERWISE MADE AVAILABLE TO AND WILL NOT BE OFFERED, SOLD OR OTHERWISE MADE AVAILABLE TO ANY UK RETAIL INVESTOR IN THE UNITED KINGDOM ("UK"). FOR PURPOSES OF THIS PROVISION:

(A) THE EXPRESSION "UK RETAIL INVESTOR" MEANS A PERSON WHO IS ONE (OR MORE) OF THE FOLLOWING:

(i) A RETAIL CLIENT AS DEFINED IN POINT (8) OF ARTICLE 2 OF COMMISSION DELEGATED REGULATION (EU) 2017/565, AS IT FORMS PART OF UK DOMESTIC LAW BY VIRTUE OF THE EUROPEAN UNION (WITHDRAWAL) ACT 2018 (AS AMENDED, THE "EUWA") AND AS AMENDED; OR

(ii) A CUSTOMER WITHIN THE MEANING OF THE PROVISIONS OF THE UK FINANCIAL SERVICES AND MARKETS ACT 2000 (AS AMENDED, "FSMA") AND ANY RULES OR REGULATIONS MADE UNDER FSMA (SUCH RULES AND REGULATIONS AS AMENDED) TO IMPLEMENT DIRECTIVE (EU) 2016/97, WHERE THAT CUSTOMER WOULD NOT QUALIFY AS A PROFESSIONAL CLIENT, AS DEFINED IN POINT (8) OF ARTICLE 2(1) OF REGULATION (EU) NO 600/2014, AS IT FORMS PART OF UK DOMESTIC LAW BY VIRTUE OF THE EUWA AND AS AMENDED; OR

(iii) NOT A QUALIFIED INVESTOR ("UK QUALIFIED INVESTOR") AS DEFINED IN ARTICLE 2 OF REGULATION (EU) 2017/1129, AS IT FORMS PART OF UK DOMESTIC LAW BY VIRTUE OF THE EUWA AND AS AMENDED (THE "UK PROSPECTUS REGULATION"); AND

(B) THE EXPRESSION "OFFER" INCLUDES THE COMMUNICATION IN ANY FORM AND BY ANY MEANS OF SUFFICIENT INFORMATION ON THE TERMS OF THE OFFER AND THE BONDS TO BE OFFERED SO AS TO ENABLE AN INVESTOR TO DECIDE TO PURCHASE OR SUBSCRIBE FOR THE BONDS.

CONSEQUENTLY, NO KEY INFORMATION DOCUMENT REQUIRED BY REGULATION (EU) NO 1286/2014 (AS AMENDED), AS IT FORMS PART OF UK DOMESTIC LAW BY VIRTUE OF THE EUWA AND AS AMENDED (THE "UK PRIIPS REGULATION") FOR OFFERING OR SELLING THE BONDS OR OTHERWISE MAKING THEM AVAILABLE TO UK RETAIL INVESTORS IN THE UK HAS BEEN PREPARED AND THEREFORE OFFERING OR SELLING THE BONDS OR OTHERWISE MAKING THEM AVAILABLE TO ANY UK RETAIL INVESTOR IN THE UK MAY BE UNLAWFUL UNDER THE UK PRIIPS REGULATION.

# OTHER UK OFFERING RESTRICTIONS

THIS OFFICIAL STATEMENT IS NOT A PROSPECTUS FOR THE PURPOSES OF THE UK PROSPECTUS REGULATION. THIS OFFICIAL STATEMENT HAS BEEN PREPARED ON THE BASIS THAT ANY OFFER OF BONDS IN THE UK WILL ONLY BE MADE TO UK QUALIFIED INVESTORS. ACCORDINGLY ANY PERSON MAKING OR INTENDING TO MAKE AN OFFER IN THE UK OF BONDS MAY ONLY DO SO WITH RESPECT TO UK QUALIFIED INVESTORS. NONE OF THE ISSUER OR ANY OF THE UNDERWRITERS HAVE AUTHORIZED, NOR DO THEY AUTHORIZE, THE MAKING OF ANY OFFER OF BONDS IN THE UK OTHER THAN TO UK QUALIFIED INVESTORS.

# OTHER UK REGULATORY RESTRICTIONS

IN THE UK, THIS OFFICIAL STATEMENT IS BEING COMMUNICATED ONLY TO AND IS BEING DIRECTED ONLY AT, PERSONS WHO (1) HAVE PROFESSIONAL EXPERIENCE IN MATTERS RELATING TO INVESTMENTS AND WHO FALL WITHIN ARTICLE 19(5) OF THE FINANCIAL SERVICES AND MARKETS ACT 2000 (FINANCIAL PROMOTION) ORDER 2005 (AS AMENDED, THE "FINANCIAL PROMOTION ORDER"), (2) ARE PERSONS FALLING WITHIN ARTICLE 49(2)(a) TO (d) ("HIGH NET WORTH COMPANIES, UNINCORPORATED ASSOCIATIONS ETC.") OF THE FINANCIAL PROMOTION ORDER OR (3) ARE PERSONS TO WHOM IT MAY OTHERWISE LAWFULLY BE COMMUNICATED UNDER SECTION 21 OF FSMA (ALL SUCH PERSONS TOGETHER BEING REFERRED TO AS "RELEVANT PERSONS"). IN THE UK, THIS OFFICIAL STATEMENT MUST NOT BE ACTED ON OR RELIED ON BY PERSONS WHO ARE NOT RELEVANT PERSONS. IN THE UK, ANY INVESTMENT OR INVESTMENT ACTIVITY TO WHICH THIS OFFICIAL STATEMENT RELATES, INCLUDING THE BONDS, IS AVAILABLE ONLY TO RELEVANT PERSONS AND WILL BE ENGAGED IN ONLY WITH RELEVANT PERSONS.

NO PERSON MAY COMMUNICATE OR CAUSE TO BE COMMUNICATED ANY INVITATION OR INDUCEMENT TO ENGAGE IN INVESTMENT ACTIVITY (WITHIN THE MEANING OF SECTION 21 OF FSMA) RECEIVED BY IT IN CONNECTION WITH THE ISSUE OR SALE OF THE BONDS OTHER THAN IN CIRCUMSTANCES IN WHICH SECTION 21(1) OF FSMA DOES NOT APPLY.

POTENTIAL INVESTORS IN THE UK ARE ADVISED THAT ALL, OR MOST, OF THE PROTECTIONS AFFORDED BY THE UK REGULATORY SYSTEM WILL NOT APPLY TO AN INVESTMENT IN THE BONDS AND THAT COMPENSATION WILL NOT BE AVAILABLE UNDER THE UK FINANCIAL SERVICES COMPENSATION SCHEME.

# NOTICE TO PROSPECTIVE INVESTORS IN THE EUROPEAN ECONOMIC AREA

PROHIBITION ON SALES TO EU RETAIL INVESTORS

THE BONDS ARE NOT INTENDED TO BE OFFERED, SOLD OR OTHERWISE MADE AVAILABLE TO AND WILL NOT BE OFFERED, SOLD OR OTHERWISE MADE AVAILABLE TO ANY EU RETAIL INVESTOR IN THE EUROPEAN ECONOMIC AREA ("EEA"). FOR PURPOSES OF THIS PROVISION:

(A) THE EXPRESSION "EU RETAIL INVESTOR" MEANS A PERSON WHO IS ONE (OR MORE) OF THE FOLLOWING:

(I) A RETAIL CLIENT AS DEFINED IN POINT (11) OF ARTICLE 4(1) OF DIRECTIVE 2014/65/EU (AS AMENDED, "MIFID II"); OR

(II) A CUSTOMER WITHIN THE MEANING OF DIRECTIVE (EU) 2016/97, AS AMENDED, WHERE THAT CUSTOMER WOULD NOT QUALIFY AS A PROFESSIONAL CLIENT AS DEFINED IN POINT (10) OF ARTICLE 4(1) OF MIFID II; OR

(III) NOT A QUALIFIED INVESTOR ("EU QUALIFIED INVESTOR") AS DEFINED IN ARTICLE 2 OF REGULATION (EU) 2017/1129 (AS AMENDED, THE "EU PROSPECTUS REGULATION"); AND

(B) THE EXPRESSION "OFFER" INCLUDES THE COMMUNICATION IN ANY FORM AND BY ANY MEANS OF SUFFICIENT INFORMATION ON THE TERMS OF THE OFFER AND THE BONDS TO BE OFFERED SO AS TO ENABLE AN INVESTOR TO DECIDE TO PURCHASE OR SUBSCRIBE FOR THE BONDS.

CONSEQUENTLY, NO KEY INFORMATION DOCUMENT REQUIRED BY REGULATION (EU) NO 1286/2014 (AS AMENDED, THE "EU PRIIPS REGULATION") FOR OFFERING OR SELLING THE BONDS OR OTHERWISE MAKING THEM AVAILABLE TO EU RETAIL INVESTORS IN THE EEA HAS BEEN PREPARED AND THEREFORE OFFERING OR SELLING THE BONDS OR

OTHERWISE MAKING THEM AVAILABLE TO ANY EU RETAIL INVESTOR IN THE EEA MAY BE UNLAWFUL UNDER THE EU PRIIPS REGULATION.

THIS OFFERING MEMORANDUM IS NOT A PROSPECTUS FOR THE PURPOSES OF THE EU PROSPECTUS REGULATION. THIS OFFERING MEMORANDUM HAS BEEN PREPARED ON THE BASIS THAT ANY OFFER OF BONDS IN THE EEA WILL ONLY BE MADE TO EU QUALIFIED INVESTORS. ACCORDINGLY ANY PERSON MAKING OR INTENDING TO MAKE AN OFFER IN THE EEA OF BONDS MAY ONLY DO SO WITH RESPECT TO EU QUALIFIED INVESTORS. NONE OF THE ISSUER OR ANY OF THE UNDERWRITERS HAVE AUTHORIZED, NOR DO THEY AUTHORIZE, THE MAKING OF ANY OFFER OF BONDS IN THE EEA OTHER THAN TO EU QUALIFIED INVESTORS.

# NOTICE TO PROSPECTIVE INVESTORS IN SWITZERLAND

# PROHIBITION OF SALES TO SWISS RETAIL INVESTORS

THE BONDS ARE NOT INTENDED TO BE OFFERED, SOLD OR OTHERWISE MADE AVAILABLE TO AND SHOULD NOT BE OFFERED, SOLD OR OTHERWISE MADE AVAILABLE TO ANY RETAIL INVESTOR IN SWITZERLAND. FOR THESE PURPOSES, A RETAIL INVESTOR MEANS A PERSON WHO IS A RETAIL CLIENT AS DEFINED IN ARTICLE 4 OF THE SWISS FINANCIAL SERVICES ACT ("FINSA").

NO KEY INFORMATION DOCUMENT ACCORDING TO FINSA OR ANY EQUIVALENT DOCUMENT UNDER FINSA HAS BEEN PREPARED IN RELATION TO THE BONDS, AND, THEREFORE, THE BONDS MAY NOT BE OFFERED OR RECOMMENDED TO RETAIL CLIENTS WITHIN THE MEANING OF FINSA IN SWITZERLAND.

# EXEMPTION TO PREPARE A FINSA-COMPLIANT PROSPECTUS

THE OFFERING OF THE BONDS IN SWITZERLAND IS EXEMPT FROM THE REQUIREMENT TO PREPARE AND PUBLISH A PROSPECTUS UNDER FINSA BECAUSE SUCH OFFERING IS MADE TO PROFESSIONAL CLIENTS AND INSTITUTIONAL CLIENTS WITHIN THE MEANING OF FINSA ONLY. THIS DOCUMENT DOES NOT CONSTITUTE A PROSPECTUS PURSUANT TO FINSA, AND NO SUCH PROSPECTUS HAS BEEN OR WILL BE PREPARED FOR OR IN CONNECTION WITH THE OFFERING OF THE BONDS.

## NOTICE TO PROSPECTIVE INVESTORS IN CANADA

THE BONDS MAY BE SOLD IN CANADA ONLY TO PURCHASERS PURCHASING, OR DEEMED TO BE PURCHASING, AS PRINCIPAL THAT ARE ACCREDITED INVESTORS, AS DEFINED IN NATIONAL INSTRUMENT 45-106 PROSPECTUS EXEMPTIONS OR SUBSECTION 73.3(1) OF THE SECURITIES ACT (ONTARIO), AND ARE PERMITTED CLIENTS, AS DEFINED IN NATIONAL INSTRUMENT 31-103 REGISTRATION REQUIREMENTS, EXEMPTIONS AND ONGOING REGISTRANT OBLIGATIONS. ANY RESALE OF THE BONDS MUST BE MADE IN ACCORDANCE WITH AN EXEMPTION FROM, OR IN A TRANSACTION NOT SUBJECT TO, THE PROSPECTUS REQUIREMENTS OF APPLICABLE SECURITIES LAWS.

SECURITIES LEGISLATION IN CERTAIN PROVINCES OR TERRITORIES OF CANADA MAY PROVIDE A PURCHASER WITH REMEDIES FOR RESCISSION OR DAMAGES IF THIS OFFICIAL STATEMENT (INCLUDING ANY AMENDMENT THERETO) CONTAINS A MISREPRESENTATION, PROVIDED THAT THE REMEDIES FOR RESCISSION OR DAMAGES ARE EXERCISED BY THE PURCHASER WITHIN THE TIME LIMIT PRESCRIBED BY THE SECURITIES LEGISLATION OF THE PURCHASER'S PROVINCE OR TERRITORY. THE PURCHASER SHOULD REFER TO ANY APPLICABLE PROVISIONS OF THE SECURITIES LEGISLATION OF THE PURCHASER'S PROVINCE OR TERRITORY FOR PARTICULARS OF THESE RIGHTS OR CONSULT WITH A LEGAL ADVISOR.

PURSUANT TO SECTION 3A.3 OF NATIONAL INSTRUMENT 33-105 UNDERWRITING CONFLICTS (NI 33-105), THE UNDERWRITERS ARE NOT REQUIRED TO COMPLY WITH THE DISCLOSURE REQUIREMENTS OF NI 33-105 REGARDING UNDERWRITER CONFLICTS OF INTEREST IN CONNECTION WITH THIS OFFERING.

#### SUMMARY STATEMENT

This summary statement is qualified in its entirety by reference to the information appearing elsewhere in this Official Statement. Terms used in this summary statement and not defined in this summary statement shall have the meanings set forth in the body of this Official Statement or in APPENDIX A hereto.

#### The Airports Authority

The Metropolitan Washington Airports Authority (the "Airports Authority") was established in 1986 to operate, maintain, improve, develop, protect and promote Ronald Reagan Washington National Airport ("Reagan National") and Washington Dulles International Airport ("Dulles International" and, collectively with Reagan National, the "Airports"). Pursuant to an Agreement and Deed of Lease between the United States of America and the Airports Authority, effective June 7, 1987, as amended to the date hereof (the "Federal Lease"), the Airports Authority assumed operating responsibility for the Airports and obtained a leasehold interest in and other rights with respect to the Airports and the Dulles Access Right-of-Way (as defined herein). See "THE AIRPORTS AUTHORITY – Federal Lease" and "INTRODUCTION – Dulles Access Right of Way."

In November, 2008, the Airports Authority assumed the responsibility of operating the Dulles Toll Road and constructing the Dulles Metrorail Project, including the rights to set and collect Tolls, and to receive and use the revenues generated by the Dulles Toll Road (the "Toll Road Revenues") to partially fund construction of the Dulles Metrorail Project and other transportation improvements within this area of Northern Virginia. See "INTRODUCTION – Transfer of Dulles Toll Road to the Airports Authority."

#### **COVID-19 Global Pandemic**

The Coronavirus ("COVID-19") global pandemic has altered the behavior of businesses and people in a manner that is having negative effects on national, regional and local economies, including areas served by the Dulles Toll Road. As a result, the pandemic has had an adverse impact on travel, including decreased traffic volume on the Dulles Toll Road. For further information regarding the COVID-19 pandemic and its impact on the Dulles Toll Road including total transactions and Toll Road Revenues, see "THE AIRPORTS AUTHORITY – COVID-19 Global Pandemic."

## **Dulles Toll Road**

The Dulles Toll Road is an eight-lane (four in each direction) tolled roadway that is approximately 13.4 miles in length, has 112 total lane miles with 27 ramp miles and operates generally between Interstate 495 and Virginia Route 28 in eastern Loudoun County, Virginia ("Loudoun County"). See "INTRODUCTION – Dulles Toll Road" and "THE DULLES TOLL ROAD."

## **Dulles Metrorail Project**

The Airports Authority, in cooperation with the Washington Metropolitan Area Transit Authority ("WMATA"), the Virginia Department of Transportation ("VDOT"), the Virginia Department of Rail and Public Transportation ("VDRPT"), Fairfax County, Virginia ("Fairfax County") and Loudoun County, has responsibility for the design and construction of a 23.1-mile extension of WMATA's 106-mile Metrorail Adopted Regional System (the "Metrorail System"), that is known as the "Silver Line" and connects the Dulles Corridor (as defined herein) in Northern Virginia with the greater Washington, D.C. metropolitan area (collectively, the "Dulles Metrorail Project"). See "THE DULLES METRORAIL PROJECT" and "Transfer to WMATA Upon Completion of Dulles Metrorail Project – Phase 2" thereunder.

Construction of the Dulles Metrorail Project was implemented in two phases – Phase 1 and Phase 2. Dulles Metrorail Project – Phase 1 was completed, and care, custody and control thereof was turned over to WMATA, during 2014. Substantial completion of the primary construction elements of the Dulles Metrorail Project – Phase 2, the Package A Project and the Package B Project (each as defined herein), has been reached and was announced by the Airports Authority on November 4, 2021 for the Package A Project and December 1, 2021 for the Package B Project. Substantial completion means that major construction has been completed and operational readiness testing can commence. WMATA acceptance of Dulles Metrorail Project – Phase 2 is anticipated to occur by the second quarter of 2022.

The operation and maintenance of Dulles Metrorail Project – Phase 1 and the associated expenses are the sole responsibility of WMATA. Upon acceptance of Dulles Metrorail Project – Phase 2 by WMATA, such expenses with respect thereto will become the sole responsibility of WMATA. Such expenses are payable from WMATA's operating and other revenues, including revenues derived from the operation of Dulles Metrorail Project. WMATA's operating and other revenues are not pledged to the payment of principal of, premium, if any, or interest on the Bonds (as defined herein).

Funding for the design and construction of the Dulles Metrorail Project is being provided by the federal government (through a Full Funding Grant Agreement), the Commonwealth of Virginia (the "Commonwealth"), the Northern Virginia Transportation Authority ("NVTA"), Fairfax County, Loudoun County and the Airports Authority (from both Toll Road Revenues and certain limited aviation revenues). For additional information on the financing plan for the Dulles Metrorail Project, see "THE DULLES METRORAIL PROJECT – Funding of the Dulles Metrorail Project."

#### **Purpose of Issue**

Proceeds of the Series 2022 Bonds, together with other funds available under the Master Indenture (as defined herein), will be used to (i) refund the outstanding Series 2014A Bonds and Series 2009C Bonds (each as defined herein), (ii) fund the Series 2022 Debt Service Reserve Requirement (as defined herein), (iii) capitalize a portion of interest payments on the Series 2022 Bonds through October 1, 2024 and (iv) pay the costs of issuance of the Series 2022 Bonds. See "REFINANCING PLAN AND ESTIMATED SOURCES AND USES OF FUNDS."

## The Series 2022 Bonds

The Series 2022 Bonds will be issued under and secured by the Master Indenture of Trust, dated as of August 1, 2009, as amended and supplemented to the date hereof (the "Master Indenture"), and the Thirteenth Supplemental Indenture of Trust, dated as of February 1, 2022 (the "Thirteenth Supplemental Indenture" and, together with the Master Indenture, the "Indenture"), each by and between the Airports Authority and Manufacturers and Traders Trust Company, as the trustee (the "Trustee"), as Second Senior Lien Bonds (as defined herein). The bonds previously issued under the Master Indenture, the Series 2022 Bonds and any additional bonds to be issued under the Master Indenture are referred to collectively in this Official Statement as the "Bonds."

*Optional Redemption.* The Series 2022A Bonds are subject to optional redemption prior to maturity by the Airports Authority on and after \_\_\_\_\_\_, 20\_\_\_, in whole or in part at any time, at a redemption price equal to the principal amount of the Series 2022 Bonds called for redemption plus interest accrued to the redemption date. See "THE SERIES 2022 BONDS – Redemption Provisions – *Optional Redemption of Series 2022A Bonds.*"

The Series 2022B Bonds are subject to optional redemption prior to maturity by the Airports Authority, in whole or in part at any time, at a redemption price, which prior to \_\_\_\_\_\_, 20\_\_ shall

equal the Make-Whole Redemption Price (as defined herein) and on or after \_\_\_\_\_\_, 20\_\_ shall equal 100% of the principal amount of the Series 2022B Bonds called for redemption plus interest accrued to the redemption date. See "THE SERIES 2022 BONDS – Redemption Provisions – *Optional Redemption of Series 2022B Bonds*."

*Mandatory Sinking Fund Redemption.* The Series 2022 Bonds are subject to mandatory sinking fund redemption at a redemption price equal to the principal amount of the Series 2022 Bonds called for redemption plus interest accrued to the redemption date as described herein under "THE SERIES 2022 BONDS – Redemption Provisions – *Mandatory Sinking Fund Redemption.*"

# Security

The Bonds are special limited obligations of the Airports Authority payable only from the Toll Road Revenues, a portion of the proceeds received from the sale of the Series 2022 Bonds, and such other revenues of the Airports Authority as may, under the Indenture, be available for such payment, including amounts that may be on deposit in certain funds, accounts and subaccounts established pursuant to the Indenture, as more fully described under "SECURITY AND SOURCES OF PAYMENT FOR THE BONDS – Flow of Funds" and "– Construction Fund." All Second Senior Lien Bonds, including the Series 2022 Bonds, are equally and ratably secured under the Indenture without preference, priority or distinction of any Second Senior Lien Bonds over any other Second Senior Lien Bonds. All Second Senior Lien Bonds, including the Series 2022 Bonds, are in all respects junior and subordinate to the First Senior Lien Bonds (as defined herein).

Under the Indenture, in addition to the pledge of Toll Road Revenues, the Airports Authority has pledged, for the benefit of the Bondholders (subject to the order of the lien priority of the Bonds held by such Bondholders), the Airports Authority's Interest in the Permit and Operating Agreement (as defined herein). The Airports Authority's Interest in the Permit and Operating Agreement includes its interest in and to the Dulles Toll Road, the Toll Road Revenues, the Toll Servicing Rights, and certain other property and rights set forth in the Permit and Operating Agreement. See "SECURITY AND SOURCES OF PAYMENT FOR THE BONDS – Lien Structure – Pledge and Lien of Indenture."

The following table sets forth the total annual Toll Road Revenues collected in the years 2011 through 2020, and in the ten month periods ending October 31, 2019, October 31, 2020 and October 31, 2021, by payment type – cash or E-ZPass, as well as violations and other revenues.

#### Total Toll Road Revenues

				Year-to-Year Increase /
Year	$\operatorname{Cash}^*$	E-ZPass	Total	(Decrease) (%)
$2\overline{011}^{**}$	\$24,025,414	\$ 70,634,124	\$ 94,659,538	N/A
2012**	22,982,620	78,613,469	101,596,089	7.3
2013**	24,581,760	102,478,081	127,059,841	25.1
2014**	25,115,344	123,537,397	148,652,741	17.0
2015	23,869,669	127,562,090	151,431,759	1.9
2016	22,877,302	128,853,731	151,731,033	0.2
2017	21,942,283	130,080,380	152,022,663	0.2
2018	19,881,832	131,515,100	151,396,932	(0.4)
2019**	23,063,633	174,343,696	197,407,329	30.4
2020	11,288,634	110,798,012	122,086,646	(38.2)
2019§	19,220,523	146,663,768	165,884,291	N/A
2020§	9,236,010	93,163,153	102,399,163	(38.3)
2021§	10,652,871	108,522,099	119,174,970	16.4
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\* Includes violations and other revenues.

\*\* Toll rate increases effective January 1 of 2011, 2012, 2013, 2014 and 2019.

 $\$  For the ten month period ending October 31.

Source: Records of the Airports Authority.

#### **Security Lien Structure**

The Outstanding First Senior Lien Revenue Bonds and any additional First Senior Lien Revenue Bonds issued by the Airports Authority hereafter (collectively, the "First Senior Lien Bonds") are payable primarily from, and secured by a lien on and pledge of, the Toll Road Revenues, subject only to the prior payment of Operation and Maintenance Expenses. The pledge of the Toll Road Revenues securing the First Senior Lien Bonds is senior to the pledge of Toll Road Revenues securing the Outstanding Second Senior Lien Revenue Bonds, including the Series 2022 Bonds, and any additional Second Senior Lien Revenue Bonds issued by the Airports Authority hereafter (collectively, the "Second Senior Lien Bonds"). The pledge of Toll Road Revenues securing the Second Senior Lien Bonds is senior to the pledge of Toll Road Revenues securing the Outstanding Subordinate Lien Revenue Bonds and any additional Subordinate Lien Revenue Bonds issued by the Airports Authority hereafter (collectively, the "Subordinate Subordinate Lien Revenue Bonds issued by the Airports Authority hereafter (collectively, the "Subordinate Lien Bonds"). The pledge of Toll Road Revenues securing the Subordinate Lien Bonds is senior to the pledge of Toll Road Revenues securing any Junior Lien Revenue Bonds if issued by the Airports Authority hereafter (collectively, the "Junior Lien Bonds").

The Airports Authority had \$3.354 billion principal amount of bonds Outstanding as of October 1, 2021 for the Dulles Metrorail Project and for certain improvements to the Dulles Toll Road and within the Dulles Corridor, consisting of \$163.1 million principal amount of First Senior Lien Bonds, \$1.772 billion principal amount of Second Senior Lien Bonds and \$1.419 billion principal amount of Subordinate Lien Bonds (each as defined herein).

#### **Additional Bonds**

The Indenture permits the Airports Authority to issue additional Bonds from time to time to pay or provide for the payment of the Cost (as defined in APPENDIX A hereto) of the Dulles Metrorail Project or

the Capital Improvements (as defined herein), to refund all or a portion of a Series of Bonds, or for any combination of such purposes.

*New Money Bonds*. Under the Indenture, the Airports Authority may issue additional Bonds, other than Bonds issued pursuant to a Safety Order (as defined herein), only if, in addition to satisfying certain other requirements, the Airports Authority delivers to the Trustee evidence of compliance with the following additional Bonds historical and/or projected coverage tests, all as more fully described herein under "SECURITY AND SOURCES OF PAYMENT FOR THE BONDS – Additional Bonds":

- <u>First Senior Lien Bonds</u>. (1) The Net Revenues for (a) the most recent Fiscal Year for which audited statements are available or (b) a 12 consecutive month period in the immediately prior 18 months (the most recent Fiscal Year or such 12 consecutive month period being herein referred to as the "Historical Period") were at least 200% of the Maximum Annual Debt Service for all then Outstanding First Senior Lien Bonds and the additional First Senior Lien Bonds proposed to be issued; <u>and</u> (2) the projected Net Revenues through final maturity are sufficient to meet the Rate Covenant (as defined in APPENDIX A hereto);
- <u>Second Senior Lien Bonds</u>. (1) The Net Revenues for the Historical Period were at least 135% of the average Annual Debt Service for all then Outstanding First Senior Lien Bonds and Second Senior Lien Bonds and the additional Second Senior Lien Bonds proposed to be issued; or (2) the projected Net Revenues through final maturity are sufficient to meet the Rate Covenant;
- <u>Subordinate Lien Bonds</u>. (1) The Net Revenues for the Historical Period were at least 120% of the average Annual Debt Service for all then Outstanding First Senior Lien Bonds, Second Senior Lien Bonds and Subordinate Lien Bonds and the additional Subordinate Lien Bonds proposed to be issued; or (2) the projected Net Revenues through final maturity are sufficient to meet the Rate Covenant; and
- <u>Junior Lien Bonds</u>. (1) The Net Revenues for the Historical Period were at least 100% of the average Annual Debt Service for all then Outstanding Bonds and the additional Junior Lien Bonds proposed to be issued; <u>or</u> (2) the projected Net Revenues through final maturity are sufficient to meet the Rate Covenant.

*Refunding Bonds*. Under the Indenture, without complying with the additional Bonds historical and/or projected coverage tests described above, the Airports Authority may from time to time issue additional Bonds for the purpose of refunding all or a portion of one or more Series of Bonds; provided that the Maximum Annual Debt Service (taking into account the issuance of the refunding Bonds and the application of the proceeds thereof) would not be more than the Maximum Annual Debt Service immediately prior to the issuance of such refunding Bonds.

See "SECURITY AND SOURCES OF PAYMENT FOR THE BONDS – Additional Bonds" herein and APPENDIX B – "SUMMARY OF THE INDENTURE" for a more detailed description of provisions that apply to the issuance of additional Bonds, including the issuance of Bonds required to be issued under a Safety Order.

## **Rate Covenant**

The Airports Authority has covenanted in the Master Indenture that it will establish, charge and collect Tolls for the privilege of traveling on the Dulles Toll Road at rates sufficient to meet the Operation

and Maintenance Expenses and produce Net Revenues in any Fiscal Year, and in each Fiscal Year thereafter, that are at least:

- (i) 200% of the Maximum Annual Debt Service with respect to all Outstanding First Senior Lien Bonds for such Fiscal Year;
- (ii) 135% of the Annual Debt Service with respect to all Outstanding First Senior Lien Bonds and all Outstanding Second Senior Lien Bonds for such Fiscal Year;
- (iii) 120% of the Annual Debt Service with respect to all Outstanding First Senior Lien Bonds, all Outstanding Second Senior Lien Bonds and all Outstanding Subordinate Lien Bonds for such Fiscal Year; and
- (iv) 100% of the Annual Debt Service with respect to all Outstanding Bonds and all other obligations of the Airports Authority secured by Toll Road Revenues for such Fiscal Year.

See "SECURITY AND SOURCES OF PAYMENT FOR THE BONDS – Rate Covenant" for a more detailed description of the existing Rate Covenant.

#### **Estimated Debt Service Coverage**

The Airports Authority has prepared a table that sets forth the estimated annual Net Revenues and annual debt service requirements for the Series 2022 Bonds and all Bonds Outstanding after the issuance of the Series 2022 Bonds and the application of the proceeds thereof, including to the refunding of the Refunded Bonds (as defined herein). See "PROJECTED ANNUAL DEBT SERVICE REQUIREMENTS" and "ESTIMATED DEBT SERVICE COVERAGE ON BONDS OUTSTANDING AFTER ISSUANCE OF THE SERIES 2022 BONDS" set forth herein under "PROSPECTIVE FINANCIAL INFORMATION." The Net Revenues of the Airports Authority are forecast to equal or exceed the Rate Covenant in each year of the forecast period.

#### Ratings

The Series 2022 Bonds have been assigned the long-term ratings of "Baa1" (stable outlook) by Moody's Investors Service, Inc. and "A-" (stable outlook) by S&P Global Ratings. See "RATINGS."

## **Bond Insurance**\*

Subject to a determination by the Airports Authority to obtain bond insurance, the scheduled payment of principal of and interest on all or a portion of the Series 2022 Bonds when due will be guaranteed under an insurance policy to be issued concurrently with the delivery of the Series 2022 Bonds by Assured Guaranty Municipal Corp. See "THE SERIES 2022 BONDS – Bond Insurance."

<sup>\*</sup> Preliminary, subject to change.

#### **OFFICIAL STATEMENT**

#### relating to

#### \$739,815,000\* DULLES TOLL ROAD REVENUE REFUNDING BONDS, SERIES 2022 (Dulles Metrorail and Capital Improvement Projects) consisting of

\$418,640,000\* Dulles Toll Road Second Senior Lien Revenue Refunding Bonds, Series 2022A \$321,175,000<sup>\*</sup> Dulles Toll Road Second Senior Lien Revenue Refunding Bonds, Series 2022B (Federally Taxable)

#### **INTRODUCTION**

#### General

This Official Statement is furnished in connection with the issuance by the Metropolitan Washington Airports Authority (the "Airports Authority") of (i) \$418,640,000<sup>\*</sup> aggregate principal amount of its Dulles Toll Road Second Senior Lien Revenue Refunding Bonds, Series 2022A (the "Series 2022A Bonds") and (ii) \$321,175,000<sup>\*</sup> aggregate principal amount of its Dulles Toll Road Second Senior Lien Revenue Refunding Bonds, Series 2022B (Federally Taxable) (the "Series 2022B Bonds" and collectively with the Series 2022A Bonds, the "Series 2022 Bonds"). Unless otherwise defined in this Official Statement, all terms used herein shall have the meanings set forth in APPENDIX A – "Definitions."

#### **The Airports Authority**

The Airports Authority was established in 1986 to operate, maintain, improve, develop, protect and promote Ronald Reagan Washington National Airport ("Reagan National") and Washington Dulles International Airport ("Dulles International" and, collectively with Reagan National, the "Airports"). Pursuant to an Agreement and Deed of Lease between the United States of America and the Airports Authority, effective June 7, 1987, as amended to the date hereof (the "Federal Lease"), the Airports Authority assumed operating responsibility for the Airports and obtained a leasehold interest in and other rights with respect to the Airports and the Dulles Access Right-of-Way (as defined herein). See "THE AIRPORTS AUTHORITY – Federal Lease" and "Dulles Access Right-of-Way" below.

In November, 2008, the Airports Authority assumed the responsibility of operating the Dulles Toll Road and constructing the Dulles Metrorail Project (each as defined herein), including the rights to set and collect Tolls, and to receive and use the revenues generated by the Dulles Toll Road (the "Toll Road Revenues") to partially fund construction of the Dulles Metrorail Project and other transportation improvements within this area of Northern Virginia. See "Transfer of Dulles Toll Road to the Airports Authority" below.

#### **Dulles Access Right-of-Way**

In addition to providing to the Airports Authority a leasehold interest in the Airports, the Federal Lease conveyed to the Airports Authority a leasehold interest in and operational control over (subject to then existing easements discussed below) a 16.2-mile stretch of land, ranging in width from 125 to 400 feet

<sup>\*</sup> Preliminary, subject to change.

and running between Interstate 66 ("I-66"), in eastern Fairfax County, Virginia ("Fairfax County"), and the eastern boundary of Dulles International (the "Dulles Access Right-of-Way").

#### **Dulles International Airport Access Highway**

A limited-access, non-toll highway, known as the Dulles International Airport Access Highway (the "DIAAH"), operates within the entire 16.2-mile length of the Dulles Access Right-of-Way, from I-66 to Dulles International. It is generally a four-lane highway, with two lanes running in each direction.

The Airports Authority has operated and maintained the portion of the DIAAH that lies between Interstate 495 ("I-495," which is also known as the Capital Beltway) and Dulles International since 1987. This segment of the DIAAH was constructed by the federal government, opened in 1962, and was operated by the federal government before responsibility for the road was assumed by the Airports Authority. Only users of Dulles International, certain public mass transit vehicles and persons with business at Dulles International may use this portion of the DIAAH.

The remaining portion of the DIAAH, generally located between I-66 and I-495, was constructed, and has been operated and maintained since its opening in 1984, by the Virginia Department of Transportation ("VDOT") pursuant to a deed of easement granted by the federal government to the Commonwealth of Virginia (the "Commonwealth") on November 23, 1983 for a term of 99 years (the "November 1983 Easement"). This easement requires the Commonwealth to preserve the median in this part of the DIAAH for future rail service to Dulles International. The Airports Authority's leasehold interest in this property under the Federal Lease is subject to the November 1983 Easement.

## **Dulles Toll Road**

On January 10, 1983, the federal government granted a separate deed of easement, with a term of 99 years, to the Commonwealth (the "January 1983 Easement"). The January 1983 Easement covers certain property within the Dulles Access Right-of-Way, generally between I-495 and Virginia Route 28, adjacent to Dulles International. The January 1983 Easement was granted to enable the Commonwealth to construct and operate a limited access toll highway, the Omer L. Hirst – Adelard L. Brault Expressway, also known as the Dulles Toll Road (the "Dulles Toll Road"). The Airports Authority's leasehold interest under the Federal Lease in the property occupied by the Dulles Toll Road is subject to the January 1983 Easement. On a number of occasions following its establishment, the Airports Authority has granted to the Commonwealth easements (with a term equal to the term of the Federal Lease) to certain additional property within the Dulles Access Right-of-Way to enable the Commonwealth to widen and make other improvements to the Dulles Toll Road.

Today, the Dulles Toll Road is an eight-lane (four in each direction) tolled roadway that is approximately 13.4 miles in length, has 112 total lane and 27 ramp miles, and operates generally between I-495 and Virginia Route 28 in eastern Loudoun County, Virginia ("Loudoun County"). Its eastbound and westbound lanes operate in the outer portions of the Dulles Access Right-of-Way, and are separated by the DIAAH, which runs along the center of the Dulles Access Right-of-Way. The Dulles Toll Road was constructed by VDOT and opened to vehicle traffic in October 1984. It provides access to well-established and rapidly-growing activity centers in the Northern Virginia region, such as Tysons Corner and the Reston-Herndon area in Fairfax County, Dulles International and eastern Loudoun County. See "THE DULLES TOLL ROAD."

#### **Transfer of Dulles Toll Road to the Airports Authority**

On December 20, 2005, the Airports Authority proposed to the Commonwealth that the Airports Authority (i) assume the responsibility for operating and maintaining the Dulles Toll Road and constructing the Dulles Metrorail Project (as defined herein) and (ii) use revenues from the Dulles Toll Road to partially fund construction of the Dulles Metrorail Project.

In accordance with the Master Transfer Agreement relating to the Dulles Toll Road and the Dulles Corridor Metrorail Project (the "Transfer Agreement"), and the Dulles Toll Road Permit and Operating Agreement, as amended (the "Permit and Operating Agreement"), each dated December 29, 2006, and each by and between the Airports Authority and VDOT, on November 1, 2008, VDOT (i) granted to the Airports Authority a permit to operate the Dulles Toll Road, to set and collect Tolls, and to receive and use the Toll Road Revenues (as defined herein), and (ii) assigned to the Airports Authority, for the 50-year term of the Permit and Operating Agreement, substantially all of the right and interest of VDOT in and to the Dulles Toll Road (but conveyed no real property interest in any part of the Dulles Toll Road), as well as certain liabilities of the Commonwealth relating to the Dulles Toll Road.

Under the Permit and Operating Agreement, the Airports Authority is authorized to use Toll Road Revenues to provide security and payment for the Bonds (as defined herein) that will finance the construction of three types of projects within the Dulles Corridor: (i) the Dulles Metrorail Project; (ii) extensions, modifications and improvements to the Dulles Toll Road; and (iii) other transportation improvements within the Dulles Corridor (excluding the DIAAH) (collectively, the "Capital Improvements"). See "THE DULLES METRORAIL PROJECT" and "Funding of the Dulles Metrorail Project" thereunder.

The Permit and Operating Agreement may be terminated by either party upon the occurrence of certain events. A termination of the Permit and Operating Agreement could result in the extinguishment of the Airports Authority's interest therein, including the right to receive and use the Toll Road Revenues to pay the principal of and interest on the Bonds. See "TERMINATION AND EXPIRATION OF THE PERMIT AND OPERATING AGREEMENT – Termination of Permit and Operating Agreement."

For a more detailed summary of the Transfer Agreement and the Permit and Operating Agreement, see APPENDIX C – "SUMMARIES OF THE MASTER TRANSFER AGREEMENT AND THE PERMIT AND OPERATING AGREEMENT."

#### **Dulles Metrorail Project**

In 2008, the Airports Authority, in cooperation with the Washington Metropolitan Area Transit Authority ("WMATA"), VDOT, the Virginia Department of Rail and Public Transportation ("VDRPT"), Fairfax County and Loudoun County, formally assumed responsibility for the design and construction of the Dulles Metrorail Project, a 23.1-mile extension of WMATA's 106-mile Metrorail Adopted Regional System (the "Metrorail System") connecting the Dulles Corridor in Northern Virginia with the greater Washington, D.C. metropolitan area. The Dulles Metrorail Project, known as the "Silver Line," branches off from the existing Metrorail Orange Line near the West Falls Church Station in Fairfax County, proceeds along the median of the DIAAH, departs from the median to run through Tysons Corner via Virginia State Routes 123 and 7, then proceeds again along the DIAAH median to Dulles International and beyond Dulles International to Route 772 in Loudoun County.

The first, 11.7-mile phase of the Dulles Metrorail Project ("Dulles Metrorail Project – Phase 1") was completed with a final construction budget of \$2.982 billion, and care, custody and control thereof was turned over to WMATA in 2014. The second phase of the Dulles Metrorail Project ("Dulles Metrorail

Project – Phase 2") is an approximately 11.4-mile extension of the Metrorail System from Wiehle Avenue in western Fairfax County, through Dulles International, to Route 772 in eastern Loudoun County. Dulles Metrorail Project – Phase 2 includes six new stations, one of which is located at Dulles International, and a rail yard and maintenance facility which are also located on Dulles International property. The Airports Authority currently estimates the cost of Dulles Metrorail Project – Phase 2 at \$2.778 billion, which includes approximately \$133 million in unallocated contingency as of November 30, 2021. Substantial completion of the primary construction elements of the Dulles Metrorail Project – Phase 2, the Package A Project and the Package B Project (each as defined herein), has been reached and was announced by the Airports Authority on November 4, 2021 for the Package A Project and December 1, 2021 for the Package B Project. Substantial completion means that major construction has been completed and operational readiness testing can commence. WMATA acceptance of Dulles Metrorail Project – Phase 2 is anticipated to occur by the second quarter of 2022. See "THE DULLES METRORAIL PROJECT."

The operation and maintenance of Dulles Metrorail Project – Phase 1, and the associated expenses, are the sole responsibility of WMATA. Upon completion of Dulles Metrorail Project – Phase 2 and the acceptance thereof by WMATA, such expenses with respect thereto will also become the sole responsibility of WMATA. Such expenses are payable from WMATA's operating and other revenues (including revenues derived from the operation of Dulles Metrorail Project). WMATA's operating and other revenues are not pledged to the payment of principal of or premium, if any and interest on the Bonds.

## The Series 2022 Bonds

The Series 2022 Bonds will be issued under and secured by the Master Indenture of Trust, dated as of August 1, 2009, as amended and supplemented to the date hereof (the "Master Indenture") and the Thirteenth Supplemental Indenture of Trust, dated as of February 1, 2022 (the "Thirteenth Supplemental Indenture" and, together with the Master Indenture, the "Indenture"), each by and between the Airports Authority and Manufacturers and Traders Trust Company, as the trustee (the "Trustee"), as Second Senior Lien Bonds. The bonds previously issued under the Master Indenture, the Series 2022 Bonds and any additional bonds to be issued under the Master Indenture, as the same may be further supplemented, are referred to collectively in this Official Statement as the "Bonds."

The Bonds are special, limited obligations of the Airports Authority payable from and secured by the Toll Road Revenues (as defined herein) and certain specified funds and accounts created pursuant to the Indenture. See "SECURITY AND SOURCES OF PAYMENT FOR THE BONDS – General." All Second Senior Lien Bonds, including the Series 2022 Bonds, are equally and ratably secured under the Indenture without preference, priority or distinction of any Second Senior Lien Bonds over any other Second Senior Lien Bonds. All Second Senior Lien Bonds, including the Series 2022 Bonds, are in all respects junior and subordinate to the First Senior Lien Bonds.

Proceeds of the Series 2022 Bonds, together with other funds available under the Master Indenture, will be used to (i) refund the outstanding Series 2014A Bonds and Series 2009C Bonds (each as defined herein), (ii) fund the Series 2022 Debt Service Reserve Requirement (as defined herein), (iii) capitalize a portion of interest payments on the Series 2022 Bonds through October 1, 2024 and (iv) pay the costs of issuance of the Series 2022 Bonds. See "REFINANCING PLAN AND ESTIMATED SOURCES AND USES OF FUNDS."

The Series 2022 Bonds are subject to optional and mandatory sinking fund redemption prior to maturity as more fully described herein. See "THE SERIES 2022 BONDS – Redemption Provisions."

#### **Investment Considerations**

The Series 2022 Bonds may not be suitable for all investors. Prospective purchasers of the Series 2022 Bonds should read this entire Official Statement, including the appendices hereto and give careful consideration to certain investment considerations including those affecting the funding and construction of the Dulles Metrorail Project – Phase 2, the collection of Toll Road Revenues, the termination of the Permit and Operating Agreement and the operation and maintenance of the Dulles Toll Road. See "INVESTMENT CONSIDERATIONS."

#### THE AIRPORTS AUTHORITY

## General

The Airports Authority is a public body politic and corporate, established in 1986 with the consent of the Congress of the United States, by the District of Columbia Regional Airports Authority Act of 1985, as amended, codified at D.C. Code §9-901 et seq. (2001) (the "District Act"), and Chapter 598 of the Acts of Virginia General Assembly of 1985, as amended, codified at Va. Code §5.1-152 et seq. (2001) (the "Virginia Act" and, together with the District Act, the "Acts"). The Airports Authority is independent of the District of Columbia (the "District"), the Commonwealth and the federal government.

The Airports Authority has the powers and authority set forth in the Acts, including without limitation the authority to (a) operate, maintain, develop, promote and improve, and adopt rules and regulations pertaining to the use, maintenance and operation of, the Airports, including the area within the Dulles Access Right-of-Way, (b) issue revenue bonds for the construction, financing and placing in service of Airport facilities, including facilities within the Dulles Access Right-of-Way, (c) fix, charge, revise and collect tolls, rates, fees, rentals and other charges for the use of Airport facilities, and (d) undertake all acts and things necessary or convenient to carry out its express powers. The Airports Authority has no taxing power.

#### **Board of Directors**

The Acts provide that the Airports Authority shall consist of a seventeen (17) member Board of Directors (the "Board"). Seven (7) members are appointed by the Governor of Virginia subject to confirmation by the Virginia General Assembly, four (4) are appointed by the Mayor of the District of Columbia (the "Mayor") subject to confirmation by the Council of the District of Columbia (the "Council"), three (3) are appointed by the Governor of Maryland, and three (3) are appointed by the President of the United States with the advice and consent of the United States Senate. Presently, the three seats appointed by the President of the United States are vacant. Directors serve staggered six-year terms without compensation and may be reappointed to one additional term.

The current members of the Airports Authority's Board are:

Name	Appointing Authority	Term Expires
William E. Sudow, Chairperson	Governor of Virginia	October 11, 2024*
Thorn Pozen, Vice Chairperson	Mayor of the District of Columbia	January 5, 2027*
Judith N. Batty	Mayor of the District of Columbia	October 4, 2024
John A. Braun	Governor of Virginia	November 23, 2024
Albert J. Dwoskin	Governor of Virginia	October 11, 2024
Honorable Katherine K. Hanley	Governor of Virginia	November 23, 2026*
Honorable Robert W. Lazaro, Jr.	Governor of Virginia	November 23, 2022
Mamie Mallory	Governor of Maryland	November 23, 2024
Timothy Poole	Governor of Maryland	November 23, 2026
Warner H. Session	Mayor of the District of Columbia	January 5, 2023*
Honorable David G. Speck	Governor of Virginia	November 23, 2026*
Honorable J. Walter Tejada	Governor of Virginia	November 23, 2024*
Mark Uncapher	Governor of Maryland	November 30, 2022
Joslyn N. Williams	Mayor of the District of Columbia	January 5, 2025*
Vacant	President of the United States	-
Vacant	President of the United States	-
Vacant	President of the United States	-
* Second Term.		

The Board operates through several committees that include the Standing Committees of Business Administration, Dulles Corridor, Finance, and Strategic Development, and the Committees of Ethics Review, Executive and Governance, Human Resources, Nominations, Risk Management and Sustainability. Primary oversight over financing activities is provided by the Finance and the Risk Management Committees. All Board members are members of one or more Standing Committees.

#### **Senior Management**

Airports Authority operations are conducted under the supervision of Airports Authority management. The current senior management of the Airports Authority are listed below.

**JOHN E. POTTER.** Mr. Potter is President and Chief Executive Officer of the Airports Authority. Prior to assuming this position in July 2011, Mr. Potter served as the Postmaster General of the United States for ten years where he worked to modernize management of the over 500,000 employee organization. Prior to serving as Postmaster General, Mr. Potter served in a number of positions at the United States Postal Service, including Manager of Washington—Baltimore—Northern Virginia Field Operations, Senior Vice President of Labor Relations, Senior Vice President of Operations Support, and Executive Vice President and Chief Operating Officer. Mr. Potter is a graduate of Fordham University (B.A., Economics, 1977) and Massachusetts Institute of Technology (M.S.M., Sloan Fellow, 1995).

**CHRYSSA WESTERLUND.** Ms. Westerlund is Acting Executive Vice President and Chief Revenue Officer. Prior to assuming this position, Ms. Westerlund served as Vice President of Marketing and Consumer Strategy, which includes marketing, digital strategy, revenue strategy and airport concessions, and was Deputy Vice President of Planning and Revenue Development. Before joining the Airports Authority in January of 2015, Ms. Westerlund served as a Global Alliance Director for Hewlett-Packard's IT services division and focused on growing revenue through the development of new partners and services. She also spent a number of years as a management consultant providing strategic advisory services to Fortune 500 companies. Ms. Westerlund is a graduate of the University of Texas in Austin (B.B.A., Accounting, 1992) and the University of Pennsylvania's Wharton School of Business (M.B.A., Marketing, 1997) and is a Certified Public Accountant in Texas. **JOHNNA S. SPERA**. Ms. Spera is Senior Vice President and General Counsel for the Airports Authority. Since joining the Airports Authority in November 2009, she has served in numerous positions, including Associate General Counsel; Acting Vice President, Office of Supply Chain Management; and Deputy Vice President and Deputy General Counsel. Immediately prior to joining the Airports Authority, Ms. Spera was the Regional General Counsel for Toll Brothers, Inc. Before that, she spent 17 years within the Charles E. Smith Companies organization, where she served in various roles, including Vice President and General Counsel of Charles E. Smith Management, Inc. and Senior Vice President and General Counsel of Consolidated Engineering Services, Inc., which was acquired by EMCOR Facilities Services, Inc. in 2002. Ms. Spera has served on the boards of several non-profit organizations in Northern Virginia. She is a graduate of the University of Virginia (B.A., Government, 1985) and the University of Virginia School of Law (J.D., 1988).

ANDREW T. ROUNTREE. Mr. Rountree is Senior Vice President for Finance and Chief Financial Officer of the Airports Authority. Prior to assuming this position in December, 2010, Mr. Rountree served as the Acting Vice President for Finance and Chief Financial Officer and was the Deputy Chief Financial Officer beginning in 2005. Prior to joining the Airports Authority, Mr. Rountree was appointed as the Director of Finance for the City of Richmond, Virginia in September 2000. While with the City of Richmond, he also served as Deputy Director of Finance from 1998 to 2000, and as the Chief of the License, Assessment, and Tax Audit beginning in 1996. Mr. Rountree served in a number of positions with the Commonwealth of Virginia, including Assistant Controller with the Department of Information Technology from 1990 to 1996 and Audit Director with the Auditor of Public Accounts, the legislatively appointed auditor for the Commonwealth, until 1990. Mr. Rountree currently serves on the Board Finance Committee for Airports Council International-North America (ACI-NA), and is Past-Chair of the ACI-NA Finance Steering Committee. He was recognized in 2017 as ACI-NA Finance Professional of the Year for Large Hub Airports. Mr. Rountree is a graduate of Virginia Commonwealth University (B.S., Economics, 1982) and is a Certified Public Accountant in the Commonwealth of Virginia.

**ROGER NATSUHARA.** Mr. Natsuhara is Senior Vice President and Chief Engineer and Development Officer, responsible for the Airports Authority's Capital Construction Program, Capital Improvements Program, Environmental, Sustainability and Real Estate Development programs for the Airports Authority and the Dulles Metrorail Project. He joined the Airports Authority in October 2014. Mr. Natsuhara has managed large capital programs since 1989 when he was assigned as an Assistant Resident Officer in Charge of Construction at Marine Corps Air Station El Toro. Prior to joining the Airports Authority, he was the Acting Assistant and Principal Deputy Assistant Secretary of the Navy for Energy, Installations and Environment. His responsibilities included overseeing all world-wide construction policies for the Navy and the Marine Corps. He is a graduate of the University of California, Berkeley (B.S., Civil Engineering, 1980) and Naval Postgraduate School (M.S., Financial Management, 1989).

**ANTHONY VEGLIANTE**. Mr. Vegliante is Senior Vice President for Human Resources and Administrative Services. He joined the Airports Authority in May 2013. Prior to joining the Airports Authority, Mr. Vegliante was the Chief Human Resources Officer for the United States Postal Service, where he managed the human resources function for more than 500,000 employees nationwide. Prior to that assignment Mr. Vegliante was the Vice President for Labor Relations and participated in 20 national labor negotiations at the United States Postal Service. In 2010, Mr. Vegliante was elected a fellow of the National Academy of Human Resources, the first public sector executive to receive the honor. He is a graduate of the University of Rhode Island (B.S., Economics, 1974), the University of Southern California Executive Management Program, the University of Bridgeport (M.S., Business Education, 1979), and the University of New Haven (M.S., Industrial Relations, 1997).

**ANDREW HASCALL**. Mr. Hascall is Acting Senior Vice President for Dulles Corridor Metrorail Project. He joined the Airports Authority in August 2020. Prior to joining the Airports Authority, Mr. Hascall held a variety of senior leadership positions with the Department of Navy managing design and construction projects in various U.S. and overseas locations. He is a graduate of Illinois Institute of Technology (B.S., Mechanical Engineering, 1992), and the Naval Postgraduate School (M.B.A., 2003). He is a registered Professional Engineer in the State of Missouri.

**GOUTAM KUNDU**. Mr. Kundu is Senior Vice President for Technology and Chief Information Officer. He joined the Airports Authority in June 2013. Prior to joining the Airports Authority, Mr. Kundu held the executive positions of Chief Information Officer at the United States Mint; Vice President at NIIT Technologies, a global IT service and software company; Chief Information Officer at the Washington Suburban Sanitary Commission; and Chief Technology Officer at Farm Bureau Insurance. He is a graduate of the University of Calcutta (B.S., Computer Engineering, 1993) and the Indiana University Kelley School of Business (M.B.A., 1998).

**MONICA R. HARGROVE**. Ms. Hargrove is Vice President and Secretary of the Airports Authority. Prior to assuming this position in March 2016, Ms. Hargrove served as Deputy General Counsel of the Airports Authority since November 2013. Before joining the Airports Authority, Ms. Hargrove served as General Counsel of Airports Council International-North America and as a corporate attorney with US Airways for more than 19 years, serving in the positions of Senior Attorney, Assistant General Counsel and Associate General Counsel. Ms. Hargrove began her legal career as a trial attorney in the Antitrust Division of the United States Department of Justice in 1979. She currently serves as the Immediate Past-Chair of the American Bar Association's Forum on Air & Space Law, and she served as the 2013 Chair of the Federal Bar Association's Transportation & Transportation Security Law Section. She is a member of the District of Columbia and Virginia State Bars. Ms. Hargrove is a graduate of Dartmouth College (B.A., Government, 1976) and the University of Michigan Law School (J.D., 1979).

**THOMAS BEATTY**. Mr. Beatty is Vice President for Engineering, responsible for the planning, design, construction, environmental, building code compliance and the quality assurance and safety programs for all capital programs on Airports Authority property. He also serves as the Safety Security Oversight Administrator for the Dulles AeroTrain. Mr. Beatty joined the Airports Authority in January 1997 as an Environmental Program Engineer. He was promoted to Manager Building Codes and Environmental Department in January 2017, to Deputy Vice President Office of Engineering in September 2019, and to Vice President Office of Engineering in December 2021. Prior to joining the Airports Authority, he served as a deputy program manager for a design and environmental firm. Mr. Beatty is a graduate of Pennsylvania State University (B.S., Engineering and Science, 1988). He is also a registered Professional Engineer in the Commonwealth of Virginia, a Certified Building Official and holds several environmental certifications.

**MARILOU PARAYAOAN**. Ms. Parayaoan is Acting Vice President for Audit. Before assuming her position in December 2021, Ms. Parayaoan served as an Audit Manager with the Airports Authority since August 2017. Ms. Parayaoan joined the Airports Authority in February 2010, managed operational, financial and information technology audits. Her background includes internal audit and public accounting roles with PWC and TCBA PC, a national accounting and consulting firm and senior manager for Equitable PCIBank, the third largest bank in the Philippines. Ms. Parayaoan is a Certified Public Accountant in Virginia and California, Certified Internal Auditor, Certified Information Systems Auditor, Certified Fraud Examiner, Certified Government Financial Manager, Chartered Global Management Accountant, and holds a Certificate in Airside Safety. Ms. Parayaoan currently serves on the Board Audit Committee for the Institute of Internal Auditors DC Chapter and chair the Board Membership Committee for the Association of Airports Internal Auditors. Ms. Parayaoan is a graduate of Polytechnic University of the Philippines (Bachelor of Accountancy, 1985). **JULIA T. HODGE**. Ms. Hodge is Vice President for Supply Chain Management, responsible for the Airports Authority's Procurement and Contracts, Supplier Diversity, and Property Management functions. She joined the Airports Authority in September 2009 and held leadership positions in the Office of Finance, Office of Audit and Office of Corporate Risk and Strategy, where she served as the Deputy Vice President responsible for organization-wide governance, compliance, and strategic planning. Ms. Hodge was an auditor and management consultant with PricewaterhouseCoopers, LLP for ten years prior to joining the Airports Authority. A Certified Public Accountant in the Commonwealth of Virginia, she is a graduate of Boston College (B.S., Accounting, 2000) and Georgetown University (E.M.L., 2012).

**J. PAUL MALANDRINO, JR.** Mr. Malandrino is Vice President and Airport Manager at Reagan National Airport. Mr. Malandrino was the Federal Security Director at Thurgood Marshall Baltimore/Washington International Airport for almost four years before assuming his current position in July 2006. Prior to that time, he served as Manager of the Operations Department at Dulles International for six years. He spent most of his Air Force career flying various models of the F-111 fighter bomber aircraft. One of his many assignments was serving as the Commanding Officer of the famed 380<sup>th</sup> Bombardment Wing in Plattsburgh, New York, flying FB-111 and KC-135 aircraft. Mr. Malandrino retired from the United States Air Force in 1996, after spending 30 years on active duty. Mr. Malandrino is a graduate of the Citadel (B.A. History, 1965), Golden Gate University (M.P.A., 1976) and the United States Air Force War College (1981).

**RICHARD GOLINOWSKI**. Mr. Golinowski is Vice President and Airport Manager at Dulles International, which includes the Airport, Dulles Toll Road and Dulles International Airport Access Highway. Prior to assuming this position in September 2021, he served as Vice President for Operations Support. He joined the Airports Authority in February 1995 and previously held management positions at Reagan National Airport for Resource Support, Engineering and Maintenance, and Airport Operations. Prior to joining the Airports Authority, he worked as a consulting engineer and served as the manager of the facilities engineering group for his firm. Mr. Golinowski is a graduate of Virginia Tech (B.S. Engineering, 1987) and is a registered Professional Engineer in the Commonwealth of Virginia.

**BRYAN NORWOOD**. Mr. Norwood is Vice President for Public Safety. He joined the Airports Authority in April 2014. He began his law enforcement career in 1989 as a police officer in New Haven, Connecticut. After rising through the ranks to Assistant Chief in 2002, he was appointed Chief of Police in Bridgeport, Connecticut, in 2006, and Chief of Police in Richmond, Virginia, in 2008. Mr. Norwood also was a special agent for the United States Drug Enforcement Administration from 1998 to 1999. He was chairman of the Central Virginia Law Enforcement Chief Executive Association and is a member of the International Association of Chiefs of Police, the Virginia Association of Chiefs of Police, and the National Organization of Black Law Enforcement Executives. He is a graduate of Hampton University (B.A. in Psychology, 1988) and New Haven Police Academy (1989).

**CHRISTOPHER PAOLINO**. Mr. Paolino is Acting Vice President for Operations Support. In addition to this position, Mr. Paolino continues to serve as Deputy Vice President for Strategy and Business Transformation & Performance, which includes management of corporate strategic planning and enterprise risk, as well as oversight of the Airports Authority's HCM and Financial ERP system. Mr. Paolino joined the Airports Authority in 2013 as the head of public affairs. He subsequently served as Director of IT Business Relationship Management, working to align business needs with technology objectives, and served as the project manager for the implementation of the full-suite ERP system, launching on-time and under budget in 2018. Prior to joining the Airports Authority, he served in a variety of public sector capacities, including in the Office of the Governor of Rhode Island, the Washington, D.C. office of a Member of Congress, and the Office of the Secretary of the U.S. Department of the Interior. Mr. Paolino is a graduate of Dartmouth College (B.A., Philosophy, 2000) and the Raymond A. Mason School of Business at the College of William & Mary (M.B.A., 2021).

**TANISHA LEWIS**. Ms. Lewis is Vice President for Diversity, Inclusion and Social Impact. Prior to assuming this position, she served in key human resources roles, most recently as manager of human capital management, performance and business readiness. Ms. Lewis has led the implementation of the Airports Authority's human capital management system, created robust succession planning and development programs for critical positions, and developed the Corporate Social Responsibility program. Ms. Lewis is a graduate of George Washington University (B.A. Liberal Arts 1999) and the Catholic University of America (M.A. Human Resource Management, 2015).

**DAVID R. MOULD**. Mr. Mould is Vice President for Communications and Government Affairs, which includes corporate communications, media relations, employee communications, government relations, corporate relations and noise information programs. He joined the Airports Authority in June 2012 after serving as chief of communications for government agencies, including NASA and the Tennessee Valley Authority, and energy corporations, including Southern Company and PG&E National Energy Group. He has also served as senior policy advisor to the United States Secretary of Energy and as a public affairs consultant and lobbyist in the energy and aerospace industries. He was a journalist for three newspapers and the United Press International news agency. He is a graduate of Emory University (M.B.A., 1998) and the University of Tennessee (B.S. Communications, 1980).

**CARL SCHULTZ**. Mr. Schultz is Acting Vice President for Airline Business Development. He joined the Airports Authority in June 2017. Prior to joining the Airports Authority, Mr. Schultz was Senior Executive, Air Service Development, at Houston Airport System for three years. Prior to joining Houston Airport System, Mr. Schultz served as an analyst in Air Service Development at Reno-Tahoe Airport Authority and an analyst in Business Development at the Columbus Regional Airport Authority. Mr. Schultz also spent three years at NetJets, Inc. in Columbus, Ohio as an Aircraft Appearance and Standards Coordinator. Mr. Schultz is a graduate of The Ohio State University (B.S., Aviation Management, 2007) and Embry-Riddle Aeronautical University (M.B.A., Aviation, 2012).

DEVEN JUDD. Mr. Judd is Acting Vice President for Marketing and Consumer Strategy, which includes marketing, digital strategy, revenue strategy and airport terminal concessions. He has spent his career in commercial management of airports serving in properties, business development, planning, real estate, parking, rental cars, and concessions. Prior to assuming his current position, he served as Manager of Customer & Concessions Development and Leasing and Development Manager generating more than \$150 million in annual revenue for the Airports Authority. Before joining the Airports Authority in June of 2016, Mr. Judd held positions with the City of Atlanta at the Hartsfield-Jackson Atlanta International Airport as Concessions Development Manager, Jacobsen/Daniels Associates as a Project Consultant and the Jacksonville Aviation Authority as the Business Development Administrator and Properties Specialist. Mr. Judd is both an Accredited Airport Executive (A.A.E.) bestowed by the American Association of Airport Executives and an International Airport Professional (IAP), which is awarded through the Global ACI-ICAO Airport Management Professional Accreditation Program. Additionally, Mr. Judd holds the Project Management Professional (PMP) certification, an industry-recognized certification for project managers. Mr. Judd is a graduate of Hampton University in Hampton, Virginia (B.S., Aviation Management, 1998), the University of North Florida in Jacksonville, Florida (M.B.A., 2004), and Concordia University - John Molson School of Business in Montreal, Quebec Canada (Airport Executive Leadership Diploma, 2015).

## Environmental, Social and Governance Efforts and Initiatives

Environmental sustainability and corporate citizenship are central to the Airports Authority's goal of providing world class facilities to the traveling public. The Airports Authority focuses its corporate social responsibility efforts on being a leader in environmental initiatives, establishing supplier diversity programs, serving its surrounding communities and the traveling public, empowering its employees through

various programs and creating a culture of safety and security. To further these efforts, in November 2021 the Airports Authority established an Office of Diversity, Inclusion and Social Impact led by a newly created role of Vice President of Diversity, Inclusion and Social Impact.

*Environmental Sustainability.* The Airports Authority's commitment to the environment has resulted in operational improvements in management of waste, air emissions and water quality. An important aspect of the Airports Authority's water quality program is meeting the Chesapeake Bay Preservation Act and Virginia Stormwater Management regulations for water quality and quantity requirements. As part of the Dulles Metrorail Project, 25 stormwater management facilities will be built to filter water from approximately 240 acres and remove nearly 150 pounds of phosphorus pollutants from stormwater runoff annually. The Airports Authority also undertook a stream restoration project along the Dulles Toll Road. When complete, this project will eliminate streambank erosion and sediment migration and stabilize the roadway, removing approximately 73 pounds of phosphorous from stormwater runoff per year. Included as part of the Dulles Metrorail Project construction efforts, the Airports Authority constructed a cistern designed to store 34,336 gallons of rainwater as part of the stormwater management facilities. The harvested rainwater may be used to irrigate landscaped areas, offsetting the demand for utility-supplied water and reducing the volume of stormwater runoff. See discussion of the Package P Project (as defined herein) under "THE DULLES METRORAIL PROJECT – Dulles Metrorail Project – Phase 2 – *Other Package Contracts.*"

In 2019, the Airports Authority signed a strategic partnership project agreement with the National Renewable Energy Laboratory ("NREL") to develop a sustainability plan to incorporate further environmental goals and initiatives at the Airports (the "Sustainability Plan"). Over a yearlong period, NREL and the Airports Authority conducted interviews with stakeholders and analyzed operations at the Airport and the Dulles Toll Road to capture existing initiatives, establish baseline metrics and identify opportunities for partnerships. The Sustainability Plan was completed and approved by the Airports Authority in September 2020 and includes six goals:

- Reducing fuel use through electrification of transportation systems;
- Increasing the efficiency of buildings;
- Increasing water use efficiency;
- Reducing the amount of municipal solid waste generated and sent to landfills;
- Developing and maintaining a culture of sustainable administration; and
- Encouraging more efficient use of public transportation.

As part of the Sustainability Plan, the Airports Authority and NREL revised the Airports Authority's Design Manual, which is the primary guide for construction projects (the "Design Manual"). The revised Design Manual integrates sustainable design with the Sustainability Plan's six goals and sets minimum sustainable design standards.

*Social Initiatives*. A core value of the Airports Authority is treating everyone fairly and embracing diversity. To this end, the Airports Authority recruits at various job fairs, partners with colleges and universities, sponsors events and participates in workshops and panels aimed at recruiting diverse candidates. In 2020, the Airports Authority launched its Understanding Unconscious Bias e-learning module, which examines personal biases and explores solutions on how to manage the impact of these biases. Employees participated in virtual discussions which highlighted employee experiences and methods to address personal biases. In 2020, the Airports Authority Authority workforce was 54% white, 28% African American or Black, 10% Asian, 6% Latino and 1% Native American or Alaska Native. The 2020 workforce was 78% male and 22% female.

*Employee Development and Organizational Culture.* The Airports Authority has implemented a number of training programs to support professional development and internal promotion. Efforts include the Leadership Development Program and the Supervisory Training Program, which are both comprehensive classroom and experiential learning programs. The Airports Authority's Professional Development Program is an entry-level employee development program created to recruit, hire, develop and retain the next generation of Airports Authority employees. Management interns are hired from Virginia, Maryland and Washington, D.C. to fill entry-level professional staff positions created in the areas of human resources, revenue, procurement and finance.

The Airports Authority promotes an enterprise-wide responsibility to protect employees, customers, stakeholders and infrastructure. The Emergency Management and Preparedness Department coordinates preparedness, response and recovery from all types of hazards that may impact the Airports. The Airports Authority also has its own Police and Fire Departments that serve the airport and Dulles Toll Road communities and participate in mutual aid efforts throughout the region.

Support for Small and Disadvantaged Business Enterprises. The Airports Authority participated in 24 community outreach events promoting supplier diversity in 2021 through partnerships with schools, business organizations, local governments and non-profit groups. Additionally, the Airports Authority encourages large prime contractors to conduct outreach, and assists in matchmaking, to help qualified small businesses become partners on contracts. In 2020, the Airports Authority spent over \$173 million with certified Disadvantaged Business Enterprises ("DBE") and Local Disadvantaged Business Enterprises ("LDBE").

In 2018, the Airports Authority launched its Small Business University to assist small business enterprises in various stages of growth achieve the next level of success and enhance contract readiness. Small Business University includes the Non-Credit Executive Certificate Program, designed to develop the potential and capability of LDBE contractors that are seeking to grow. The Airports Authority partnered with Georgetown University in 2018 and George Mason University in 2019, 2020 and 2021 to deliver the seven-week curriculum to 118 local businesses. Graduates of the program have successfully competed for and been awarded Airports Authority contracts worth over \$3.2 million.

The Airports Authority received the "2020 Civil Rights Advocate and Partner Award for DBE & ACDBE Programs" for the Airports Authority's enhanced outreach efforts, supplier development programs and consistent achievement of DBE and Airports Concessions DBE ("ACDBE") participation in federally funded contracts and concessions opportunities, "Best Public Transportation Airports Authority for Minority Business Enterprises" by Maryland Governor Hogan on behalf of the Maryland Washington Minority Companies Association (2018), and "Diversity Inclusive Organization" by the American DBE Magazine (2018).

*Community Involvement*. The Airports Authority's annual Dulles Day, featuring the Dulles Plane Pull, has raised over \$2 million for charitable causes since 1992. The event was last held in October 2021 and raised over \$180,000 for Special Olympics Virginia. The Airports Authority's Fire Department also regularly participates in charitable activities in partnership with Operation Gratitude, a national non-profit that honors first responders, the military and veterans.

*Governance*. The composition of the Airports Authority's Board is determined by federal statute, which provides for up to 17 members; seven appointed by the Governor of the Commonwealth, four by the Mayor of the District, three by the Governor of Maryland and three by the President of the United States with the advice and consent of the U.S. Senate. Geographical balance in the Airports Authority's governance is further ensured by all Board committees having two co-chairs from different jurisdictions. Directors may serve up to two consecutive six-year terms. The Board chair is elected each year by vote of

the full Board and may serve up to two consecutive one-year terms. All Board members participate in annual ethics trainings and must complete formalized financial disclosures and interest declarations. See "Board of Directors" above.

Within the Board, the Dulles Corridor Committee reviews and makes recommendations to the Board on certain contracts for goods and services over \$3 million in total value related to the Dulles Toll Road. The Committee also reviews and makes recommendations to the Board on contracts for goods and services over \$3 million in total value related to the Dulles Metrorail Project and sets policy and provides oversight on regional transportation issues related to the Dulles Toll Road.

# **Federal Lease**

The Airports were transferred by the federal government to the Airports Authority on June 7, 1987, for an initial term of 50 years ending June 6, 2037. The term of the Federal Lease may be extended by mutual agreement and execution of a written extension by the Secretary of Transportation and the Airports Authority, and this was done in 2003 to extend the term to June 6, 2067.

The Federal Lease transferred to the Airports Authority a leasehold interest in all of the Airports' then existing real property, including the Dulles Access Right-of-Way (subject to the January 1983 Easement and the November 1983 Easement), and the right, title and interest of the federal government in all equipment, materials, furnishings and other personal property appurtenant to or located on the Airports' real property (other than particular property required for federal air traffic control responsibilities). The Federal Lease also authorized the Airports Authority to occupy, operate, control and use all of the leased property in operating and developing the Airports, and provided that, subject to its provisions, the Airports Authority has full power and dominion over, and complete discretion in, the operations and development of the Airports. Following the transfer of the leasehold interest, the Airports Authority acquired title to approximately 1,161 acres of land to accommodate new runways and related improvements at Dulles International Airport. All land acquired after the transfer is not subject to the Federal Lease, except that any such land in the Airports Authority's possession upon expiration of the Federal Lease will revert to the federal government.

In November 2018, the Airports Authority finalized the sale of 424 acres of land that were part of Dulles International Airport, called the Western Lands, which had been acquired for future development, to Digital Realty Trust, LP for \$236.5 million. The Western Lands represent the property that was not used as part of the construction of the fourth runway and additional support facilities at Dulles International Airport. The Airports Authority determined, as approved by the Federal Aviation Administration ("FAA"), that there was no current or foreseeable need for the Airports Authority to use the Western Lands.

The Federal Lease provides for an annual base rental payable to the United States Treasury. That base rental was \$3.0 million for the one-year period that commenced June 7, 1987. Since then, this amount has been subject to annual adjustments for inflation and interest. The adjusted lease payment for the year ended June 6, 2021 was approximately \$6.0 million, and the adjusted lease payment for the year ending June 6, 2022 is estimated as of October 31, 2021 to be \$6.1 million. The Airports Authority has made all rental payments on a timely basis.

The following constitute "events of default" under the Federal Lease: (a) the failure of the Airports Authority to make rental payments when due or within 30 days thereafter; (b) the use of any of the leased property for purposes other than "Airport Purposes" (and the continuation thereof for 30 days after notice from the United States Secretary of Transportation (the "Secretary"), unless good faith efforts to remedy the default are underway); and (c) the breach of any other provision of the Federal Lease (and the continuation thereof for 30 days after notice from the Secretary, unless good faith efforts are underway to remedy such default). "Airport Purposes" is defined in the Federal Lease to mean a use of property "for aviation business or activities, for activities necessary or appropriate to serve passengers or cargo . . . or for nonprofit, public use facilities which are not inconsistent with the needs of aviation, or for a business activity not inconsistent with its needs of aviation that has been approved by the Secretary." In the case of any default listed in (a) or (c) above, the Secretary may request the United States Attorney General to bring an appropriate action to compel compliance by the Airports Authority. In the case of a payment default under the Federal Lease, the Secretary may assess penalties and interest at specified rates. In the case of a default described in (b) above, the Secretary is required to direct the Airports Authority to bring the use of Airport property into conformity with the Federal Lease and to retake that property if the Airports Authority does not do so within a reasonable period. It is only in this "event of default," where Airport property is used for non-airport purposes, that the Federal Lease, as to the property so used, may be terminated.

On October 29, 2008, the Secretary affirmed that the use of property that is subject to the Federal Lease for the Dulles Toll Road and for the Dulles Metrorail Project are uses for "Airport Purposes," as defined and required by the Federal Lease, and that the Airports Authority's operation and maintenance of the Dulles Toll Road, and its construction of the Dulles Metrorail Project using Toll Road Revenues, are consistent with its obligations under the Federal Lease.

A default by the Airports Authority under the Federal Lease that would cause the Federal Lease to be terminated with respect to the Airports Authority's right to use the land within the Dulles Access Rightof-Way could adversely affect the ability of the Airports Authority to fulfill its obligations under, among other agreements, the Permit and Operating Agreement, by limiting its ability to complete construction of the Dulles Metrorail Project and its ability to collect Tolls on the Dulles Toll Road. See "INVESTMENT CONSIDERATIONS – Risks Relating to Management and Operation of the Dulles Toll Road."

## **The Airports**

Reagan National was opened for service in 1941. It is located on approximately 860 acres along the Potomac River in Arlington County, Virginia, just across the Potomac River from Washington, D.C. It has three interconnected terminal buildings, three runways and 58 aircraft gates on four concourses. As of September 30, 2021, Reagan National was served by 15 airlines, including seven major/national airlines, seven regional/commuter airlines, and one foreign flag carrier.<sup>\*</sup> Total enplanements at Reagan National in 2020 were approximately 3.8 million, a 68.5% decrease from 2019. Year-to-date enplanements at Reagan National for the nine month period ending September 30, 2021 were 4.4 million, an increase of 42.2% from the same period in 2020. Reagan National is a secondary hub for American Airlines ("American"). American and its regional affiliates accounted for 52.2% of enplanements at Reagan National in 2020.

Dulles International was opened in 1962. It is located on approximately 11,406 acres (exclusive of the DIAAH) in Fairfax and Loudoun Counties, approximately 26 miles west of Washington, D.C. In addition to a main terminal, it has four midfield concourses (A, B, C and D), four runways and 97 aircraft gates. As of September 30, 2021, Dulles International was served by 49 airlines, including six major/national airlines, eleven regional/commuter airlines, 27 foreign flag carriers and five cargo carriers.<sup>\*</sup> United Airlines ("United") maintains a domestic hub and an international gateway operation at Dulles International. Total enplanements at Dulles International in 2020 were approximately 4.1 million, consisting of 3.1 million domestic (a 62.0% decrease from 2019) and 1.0 million international (a 76.3% decrease from 2019) enplanements. Year-to-date enplanements at Dulles International for the nine month period ending September 30, 2021 were 5.0 million (consisting of 3.9 million domestic and 1.1 million

<sup>\*</sup> Airline counts include only those providing active service during 2021 (as of September 30). Certain signatory airlines (*e.g.*, Air China and Virgin Atlantic) did not provide active service during such period and are excluded.
international), an increase of 62.6% of enplanements from the same period in 2020. United and its regional affiliates accounted for 83.4% of domestic and 34.6% of international enplanements at Dulles International in 2020.

# **COVID-19 Global Pandemic**

The Coronavirus ("COVID-19") global pandemic has altered the behavior of businesses and people in a manner that is having negative effects on national, regional and local economies, including areas served by the Dulles Toll Road. As a result, the pandemic has had an adverse impact on travel, including decreased traffic volume on the Dulles Toll Road. The Airports Authority implemented measures intended to mitigate operational and financial impacts with respect to the Dulles Toll Road, including operating cost controls (see "*Impact on Dulles Toll Road Operations and Unrestricted Fund Balances*" below) and removing all personnel from Dulles Toll Road toll booths for the safety of the traveling public and Airports Authority employees in April 2020. The operating and financial information described herein does not reflect any adverse impacts of the Omicron variant of COVID-19 which, due to its relatively recent prevalence, are not yet quantifiable or determinable.

*Impact on Dulles Toll Road Transactions and Toll Road Revenues.* In calendar year 2019, monthly total transactions on the Dulles Toll Road averaged approximately 7.6 million. Monthly total transactions began to decline in March 2020 and fell to a low of 2.1 million in April 2020, a 72.5 percent decrease from April 2019. Total transactions for Fiscal Year 2020 were 55.1 million, approximately 61 percent of the 91.0 million total transactions in Fiscal Year 2019. Total transactions for the ten months ending October 31, 2021 were 53.5 million, an increase of 15.3 percent over the same period in 2020 and a decrease of 30.2 percent from the same period in 2019. Monthly total transactions were 6.3 million in October 2021, an increase of 25.7 percent over the same month in 2020.

The impact of the pandemic on Toll Road Revenues is comparable to the change in total transactions. Total Toll Road Revenues in Fiscal Year 2020 were \$122.1 million, approximately 62 percent of the \$197.4 million in Fiscal Year 2019. Total Toll Road Revenues for the ten months ending October 31, 2021 were \$119.1 million, an increase of 16.4 percent over the same period in 2020 and a decrease of 28.1 percent from the same period in 2019. Monthly Toll Road Revenues were \$14.2 million in October 2021, an increase of 28.9 percent over the same month in 2020. See "COLLECTION OF THE TOLL ROAD REVENUES – Historical Traffic Transactions and Toll Road Revenues."

*Impact on Dulles Toll Road Operations and Unrestricted Fund Balances.* Exact change coin payments are currently accepted for payment of tolls on the Dulles Toll Road, but the Airports Authority expects that this toll payment option will be phased out in 2022. Dulles Toll Road customers who do not pay with E-ZPass, other electronic forms of payment or exact change are sent payment notices by mail. Such transactions billed by mail are considered violations, but applicable administrative fees are waived if the amount due is paid before the second notice is sent to the customer. Operating expenses in Fiscal Year 2020 were \$41.8 million, a decrease of 27.4 percent from Fiscal Year 2019. Operating expenses for the nine months ending September 30, 2021 were \$32.2 million, an increase of 5.6 percent over the same period in 2020 and a decrease of 16.8 percent from the same period in 2019.

In accordance with the Master Indenture, the computation of Annual Debt Service excludes any indebtedness for which funds are, or are reasonably expected to be, available for and which are irrevocably committed to make such payments. In Fiscal Year 2020, the Airports Authority used approximately \$65 million of funds from the Toll Rate Stabilization Fund to pay debt service and produced Net Revenues sufficient to satisfy the Rate Covenant.

After deposits to the Toll Rate Stabilization Fund in 2020, the net draw on unrestricted reserves in 2020 was approximately \$44 million. It is anticipated that at least \$21 million of reserves may be needed to offset lower Toll Road Revenues in 2021. The projected net draw on reserves in the 2022 Budget (as defined herein) is less than \$14 million. This amount does not reflect anticipated debt service reductions after issuance of the Series 2022 Bonds. While the Airports Authority believes the assumptions in the approved budgets for Fiscal Years 2021 and 2022 are reasonable, actual results may differ from such assumptions.

## Total Unrestricted Cash and Cash Equivalents

	Fiscal Year 2019	Fiscal Year 2020	Fiscal Year 2021	Fiscal Year 2022
	$(Actual)^{(1)}$	<u>(Actual)</u> <sup>(1)</sup>	(Budgeted) <sup>(2)</sup>	(Budgeted) <sup>(3)</sup>
Beginning Fiscal Year Balance	\$240,567,365	\$272,176,307	\$228,419,163	\$207,819,163
Toll Rate Stabilization Fund Draws	-	(65,527,769)	(42,000,000)	(35,500,000)
Total Deposits	<u>31,608,942</u>	21,770,625	21,400,000	22,100,000
Net Change	<u>31,608,942</u>	<u>(43,757,144)</u>	(20,600,000)	<u>(13,400,000)</u>
End Fiscal Year Balance	\$272,176,307	\$228,419,163	\$207,819,163	\$194,419,163

(1) Source: 2020 Annual Report.

<sup>(2)</sup> Source: Airports Authority Budget for Fiscal Year 2021.

<sup>(3)</sup> Source: Airports Authority Budget for Fiscal Year 2022.

A portion of the proceeds of the Series 2022A Bonds will be used to capitalize a portion of the interest payments on the Series 2022A Bonds through October 1, 2024, and a portion of the proceeds of the Series 2022B Bonds will be used to capitalize a portion of the interest payments on the Series 2022B Bonds through October 1, 2024. See "REFINANCING PLAN AND ESTIMATED SOURCES AND USES OF FUNDS."

### **Financial Information for Dulles Corridor Enterprise Fund**

The Airports Authority maintains separate enterprise funds to account for its authorized activities – the "Aviation Enterprise Fund" to record the combined financial activity associated with the Airports and aviation activities, and the "Dulles Corridor Enterprise Fund" to record the combined financial activity associated with the operation, maintenance and improvement of the Dulles Toll Road, the construction of the Dulles Metrorail Project and the construction and improvement of other roads and transportation facilities in the Dulles Corridor (collectively referred to as the "Dulles Corridor Enterprise").

*Fiscal Year 2020 and 2019 Results*. The Fiscal Year 2020 and 2019 financial results of the Dulles Corridor Enterprise Fund, derived from the audited financial statements contained in the Airports Authority's 2020 Annual Report (the "2020 Annual Report"), are set forth below.

# Financial Results Statements of Revenues, Expenses and Changes in Net Position<sup>(1)</sup> Dulles Corridor Enterprise Fund

	Fiscal Year Ended	Fiscal Year Ended
	December 31, 2020	December 31, 2019
OPERATING REVENUES		
Tolls – Cash	\$ 5,073,827	\$ 15,078,541
Tolls – Electronic Toll Collection	110,798,012	174,343,696
Tolls – Violations and Other	6,214,807	<u>7,985,092</u>
TOTAL OPERATING REVENUES	122,086,646	197,407,329
OPERATING EXPENSES		
Materials, equipment, supplies, contract services, and other	21,708,613	37,300,297
Salaries and Related Benefits	9,556,199	10,383,690
Utilities	172,934	202,636
Depreciation and Amortization	10,343,569	9,679,887
TOTAL OPERATING EXPENSES	41,781,315	57,566,510
OPERATING INCOME	80,305,331	<u>139,840,819</u>
NON-OPERATING REVENUES		
Interest Income and Interest Expense	(163,047,147)	(142,231,698
Net contributions from (to) other governments	32,179,720	78,884,605
TOTAL NON-OPERATING REVENUES (EXPENSES)	(130,867,427)	(63,347,093)
GAIN/(LOSS) BEFORE CAPITAL CONTRIBUTIONS	<u>(50,562,096)</u>	76,493,726
CAPITAL CONTRIBUTIONS		
Net Grant Revenue – Federal	23,117,213	13,217,792
Net Grant Revenue – State/Local	<u>111,591,427</u>	23,619,333
TOTAL CAPITAL CONTRIBUTIONS	134,708,640	36,837,125
NET POSITION (DEFICIT)		
Increase in net position	84,146,544	113,330,851
Total net position, beginning of period	(313,082,716)	(426,413,567)
Total net position, end of period	\$(228,936,172)	\$(313,082,716)

(1) Totals may not add due to rounding.

Source: 2020 Annual Report.

Operating revenues for the Fiscal Years ending December 31, 2020 and December 31, 2019, respectively, were \$122.1 million and \$197.4 million, and were comprised solely of tolls collected from the Dulles Toll Road. Electronic toll collections accounted for \$110.8 million, or approximately 90.8%, of toll collections in 2020, and \$174.3 million, or approximately 88.3%, of toll collections in 2019.

Operating expenses for the Fiscal Years ending December 31, 2020 and December 31, 2019, respectively, were \$41.8 million and \$57.6 million. This figure includes \$23.7 million for 2020 and \$32.7 million for 2019 of expenses related to the operation of the Dulles Toll Road (which constitute Operation and Maintenance Expenses payable under the Indenture), and \$18.1 million for 2020 and \$24.9 million for 2019 in non-capitalized expenses related to the Renewal and Replacement Program and Capital Improvement Program (each as defined herein) (which do not constitute Operation and Maintenance Expenses payable under the Indenture, but are payable from capital moneys of the Airports Authority).

Capital contributions during the twelve-month periods ending December 31, 2020 and December 31, 2019 include net federal, state and local grants related to the Dulles Metrorail Project totaling \$134.7 million and \$36.8 million, respectively.

The net position of the Dulles Corridor Enterprise Fund as of December 31, 2020 increased by \$84.1 million from December 31, 2019. Total current assets as of December 31, 2020 and December 31, 2019, respectively, were \$645.0 million and \$508.2 million, and non-current assets were \$2.8 billion and \$3.0 billion, respectively, which includes \$2.3 billion in 2020 and \$2.2 billion in 2019 in construction in progress related to the Dulles Metrorail Project. Total liabilities as of December 31, 2020 were \$3.7 billion, and as of December 31, 2019 were \$3.8 billion.

The Airports Authority's most recent audited financial statements are contained in the 2020 Annual Report, a copy of which was filed with the Municipal Securities Rulemaking Board (the "MSRB") through its Electronic Municipal Market Access system ("EMMA"), and can be accessed at http://www.mwaa.com.

Unaudited Fiscal Year 2021 Results Through September 30, 2021. The unaudited financial results for the Dulles Corridor Enterprise Fund for the three quarters ended September 30, 2021, September 30, 2020 and September 30, 2019 are set forth below.

# Financial Results Statements of Revenues, Expenses and Changes in Net Position<sup>(1)</sup> Dulles Corridor Enterprise Fund (unaudited)

	Nine Months Ended September 30, 2021	Nine Months Ended September 30, 2020	Nine Months Ended September 30, 2019
OPERATING REVENUES			
Tolls – Cash	\$ 2,445,102	\$ 4,250,072	\$ 11,629,049
Tolls – Electronic Toll Collection	95,675,989	82,988,316	130,937,262
Tolls – Violations and Other	6,921,479	4,173,595	5,421,081
TOTAL OPERATING REVENUES	105,042,569	<u>91,411,983</u>	147,987,393
OPERATING EXPENSES			
Materials, equipment, supplies, contract services, and other	17,697,258	14,532,620	23,922,002
Salaries and Related Benefits	7,187,017	7,930,763	7,313,459
Utilities	99,750	115,047	125,961
Depreciation and Amortization	7,244,093	7,923,563	7,289,301
TOTAL OPERATING EXPENSES	32,228,118	<u>30,501,992</u>	38,650,723
OPERATING INCOME	72,814,451	<u>60,909,991</u>	109,336,670
NON-OPERATING REVENUES			
Interest Income and Interest Expense	(129,659,857)	(120,060,231)	(105,224,844)
Net contributions from (to) other governments	<u>24,648,040</u>	23,301,550	<u>57,846,192</u>
TOTAL NON-OPERATING REVENUE (EXPENSES)	(105,011,817)	(96,758,681)	(47,378,652)
GAIN/(LOSS) BEFORE CAPITAL CONTRIBUTIONS	(32,197,366)	(35,848,689)	<u>61,958,018</u>
CAPITAL CONTRIBUTIONS			
Net Grant Revenue – Federal	11,726,796	15,184,698	18,408,748
Net Grant Revenue – State/Local	68,032,977	84,600,994	9,704,817
TOTAL CAPITAL CONTRIBUTIONS	79,759,773	99,785,693	28,113,565
NET POSITION (DEFICIT)			
Increase in net position	47,562,406	63,937,004	90,071,583
Total net position, beginning of period	(228,936,172)	(313,082,716)	<u>(426,413,567)</u>
Total net position, end of period	<u>\$(181,373,766)</u>	<u>\$(249,145,712)</u>	<u>\$(336,341,984)</u>

<sup>(1)</sup> Totals may not add due to rounding. The unaudited 2021, 2020 and 2019 results included in this Official Statement have been prepared by, and are the responsibility of, the Airports Authority's management. Crowe LLP has not performed an audit, review, or compilation with respect to the accompanying unaudited 2021, 2020 and 2019 results. Accordingly, Crowe LLP does not express an opinion or any other form of assurance with respect thereto.

Source: Unaudited financial statements of the Airports Authority.

Operating revenues for the nine month periods ending September 30, 2021, September 30, 2020, and September 30, 2019, respectively, were \$105.0 million, \$91.4 million, and \$148.0 million and were

comprised solely of Tolls collected from the Dulles Toll Road. Electronic toll collections accounted for \$95.7 million, or approximately 91.1%, of toll collections in 2021, \$83.0 million, or approximately 90.8%, of toll collections in 2020, and \$130.9 million, or approximately 88.5%, of toll collections in 2019.

Operating expenses for the nine month periods ending September 30, 2021, September 30, 2020, and September 30, 2019, respectively, were \$32.2 million, \$30.5 million, and \$38.7 million. This figure includes \$21.5 million for 2021, \$17.1 million for 2020 and \$24.8 million for 2019 of expenses related to the operation of the Dulles Toll Road (which constitute Operation and Maintenance Expenses payable under the Indenture), and \$10.7 million for 2021, \$13.4 million for 2020, and \$13.9 million for 2019 in non-capitalized expenses related to the Renewal and Replacement Program and Capital Improvement Program (which do not constitute Operation and Maintenance Expenses payable under the Indenture, but are payable from capital moneys of the Airports Authority).

Capital contributions during the nine month periods ending September 30, 2021, September 30, 2020, and September 30, 2019 include net federal, state, and local grants related to the Dulles Metrorail Project totaling \$79.8 million, \$99.8 million, and \$28.1 million, respectively.

The net position of the Dulles Corridor Enterprise Fund as of September 30, 2021 increased by \$47.6 million from December 31, 2020. Total current assets as of September 30, 2021, September 30, 2020, and September 30, 2019, respectively, were \$770.0 million, \$662.0 million, and \$670.4 million and noncurrent assets were \$2.8 billion, \$2.9 billion, and \$2.7 billion respectively, which includes \$2.4 billion in 2021, \$2.3 billion in 2020, and \$2.2 billion in construction in progress related to the Dulles Metrorail Project. Total liabilities as of September 30, 2021, September 30, 2020, and \$2.7 billion, \$3.8 billion, and \$3.7 billion.

*Fiscal Year 2022 Budget.* The President and Chief Executive Officer prepares the Airports Authority's annual budget and submits it to the Board for review and approval. The overall Airports Authority budget for Fiscal Year 2022 (the "2022 Budget") includes a separate Fiscal Year 2022 budget for the Dulles Corridor Enterprise that consists of (i) the O&M Program (as defined herein), (ii) the Renewal and Replacement Program and (iii) the Capital Improvement Program. The 2022 Budget was approved by the Board in December 2021. The 2022 Budget is accessible on the Airports Authority's website at https://www.mwaa.com/about/current-financial-data. The Airports Authority is committed to ensuring that adequate resources are available to efficiently and safely operate and maintain the Dulles Toll Road and believes that the 2022 Budget for the Dulles Corridor Enterprise Fund provides those resources.

The Dulles Corridor Operation and Maintenance Program (the "O&M Program") is the budget for operating the Dulles Toll Road, including reserve requirements. The following table shows the major categories of expenditures budgeted for Fiscal Year 2022.

	2022 Budget
Category	(dollars in thousands)
Operating Expenses	\$ 31,521
Debt Service and Transfer to Reserve Accounts	<u>137,974</u>
Total O&M Program	\$169,495

The Dulles Corridor Renewal and Replacement Program (the "Renewal and Replacement Program") addresses major maintenance requirements, as well as other routine maintenance projects. Its budgeted expenditures for Fiscal Year 2022 total \$7.2 million.

The Dulles Corridor Capital Improvement Program (the "Capital Improvement Program") funds capital improvements related to the Dulles Toll Road, its ancillary ramps and interchanges, and the Dulles Metrorail Project. The following shows expenditures under this program for the Dulles Metrorail Project and the Dulles Corridor Improvements (other than the Dulles Metrorail Project) authorized to be expended in Fiscal Year 2022.

	2022 Budget
Category	(dollars in thousands)
Dulles Metrorail Project	\$253,604
Dulles Corridor Improvements	23,626
Total Capital Improvement Program	\$277,231

#### **THE SERIES 2022 BONDS**

The following summary describes certain provisions of the Series 2022 Bonds. This summary does not purport to be complete and is subject to, and qualified in its entirety by reference to, the provisions of the Indenture and the Series 2022 Bonds.

### **Description of the Series 2022 Bonds**

The Series 2022 Bonds will be dated their date of delivery and bear interest at the rates and mature on the dates set forth on the inside cover page of this Official Statement. Interest on the Series 2022 Bonds will accrue from their date of delivery and be payable semi-annually on each April 1 and October 1, commencing October 1, 2022. The Series 2022 Bonds will be issued in authorized denominations of \$5,000 or any integral multiples thereof.

### **Book-Entry Only System**

The Series 2022 Bonds, when issued, will be registered in the name of Cede & Co., the partnership nominee of The Depository Trust Company, New York, New York ("DTC"), or such other name as may be requested by an authorized representative of DTC. When the Series 2022 Bonds are issued, ownership interests will be available to purchasers only through a book-entry system maintained by DTC (the "Book-Entry Only System"). So long as Cede & Co. is the registered owner of the Series 2022 Bonds as nominee of DTC, references herein to the holders or registered owners of the Series 2022 Bonds will mean Cede & Co. and will not mean the beneficial owners of the Series 2022 Bonds.

None of the Airports Authority, the Trustee or the Underwriters will have any responsibility or obligation to the Participants, DTC or the persons for whom they act with respect to (i) the accuracy of any records maintained by DTC or by a Direct or Indirect Participant of DTC, (ii) payments or the providing of notice to Direct Participants, the Indirect Participants or the beneficial owners, (iii) the selection by DTC or by any Direct or Indirect Participant of any beneficial owner to receive payment in the event of a partial redemption of the Series 2022 Bonds or (iv) any other action taken by DTC or its partnership nominee as owner of the Series 2022 Bonds. For more information on DTC and the Book-Entry Only System, see APPENDIX F – "DESCRIPTION OF BOOK-ENTRY ONLY SYSTEM AND GLOBAL CLEARANCE PROCEDURES – DTC'S BOOK ENTRY SYSTEM."

# **Global Clearance Procedures**

Beneficial Interests in the Series 2022 Bonds may be held through DTC, Clearstream Banking, S.A. (Clearstream) or Euroclear Bank SA/NV (Euroclear) as operator of the Euroclear System, directly as a participant or indirectly through organizations that are participants in such system. For more information

on global clearance procedures, see APPENDIX F – "DESCRIPTION OF BOOK-ENTRY ONLY SYSTEM AND GLOBAL CLEARANCE PROCEDURES – GLOBAL CLEARANCE PROCEDURES."

## **Redemption Provisions**

*Optional Redemption of Series 2022A Bonds.* The Series 2022A Bonds are subject to optional redemption prior to maturity by the Airports Authority on and after \_\_\_\_\_\_, 20\_\_\_, in whole or in part at any time, at a redemption price equal to the principal amount of the Series 2022A Bonds called for redemption plus interest accrued to the redemption date.

*Optional Redemption of Series 2022B Bonds.* The Series 2022B Bonds are subject to optional redemption prior to maturity by the Airports Authority, in whole or in part at any time, at a redemption price, which prior to \_\_\_\_\_\_, 20\_\_ shall equal the Make-Whole Redemption Price (as defined below) and on or after \_\_\_\_\_\_, 20\_\_ shall equal 100% of the principal amount of the Series 2022B Bonds called for redemption plus interest accrued to the redemption date.

The "Make-Whole Redemption Price" is equal to the greater of (i) 100% of the principal amount of such Series 2022B Bonds to be redeemed or (ii) the sum of the present values of the remaining scheduled payments of principal and interest to the maturity date of such Series 2022B Bonds to be redeemed, not including any portion of those payments of interest accrued and unpaid as of the date on which such Series 2022B Bonds are to be redeemed, discounted to the date on which such Series 2022B Bonds are to be redeemed, discounted to the date on which such Series 2022B Bonds are to be redeemed, assuming a 360-day year consisting of twelve 30-day months, at the Treasury Rate (as defined below), plus \_\_\_\_\_ basis points.

"Treasury Rate" means, as of any redemption date, the yield to maturity as of such redemption date of United States Treasury securities with a constant maturity (as compiled and published in the most recent Federal Reserve Statistical Release H.15 (519) that has become publicly available at least two business days and no more than forty-five business days prior to the redemption date (excluding inflation indexed securities) (or, if such Statistical Release is no longer published, any publicly available source of similar market data)) most nearly equal to the period from the redemption date to the maturity date of the Series 2022B Bonds to be redeemed.

*Mandatory Sinking Fund Redemption*<sup>\*</sup>. The Series 2022A Bonds are subject to mandatory sinking fund redemption in part (in accordance with the procedures described below in "*Selection of Series 2022 Bonds to be Redeemed*"), prior to maturity on October 1, in the years set forth below, at a redemption price equal to the principal amount of the Series 2022A Bonds called for redemption plus interest accrued to the redemption date.

Series 2022A Bo	onds maturing on October 1, 20
	Principal
Year	Amount
	\$
Ť	

<sup>†</sup> Final maturity.

<sup>\*</sup> Preliminary, subject to change.

The Series 2022B Bonds are subject to mandatory sinking fund redemption in part (in accordance with the procedures described below in "Selection of Series 2022 Bonds to be Redeemed"), prior to maturity on October 1, in the years set forth below, at a redemption price equal to the principal amount of the Series 2022B Bonds called for redemption plus interest accrued to the redemption date.

Series 2022B Bor	nds maturing on October 1, 20
	Principal
Year	Amount
	\$
Ť	

<sup>†</sup> Final maturity.

*Notice of Redemption.* Each notice of redemption shall specify: (i) the date fixed for redemption, (ii) the principal amount of Series 2022 Bonds or portions thereof to be redeemed, (iii) the applicable redemption price, (iv) the place or places of payment, (v) that payment of the principal amount and premium, if any, will be made upon presentation and surrender to the Trustee or Paying Agent, as applicable, of the Series 2022 Bonds to be redeemed, (vi) that interest accrued to the date fixed for redemption will be paid as specified in such notice, (vii) that on and after such date interest on Series 2022 Bonds which have been redeemed will cease to accrue, and (viii) the designation, including the CUSIP numbers of the Series 2022 Bonds to be redeemed and, if less than the face amount of any such Series 2022 Bond is to be redeemed.

Any notice of redemption shall be sent by the Trustee not less than 30 nor more than 60 days prior to the date set for redemption by first-class mail (i) to the Holder of each such Series 2022 Bond to be redeemed in whole or in part at his address as it appears on the Register, or while the Series 2022 Bonds are held in book-entry form, to the Securities Depository, (ii) to all organizations registered with the SEC as securities depositories, (iii) to the MSRB, and (iv) to at least two information services of national recognition which disseminate redemption information with respect to tax-exempt securities. Failure to give any notice specified in (i), or any defect therein, shall not affect the validity of any proceedings for the redemption of any Series 2022 Bonds with respect to which no such failure has occurred and failure to give any notice specified in (ii), (iii) or (iv), or any defect therein, shall not affect the validity of any proceedings for the redemption of any Series 2022 Bonds with respect to which the notice specified in (i) is given correctly.

If at the time of notice of any optional redemption of the Series 2022 Bonds there has not been deposited with the Trustee moneys available for payment pursuant to the Indenture and sufficient to redeem all of the Series 2022 Bonds called for redemption, the notice may state that it is conditional in that it is subject to the deposit of sufficient moneys by not later than the redemption date, and if the deposit is not timely made the notice shall be of no effect.

Selection of Series 2022 Bonds to Be Redeemed. If less than all Series 2022A Bonds are to be redeemed, the maturities to be redeemed or the method of their selection shall be determined by the Airports Authority; and if less than all such Series 2022A Bonds of a single maturity are to be redeemed, such Series 2022A Bonds to be redeemed shall be selected in such manner as the Airports Authority determines.

If less than all Series 2022B Bonds are to be redeemed, the maturities to be redeemed shall be determined by the Airports Authority. If less than all of the Series 2022B Bonds of a maturity are to be redeemed, the particular Series 2022B Bonds or portions thereof to be redeemed shall be selected on a pro rata pass-through distribution of principal basis in accordance with the operational arrangements of DTC then in effect. It is the Airports Authority's intent that redemption allocations made by DTC, the DTC

Participants or such other intermediaries that may exist between the Airports Authority and the beneficial owners be made on a pro rata pass-through distribution of principal basis. However, the Airports Authority can provide no assurance that DTC, the DTC Participants or any other intermediaries will allocate redemptions among beneficial owners on such a proportional basis. If the DTC operational arrangements do not allow for redemption on a pro rata pass-through distribution of principal basis, all Series 2022B Bonds to be so redeemed will be selected for redemption in accordance with DTC procedures by lot; provided further that any such redemption must be performed such that all Series 2022B Bonds remaining outstanding will be in authorized denominations.

If the Series 2022B Bonds are not registered in book-entry-only form, any redemption of less than all of the Series 2022B Bonds of a maturity will be allocated among the registered owners of such Series 2022B Bonds as nearly as practicable in proportion to the principal amounts of such Series 2022B Bonds owned by each registered owner, subject to the authorized denominations applicable to the Series 2022B Bonds. This will be calculated based on the formula: (principal amount to be redeemed) x (principal amount owned by owner) / (principal amount outstanding). The particular Series 2022B Bonds to be redeemed will be determined by the Airports Authority, using such method as it deems fair and appropriate.

# **Bond Insurance**\*

The following information has been provided by AGM for inclusion in this Official Statement. Reference is made to APPENDIX H hereto for a specimen of the Bond Insurance Policy (as defined below). Neither the Airports Authority nor the Underwriters take any responsibility for, or make any representation as to, its accuracy or completeness.

*Bond Insurance Policy*. Subject to a determination by the Airports Authority to obtain bond insurance, concurrently with the issuance of the Series 2022 Bonds, Assured Guaranty Municipal Corp. ("AGM") will issue its Municipal Bond Insurance Policy for all or a portion of the Series 2022 Bonds (the "Bond Insurance Policy"). The Bond Insurance Policy guarantees the scheduled payment of principal of and interest on the Series 2022 Bonds when due as set forth in the form of the Bond Insurance Policy included as EXHIBIT H to this Official Statement.

The Bond Insurance Policy is not covered by any insurance security or guaranty fund established under New York, California, Connecticut or Florida insurance law.

Assured Guaranty Municipal Corp. AGM is a New York domiciled financial guaranty insurance company and an indirect subsidiary of Assured Guaranty Ltd. ("AGL"), a Bermuda-based holding company whose shares are publicly traded and are listed on the New York Stock Exchange under the symbol "AGO". AGL, through its operating subsidiaries, provides credit enhancement products to the U.S. and international public finance (including infrastructure) and structured finance markets and asset management services. Neither AGL nor any of its shareholders or affiliates, other than AGM, is obligated to pay any debts of AGM or any claims under any insurance policy issued by AGM.

AGM's financial strength is rated "AA" (stable outlook) by S&P Global Ratings, a business unit of Standard & Poor's Financial Services LLC ("S&P"), "AA+" (stable outlook) by Kroll Bond Rating Agency, Inc. ("KBRA") and "A2" (stable outlook) by Moody's Investors Service, Inc. ("Moody's"). Each rating of AGM should be evaluated independently. An explanation of the significance of the above ratings may be obtained from the applicable rating agency. The above ratings are not recommendations to buy, sell or hold any security, and such ratings are subject to revision or withdrawal at any time by the rating agencies, including withdrawal initiated at the request of AGM in its sole discretion. In addition, the rating

<sup>\*</sup> Preliminary, subject to change.

agencies may at any time change AGM's long-term rating outlooks or place such ratings on a watch list for possible downgrade in the near term. Any downward revision or withdrawal of any of the above ratings, the assignment of a negative outlook to such ratings or the placement of such ratings on a negative watch list may have an adverse effect on the market price of any security guaranteed by AGM. AGM only guarantees scheduled principal and scheduled interest payments payable by the issuer of bonds insured by AGM on the date(s) when such amounts were initially scheduled to become due and payable (subject to and in accordance with the terms of the relevant insurance policy), and does not guarantee the market price or liquidity of the securities it insures, nor does it guarantee that the ratings on such securities will not be revised or withdrawn.

*Current Financial Strength Ratings.* On October 20, 2021, KBRA announced it had affirmed AGM's insurance financial strength rating of "AA+" (stable outlook). AGM can give no assurance as to any further ratings action that KBRA may take.

On July 8, 2021, S&P announced it had affirmed AGM's financial strength rating of "AA" (stable outlook). AGM can give no assurance as to any further ratings action that S&P may take.

On August 13, 2019, Moody's announced it had affirmed AGM's insurance financial strength rating of "A2" (stable outlook). AGM can give no assurance as to any further ratings action that Moody's may take.

For more information regarding AGM's financial strength ratings and the risks relating thereto, see AGL's Annual Report on Form 10-K for the fiscal year ended December 31, 2020.

Capitalization of AGM. At September 30, 2021:

- The policyholders' surplus of AGM was approximately \$2,910 million.
- The contingency reserve of AGM was approximately \$963 million.
- The net unearned premium reserves and net deferred ceding commission income of AGM and its subsidiaries (as described below) were approximately \$2,124 million. Such amount includes (i) 100% of the net unearned premium reserve and deferred ceding commission income of AGM, and (ii) the net unearned premium reserves and net deferred ceding commissions of AGM's wholly owned subsidiaries Assured Guaranty UK Limited ("AGUK") and Assured Guaranty (Europe) SA ("AGE").

The policyholders' surplus of AGM and the contingency reserves, net unearned premium reserves and deferred ceding commission income of AGM were determined in accordance with statutory accounting principles. The net unearned premium reserves and net deferred ceding commissions of AGUK and AGE were determined in accordance with accounting principles generally accepted in the United States of America.

*Incorporation of Certain Documents by Reference.* Portions of the following documents filed by AGL with the Securities and Exchange Commission (the "SEC") that relate to AGM are incorporated by reference into this Official Statement and shall be deemed to be a part hereof:

(i) the Annual Report on Form 10-K for the fiscal year ended December 31, 2020 (filed by AGL with the SEC on February 26, 2021);

- (ii) the Quarterly Report on Form 10-Q for the quarterly period ended March 31, 2021 (filed by AGL with the SEC on May 7, 2021);
- (iii) the Quarterly Report on Form 10-Q for the quarterly period ended June 30, 2021 (filed by AGL with the SEC on August 6, 2021); and
- (iv) the Quarterly Report on Form 10-Q for the quarterly period ended September 30, 2021 (filed by AGL with the SEC on November 5, 2021).

All information relating to AGM included in, or as exhibits to, documents filed by AGL with the SEC pursuant to Section 13(a) or 15(d) of the Securities Exchange Act of 1934, as amended, excluding Current Reports or portions thereof "furnished" under Item 2.02 or Item 7.01 of Form 8-K, after the filing of the last document referred to above and before the termination of the offering of the Series 2022 Bonds shall be deemed incorporated by reference into this Official Statement and to be a part hereof from the respective dates of filing such documents. Copies of materials incorporated by reference are available over the internet at the SEC's website at http://www.sec.gov, at AGL's website http://www.assuredguaranty.com, or will be provided upon request to Assured Guaranty Municipal Corp.: 1633 Broadway, New York, New York 10019, Attention: Communications Department (telephone (212) 974-0100). Except for the information referred to above, no information available on or through AGL's website shall be deemed to be part of or incorporated in this Official Statement.

Any information regarding AGM included herein under the heading "THE SERIES 2022 BONDS – Bond Insurance" (other than respect to the caption "– *Bond Insurance Policy*") or included in a document incorporated by reference herein (collectively, the "AGM Information") shall be modified or superseded to the extent that any subsequently included AGM Information (either directly or through incorporation by reference) modifies or supersedes such previously included AGM Information. Any AGM Information so modified or superseded shall not constitute a part of this Official Statement, except as so modified or superseded.

*Miscellaneous Matters*. AGM makes no representation regarding the Series 2022 Bonds or the advisability of investing in the Series 2022 Bonds. In addition, AGM has not independently verified, makes no representation regarding, and does not accept any responsibility for the accuracy or completeness of this Official Statement or any information or disclosure contained herein, or omitted herefrom, other than with respect to the accuracy of the information regarding AGM supplied by AGM and presented under the heading "THE SERIES 2022 BONDS – Bond Insurance."

# SECURITY AND SOURCES OF PAYMENT FOR THE BONDS

## General

The Bonds are secured by the Toll Road Revenues after the prior payment of Operation and Maintenance Expenses as described below under "–Pledged Toll Road Revenues," as well as by certain other funds and accounts and contractual rights as described below under "–Lien Structure – *Pledge and Lien of Indenture*."

### Pledged Toll Road Revenues

Under the Indenture, the Airports Authority has granted to the Trustee, for the benefit of the Bondholders, a pledge of the Toll Road Revenues, subject to the prior payment of Operation and Maintenance Expenses and to the order of the lien priority of the Bonds held by such Bondholders.

Toll Road Revenues under the Indenture consist of: (a) Tolls; (b) any interest income on, and any profit realized from, the investment of moneys in any Fund or Account to the extent that such income or profit is not transferred to, or retained in, the Revenue Fund or any Bond Fund, excluding any interest income on, and any profit realized from, the investment of moneys in the Arbitrage Rebate Fund, the Renewal and Replacement Reserve Fund, the Capital Improvements Fund, the Metrorail Project Fund, the Latent Defects Reserve Fund, the Transit Operations Fund and the Remaining Toll Road Revenue Fund; (c) all moneys released from any Fund or Account and transferred to the Revenue Fund; (d) all proceeds of insurance payable to or received by the Airports Authority with respect to the Dulles Toll Road (whether by way of claims, return of premiums, ex gratia settlements or otherwise), including proceeds from business interruption insurance and loss of advance profits insurance, but excluding proceeds of fire and other casualty insurance; (e) the proceeds of any condemnation awards with respect to the Dulles Toll Road; and (f) all other amounts derived from or with respect to the operation of the Dulles Toll Road; provided, that Toll Road Revenues shall not include: (i) the proceeds of any sale of land, buildings or equipment; (ii) any interest income on, and any profit realized from, the investment of moneys in any fund or account funded from the proceeds of Special Project Bonds; (iii) any amounts received by the Airports Authority from, or in connection with, Special Projects, unless such amounts are specifically designated as Toll Road Revenues by the Airports Authority; or (iv) any other amounts which are not deemed to be revenues in accordance with generally accepted accounting principles or which are restricted as to their use. In no event shall Toll Road Revenues include any Airports Authority assessments or revenue derived from or dedicated to operation of the Airports.

For purposes of the Indenture, the subsidy payments that are expected to be received by the Airports Authority from the federal government pursuant to the provisions of the American Recovery and Reinvestment Act of 2009 (the "Recovery Act") are treated, when calculating the additional Bonds tests (see "Additional Bonds" below) and the Rate Covenant, as an exclusion from Annual Debt Service, and such subsidy payments are not treated as Toll Road Revenues. Due to federal sequestration, the subsidy payment was reduced by 5.7% for federal Fiscal Year 2021. The sequestration reduction rate for federal Fiscal Year 2022, which began on October 1, 2021, remains at 5.7%. The Airports Authority issued two series of Bonds subject to the provisions of the Recovery Act, the Series 2009D Bonds and the Series 2010D Bonds (also referred to herein as "Build America Bonds" or "BABs"), and the Airports Authority has agreed in the Third Supplemental Indenture and the Sixth Supplemental Indenture to deposit all subsidy payments received from the federal government into the Series 2009D Interest Account of the Second Senior Lien Bond Fund and the Series 2010D Interest Account of the Subordinate Lien Bond Fund, respectively, to pay interest when due on the Series 2009D Bonds and the Series 2010D Bonds, respectively. The Airports Authority cannot predict the amount of future reductions to the subsidy payment, if any; however, for purposes of projecting Annual Debt Service in future years on the BABs, the Airports Authority has assumed that subsidy payments relating thereto, in the current and all future years through 2030 will be reduced by 5.7% annually as a result of federal sequestration, and that after 2030 there will be no annual reductions of such subsidy payments.

# **Setting Toll Rates and Suspension of Tolls**

*Exclusive Right of Airports Authority to Set Toll Rates.* Under the Permit and Operating Agreement, the Airports Authority has the exclusive right to establish, charge and collect Tolls and other User Fees for the use of the Dulles Toll Road until expiration of the term, or the earlier termination, of the Permit and Operating Agreement. "User Fees" means fees, tolls, rates, incidental charges and other charges (including administrative charges such as late fees, insufficient funds fees, etc.) in respect of vehicles using the Dulles Toll Road and imposed by or on behalf of the Airports Authority pursuant to the Permit and Operating Agreement.

*Conditions Applicable to Airports Authority's Right to Set Toll Rates.* The Airports Authority's rights with respect to Tolls are limited by, and conditioned on, among other provisions in the Permit and Operating Agreement, the following: (i) the Airports Authority shall establish toll rates that are the same for persons using the Dulles Toll Road under like conditions, and for this purpose "like conditions" may take into consideration type, weight and occupancy of the vehicle, number of axles, time-of-day and/or day-of-week travel, traffic congestion and/or other traffic conditions and type of facilities; (ii) the Airports Authority shall exempt from Tolls and other User Fees the classes of vehicles and the persons that are exempt from the payment of tolls under Commonwealth law; and (iii) prior to increasing any toll rate, the Airports Authority shall follow its regulatory process for promulgating regulations, including convening one or more public hearings in the Dulles Corridor to provide members of the public and others an opportunity to become informed about, and express their views on, the proposed toll rate increase. See APPENDIX C – "SUMMARIES OF THE MASTER TRANSFER AGREEMENT AND THE PERMIT AND OPERATING AGREEMENT – Right to Charge Tolls; Additional Provisions Respecting Tolls."

The Airports Authority has covenanted in the Master Indenture to establish, charge and collect Tolls for the privilege of traveling on the Dulles Toll Road at rates sufficient to meet the Operation and Maintenance Expenses and produce sufficient Net Revenues in each Fiscal Year to satisfy the Rate Covenant. See "– Rate Covenant" below. The Airports Authority has further covenanted in the Master Indenture that:

- it will use its best efforts to oppose any law proposed in the future that would exempt from the payment of Tolls and other User Fees any classes of vehicles or persons the effect of which would have a material adverse effect on Toll Road Revenues; and
- at no time will it subject its exclusive right to establish, charge and collect Tolls and other User Fees for the use of the Dulles Toll Road to the approval or consent of any other individual or entity, governmental or otherwise.

*Process for Airports Authority to Increase Toll Rates.* Toll rates for the Dulles Toll Road are codified in the Airports Authority's regulations. The Permit and Operating Agreement requires the Airports Authority, when setting or adjusting toll rates, to utilize the same process it is required to use when promulgating new and amended regulations. Pursuant to this process, the Airports Authority must:

- make the proposed amendment to toll rates available for public inspection in its offices for at least ten days;
- publish a notice in a newspaper of general circulation in the District and in the vicinity of the Dulles Toll Road that states its intention to adopt the proposed amendment, summarizes the proposed amendment, informs the public that it will hold a public hearing or hearings on the proposed amendment on a date or dates at least ten days after the date of publication at which persons may appear to voice their support or objection to the proposed amendment, and identifies the date, time and location for each public hearing;
- conduct each public hearing on the date and at the time identified in the published notice and provide persons appearing at the hearing an opportunity to express their views on the proposed amendment; and
- following the public hearing, after consideration of the views expressed during the public hearings and otherwise, take action on the proposed amendment.

In addition to the process outlined above, the Permit and Operating Agreement requires the Airports Authority to consult with the Dulles Corridor Advisory Committee ("DCAC") with respect to any proposed adjustments to the Dulles Toll Road toll rates, including their timing and amount. The DCAC consists of two representatives from each of the Airports Authority (the Chairman of the Board and the President and CEO), the Commonwealth (the Secretary or his or her designee and a Northern Virginia member of the Commonwealth Transportation Board), Fairfax County (the Chairman of the Board of Supervisors and the County Executive) and Loudoun County (the Chairman of the Board of Supervisors and the County Administrator). The consent or approval of the DCAC of adjustments to the Dulles Toll Road toll rates is not required by the Permit and Operating Agreement. For information regarding the current toll rates on the Dulles Toll Road, see "DULLES TOLL ROAD – Current Toll Rates." See also "THE DULLES TOLL ROAD – Toll Rate Setting Process."

Suspension of Tolls. Under the Permit and Operating Agreement, VDOT is authorized, in its sole discretion reasonably exercised, to order the suspension of tolling in the event the Dulles Toll Road is designated for immediate use as an emergency mass evacuation route. VDOT is required to lift any such order as soon as the need for emergency mass evacuation ceases. In addition, in the event the Dulles Toll Road is designated for immediate use as the alternate route for the diversion of traffic from another Commonwealth highway temporarily closed to all lanes in one or both directions due to a significant incident or emergency, VDOT is authorized to order the immediate suspension of tolling in the direction of the diversion. See APPENDIX C – "SUMMARIES OF THE MASTER TRANSFER AGREEMENT AND THE PERMIT AND OPERATING AGREEMENT – Emergency Suspension of Tolls."

# Lien Structure

*First Senior Lien Bonds*. On June 6, 2019, the Airports Authority issued its \$163,100,000 aggregate principal amount of Dulles Toll Road First Senior Lien Revenue Refunding Bonds, Series 2019A (Dulles Metrorail and Capital Improvement Projects) (the "Series 2019A Bonds"). The Series 2019A Bonds were issued to refund the Airports Authority's outstanding Dulles Toll Road First Senior Lien Revenue Bonds, Series 2009A. The Series 2019A Bonds and any additional Dulles Toll Road First Senior Lien Revenue Bonds that may be issued in the future (collectively, the "First Senior Lien Bonds") are payable from, and secured by a lien on and pledge of, the Toll Road Revenues, subject only to the prior payment of Operation and Maintenance Expenses. As of October 1, 2021, there were \$163.1 million aggregate principal amount of First Senior Lien Bonds Outstanding.

Second Senior Lien Bonds. The pledge of Toll Road Revenues securing the First Senior Lien Bonds is senior to the pledge of Toll Road Revenues securing Dulles Toll Road Second Senior Lien Revenue Bonds issued in August 2009, May 2010 and May 2014, the Series 2022 Bonds and any additional Dulles Toll Road Second Senior Lien Revenue Bonds that may be issued in the future (collectively, the "Second Senior Lien Bonds"). As of October 1, 2021, there were \$1.772 billion aggregate principal amount of Second Senior Lien Bonds Outstanding. The Dulles Toll Road Second Senior Lien Commercial Paper Notes program was terminated in February 2020.

As of the date of this Official Statement, included in the Second Senior Lien Bonds Outstanding are the Airports Authority's Dulles Toll Road Second Senior Lien Revenue Bonds, Series 2009C (Dulles Metrorail and Capital Improvement Projects) issued on August 12, 2009 in the aggregate principal amount of \$158,234,960.25 (the "Series 2009C Bonds"), and its Dulles Toll Road Second Senior Lien Revenue Refunding Bonds, Series 2014A (Dulles Metrorail and Capital Improvement Projects) issued on May 22, 2014 in the aggregate principal amount of \$421,760,000 (the "Series 2014A Bonds"). A portion of the proceeds of the Series 2022 Bonds will be used to refund the outstanding Series 2009C Bonds and Series 2014A Bonds. See "REFINANCING PLAN AND ESTIMATED SOURCES AND USES OF FUNDS."

*Subordinate Lien Bonds*. On December 19, 2019, the Airports Authority issued its \$1,269,365,000 aggregate principal amount of Dulles Toll Road Subordinate Lien Revenue and Refunding Bonds, Series 2019B (Dulles Metrorail and Capital Improvement Projects) (the "Series 2019B Bonds"). The pledge of

Toll Road Revenues securing the Second Senior Lien Bonds is senior to the pledge of Toll Road Revenues securing Dulles Toll Road Subordinate Lien Revenue Bonds issued in May 2010, the Series 2019B Bonds and any additional Dulles Toll Road Subordinate Lien Revenue Bonds that may be issued in the future (collectively, the "Subordinate Lien Bonds"). As of October 1, 2021, there were \$1.419 billion aggregate principal amount of Subordinate Lien Bonds Outstanding.

*Junior Lien Bonds*. The Airports Authority also may issue from time to time its Dulles Toll Road Junior Lien Revenue Bonds (the "Junior Lien Bonds"), none of which are currently Outstanding. The pledge of Toll Road Revenues securing any Junior Lien Bonds is subordinate to the pledge securing the Subordinate Lien Bonds. On August 20, 2014, the Airports Authority and the United States Department of Transportation executed a TIFIA Loan Agreement which provided a loan of up to \$1.278 billion (the "TIFIA Loan") to finance a portion of the costs of Dulles Metrorail Project – Phase 2. A portion of the proceeds of the Series 2019B Bonds was used to repay the TIFIA Loan in full on December 19, 2019 and redeem the outstanding Junior Lien Bonds securing the TIFIA Loan.

*Pledge and Lien of Indenture*. Under the Indenture, in addition to the pledge of amounts constituting Toll Road Revenues, the Airports Authority has pledged, for the benefit of the Bondholders (subject to the order of the lien priority of the Bonds held by such Bondholders), (1) amounts on deposit from time to time in certain Funds, Accounts and subaccounts created under the Indenture, as more fully described below under "—Flow of Funds" and "—Construction Fund", and (2) the Airports Authority's Interest in the Permit and Operating Agreement. The Airports Authority's Interest in the Permit and Operating Agreement, (c) the Toll Road Revenues, (d) the Toll Servicing Rights, and (e) certain other property and rights of the Airports Authority set forth in the Permit and Operating Agreement.

THE SERIES 2022 BONDS ARE SPECIAL, LIMITED OBLIGATIONS OF THE AIRPORTS AUTHORITY PAYABLE ONLY FROM THE TOLL ROAD REVENUES, A PORTION OF THE PROCEEDS RECEIVED FROM THE SALE OF THE SERIES 2022 BONDS AND SUCH OTHER REVENUES OF THE AIRPORTS AUTHORITY AS MAY, UNDER THE INDENTURE, BE AVAILABLE FOR SUCH PAYMENT, INCLUDING AMOUNTS THAT MAY BE ON DEPOSIT IN CERTAIN FUNDS, ACCOUNTS AND SUBACCOUNTS ESTABLISHED PURSUANT TO THE INDENTURE.

PAYMENT OF THE PRINCIPAL OF, PREMIUM, IF ANY, AND INTEREST ON THE SERIES 2022 BONDS DOES NOT AND SHALL NOT CONSTITUTE A CLAIM AGAINST VDOT'S INTEREST IN THE DULLES TOLL ROAD OR THE DULLES TOLL ROAD RIGHT-OF-WAY, VDOT'S INTEREST UNDER THE PERMIT AND OPERATING AGREEMENT OR ITS INTEREST AND ESTATE IN AND TO THE DULLES TOLL ROAD OR ANY PART THEREOF, AND IS NOT AN OBLIGATION OF THE COMMONWEALTH OF VIRGINIA, OR ANY POLITICAL SUBDIVISION, AGENCY, DEPARTMENT OR INSTRUMENTALITY THEREOF, MORAL OR OTHERWISE.

THE SERIES 2022 BONDS DO NOT AND SHALL NOT CONSTITUTE A DEBT OF THE DISTRICT OF COLUMBIA OR OF THE COMMONWEALTH OF VIRGINIA, OR ANY POLITICAL SUBDIVISION, AGENCY, DEPARTMENT OR INSTRUMENTALITY OF THE DISTRICT OF COLUMBIA OR OF THE COMMONWEALTH OF VIRGINIA, NOR A PLEDGE OF THE FAITH AND CREDIT OF THE DISTRICT OF COLUMBIA OR OF THE COMMONWEALTH OF VIRGINIA, OR ANY POLITICAL SUBDIVISION, AGENCY, DEPARTMENT OR INSTRUMENTALITY OF THE DISTRICT OF COLUMBIA OR OF THE COMMONWEALTH OF VIRGINIA. THE ISSUANCE OF THE SERIES 2022 BONDS UNDER THE PROVISIONS OF THE DISTRICT ACT AND THE VIRGINIA ACT SHALL NOT DIRECTLY, INDIRECTLY OR CONTINGENTLY OBLIGATE THE DISTRICT OF COLUMBIA OR THE COMMONWEALTH OF VIRGINIA, OR ANY POLITICAL SUBDIVISION, AGENCY, DEPARTMENT OR INSTRUMENTALITY OF THE DISTRICT OF COLUMBIA OR OF THE COMMONWEALTH OF VIRGINIA, TO THE PAYMENT THEREOF OR TO THE LEVY OR PLEDGE OF ANY FORM OF TAXATION WHATSOEVER. THE AIRPORTS AUTHORITY HAS NO TAXING POWER.

#### **Flow of Funds**

The Airports Authority is required by the Master Indenture to deposit all Toll Road Revenues upon receipt, and may deposit amounts from any other available source, to the Revenue Fund. Funds are to be withdrawn from the Revenue Fund and deposited or transferred in the amounts, in the order of priority and at the times specified in the following chart:





- (xiii) Each month, to the Renewal and Replacement Reserve Fund the amount, if any, equal to onetwelfth (1/12th) of the amount set forth in the Airports Authority's current annual budget.
- (xiv) At least annually, to the Toll Rate Stabilization Fund the amount, if any, equal to the amount set forth in the Airports Authority's current annual budget.
- (xv) Each month, to the Capital Improvements Fund the amount, if any, equal to one-twelfth (1/12th) of the amount set forth in the Airports Authority's current annual budget.
- (xvi) Each month, to the Metrorail Project Fund the amount, if any, equal to one-twelfth (1/12th) of the amount set forth in the Airports Authority's current annual budget.
- (vii) Each month, to the Latent Defects Reserve Fund an amount, if any, necessary to maintain a balance therein equal to the Latent Defects Reserve Requirement.
- (xviii) Each month, to the Transit Operations Fund the amount, if any, equal to one-twelfth (1/12th) of the amount set forth in the Airports Authority's current annual budget.
- (xix) Not later than the 180th day following the last day of the Fiscal Year and only to the extent that each of the Funds and Accounts set forth above are funded as provided herein, in any Supplemental Indenture and in the Permit and Operating Agreement, to the Remaining Toll Road Revenue Fund the amount, if any, determined by an Airports Authority Representative to be transferred thereto.

Amounts in the following Funds are pledged to Bondholders to secure the Bonds, or certain Series thereof, to the extent provided in the Indenture:

- *First Senior Lien Bond Fund and First Senior Lien Debt Service Reserve Fund*, provided that amounts in each Account of the First Senior Lien Bond Fund and the First Senior Lien Debt Service Reserve Fund are pledged only to the Holders of First Senior Lien Bonds of the related Series;
- Second Senior Lien Bond Fund and Second Senior Lien Debt Service Reserve Fund, provided that amounts in each Account in the Second Senior Lien Bond Fund and the Second Senior Lien Debt Service Reserve Fund are pledged only to the Holders of Second Senior Lien Bonds of the related Series.
- Subordinate Lien Bond Fund and Subordinate Lien Debt Service Reserve Fund, provided that amounts in each Account of the Subordinate Lien Bond Fund and the Subordinate Lien Debt Service Reserve Fund are pledged only to the Holders of Subordinate Lien Bonds of the related Series.
- *Junior Lien Bond Fund*, provided that amounts in the Junior Lien Bond Fund are pledged to the Holders of Junior Lien Bonds as provided in a Supplemental Indenture authorizing the issuance of the Series of Junior Lien Bonds.
- *Toll Rate Stabilization Fund* Amounts in the Toll Rate Stabilization Fund are to be used by the Airports Authority to fund costs relating to the Dulles Metrorail Project and other Capital Improvements in the Dulles Corridor, to provide funds to make up any deficiencies in the Operation and Maintenance Fund, the Extraordinary Maintenance and Repair Reserve Fund, any Bond Fund or any Debt Service Reserve Fund, and to redeem any Outstanding Bonds. Amounts in the Toll Rate Stabilization Fund are pledged to all Bondholders (subject to the order of the lien priority of the Bonds held by such Bondholders).

Amounts in the following Funds are not pledged to Bondholders to secure the Bonds and may be used only for designated purposes:

- *Operation and Maintenance Fund* Amounts in the Operation and Maintenance Fund are to be used by the Airports Authority to pay Operation and Maintenance Expenses.
- *Extraordinary Maintenance and Repair Reserve Fund* Amounts in the Extraordinary Maintenance and Repair Reserve Fund are held by the Trustee for the benefit of VDOT. With the prior written approval of VDOT, the Airports Authority has the ability to use all or any portion of such funds for the Dulles Metrorail Project or any Capital Improvements.
- *Arbitrage Rebate Fund* Amounts in the Arbitrage Rebate Fund are held by the Trustee until needed to make payments to the Treasury Department of the United States to satisfy the Rebate Requirement relating to each Series of Bonds.
- *Renewal and Replacement Reserve Fund* Amounts in the Renewal and Replacement Reserve Fund are to be used by the Airports Authority exclusively for funding major maintenance expenditures in accordance with the Permit and Operating Agreement. After provision has been made for funding all major maintenance expenditures pursuant to the Permit and Operating Agreement, the Airports Authority may, at its discretion, transfer any funds remaining in the Renewal and Replacement Reserve Fund to the Revenue Fund.
- *Capital Improvements Fund* Amounts in the Capital Improvements Fund are to be used by the Airports Authority to pay the costs of the Capital Improvements to the Dulles Toll Road as designated by the Airports Authority.
- *Metrorail Project Fund* Amounts in the Metrorail Project Fund may be used by the Airports Authority to pay the capital costs of the Dulles Metrorail Project as designated by the Airports Authority.
- Latent Defects Reserve Fund Amounts in the Latent Defects Reserve Fund are to be used exclusively to fund a cash reserve for costs associated with remedying any latent defects related to the Dulles Metrorail Project required pursuant to the Permit and Operating Agreement and the Phase 1 WMATA Cooperative Agreement. The Latent Defects Reserve Requirement of \$15 million plus accrued interest earnings has been satisfied. No additional deposits to the Latent Defects Reserve Fund are anticipated.
- *Transit Operations Fund* Amounts in the Transit Operations Fund may be used by the Airports Authority to pay the costs of the transit operations in the Dulles Corridor (*i.e.*, exclusive of the costs of the Dulles Metrorail Project) as designated by the Airports Authority and in accordance with the Permit and Operating Agreement. The Airports Authority deposited \$6.645 million to the Transit Operations Fund in 2009 and 2010 to pay a portion of the annual operating cost of the Dulles Express Bus Service. Between 2000 and 2008, the year VDOT transferred operational responsibility for the Dulles Toll Road to the Airports Authority, an annual grant of Toll Road Revenues had been provided to Fairfax County to support this bus service. The Airports Authority discontinued the grant in 2011. No additional deposits to the Transit Operations Fund were made after 2010 and none are anticipated.
- *Remaining Toll Road Revenue Fund* Amounts in the Remaining Toll Road Revenue Fund are available for use by the Airports Authority for any lawful purpose. The Airports Authority is required to transfer amounts on deposit in the Remaining Toll Road Revenue Fund, if any,

to VDOT, no later than 180 days following the last day of the Fiscal Year. There have been no deposits to the Remaining Toll Road Revenue Fund and none are anticipated.

## **Debt Service Reserve Accounts for Each Series of Bonds**

*First Senior Lien Debt Service Reserve Fund.* Each Series of First Senior Lien Bonds is additionally secured by a separate Series Account in the First Senior Lien Debt Service Reserve Fund, into which there is to be deposited, upon the issuance of each Series of First Senior Lien Bonds, an amount, if any, specified in the Supplemental Indenture governing the issuance of and securing the related Series of First Senior Lien Bonds. As of November 1, 2021, the amount on deposit in the First Senior Lien Debt Service Reserve Fund was \$16.3 million.

Second Senior Lien Debt Service Reserve Fund. Each Series of Second Senior Lien Bonds is additionally secured by a separate Series Account in the Second Senior Lien Debt Service Reserve Fund, into which there is to be deposited, upon the issuance of each Series of Second Senior Lien Bonds, an amount, if any, specified in the Supplemental Indenture governing the issuance of and securing the related Series of Second Senior Lien Bonds. As of November 1, 2021, the total amount on deposit in all Series Accounts of the Second Senior Lien Debt Service Reserve Fund was \$134.4 million. Upon the issuance of the Series 2022 Bonds, the approximately \$56.5 million on deposit in the Series Accounts in the Second Senior Lien Debt Service Reserve Fund securing the Refunded Bonds will be applied, together with proceeds of the Series 2022 Bonds and other amounts available under the Indenture, to the refunding of the Refunded Bonds as described under "REFINANCING PLAN AND ESTIMATED SOURCES AND USES OF FUNDS."

Pursuant to the Thirteenth Supplemental Indenture, a Series Account securing the Series 2022 Bonds is established in the Second Senior Lien Debt Service Reserve Fund (the "Series 2022 Debt Service Reserve Account"). The Series 2022 Debt Service Reserve Account is pledged as security to Holders of the Series 2022A Bonds, the Series 2022B Bonds and, if so specified in the Supplemental Indenture governing the issuance of and securing additional Series of Second Senior Lien Bonds that may be issued in the future, such additional Bonds. Upon the issuance of the Series 2022 Bonds, \$\_\_\_\_\_\_ will be deposited in the Series 2022 Debt Service Reserve Account in satisfaction of the Series 2022 Debt Service Reserve Requirement.

The Debt Service Reserve Requirement for the Series 2022 Bonds (the "Series 2022 Debt Service Reserve Requirement") is an amount equal to the least of (a) §\_\_\_\_\_\_, which amount is equal to 125% of the average Annual Debt Service (as defined in Appendix A hereto) for the Series 2022 Bonds in the current and each future Fiscal Year, (b) 10% of the aggregate original stated principal amount of the Series 2022 Bonds (or 10% of the issue price of the Series 2022A Bonds, if required by the Code, plus the original stated principal amount of the Series 2022B Bonds) or (c) the maximum principal and interest due on the Series 2022 Bonds in the current or any future Fiscal Year, but in no event more than 10% of the aggregate original stated principal amount of the Series 2022B Bonds (or 10% of the issue price of the Series 2022 Bonds (or 10% of the aggregate original stated principal amount of the Series 2022B Bonds) or (c) the maximum principal and interest due on the Series 2022 Bonds in the current or any future Fiscal Year, but in no event more than 10% of the aggregate original stated principal amount of the Series 2022B Bonds (or 10% of the issue price of the Series 2022A Bonds, if required by the Code, plus the original stated principal amount of the Series 2022B Bonds (or 10% of the issue price of the Series 2022A Bonds, if required by the Code, plus the original stated principal amount of the Series 2022B Bonds (or 10% of the issue price of the Series 2022A Bonds, if required by the Code, plus the original stated principal amount of the Series 2022B Bonds).

Subordinate Lien Debt Service Reserve Fund. Each Series of Subordinate Lien Bonds is additionally secured by a separate Series Account in the Subordinate Lien Debt Service Reserve Fund, into which there is to be deposited, upon the issuance of each Series of Subordinate Senior Lien Bonds, an amount, if any, specified in the Supplemental Indenture governing the issuance of and securing the related Series of Subordinate Lien Bonds. As of November 1, 2021, the total amount on deposit in all Series Accounts of the Subordinate Lien Debt Service Reserve Fund was \$115.8 million.

*Junior Lien Debt Service Reserve Fund.* The Indenture authorizes, but does not require, the establishment of a debt service reserve fund relating to Junior Lien Bonds. There are no Junior Lien Bonds currently outstanding.

*Provisions Equally Applicable to all of the Debt Service Reserve Funds.* Amounts in each Account in the related Debt Service Reserve Fund will be used to pay debt service on the related Series of Bonds on the date such debt service is due when insufficient funds for that purpose are in the related Bond Fund; provided, however, that all amounts in an Account in the related Debt Service Reserve Fund may be used, together with other amounts available for such purpose under the Indenture, to provide for payment in full of all Outstanding Bonds of the related Series when the aggregate of such amounts is sufficient for such purpose. Amounts in each Account of the related Debt Service Reserve Fund are pledged to Holders of Bonds of the related Series.

In lieu of or in addition to cash or investments, at any time the Airports Authority may cause to be deposited to the credit of a Series Account in the related Debt Service Reserve Fund any form of Credit Facility, in the amount of the related Series Debt Service Reserve Requirement, irrevocably payable to the Trustee as beneficiary for the Holders of the related Series of Bonds, provided that the Trustee has received evidence satisfactory to it that (i) at the time of the initial delivery of the Credit Facility the Credit Provider has a credit rating in one of the two highest credit rating categories by two Rating Agencies, (ii) the obligation of the Airports Authority to pay the fees of and to reimburse the Credit Provider is subordinate to its obligation to pay debt service on the related Bonds, (iii) the term of the Credit Facility is at least 24 months, (iv) except as provided in the Indenture and described in the next sentence, the only condition to a drawing under the Credit Facility is insufficient amounts in the applicable Funds and Accounts held by the Trustee with respect to the related Series of Bonds when needed to pay debt service on such Series or the expiration of the Credit Facility, and (v) the Credit Provider shall notify the Airports Authority and the Trustee at least 18 months prior to expiration of the Credit Facility. If (a) the Airports Authority receives such expiration notice and the Credit Provider does not extend the expiration date or (b) the Airports Authority receives notice of the termination of the Credit Facility, the Airports Authority shall (x) provide a substitute Credit Facility that meets the requirements set forth in the Indenture and described in the foregoing sentences, (y) deposit the applicable Series Debt Service Reserve Requirement to the related Account in the related Debt Service Reserve Fund (1) in the manner provided in the Supplemental Indenture pursuant to which such Bonds are issued, or (2) prior to the Credit Facility termination date in the case of receipt of a termination notice, or (z) instruct the Trustee to draw on such Credit Facility in the amount of the related Series Debt Service Reserve Requirement (1) in the manner provided in the Supplemental Indenture pursuant to which such Bonds are issued or (2) prior to the Credit Facility termination date in the case of receipt of a termination notice, and deposit such drawn amount to such Series Account in the related Debt Service Reserve Fund.

In the event that the Trustee shall have withdrawn moneys in the applicable Account within the Debt Service Reserve Fund for the purpose of paying principal or interest on the related Series of Bonds when due, the Trustee shall promptly notify the Airports Authority of such withdrawal. Upon receipt of such notification, the Airports Authority shall, on or prior to the first Business Day of each month, commencing the month after receipt of the notification from the Trustee, in accordance with the flow of funds set forth in the Indenture, transfer to the Trustee for deposit in the applicable Debt Service Reserve Fund an amount equal to (a) one-twelfth (1/12th) of the aggregate amount of each unreplenished withdrawal in the case of the First Senior Lien Debt Service Reserve Fund, or (b) one-twenty fourth (1/24th) of the aggregate amount of each unreplenished withdrawal in the case of the Subordinate Lien Debt Service Reserve Fund, until the amount on deposit in the applicable Debt Service Reserve Fund is equal to the related Debt Service Reserve Requirement for the applicable Service Reserve Fund is equal to the related Debt Service Reserve Requirement for the applicable Service Reserve Fund is equal to the related Debt Service Reserve Requirement for the applicable Service Re

## **Other Reserves**

As of November 1, 2021, the Airports Authority has approximately \$957 million of restricted and unrestricted fund balances.

Restricted Balances as of November 1, 2021 (unaudited)				
Cash and Cash Equivalents - Short Term	\$ 51,021,688			
Cash and Cash Equivalents - Long Term	362,057,172			
Short Term Investments	235,648,895			
Long Term Investments	96,740,986			
Total Restricted <sup>*</sup>	\$745,468,741			
Unrestricted Balances as of November 1, 2021 (unaudited)				
Cash and Cash Equivalents	\$211,930,306			
Total Unrestricted	211,930,306			

\* Includes \$267 million in Debt Service Reserve accounts.

The Airports Authority may, but is not required to, use amounts in the Toll Rate Stabilization Fund to make up any deficiencies in the Operation and Maintenance Fund, the Extraordinary Maintenance and Repair Reserve Fund, any Bond Fund or any Debt Service Reserve Fund, and to redeem any Outstanding Bonds. Amounts in the Toll Rate Stabilization Fund are pledged to all Bondholders (subject to the order of the lien priority of the Bonds held by such Bondholders).

In addition, after provision has been made for funding all major maintenance expenditures pursuant to the Permit and Operating Agreement, the Airports Authority may, at its discretion, transfer any funds remaining in the Renewal and Replacement Reserve Fund to the Revenue Fund to make the monthly deposits described under "—Flow of Funds" above.

There can be no assurance that any moneys will be available in either the Toll Rate Stabilization Fund or the Renewal and Replacement Reserve Fund at any time to make payments of principal of or interest on any Bonds.

#### **Construction Fund**

All proceeds of Bonds issued to pay costs of the Dulles Metrorail Project will be deposited into the Metrorail Project Account in the Construction Fund established under the Indenture and applied to the payment of the costs of the Dulles Metrorail Project or for other projects and for other purposes then authorized by law. All proceeds of the Bonds relating to the Capital Improvements will be deposited into the Capital Improvements Account in the Construction Fund and applied to the payment of the cost of the Capital Improvements or for other projects and purposes then authorized by law. All proceeds of any Subordinate Lien Bonds issued to fund any cost overruns of the Dulles Metrorail Project will be deposited into the Capital Reserve Account in the Construction Fund and used for cost overruns of Dulles Metrorail Project – Phase 2 or any other lawful purpose. The Airports Authority also may deposit to the credit of the appropriate Account of the Construction Fund any other moneys (including all obligations held as investments thereof and the proceeds of such investments) received from any other source for paying costs of the Dulles Metrorail Project or the Capital Improvements, or for any other purpose or project authorized by law.

Moneys, instruments and securities in the Construction Fund will be held in a separate account by the Trustee or a bank or trust company selected by the Airports Authority, as custodian and bailer (the "Custodian") for the Trustee. The Trustee currently also serves as the Custodian. Amounts in the Construction Fund are pledged to the Bondholders (subject to the order of the lien priority of the Bonds held by such Bondholders).

## **Rate Covenant**

The Airports Authority has covenanted in the Master Indenture that it will establish, charge and collect Tolls for the privilege of traveling on the Dulles Toll Road at rates sufficient to meet the Operation and Maintenance Expenses and produce Net Revenues in any Fiscal Year, and in each Fiscal Year thereafter, that are at least:

- (i) 200% of the Maximum Annual Debt Service with respect to all Outstanding First Senior Lien Bonds for such Fiscal Year;
- (ii) 135% of the Annual Debt Service with respect to all Outstanding First Senior Lien Bonds and all Outstanding Second Senior Lien Bonds for such Fiscal Year;
- (iii) 120% of the Annual Debt Service with respect to all Outstanding First Senior Lien Bonds, all Outstanding Second Senior Lien Bonds and all Outstanding Subordinate Lien Bonds for such Fiscal Year; and
- (iv) 100% of the Annual Debt Service with respect to all Outstanding Bonds and all other obligations of the Airports Authority secured by Toll Road Revenues for such Fiscal Year.

In connection with the preparation of an annual budget for each Fiscal Year while any Series of Bonds is Outstanding, the Airports Authority will prepare a statement in which it sets forth its conclusion as to whether Toll Road Revenues for the current Fiscal Year and for the immediately succeeding Fiscal Year will be sufficient to comply with the Rate Covenant.

If either (i) the annual budget adopted by the Airports Authority for any Fiscal Year shows that Toll Road Revenues will be inadequate to meet the Rate Covenant for such Fiscal Year or (ii) the audited financial reports regarding the Dulles Toll Road prepared by the Airports Authority show that the Airports Authority did not satisfy the Rate Covenant for a Fiscal Year, then, the Airports Authority is required to:

> within 30 days of the date such budget is adopted or such audit is final, engage a (i) Toll Road Consultant to conduct a study and, within 60 days of such engagement, the Toll Road Consultant is to deliver a written report to the Airports Authority containing the results of such study and the recommendations of the Toll Road Consultant as to the actions required with respect to the operation of the Dulles Toll Road and Tolls, fees and charges for the privilege of traveling on the Dulles Toll Road in order to provide sufficient Toll Road Revenues in each subsequent Fiscal Year to comply with the Rate Covenant (provided, however, that, if such study was conducted and such a report was delivered because the annual budget for a Fiscal Year showed that Toll Road Revenues would be inadequate to meet the Rate Covenant for such Fiscal Year, a second study need not be conducted and a second report need not be delivered because the audited financial reports regarding the Dulles Toll Road prepared by the Airports Authority show that the Airports Authority did not satisfy the Rate Covenant for the same Fiscal Year); and

(ii) take the actions recommended by the Toll Road Consultant in such report no later than 60 days after the receipt of such report.

Failure to comply with the Rate Covenant does not constitute an Event of Default under the Indenture if either (i) the Airports Authority engages a Toll Road Consultant and takes the actions recommended by the Toll Road Consultant or (ii) the Toll Road Consultant provides a written opinion stating that the actions required in order to produce the required Toll Road Revenues are impracticable at that time; provided, however, that failure to comply with the Rate Covenant for a period of 36 consecutive months shall in all events constitute an Event of Default, regardless of whether the Airports Authority engages a Toll Road Consultant provides a written opinion stating that the actions required a that time; provided, however, that failure to comply with the Rate Covenant for a period of 36 consecutive months shall in all events constitute an Event of Default, regardless of whether the Airports Authority engages a Toll Road Consultant and takes the actions recommended by the Toll Road Consultant, or the Toll Road Consultant provides a written opinion stating that the actions required in order to produce the required Toll Road Revenues were impracticable at that time. "Impracticable" means (A) such actions would not result in an increase in Toll Road Revenues that is sufficient to comply with the Rate Covenant, (B) the economic cost of taking such actions exceeds the economic benefit resulting from such actions or (C) the Airports Authority does not have sufficient available funds to pay the cost of taking such actions.

If any study concludes that actions with respect to the operation of the Dulles Toll Road and Tolls, fees and charges for the privilege of traveling on the Dulles Toll Road will not provide sufficient Toll Road Revenues in each subsequent Fiscal Year to comply with the Rate Covenant, the Airports Authority is required to use its best efforts to collect revenues from other sources (not including any sources relating to aviation purposes) that will enable it to comply with such Rate Covenant.

Under the Permit and Operating Agreement, the Airports Authority has the exclusive right to establish, charge and collect Tolls and other User Fees for the use of the Dulles Toll Road until expiration of the term, or the earlier termination, of the Permit and Operating Agreement. The Airports Authority has covenanted in the Master Indenture that at no time will it subject its exclusive right to establish, charge and collect Tolls and other User Fees for the use of the Dulles Toll Road to the approval or consent of any other individual or entity, governmental or otherwise. See APPENDIX C – "SUMMARIES OF THE MASTER TRANSFER AGREEMENT AND THE PERMIT AND OPERATING AGREEMENT."

### **Additional Bonds**

The Indenture permits the Airports Authority to issue additional Bonds from time to time to pay or provide for the payment of the Cost (as defined in APPENDIX A hereto) of the Dulles Metrorail Project or the Capital Improvements, to refund all or a portion of a Series of Bonds, or for any combination of such purposes.

*New Money Bonds*. Under the Indenture, the Airports Authority may issue additional Bonds, other than Bonds issued pursuant to a Safety Order, only if, in addition to satisfying certain other requirements, the Airports Authority delivers to the Trustee evidence of compliance with the following additional Bonds historical and/or projected coverage tests:

<u>First Senior Lien Bonds</u>. If such additional Bonds are First Senior Lien Bonds, (1) a certificate of the Chief Financial Officer of the Airports Authority certifying that the Net Revenues for (a) the most recent Fiscal Year for which audited statements are available or (b) a 12 consecutive month period in the immediately prior 18 months (the most recent Fiscal Year or such 12 consecutive month period being herein referred to as the "Historical Period") were at least 200% of the Maximum Annual Debt Service for all then Outstanding First Senior Lien Bonds (excluding any First Senior Lien Bonds being refunded) and the additional First Senior Lien Bonds proposed to be issued; and (2) a certificate of the Toll Road Consultant stating that, based upon reasonable

assumptions, the projected Net Revenues for the current and each of the Fiscal Years through the repayment of all Outstanding Bonds following the issuance of the additional First Senior Lien Bonds are sufficient to meet the Rate Covenant (taking into account the additional First Senior Lien Bonds proposed to be issued and excluding any First Senior Lien Bonds being refunded).

<u>Second Senior Lien Bonds</u>. If such additional Bonds are Second Senior Lien Bonds, (1) a certificate of the Chief Financial Officer of the Airports Authority certifying that the Net Revenues for the Historical Period were at least 135% of the average Annual Debt Service for all then Outstanding First Senior Lien Bonds and Second Senior Lien Bonds (excluding any Second Senior Lien Bonds being refunded) and the additional Second Senior Lien Bonds proposed to be issued; <u>or</u> (2) a certificate of the Toll Road Consultant stating that, based upon reasonable assumptions, the projected Net Revenues for the current and each of the Fiscal Years through the repayment of all Outstanding Bonds following the issuance of the additional Second Senior Lien Bonds are sufficient to meet the Rate Covenant (taking into account the additional Second Senior Lien Bonds proposed to be issued and excluding any Second Senior Lien Bonds being refunded).

<u>Subordinate Lien Bonds</u>. If such additional Bonds are Subordinate Lien Bonds, (1) a certificate of the Chief Financial Officer of the Airports Authority certifying that the Net Revenues for the Historical Period were at least 120% of the average Annual Debt Service for all then Outstanding First Senior Lien Bonds, Second Senior Lien Bonds and Subordinate Lien Bonds (excluding any Subordinate Lien Bonds being refunded) and the additional Subordinate Lien Bonds proposed to be issued; <u>or</u> (2) a certificate of the Toll Road Consultant stating that, based upon reasonable assumptions, the projected Net Revenues for the current and each of the Fiscal Years through the repayment of all Outstanding Bonds following the issuance of the additional Subordinate Lien Bonds are sufficient to meet the Rate Covenant (taking into account the additional Subordinate Lien Bonds proposed to be issued to be issued and excluding any Subordinate Lien Bonds being refunded).

<u>Junior Lien Bonds</u>. If such additional Bonds are Junior Lien Bonds, (1) a certificate of the Chief Financial Officer of the Airports Authority certifying that the Net Revenues for the Historical Period were at least 100% of the average Annual Debt Service for all then Outstanding Bonds (excluding any Junior Lien Bonds being refunded) and the additional Junior Lien Bonds proposed to be issued; <u>or</u> (2) a certificate of the Toll Road Consultant stating that, based upon reasonable assumptions, the projected Net Revenues for the current and each of the Fiscal Years through the repayment of all Outstanding Bonds following the issuance of the additional Junior Lien Bonds are sufficient to meet the Rate Covenant (taking into account the additional Junior Lien Bonds proposed to be issued and excluding any Junior Lien Bonds being refunded).

*Refunding Bonds.* The Airports Authority may issue refunding Bonds from time to time. If additional Bonds are being issued for the purpose of refunding all or a portion of one or more Series of Bonds, the Airports Authority must deliver either (1) evidence that the Maximum Annual Debt Service (taking into account the issuance of the refunding Bonds) would not be more than the Maximum Annual Debt Service immediately prior to the issuance of such refunding Bonds, or (2) a certificate showing historical and/or projected coverage test compliance as if such Bonds were new money Bonds as described above under "*New Money Bonds.*"

*Issuance Required Under Safety Order*. The Airports Authority may issue additional Bonds without satisfying the additional Bonds tests described above solely for the purpose of financing the cost of carrying out work on the Dulles Toll Road required under a Safety Order issued by VDOT pursuant to the Permit and Operating Agreement, provided that an Airports Authority Representative issues a written certification to that effect. "Safety Order" means any written order or directive of VDOT which directs that certain

improvements to the Dulles Toll Road be undertaken (a) to conform to changes in safety standards or methodologies agreed to or adopted by VDOT for similar portions of highways in the Commonwealth; or (b) to correct a specific safety condition affecting the Dulles Toll Road which VDOT has determined to exist by investigation or analysis.

See APPENDIX B – "SUMMARY OF THE INDENTURE" for a more detailed description of provisions that apply to the issuance of additional Bonds.

# Remedies Upon Event of Default; No Acceleration or Cross-Default

Upon the occurrence of an Event of Default, there is no right of acceleration with respect to the Bonds. An Event of Default with respect to one Series of Bonds is not an Event of Default with respect to any other Series of Bonds unless such event or condition on its own constitutes an Event of Default with respect to such other Series of Bonds.

Upon the occurrence and continuance of an Event of Default with respect to a Series of Bonds, the Trustee may or, upon the written request of the Holders of not less than 51% in an aggregate principal amount of the Bonds of such Series, together with indemnification of the Trustee to its satisfaction, shall proceed to protect and enforce its rights and the rights of the Bondholders under the Indenture, the Acts and such Bonds by such suits, actions or proceedings as the Trustee, being advised by counsel, deems expedient.

In the event that the Event of Default is also an event that could cause the termination of the Permit and Operating Agreement, the Trustee is first required to take actions to cure the event, if curable, thereby preventing the termination of the Permit and Operating Agreement, and, in the case of certain events, prior to such termination, to cause the transfer of the Airports Authority's Interest from the Airports Authority to a Substituted Operator that has been approved by VDOT. See "TERMINATION AND EXPIRATION OF THE PERMIT AND OPERATING AGREEMENT."

For a more detailed summary of the Events of Default and the rights and remedies of the Trustee and the Bondholders, see APPENDIX B – "SUMMARY OF THE INDENTURE – Default and Remedies."

## **REFINANCING PLAN AND ESTIMATED SOURCES AND USES OF FUNDS**

*Series 2022A Bonds.* A portion of the proceeds of the Series 2022A Bonds will be used to redeem the Series 2014A Bonds described below (the "Refunded Series 2014A Bonds") on April 1, 2022 (the "Series 2014A Redemption Date"), at a redemption price equal to the principal amount thereof and interest accrued thereon to the Series 2014A Redemption Date.

Maturity Date (October 1)	Principal Amount	CUSIP <sup>*</sup> No.
2053	\$421,760,000	592643CC2

Proceeds of the Series 2022A Bonds will also be used to capitalize a portion of the interest payments on the Series 2022A Bonds through October 1, 2024.

*Series 2022B Bonds.* A portion of the proceeds of the Series 2022B Bonds will be used to redeem the Series 2009C Bonds described below (the "Refunded Series 2009C Bonds" and together with the Refunded Series 2014A Bonds, the "Refunded Bonds") on October 1, 2026 (the "Series 2009C Redemption Date"), at a redemption price equal to the principal amount and accreted value thereof and interest accrued thereon to the Series 2009C Redemption Date.

Maturity Date			
(October 1)	Principal Amount	Accreted Value	CUSIP <sup>*</sup> No.
2041	\$158,234,960.25	\$249,775,000	592643BM1

Proceeds of the Series 2022B Bonds will also be used to capitalize a portion of the interest payments on the Series 2022B Bonds through October 1, 2024.

*Refunding Agreements.* On the date of delivery of the Series 2022 Bonds, the Airports Authority and the Trustee will enter into Refunding Agreements, each dated as of February 1, 2022 (collectively, the "Refunding Agreements"), pursuant to which the Airports Authority will irrevocably deposit with the Trustee cash and/or direct and general obligations of, or obligations the timely payment of principal and interest on which are unconditionally guaranteed by, the United States of America sufficient to timely pay, when due, the principal of and interest on the Refunded Bonds on the Series 2014A Redemption Date and the Series 2009C Redemption Date, as applicable.

<sup>&</sup>lt;sup>\*</sup> CUSIP® is a registered trademark of the American Bankers Association. CUSIP Global Services (CGS) is managed on behalf of the American Bankers Association by S&P Global Market Intelligence. Copyright© 2022 CUSIP Global Services. All rights reserved. CUSIP® data herein is provided by CUSIP Global Services. This data is not intended to create a database and does not serve in any way as a substitute for the CGS database. CUSIP® numbers are provided for convenience of reference only. None of the Airports Authority, the Underwriters or their agents or counsel assume responsibility for the accuracy of such numbers.

*Estimated Sources and Uses of Funds.* The proceeds of the Series 2022 Bonds, together with other available funds of the Airports Authority, are expected to be applied in the following manner:

<u>2022A</u>	<u>2022B</u>	<u>Total</u>	
	\$	\$	\$
	\$	\$	\$
	\$	\$	\$
	*	+	+
	\$	\$	\$
		2022A 2022B \$ \$ \$ \$ \$	\$ \$ \$ \$

(i) The Series 2022 Debt Service Reserve Account secures the Series 2022A Bonds, the Series 2022B Bonds and may secure additional Series of Second Senior Lien Bonds in the future. See "SECURITY AND SOURCES OF PAYMENT FOR THE BONDS – Debt Service Accounts for Each Series of Bonds – Second Senior Lien Debt Service Reserve Fund" herein.

(2) Includes Underwriters' discount, bond insurance premium, if any, certain fees and expenses of legal counsel, financial advisors, consultants, the Trustee and rating agencies, printing costs and other costs of issuance.

# HISTORICAL FINANCIAL INFORMATION

The following table sets forth historical debt service coverage for the years 2016 through 2020. The information presented is derived from audited financial statements prepared in accordance with generally accepted accounting principles, however, the presentation differs from the audited presentation.

	• • • •	<b>a</b> a 4 <b>-</b>	• • • • •	• • • • •	• • • •
Year Ending December 31	<u>2016</u>	<u>2017</u>	<u>2018</u>	<u>2019</u>	<u>2020</u>
Toll Road Revenues	\$ 151,731	152,023	151,397	197,407	122,087
Other Revenues	260	1,051	3,129	4,478	964
Operating Expenses	(29,088)	(28,724)	(29,061)	(32,504)	(24,591)
Net Revenues	\$ 122,903	124,350	125,465	169,382	98,460
First Senior Lien Debt Service	\$ 10,143	10,143	10,143	9,696	8,156
Second Senior Lien Debt Service	51,845	63,520	64,034	85,292	79,206
less committed funding for interest payments	(30,000)	(20,000)	(15,000)	(15,000)	(65,528)
Subordinate Lien Debt Service	8,086	8,090	8,077	8,060	58,351
Junior Lien Debt Service		-	-	36,730	n/a
Total Net Debt Service	\$ 40,073	61,753	67,254	124,778	80,185
First Senior Lien Debt Service Coverage	12.12x	12.26x	12.37x	17.47x	12.07x
Second Senior Lien Debt Service Coverage	<i>3.84x</i>	2.32x	2.12x	2.12x	4.51x
Subordinate Lien Debt Service Coverage	<i>3.07x</i>	2.01x	1.87x	1.92x	1.23x
Junior Lien Debt Service Coverage	3.07x	2.01x	1.87x	1.36x	n/a

## Historical Debt Service Coverage (dollars in thousands)

# **PROSPECTIVE FINANCIAL INFORMATION**

The tables that follow set forth the annual debt service requirements for the Series 2022 Bonds and all Bonds Outstanding after the issuance of the Series 2022 Bonds and the refunding of the Refunded Bonds, the estimated annual Toll Road Revenues available to pay Operation and Maintenance Expenses, the estimated debt service reserve fund earnings available to the Airports Authority, estimated Operation and Maintenance Expenses, and debt service and the projected debt service coverage on each lien of Bonds. The tables were prepared based on information furnished by the Airports Authority, the Financial Advisors and Stantec Consulting Services Inc. ("Stantec"), the Airports Authority's Traffic and Revenue Consultant. None of the Airports Authority, the Financial Advisors, the Underwriters or Stantec warrants or represents that the estimates and projections in the tables herein will be met. In addition, the Airports Authority gives no assurance that the actual financial results of the Dulles Toll Road will meet or exceed the estimates and projections set forth in the tables herein, and, other than as provided in the Disclosure Agreement (as defined herein), assumes no obligation to update any of the information in the tables. See "Forward-Looking Statements" and "Risks Relating to Management and Operation of the Dulles Toll Road – Future Toll Rate Increases" under "INVESTMENT CONSIDERATIONS."

This Official Statement includes certain prospective financial information, including (i) the Dulles Toll Road Investment-Grade Traffic and Revenue Study, dated December 6, 2021 (the "Traffic and Revenue Study"), prepared by Stantec and attached as APPENDIX D to this Official Statement, and (ii) budget information (see "THE AIRPORTS AUTHORITY – Financial Information for Dulles Corridor Enterprise Fund – *Fiscal Year 2022 Budget*"), funding information and summaries of prospective financial information from the Traffic and Revenue Study, which have been prepared by, and are the responsibility of, the Airports Authority's management. The Airports Authority and its management believe that the budget information, the funding information and the summaries of prospective financial information from the Traffic and Revenue Study have been prepared on a reasonable basis, reflecting the best estimates and judgments of the Airports Authority, and represent, to the best of management's knowledge and opinion, the Airports Authority's expected course of action. However, because this information is highly subjective, it should not be relied upon as necessarily indicative of future results.

The prospective financial information in this Official Statement was not prepared with a view toward compliance with the guidelines established by the American Institute of Certified Public Accountants for preparation and presentation of prospective financial information.

Crowe LLP has not examined, compiled or performed any procedures with respect to the prospective financial information contained in this Official Statement and, accordingly, Crowe LLP does not express an opinion or any other form of assurance on such information or its achievability. Crowe LLP assumes no responsibility for and denies any association with the prospective financial information and any other information derived therefrom included elsewhere in this Official Statement.

The financial statements as of December 31, 2020 set forth in the 2020 Annual Report have been audited by Cherry Bekaert LLP, independent auditor, as stated in their report appearing therein. Cherry Bekaert LLP has not been engaged to perform and has not performed, since the date of its report included therein, any procedures on the financial statements addressed in that report. Additionally, the Cherry Bekaert LLP report does not cover any other information in this Official Statement and should not be read to do so.

#### **PROJECTED ANNUAL DEBT SERVICE REQUIREMENTS** <sup>(1)</sup>

(000s)

Calendar Year	Total First Senior Lien Bonds	Second Senior Lien Bonds, Series 2009B, 2009D and 2010 <sup>(2)(3)</sup>	Second Senior Lien Bonds, Series 2022A <sup>(4)</sup>	Second Senior Lien Bonds, Series 2022B <sup>(5)</sup>	Total Subordinate Lien Bonds <sup>(2)</sup>	Total Debt Service - All Liens
2022	\$ 8,156	\$ 42,712	-	-	\$ 58,343	\$ 109,210
2023	8,156	57,392	-	\$ 6,000	58,343	129,890
2024	8,156	62,657	-	12,000	58,343	141,155
2025	8,156	57,852	\$ 16,500	15,500	58,343	156,350
2026	8,156	58,192	16,500	15,500	58,343	156,690
2027	8,156	58,372	16,500	15,500	58,343	156,870
2028	8,156	52,352	16,500	15,500	58,343	150,850
2029	8,156	79,931	16,500	15,500	58,343	178,429
2030	8,156	89,824	16,500	15,500	58,343	188,322
2031	16,481	99,286	16,500	15,500	58,103	205,870
2032	16,479	99,323	16,500 15,500		58,103	205,905
2033	16,477	128,675	16,500	15,500	71,938	249,091
2034	16,479	129,173	16,500	15,500	71,442	249,093
2035	16,477	128,173	16,500	15,500	72,445	249,094
2036	16,481	128,174	16,500	15,500	72,441	249,096
2037	16,475	128,176	16,500	15,500	72,446	249,097
2038	16,477	85,751	16,500	66,500	64,070	249,299
2039	16,477	116,006	16,500	43,500	56,997	249,480
2040	16,477	112,941	16,500	72,000	54,267	272,186
2041	16,482	73,376	16,500	113,000	54,267	273,625
2042	16,479	143,276	16,500	-	73,577	249,832
2043	16,477	50,964	16,500	-	165,890	249,830
2044	16,475	56,676	16,500	-	160,182	249,833
2045	-	219,401	16,500	-	43,256	279,157
2046	-	209,701	16,500	-	43,256	269,456
2047	-	-	16,500	-	233,331	249,831
2048	-	-	16,500	-	233,328	249,828
2049	-	-	16,500	-	233,329	249,829
2050	-	-	16,500	-	233,332	249,832
2051	-	-	151,000	-	99,550	250,550
2052	-	-	151,000	-	99,545	250,545
2053	-	-	151,000	-	99,544	250,544
Totals	\$304,090	\$2,468,355	\$882,000	\$514,500	\$2,949,723	\$7,118,668

<sup>(1)</sup> All estimates are preliminary and subject to change. Totals may not add due to rounding.

(2) Federal subsidy payments for Second Senior Lien and Subordinate Lien Build America Bonds are subject to annual sequestration reductions. This pro forma assumes annual sequestration reductions continue through 2030, with an effective FY2022 BABs subsidy level of 33.005%. The BABs subsidy is assumed to return to the full 35% thereafter.

(3) Debt service for calendar year 2022 does not include approximately \$16.1 million of monies set aside for interest as of February 1, 2022. On the date of delivery of the Series 2022 Bonds, amounts on deposit in the Series Accounts for the Refunded Bonds in the Second Senior Lien Bond Fund will be transferred to the Trustee to be applied to the refunding of the Refunded Bonds pursuant to the Refunding Agreements. See "REFINANCING PLAN AND ESTIMATED SOURCES AND USES OF FUNDS" herein.

(4) Estimated Annual Debt Service on the Series 2022A Bonds. A portion of interest is capitalized from Series 2022A Bond proceeds through October 1, 2024. Actual debt service may differ materially.

<sup>(5)</sup> Estimated Annual Debt Service on the Series 2022B Bonds. A portion of interest is capitalized from Series 2022B Bond proceeds through October 1, 2024. Actual debt service may differ materially.

## ESTIMATED DEBT SERVICE COVERAGE ON BONDS OUTSTANDING AFTER ISSUANCE OF THE SERIES 2022 BONDS

(000s)

$ \begin{array}{c c c c c c c c c c c c c c c c c c c $						(0005)					
Year Ending   Estimated Toll   Estimated Net Revenues <sup>(1)</sup> Dest Service   Overage   Debt Service <sup>(4)(5)(0)</sup> Coverage   Debt Service <sup>(4)(5)(0)</sup> 2022   \$ 1(6,5)4   \$ 950   \$ (3,521)   \$ 137,973   \$ 8,156   16.92x   \$ \$ 0,867   2.71x   \$ 109,210     2023   216,003   1.598   (32,624)   184,977   8,156   22.6xx   71,547   2.59x   129x8     2024   225,523   1.598   (33,766)   193,755   8,156   24.79x   98,007   2.06x   15,530     2026   239,550   1.598   (37,437)   204,977   8,156   25.47x   98,347   2.08x   156,600     2028   281,509   1.598   (40,104)   247,754   8,156   29.96x   92.507   2.64x   156,850     2030   290,009   1.598   (41,607)   251,100   8,156   30.79x   129,980   1.93x   188,322     2031   295,839   1.598   (41,630)   257,885   16,479   15.65x   14						First Son	ior Lion	First Soniar and Saaa	nd Saniar Lian		
December 31   Rood Revenues <sup>(1)</sup> Expenses <sup>(2)</sup> Revenues   Debt Service <sup>(415)(8)</sup> Coverage   Debt Service <sup>(415)(8)</sup> Coverage   Debt Service <sup>(415)(8)</sup> 2022   \$ 168,544   \$ 905   \$ (31,521)   \$ 137,973   \$ 8,156   16.92x   \$ 50,867   2.71x   \$ 109,890     2024   225,523   1,598   (33,766)   193,755   8,156   2.376x   8,812   2.34x   141,155     2026   239,550   1,598   (36,171)   204,977   8,156   25,13x   98,847   2.08x   156,690     2027   243,584   1.598   (37,473)   207,745   8,156   29,67x   2.64x   150,850     2028   281,509   1.598   (44,1507)   251,100   8,156   30,38x   120,086   2.06x   178,439     2031   295,839   1.598   (44,63)   257,885   16,479   18,56x   177,53   1.73x   249,091     2033   331,399   1.598   (46,020)   306,578   16,477   18,38x <t< th=""><th>Voor Ending</th><th>Estimated Tall</th><th>Estimated Other</th><th>Operating</th><th>Estimated Nat</th><th>Flist Sell</th><th></th><th>First Senior and Secon</th><th>nd Senior Lien</th><th>Subordinate</th><th></th></t<>	Voor Ending	Estimated Tall	Estimated Other	Operating	Estimated Nat	Flist Sell		First Senior and Secon	nd Senior Lien	Subordinate	
203   216,003   1,598   (32,624)   184,977   8,156   22,68x   71,547   2.59x   129,890     2024   225,923   1,598   (33,766)   193,755   8,156   23,76x   82,812   2.34x   141,155     2026   235,50   1,598   (36,171)   204,977   8,156   25,13x   98,347   2.08x   156,690     2027   243,584   1,598   (37,477)   244,360   8,156   29,96x   92,507   2.64x   150,850     2029   286,259   1,598   (41,607)   251,100   8,156   30,38x   120,986   2.06x   178,429     2030   291,009   1,598   (42,960)   254,47x   16,471   18,63x   177,153   1.72x   205,870     2031   295,839   1,598   (42,960)   254,478   16,477   18,63x   177,153   1.73x   249,091     2034   351,399   1,598   (49,297)   315,202   16,477   18,63x   177,651   1.75x						Debt Service	Coverage	Debt Service <sup>(4)(5)(6)</sup>	Coverage	Debt Service <sup>(4)(5)(6)</sup>	Coverage
204   225,923   1.598   (37,66)   193,755   8.156   22.76x   82,812   2.34x   141,155     2025   235,510   1.598   (34,948)   202,161   8,156   24.79x   98,047   2.06x   156,650     2027   243,584   1.598   (37,47)   20,745   8,156   25,47x   98,527   2.11x   156,670     2028   281,509   1.598   (37,47)   244,360   8,156   30,38x   120,086   2.06x   178,429     2030   291,009   1.598   (41,507)   251,100   8,156   30,38x   120,086   2.06x   178,429     2031   291,009   1.598   (44,63)   257,885   16,479   18,63x   177,151   1.73x   249,081     2031   291,009   1.598   (44,600)   310,108   16,477   18,63x   177,151   1.73x   249,091     2044   357,112   1.598   (47,630)   311,080   16,477   19,13x   176,649   1.78x	2022	\$ 168,544	\$ 950	\$ (31,521)	\$ 137,973	\$ 8,156	16.92x	\$ 50,867	2.71x	\$ 109,210	1.26x
2025   235,510   1.598   (34,948)   202,161   8.156   24.79x   98,007   2.06x   156,630     2026   239,550   1.598   (36,171)   204,977   8.156   25.13x   98,327   2.01x   156,690     2028   281,509   1.598   (37,477)   244,340   8.156   29.96x   92,507   2.64x   150,850     2030   291,009   1.598   (40,104)   247,754   8.156   30.8x   120,006   2.06x   178,429     2030   291,009   1.598   (44,603)   257,885   16,477   15.65x   147,802   1.74x   205,905     2033   351,399   1.598   (44,03)   257,885   16,477   18.63x   177,153   1.73x   249,093     2043   357,112   1.598   (47,030)   311,080   16,477   19.13x   176,649   1.75x   249,093     2036   368,291   1.598   (51,023)   319,398   16,477   19.14x   176,651   1.81x	2023	216,003	1,598	(32,624)	184,977	8,156	22.68x	71,547	2.59x	129,890	1.42x
2026   239,550   1,598   (36,171)   204,977   8,156   25,13x   98,347   2.08x   156,690     2027   243,584   1,598   (37,477)   207,745   8,156   25,47x   98,527   2.11x   156,870     2028   286,259   1,598   (40,104)   247,754   8,156   30,38x   120,086   2.06x   178,429     2030   291,009   1,598   (44,63)   257,885   16,479   15,65x   147,802   1.74x   205,870     2031   291,009   1,598   (44,463)   257,885   16,479   15,65x   147,802   1.74x   205,870     2034   357,112   1,598   (46,020)   310,939   16,481   15,43x   177,651   1.75x   249,091     2035   362,919   1,598   (47,630)   311,080   16,477   19,13x   176,651   1.81x   249,091     2036   368,22   1,598   (51,023)   319,398   16,481   19,38x   176,651   1.81x <td>2024</td> <td>225,923</td> <td>1,598</td> <td>(33,766)</td> <td>193,755</td> <td>8,156</td> <td>23.76x</td> <td>82,812</td> <td>2.34x</td> <td>141,155</td> <td>1.37x</td>	2024	225,923	1,598	(33,766)	193,755	8,156	23.76x	82,812	2.34x	141,155	1.37x
2027   243,584   1.598   (38,747)   207,745   8,156   25.47x   98,527   2.11x   156,870     2028   281,509   1.598   (40,104)   247,574   8,156   30.38x   120,086   2.06x   177,8429     2030   291,009   1.598   (41,507)   251,100   8,156   30.79x   129,980   1.93x   188,322     2031   295,839   1.598   (42,960)   254,478   16,441   1.544x   147,767   1.72x   205,870     2033   351,399   1.598   (44,602)   306,978   16,477   18,65x   177,153   1.73x   249,091     2036   362,919   1.598   (47,030)   311,080   16,477   19,13x   176,649   1.78x   249,094     2036   362,919   1.598   (51,023)   319,398   16,477   19,13x   176,649   1.81x   249,094     2038   395,912   1.566   (54,657)   344,261   16,477   20,81x   188,52,28   1.8	2025	235,510	1,598	(34,948)	202,161	8,156	24.79x	98,007	2.06x	156,350	1.29x
2028   281,509   1,598   (38,747)   244,360   8,156   29.96x   92,507   2.64x   150,850     2029   286,259   1,598   (40,104)   247,754   8,156   30.38x   120,086   2.06x   178,429     2030   291,009   1,598   (41,507)   251,100   8,156   30.79x   129,980   1.93x   188,322     2031   295,839   1,598   (44,463)   257,885   16,477   18,65x   147,802   1.74x   205,905     2033   351,1399   1,598   (47,630)   311,080   16,477   18,65x   177,151   1.75x   249,093     2035   362,919   1,598   (47,30)   311,080   16,477   19,13x   176,655   1.81x   249,094     2036   368,822   1,598   (51,023)   319,398   16,481   19,38x   176,651   1.83x   249,097     2037   374,820   1,596   (54,657)   342,821   16,477   21,418x   176,651   1.83x	2026	239,550	1,598	(36,171)	204,977	8,156	25.13x	98,347	2.08x	156,690	1.31x
2029286,2591,598(40,104)247,7548,15630.38x120,0862.06x178,4292030291,0091,598(41,507)251,1008,15630.79x129,9801.93x188,3222031255,8391,598(42,660)254,47816,48115.44x147,7771.72x205,8702032300,7501,598(44,63)257,88516,47915.65x147,8021.74x205,9052033351,3991,598(46,020)306,97816,47718.63x177,1531.75x249,0932035362,9191,598(49,297)315,22016,47719.13x176,6491.78x249,0942036368,8221,598(51,023)319,39816,48119.38x176,6551.81x249,0962037374,8201,566(54,657)342,82116,47720.81x185,2281.85x249,2992038395,9121,566(54,657)348,50516,47721.15x192,4831.81x249,4802040411,0911,566(58,570)348,10716,47721.48x217,9181.62x273,6252041418,9921,453(60,599)359,84616,47724.83x219,3581.64x273,6252042426,8891,358(67,187)409,80616,4752.48x89,6514.57x249,8332044475,6351,358(67,187)409,80616,4752.48x <t< td=""><td>2027</td><td>243,584</td><td>1,598</td><td>(37,437)</td><td>207,745</td><td>8,156</td><td>25.47x</td><td>98,527</td><td>2.11x</td><td>156,870</td><td>1.32x</td></t<>	2027	243,584	1,598	(37,437)	207,745	8,156	25.47x	98,527	2.11x	156,870	1.32x
$\begin{array}{c c c c c c c c c c c c c c c c c c c $	2028	281,509	1,598	(38,747)	244,360	8,156	29.96x	92,507	2.64x	150,850	1.62x
$\begin{array}{c c c c c c c c c c c c c c c c c c c $	2029	286,259	1,598	(40,104)	247,754	8,156	30.38x	120,086	2.06x	178,429	1.39x
$\begin{array}{c c c c c c c c c c c c c c c c c c c $	2030	291,009	1,598	(41,507)	251,100	8,156	30.79x	129,980	1.93x	188,322	1.33x
$\begin{array}{c c c c c c c c c c c c c c c c c c c $	2031	295,839	1,598	(42,960)	254,478	16,481	15.44x	147,767	1.72x	205,870	1.24x
$\begin{array}{c c c c c c c c c c c c c c c c c c c $	2032	300,750	1,598	(44,463)	257,885	16,479	15.65x	147,802	1.74x	205,905	1.25x
$\begin{array}{c c c c c c c c c c c c c c c c c c c $	2033	351,399	1,598	(46,020)	306,978	16,477	18.63x	177,153	1.73x	249,091	1.23x
$\begin{array}{c c c c c c c c c c c c c c c c c c c $	2034	357,112	1,598	(47,630)	311,080	16,479	18.88x	177,651	1.75x	249,093	1.25x
$\begin{array}{c c c c c c c c c c c c c c c c c c c $	2035	362,919	1,598	(49,297)	315,220	16,477	19.13x	176,649	1.78x	249,094	1.27x
$\begin{array}{c c c c c c c c c c c c c c c c c c c $	2036	368,822	1,598	(51,023)	319,398	16,481	19.38x	176,655	1.81x	249,096	1.28x
$\begin{array}{c c c c c c c c c c c c c c c c c c c $	2037	374,820	1,598	(52,809)	323,610	16,475	19.64x	176,651	1.83x	249,097	1.30x
$\begin{array}{c c c c c c c c c c c c c c c c c c c $	2038	395,912	1,566	(54,657)	342,821	16,477	20.81x	185,228	1.85x	249,299	1.38x
$\begin{array}{c c c c c c c c c c c c c c c c c c c $	2039	403,509	1,566	(56,570)	348,505	16,477	21.15x	192,483	1.81x	249,480	1.40x
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	2040	411,091	1,566	(58,550)	354,107	16,477	21.49x	217,918	1.62x	272,186	1.30x
$\begin{array}{c c c c c c c c c c c c c c c c c c c $	2041	418,992	1,453	(60,599)	359,846	16,482	21.83x	219,358	1.64x	273,625	1.32x
$\begin{array}{c c c c c c c c c c c c c c c c c c c $	2042	426,889	1,358	(62,720)	365,527	16,479	22.18x	176,255	2.07x	249,832	1.46x
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	2043	467,155	1,358	(64,915)	403,598	16,477	24.50x	83,940	4.81x	249,830	1.62x
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	2044	475,635	1,358	(67,187)	409,806	16,475	24.88x	89,651	4.57x	249,833	1.64x
2047493,639939(74,492)420,08616,50025.46x249,8312048531,418849(77,099)455,16816,50027.59x249,8282049536,068849(79,798)457,11916,50027.70x249,8292050540,535849(82,590)458,79316,50027.81x249,8322051544,814849(85,481)460,182151,0003.05x250,5502052548,900849(88,473)461,276151,0003.05x250,5452053552,788849(91,569)462,067151,0003.06x250,544	2045	484,113	1,178	(69,539)	415,752	-	-	235,901	1.76x	279,157	1.49x
2048531,418849(77,099)455,16816,50027.59x249,8282049536,068849(79,798)457,11916,50027.70x249,8292050540,535849(82,590)458,79316,50027.81x249,8322051544,814849(85,481)460,182151,0003.05x250,5502052548,900849(88,473)461,276151,0003.05x250,5452053552,788849(91,569)462,067151,0003.06x250,544	2046	488,954	1,178	(71,973)	418,159	-	-	226,201	1.85x	269,456	1.55x
2049536,068849(79,798)457,11916,50027.70x249,8292050540,535849(82,590)458,79316,50027.81x249,8322051544,814849(85,481)460,182151,0003.05x250,5502052548,900849(88,473)461,276151,0003.05x250,5452053552,788849(91,569)462,067151,0003.06x250,544	2047	493,639	939	(74,492)	420,086	-	-	16,500	25.46x	249,831	1.68x
2050540,535849(82,590)458,79316,50027.81x249,8322051544,814849(85,481)460,182151,0003.05x250,5502052548,900849(88,473)461,276151,0003.05x250,5452053552,788849(91,569)462,067151,0003.06x250,544	2048	531,418	849	(77,099)	455,168	-	-	16,500	27.59x	249,828	1.82x
2051 544,814 849 (85,481) 460,182 - - 151,000 3.05x 250,550   2052 548,900 849 (88,473) 461,276 - - 151,000 3.05x 250,550   2053 552,788 849 (91,569) 462,067 - - 151,000 3.06x 250,544	2049	536,068	849	(79,798)	457,119	-	-	16,500	27.70x	249,829	1.83x
2052   548,900   849   (88,473)   461,276   -   -   151,000   3.05x   250,545     2053   552,788   849   (91,569)   462,067   -   -   151,000   3.06x   250,544	2050	540,535	849	(82,590)	458,793	-	-	16,500	27.81x	249,832	1.84x
2053 <u>552,788 849 (91,569) 462,067 151,000 3.06x 250,544</u>	2051	544,814	849	(85,481)	460,182	-	-	151,000	3.05x	250,550	1.84x
	2052	548,900	849	(88,473)	461,276	-	-	151,000	3.05x	250,545	1.84x
Totals   \$12,319,964   \$43,541   \$(1,807,241)   \$10,556,264   \$304,090   \$4,168,945   \$7,118,668	2053	552,788	849	(91,569)	462,067	-	-	151,000	3.06x	250,544	1.84x
	Totals	\$12,319,964	\$43,541	\$(1,807,241)	\$10,556,264	\$304,090		\$4,168,945		\$7,118,668	

<sup>(1)</sup> Toll Revenue Estimates are from the Traffic and Revenue Study prepared by Stantec. See "TRAFFIC AND REVENUE STUDY" herein. There is no assurance that the Airports Authority will implement assumed future toll rate increases. See "INVESTMENT CONSIDERATIONS – Risks Relating to Management and Operation of the Dulles Toll Road – Future Toll Rate Increases."

<sup>&</sup>lt;sup>(2)</sup> Potential earnings on amounts deposited to Debt Service Reserve Funds.

<sup>&</sup>lt;sup>(3)</sup> Projected Operation and Maintenance Expenses are based on the 2022 Budget with 3.50% annual escalation thereafter.

<sup>(4)</sup> Federal subsidy payments for Second Senior Lien Bonds and Subordinate Lien Build America Bonds are subject to annual sequestration reductions. This pro forma table assumes annual sequestration reductions continue through 2030, with an effective FY2022 BABs subsidy level of 33.005%. The BABs subsidy is assumed to return to the full 35% thereafter. See "SECURITY AND SOURCES OF PAYMENT FOR THE BONDS-Pledged Toll Road Revenues" herein.

<sup>&</sup>lt;sup>(5)</sup> The debt service coverage for calendar year 2022 does not reflect the use of \$35.5 million of reserves budgeted to pay interest on Bonds.

<sup>&</sup>lt;sup>(6)</sup> Debt service for calendar year 2022 does not include approximately \$16.1 million of monies set aside for interest as of February 1, 2022. On the date of delivery of the Series 2022 Bonds, amounts on deposit in the Series Accounts for the Refunded Bonds in the Second Senior Lien Bond Fund will be transferred to the Trustee to be applied to the refunding of the Refunded Bonds pursuant to the Refunding Agreements. See "REFINANCING PLAN AND ESTIMATED SOURCES AND USES OF FUNDS" herein.

## THE DULLES TOLL ROAD

The Dulles Toll Road runs parallel to the DIAAH (see "INTRODUCTION – Dulles International Airport Access Highway"). The map on page 55 of this Official Statement shows the Dulles Toll Road in the context of the Northern Virginia region. For information regarding the history of the Dulles Toll Road, see "INTRODUCTION – Dulles Toll Road."

## Airports Authority Management of the Dulles Toll Road

The Airports Authority has covenanted in the Master Indenture that it will (i) at all times operate the Dulles Toll Road, or cause the Dulles Toll Road to be operated, properly and in a sound and economical manner, (ii) maintain, preserve, reconstruct and keep the Dulles Toll Road, or cause it to be maintained, preserved, reconstructed and kept, in good repair, working order and condition and (iii) from time to time make, or cause to be made, all necessary and proper repairs, replacements and renewals.

On March 4, 2009, the Airports Authority's Board approved a management plan for the Dulles Toll Road, under which certain responsibilities and services related to the Dulles Toll Road's operation were assumed by Airports Authority staff and other responsibilities were provided through third-party contracts administered by Airports Authority staff. As part of this management plan, the Airports Authority transitioned some of the VDOT Dulles Toll Road employees to Airports Authority employee status. In addition, the Airports Authority put into place Airports Authority contracts for goods and services or maintenance. In accordance with the Transfer Agreement and the Permit and Operating Agreement, VDOT continued to operate the Dulles Toll Road as a contractor to the Airports Authority between November 1, 2008 and September 30, 2009. On October 1, 2009, the Airports Authority assumed direct responsibility for the operation of the Dulles Toll Road.

Under the Permit and Operating Agreement, the Airports Authority is required to undertake the following maintenance of the Dulles Toll Road:

- each eight years conduct an examination of the physical condition of the Dulles Toll Road assets, including any Capital Improvements constructed after November 1, 2008, and, if the condition of any asset or Capital Improvement falls below a specified rating, to develop and submit to VDOT a plan to restore the asset or Capital Improvement to its specified condition;
- annually prepare and provide to VDOT, for review but not approval, a five-year maintenance plan that considers life cycle asset maintenance for the Dulles Toll Road; and
- annually budget and fund the Renewal and Replacement Program exclusively to provide monies for major Dulles Toll Road maintenance expenditures, including, but not limited to, overlays, bridge deck replacements, erosion and drainage control, Dulles Toll Road mainline plaza renovations and similar projects not normally encompassed in routine maintenance activities.

For a more detailed summary of the foregoing obligations, see APPENDIX C – "SUMMARIES OF THE MASTER TRANSFER AGREEMENT AND THE PERMIT AND OPERATING AGREEMENT – THE PERMIT AND OPERATING AGREEMENT – Renewal and Replacement Program."

The Permit and Operating Agreement also requires the Airports Authority to establish an Extraordinary Maintenance and Repair Reserve and to fund this reserve with the maintenance reserves maintained by VDOT that were transferred to the Airports Authority on November 1, 2008. With the prior written approval of VDOT, the Airports Authority may use all or any portion of such reserve for any Dulles

Toll Road purpose, the Dulles Metrorail Project or any transportation improvement in the Dulles Corridor. If any funds are expended, however, the Airports Authority is required to reimburse the reserve over the ensuing five-year period from Toll Road Revenues. For a more detailed summary of the foregoing, see APPENDIX C – "SUMMARIES OF THE MASTER TRANSFER AGREEMENT AND THE PERMIT AND OPERATING AGREEMENT – THE PERMIT AND OPERATING AGREEMENT – Extraordinary Maintenance and Repair Reserve."

## **COLLECTION OF THE TOLL ROAD REVENUES**

The Dulles Toll Road is configured with one mainline toll plaza at the eastern end and a total of 19 ramp toll plazas at intermediate interchanges. Prior to April 2020, the mainline toll plaza was staffed 24 hours a day, seven days per week, and the ramp toll plazas were staffed from 5:30 am until 9:30 pm. The Airports Authority removed all personnel from toll booths on April 6, 2020, for the safety of the traveling public and Airports Authority employees during the COVID-19 pandemic. E-ZPass and exact change coin payments are currently accepted at all toll plazas. Debit and credit cards are not accepted but customers can use certain commercially available smartphone applications to pay tolls.

The Airports Authority expects to fully eliminate cash toll collection by the end of 2022. In anticipation of this transition to all-electronic tolling, the Airports Authority has undertaken several capital improvements on the Dulles Toll Road in recent years, including replacement of the toll collection system and the addition of digital lane signage, enhanced violation camera technology and upgraded vehicle classification readers and antennas.

## **Toll Rates and Collection**

The Airports Authority has covenanted in the Master Indenture to establish, charge and collect Tolls for the privilege of traveling on the Dulles Toll Road at rates sufficient to meet the Operation and Maintenance Expenses and produce Net Revenues in each Fiscal Year at least equal to the Rate Covenant. See "SECURITY AND SOURCES OF PAYMENT FOR THE BONDS – Rate Covenant." For information relating to the current toll rates, see "THE DULLES TOLL ROAD – Current Toll Rates." For information relating to the process that must be followed by the Airports Authority prior to changing the toll rates, see "SECURITY AND SOURCES OF PAYMENT FOR THE BONDS – Pledged Toll Road Revenues – *Setting Tolls; Limitations on, and Suspensions of, Tolls under Permit and Operating Agreement.*"

Patrons of the Dulles Toll Road pay the Tolls by electronic toll collection or exact change coin payments, until the anticipated cessation of cash toll collections in 2022. E-ZPass is the method by which electronic tolls are collected. The E-ZPass system is used on most tolled roads, bridges and tunnels in the northeastern United States. Currently, there are 34 member agencies in 19 states operating E-ZPass on roads, bridges and tunnels in the Northeast, the South and the Midwest that make up the E-ZPass Interagency Group ("IAG"). All member agencies use compatible technology, allowing travelers to use the same E-ZPass transponder throughout the IAG network. VDOT joined the IAG on behalf of itself and other participating agencies in Virginia.

The Airports Authority entered into an Electronic Toll Collection Agreement ("ETC Agreement") with VDOT, dated as of November 1, 2008, whereby VDOT, as a member of the IAG, is responsible for providing electronic toll collection services on the Dulles Toll Road. Under the ETC Agreement, VDOT is responsible for providing one or more walk-in centers to serve Dulles Toll Road users participating in the ETC system. Generally, E-ZPass customers are required to prepay their accounts by cash or credit card. In accordance with the ETC Agreement, except in cases of system failure, VDOT transfers to the Airports Authority daily by wire an amount equal to the prior day's aggregate Tolls, less applicable transaction fees. The Airports Authority pays a transaction fee to VDOT based upon the number of transactions and the

amount of revenue processed. The transaction fee is intended to compensate VDOT for processing Dulles Toll Road electronic toll payments and for servicing the accounts of Dulles Toll Road E-ZPass holders. Between 1998 and 2020, the volume of ETC transactions increased from approximately 33% of all toll transactions to approximately 96%. The following table sets forth the percentage of all toll revenues processed through ETC transactions for the years 2011 through 2020.

Year	ETC Share
2011	74.6%
2012	77.4
2013	80.7
2014	83.1
2015	84.2
2016	87.1
2017	88.2
2018	90.0
2019	92.4
2020	95.8

Source: Records of the Airports Authority.

To ensure collection of Tolls, the Airports Authority and VDOT have entered into a Violations Processing Agreement, dated as of November 1, 2008, pursuant to which VDOT is responsible for violations processing and customer service for the Dulles Toll Road. Persons who use the Dulles Toll Road without paying the applicable toll have up to six days to pay a missed toll before the violation process begins. At that point, VDOT will send a violation notice to the registered owner of the vehicle. Transactions recorded as violations include instances when a transponder is mounted incorrectly or malfunctioning. While considered violations, applicable administrative fees with respect to missed tolls billed by mail are waived if the amount due is paid before the second notice is sent to the customer.

The Airports Authority maintains a violation enforcement system at each toll lane on the Dulles Toll Road which is compatible with VDOT's system and captures a video image of the license plate, along with other pertinent information relating to the vehicles of drivers who fail to pay the proper toll amount, either manually or electronically. The Airports Authority compensates VDOT for these violations processing services in accordance with a schedule of fees and charges. These fees and charges are deducted from the amounts that VDOT ultimately collects from initially "non-paying" Dulles Toll Road patrons, and the net amount is remitted on a monthly basis to the Airports Authority.

To the west of the Dulles Toll Road, Toll Road Investors Partnership II, L.P. ("TRIP II"), the owner of the Greenway, operates a main line toll plaza and collects a toll in each direction. The toll collected by TRIP II at that plaza includes an amount equal to the Dulles Toll Road ramp toll rate (currently, \$1.50 for a two-axle vehicle) that is remitted to the Airports Authority. TRIP II collects the ramp toll pursuant to the Dulles Toll Road Comprehensive Agreement, dated as of September 28, 1993, as amended, between VDOT and TRIP II. VDOT and the Airports Authority entered into an Assignment and Assumption Agreement Relating to Toll Collection Rights, dated as of November 1, 2008, pursuant to which VDOT assigned to the Airports Authority its rights and obligations with respect to the collection of tolls by TRIP II for the account of the Dulles Toll Road.
#### **Toll Rate Setting Process**

Toll rates for the Dulles Toll Road are set out in Airports Authority regulations, and any increase in toll rates requires the Airports Authority to amend its regulations following public hearings and consultation with the Dulles Corridor Advisory Committee. See "SECURITY AND SOURCES OF PAYMENT FOR THE BONDS – Setting Toll Rates and Suspension of Tolls – *Process for Airports Authority to Increase Toll Rates.*"

The financing plan for the Dulles Corridor assumes the Airports Authority will increase toll rates periodically to generate sufficient Toll Road Revenues to pay for the operation, maintenance and improvement of the Dulles Toll Road and Annual Debt Service. Beginning in 2023, and occurring every five years thereafter, there is an assumed increase of 0.75 at the mainline toll plaza and 0.50 at all ramp toll plazas, except for a 0.75 increase at all toll plazas in 2033. There is no assurance that the Airports Authority will implement the assumed future toll increases, and the assumed future toll increases may be deferred or reduced given reductions in Annual Debt Service in certain years. See "INVESTMENT CONSIDERATIONS – Risks Relating to Management and Operation of the Dulles Toll Road – *Future Toll Rate Increases*."

#### **Current Toll Rates**

The current toll rates on the Dulles Toll Road became effective on January 1, 2019. The following table shows the toll rate structure currently in place.

Vehicle Class	Mainline Toll	<u>Ramp Toll</u>
2-axle	\$3.25	\$1.50
3-axle	6.50	3.00
4-axle	7.75	3.50
5-axle	9.00	4.00
6 or more axles	10.25	4.50

In addition, TRIP II collects \$1.50 for each transaction involving a 2-axle vehicle at its mainline plaza and remits it to the Airports Authority. For vehicles with more than two axles, a higher amount is collected and remitted to the Airports Authority.

#### Historical Traffic Transactions and Toll Road Revenues

The following table sets forth the total Dulles Toll Road annual transactions for the years 2011 through 2020, and in the ten month periods ending October 31, 2019, October 31, 2020 and October 31, 2021, by revenue transactions (*i.e.*, each recorded toll payment, whether mainline or ramp) and violations (*i.e.*, each transaction where the full toll amount was not collected at the time of the transaction, whether due to avoidance or electronic misreading or otherwise, and where the amount was subsequently collected).

Total Annual Transactions (in thousands)

#### Year-to-Year Revenue Total Increase / Transactions<sup>†</sup> Transactions Year Violations\* (Decrease) (%) 2011 99,376 2,159 101,535 N/A 2012 97,514 2,377 99,891 (1.6)2,737 2013 95,939 98,676 (1.2)2014 93,549 2,958 96,507 (2.2)2015 94,890 3,351 98,241 1.8 97,719 2016 94,190 3,528 (0.5)97,090 2017 93,227 3.863 (0.6)2018 92,076 4,257 96,333 (0.8)2019 6,245 90,972 84,727 (5.6)2020 49,587 5,492 55,079 (39.5)2019§ 76,654 71,462 5,192 N/A 2020§ 41,908 4,488 46,396 (39.5)47,222 53,515 2021§ 6,293 15.3

<sup>†</sup> Since April 2020, customers of the Dulles Toll Road may pay tolls in exact change or with E-ZPass. See "THE DULLES TOLL ROAD."

\* Includes non-revenue transactions (*i.e.*, law enforcement and emergency vehicles, public transit and school buses, Virginia Department of Motor Vehicles and Airports Authority employees on official duty and other transportation officials).

§ For the ten month period ending October 31.

Source: Records of the Airports Authority.

The following table sets forth the total annual Toll Road Revenues collected in the years 2011 through 2020, and in the ten month periods ending October 31, 2019, October 31, 2020 and October 31, 2021, by payment type – cash or E-ZPass, as well as violations and other revenues.

## Total Toll Road Revenues

				Year-to-Year
				Increase /
Year	$\underline{\operatorname{Cash}}^*$	E-ZPass	Total	(Decrease) (%)
2011**	\$24,025,414	\$ 70,634,124	\$ 94,659,538	N/A
$2012^{**}$	22,982,620	78,613,469	101,596,089	7.3
2013**	24,581,760	102,478,081	127,059,841	25.1
$2014^{**}$	25,115,344	123,537,397	148,652,741	17.0
2015	23,869,669	127,562,090	151,431,759	1.9
2016	22,877,302	128,853,731	151,731,033	0.2
2017	21,942,283	130,080,380	152,022,663	0.2
2018	19,881,832	131,515,100	151,396,932	(0.4)
$2019^{**}$	23,063,633	174,343,696	197,407,329	30.4
2020	11,288,634	110,798,012	122,086,646	(38.2)
2019§	19,220,523	146,663,768	165,884,291	N/A
2020§	9,236,010	93,163,153	102,399,163	(38.3)
2021§	10,652,871	108,522,099	119,174,970	16.4

\* Includes violations and other revenues.

\*\* Toll rate increases effective January 1 of 2011, 2012, 2013, 2014 and 2019.

 $\$  For the ten month period ending October 31.

Source: Records of the Airports Authority.

The following table sets forth total Dulles Toll Road transactions (including violations) on a monthly basis for the years 2019 and 2020, and in the ten months ending October 31, 2021.

Total Transactions						
	2010*	2020*	Increase/ (Decrease)	2021**	Increase/ (Decrease) §	
Ŧ	2019*	2020*	(%)	2021**	(%)	
January	7,144,353	7,237,663	1.3	4,038,582	(44.2)	
February	6,711,659	6,978,219	4.0	3,694,488	(47.1)	
March	7,867,055	4,889,939	(37.8)	4,934,146	0.9	
April	7,784,296	2,139,828	(72.5)	5,166,538	141.4	
May	8,187,345	2,782,419	(66.0)	5,523,587	98.5	
June	7,749,606	3,816,576	(50.8)	5,827,120	52.7	
July	7,764,267	4,359,409	(43.9)	6,018,562	38.1	
August	7,737,501	4,494,911	(41.9)	5,974,012	32.9	
September	7,583,554	4,663,477	(38.5)	6,009,605	28.9	
October	8,124,594	5,033,153	(38.1)	6,328,759	25.7	
November	7,062,355	4,372,510	(38.1)	-	-	
December	7,255,313	4,311,293	(40.6)		-	
Total	90,971,898	55,079,397	(39.5)	47,175,463		

\* Source: 2020 Annual Report, Exhibit S-11.

\*\* Source: Records of the Airports Authority. 2021 partial year data is preliminary and unaudited.

§ As compared to same month in 2020.

The following table sets forth total Toll Road Revenues on a monthly basis for the years 2019 and 2020, and in the ten months ending October 31, 2021.

|--|

	2019*	$2020^{*}$	Increase/ (Decrease) (%)	2021**	Increase/ (Decrease) § (%)
January	\$15,304,619	\$15,645,973	2.2	\$ 9,269,807	(40.8)
February	14,416,763	15,545,289	7.8	8,419,543	(45.8)
March	16,716,570	11,284,790	(32.5)	11,093,435	(1.7)
April	16,622,211	5,224,023	(68.6)	11,500,556	120.1
May	17,557,114	6,126,169	(65.1)	12,149,067	98.3
June	16,708,351	8,450,974	(49.4)	12,664,690	49.9
July	16,889,013	9,466,658	(43.9)	13,248,533	39.9
August	16,884,497	9,700,914	(42.5)	13,349,239	37.6
September	16,888,256	9,967,194	(41.0)	13,322,606	33.7
October	17,896,898	10,987,180	(38.6)	14,157,494	28.9
November	15,643,702	10,061,746	(35.7)	-	-
December	15,879,335	9,625,736	(39.4)	-	-
Total	\$197,407,329	\$122,086,646	(38.2)	\$119,174,970	

\* Source: 2020 Annual Report, Exhibit S-11.

\*\* Source: Records of the Airports Authority. 2021 partial year data is preliminary and unaudited.

§ As compared to same month in 2020.

The following table sets forth monthly variations in average daily Dulles Toll Road transactions (including violations) since 2014. Each month's average is calculated by dividing the month's transactions by the number of days in the month. The annual daily average in the row labeled "Annual Daily Average" is calculated by dividing the total transactions for the year by 365 or 366, as applicable.

#### Average Daily Dulles Toll Road Transactions

Month	2014	2015	2016	2017	2018	2019	2020	2021*
January	243,027	239,397	219,413	249,063	249,089	230,463	233,473	130,277
February	246,332	248,192	261,973	264,210	257,870	239,702	249,222	131,946
March	252,050	260,241	275,683	271,056	254,238	253,776	157,740	159,166
April	278,879	284,383	279,230	266,390	274,695	259,477	71,328	172,218
May	279,904	278,403	273,746	277,878	275,937	264,108	89,755	178,180
June	282,502	292,132	292,049	286,951	277,789	258,320	127,219	194,237
July	271,788	278,158	263,104	255,833	259,430	250,460	140,626	194,147
August	260,461	269,297	274,283	271,851	273,204	249,597	144,997	192,710
September	272,513	277,218	271,786	268,793	260,531	252,785	155,449	200,320
October	279,683	279,357	276,907	276,263	282,336	262,084	162,360	204,154
November	250,141	260,219	262,977	262,941	258,251	235,412	145,750	-
December	254,657	262,008	253,640	241,276	243,649	234,042	139,074	-
Annual								
Daily	264,403	269,152	266,991	266,000	263,925	249,238	150,902	176,618
Average								

Source: Records of the Airports Authority.

<sup>\*</sup> 2021 partial year data is preliminary and unaudited. Annual daily average is through October 31, 2021.

# THE DULLES METRORAIL PROJECT

## General

The Airports Authority, in cooperation with VDOT, VDRPT, WMATA, Fairfax County and Loudoun County, has completed the Dulles Metrorail Project – Phase 1, and has designed and constructed the Dulles Metrorail Project – Phase 2, which together will extend WMATA's Metrorail System by 23.1-miles, from a location near the Metrorail Orange Line West Falls Church station on I-66, through Tysons Corner to Dulles International and beyond to Route 772 in Loudoun County. This extension of the Metrorail System is known as the Metrorail "Silver Line."

The following map shows the planned rail line route and stations for the Dulles Metrorail Project:



## History

In 1997, VDRPT proposed a series of phased improvements in the Dulles Corridor, starting with enhanced bus service, followed by (i) a bus rapid transit ("BRT") system, (ii) an extension of the Metrorail System from I-66 through Tysons Corner and BRT from Tysons Corner into Loudoun County, and eventually (iii) an expansion of the Metrorail System into Loudoun County. In the fall of 1999, the Commonwealth Transportation Board ("CTB") directed VDRPT to proceed with an application under the federal Section 5309 New Starts Capital Program (the "New Starts Program") for funding from the Federal Transit Administration ("FTA") for the extension of the Metrorail System along the Dulles Corridor into Loudoun County, and to seek FTA's environmental review of this project under the National Environmental Policy Act ("NEPA").

FTA began the NEPA review of the Metrorail System extension project in June 2000, and issued the Final Environmental Impact Statement in December 2004, which adopted a two-phase approach to the Metrorail System extension, with the phases corresponding to Dulles Metrorail Project – Phase 1 and Dulles Metrorail Project – Phase 2, as the locally preferred alternative ("LPA"). A Record of Decision affirming the LPA was executed by FTA in March 2005, and was amended in November 2006 to address revisions to project design elements in Tysons Corner.

In June 2004, VDRPT and Dulles Transit Partners entered into an agreement to, among other things, design, construct, operate and maintain facilities to extend the existing Metrorail System to Dulles International and beyond (the "Comprehensive Agreement"). On December 20, 2005, the Airports Authority submitted a proposal to the Commonwealth under which it would assume the responsibility of VDOT for operating the Dulles Toll Road and the responsibility of VDRPT under the Comprehensive Agreement relating to the financing and construction of the Dulles Metrorail Project, and, in addition, would undertake other transportation improvements in the Dulles Corridor.

By a Memorandum of Understanding entered into as of March 24, 2006 (the "MOU"), the Commonwealth generally accepted the Airports Authority's proposal and the parties agreed in principle that, among other things, the Airports Authority would assume the responsibilities of VDOT for the Dulles Toll Road and the responsibilities and obligations of VDRPT under the Comprehensive Agreement.

In accordance with the MOU, in December 2006, the Airports Authority and VDOT entered into the Transfer Agreement and the Permit and Operating Agreement. In the Transfer Agreement, VDOT agreed to (i) grant to the Airports Authority the exclusive right to operate the Dulles Toll Road and to collect and use Toll Road Revenues pursuant to the Permit and Operating Agreement and (ii) assign to the Airports Authority the right, title and interest of VDOT in and to certain Dulles Toll Road assets, as well as certain liabilities, of the Commonwealth relating to the Dulles Toll Road.

On November 1, 2008, VDOT, by permit, transferred operational responsibility for the Dulles Toll Road to the Airports Authority. Immediately prior to this transfer, VDOT extinguished all of its indebtedness relating to the Dulles Toll Road.

The Airports Authority agreed in the Transfer Agreement that it would operate the Dulles Toll Road and collect and use Tolls in accordance with the Permit and Operating Agreement. Certain provisions of the Transfer Agreement and the Permit and Operating Agreement are more fully described in APPENDIX C – "SUMMARIES OF THE MASTER TRANSFER AGREEMENT AND THE PERMIT AND OPERATING AGREEMENT."

The Airports Authority and VDRPT entered into an Assignment and Assumption Agreement, dated as of June 27, 2007 (the "Assignment and Assumption Agreement"), in which VDRPT assigned its rights

and obligations under the Comprehensive Agreement to the Airports Authority. Subsequently, the Airports Authority and Dulles Transit Partners entered into various agreements to construct Dulles Metrorail Project – Phase 1.

# **Dulles Metrorail Project – Phase 1**

Dulles Metrorail Project – Phase 1 runs approximately 11.7 miles in Fairfax County from a location near the West Falls Church Station on the existing Metrorail Orange Line on I-66 to Wiehle Avenue in Reston, Virginia. In 2014, Dulles Metrorail Project – Phase 1 was completed, and care, custody, and control of, as well as title to, the completed work was turned over to WMATA. At that time, operation and maintenance of the completed Dulles Metrorail Project – Phase 1, and all associated expenses, became the sole responsibility of WMATA. Such expenses are payable from WMATA's operating and other revenues (including revenues derived from the operation of the completed Dulles Metrorail Project – Phase 1).

# **Dulles Metrorail Project – Phase 2**

Dulles Metrorail Project – Phase 2 is the 11.4-mile completion of the Dulles Metrorail Project from Wiehle Avenue in western Fairfax County to Route 772 in eastern Loudoun County. Dulles Metrorail Project – Phase 2 includes six new stations, including a station and a maintenance yard located on Dulles International property. Dulles Metrorail Project – Phase 2 was divided into several construction elements as described below.

Substantial Completion of Dulles Metrorail Project – Phase 2. Substantial completion of the primary construction elements of the Dulles Metrorail Project – Phase 2, the Package A Project and the Package B Project, has been reached and was announced by the Airports Authority on November 4, 2021 for the Package A Project and December 1, 2021 for the Package B Project. Substantial completion means that major construction has been completed and operational readiness testing can commence. WMATA acceptance of Dulles Metrorail Project – Phase 2 is anticipated to occur by the second quarter of 2022. See "THE DULLES METRORAIL PROJECT – Transfer to WMATA Upon Completion of Dulles Metrorail Project – Phase 2" and "INVESTMENT CONSIDERATIONS – Risks Relating to Construction of the Dulles Metrorail Project – *WMATA Acceptance Risk.*"

*Phase 2 Package A Contract.* In May 2013, the Airports Authority and Capital Rail Constructors ("Capital Rail"), a joint venture of Clark Construction Group and Kiewit Infrastructure South, entered into a contract (the "Phase 2 Package A Contract") for construction of the at-grade and aerial guideway, six stations and all wayside facilities for the entire rail alignment between the interim terminus of the Dulles Metrorail Project – Phase 1 at Wiehle Avenue in Fairfax County and Ashburn Station, the terminal station at Route 772 in Loudoun County (the "Package A Project") of Dulles Metrorail Project – Phase 2. The Phase 2 Package A Contract consists of four major geographical components: (i) Guideway East of Dulles International, which includes Reston Town Center, Herndon and Innovation Center Stations; (ii) Dulles International Station; (iii) Aerial Guideway within Dulles International and (iv) Guideway West of Dulles International, which includes the Loudoun Gateway and Ashburn Stations. The Airports Authority has agreed to pay a price for the Package A Project (the "Package A Contract Price"). As of November 30, 2021, the Package A Contract Price is \$1.447 billion, an increase of approximately \$269 million over the initial price of approximately \$1.178 billion. This increase in cost is being funded from a reduction in the original contingency allocated to Dulles Metrorail Project – Phase 2. Approximately \$11 million of such increase is due to betterments requested by Fairfax County, Loudoun County and the Airports Authority.

The Phase 2 Package A Contract (as of November 30, 2021) provides for substantial completion<sup>1</sup> of the Package A Project by August 7, 2019. However, on November 4, 2021, the Airports Authority announced that the Package A Project reached substantial completion. Capital Rail has requested that the Airports Authority provide Capital Rail additional compensation for certain changes in the Package A Project since January 2015, that Capital Rail asserts have caused the amount of work and time required to complete Dulles Metrorail Project – Phase 2 to increase substantially. See "INVESTMENT CONSIDERATIONS – Risks Relating to Construction of the Dulles Metrorail Project – *Risk of Cost Overruns*." As of November 30, 2021, 46% of the total \$551 million contingency allocated to Dulles Metrorail Project – Phase 2 has been expended or committed for the Package A Project.

The Package A Contract Price is subject to certain adjustments as described below under "- Adjustments to Contract Price and Scheduled Substantial Completion Date."

Capital Rail has executed and delivered to the Airports Authority a Performance Bond and a Payment Bond, each in the penal sum of Seven Hundred Fifty Million Dollars (\$750,000,000), from a surety company or surety companies authorized to do business in the Commonwealth.

Neither the Airports Authority nor the Underwriters makes any representation as to the financial condition of Capital Rail, Clark Construction Group LLC, Kiewit Infrastructure South or any other member or affiliate of Capital Rail or the ability of any of these entities to fulfill their obligations with respect to the Phase 2 Package A Contract.

Phase 2 Package B Contract. On July 29, 2014, the Airports Authority awarded the contract (the "Phase 2 Package B Contract" and together with the Phase 2 Package A Contract, the "Package AB Contracts") for construction of the WMATA rail yard and maintenance facilities at Dulles International (the "Package B Project") to Hensel Phelps Construction Company ("Hensel Phelps") for \$253 million. As of November 30, 2021, there have been \$50.8 million of adjustments to the initial price of the Phase 2 Package B Contract, resulting in a current contract price of \$303.8 million (the "Package B Contract Price"). The cost of such adjustments is being funded from a reduction in the original contingency allocated to Dulles Metrorail Project – Phase 2. The Phase 2 Package B Contract (as of November 30, 2021) provides for substantial completion of the Package B Project by December 23, 2018. However, on December 1, 2021, the Airports Authority announced that the Package B Project reached substantial completion. Hensel Phelps has requested that the Airports Authority provide Hensel Phelps additional compensation for certain changes in the Package B Project since February 2019, that Hensel Phelps asserts have caused the amount of work and time required to complete Dulles Metrorail Project - Phase 2 to increase substantially. See "INVESTMENT CONSIDERATIONS - Risks Relating to Construction of the Dulles Metrorail Project -Risk of Cost Overruns". As of November 30, 2021, 10% of the total \$551 million contingency allocated to Dulles Metrorail Project – Phase 2 has been expended or committed for the Package B Project.

The Package B Contract Price is subject to certain adjustments as described below under "- Adjustments to Contract Price and Scheduled Substantial Completion Date."

<sup>&</sup>lt;sup>1</sup> The term "substantial completion," as generally used in the construction industry, means the level of completion of design and construction work of a project (in accordance with plans and specifications therefor) rendering such project safe and capable of being occupied and/or operated, subject to the completion of minor punch list work items and satisfaction of contractual conditions for achieving substantial completion in the applicable project contract. The specific requirements for achieving substantial completion vary for each of the project contracts described herein.

Hensel Phelps has executed and delivered to the Airports Authority a Performance Bond and a Payment Bond, each in the penal sum equal to the Package B Contract Price, from a surety company or surety companies authorized to do business in the Commonwealth.

Neither the Airports Authority nor the Underwriters makes any representation as to the financial condition of Hensel Phelps or its ability to fulfill its obligations with respect to the Phase 2 Package B Contract.

Adjustments to Contract Price and Scheduled Substantial Completion Date. Capital Rail and Hensel Phelps are collectively referred to herein as the "Package AB Contractors." Under each of the Package AB Contracts, if the Package AB Contractor can justify that certain factors have affected its cost and/or time of performance, and that the Package AB Contractor has met its contractual requirements for a time or price adjustment, the Contract Price may be increased and/or the Scheduled Substantial Completion Date may be extended. See "INVESTMENT CONSIDERATIONS - Risks Relating to Construction of the Dulles Metrorail Project – *Risk of Cost Overruns*." The following are among the factors that could result in an increase in the Contract Price or the extension of the Scheduled Substantial Completion Date (capitalized terms used in this subsection and not otherwise defined herein have the meanings given thereto in the Phase 2 Package A Contract or the Phase 2 Package B Contract, as applicable):

- The Package AB Contractor establishes that its delay in the performance of the Work was due to an Excusable Delay, provided it demonstrates that notice was given as required by the applicable Package AB Contract, that the delay affected the critical path and that, in view of all of the circumstances, it exercised reasonable efforts to avoid and mitigate the delay;
- the occurrence of Force Majeure Events, which were properly noticed under the applicable Package AB Contract, caused a delay to the critical path that exceeded, in the aggregate for all Force Majeure Events, 45 work days;
- changes to Work are requested by the Airports Authority or changes to Work are proposed by the Package AB Contractor and accepted by the Airports Authority, including value engineering changes;
- the Airports Authority exercises its right under the applicable Package AB Contract to suspend Work;
- The Package AB Contractor proves that the Airports Authority failed to fulfill an obligation under the Contract Documents and such Package AB Contractor met the contractual conditions to recovery for such failure;
- The Package AB Contractor is requested to participate with and assist the Airports Authority and WMATA in the completion of all operational readiness testing for a period of more than two months;
- the Airports Authority requires certain Work to be removed or uncovered for inspection or examination and the Work, after inspection or examination, is found to conform to the Project Documents; or
- certain insurance costs are more than originally anticipated.

*Other Package Contracts.* The Airports Authority has entered into other contracts relating to the construction of certain components of Dulles Metrorail Project – Phase 2, some of which have been completed, and relating to the acquisition of 64 WMATA rail cars.

On August 15, 2018, the Airports Authority awarded the contract (the "Phase 2 Package G Contract") for the construction of the Dulles International Metrorail station windscreens (the "Package G Project") to W.M. Schlosser Company for \$6.97 million. The contract has a revised substantial completion date of December 21, 2020. As of November 30, 2021, there have been \$0.29 million of adjustments to the initial price of the Phase 2 Package G Contract, resulting in a contract price of \$7.26 million. As of November 30, 2021, construction of the Package G Project has been completed.

On June 14, 2018, the Airports Authority awarded the contract (the "Phase 2 Package P Contract") for the design and construction of certain stormwater management facilities (the "Package P Project") to HGS, LLC for \$26.59 million. As of November 30, 2021, there have been \$1.45 million of credit adjustments to the initial price of the Phase 2 Package P Contract, resulting in a contract price of \$25.14 million. The contract contains a substantial completion date of June 11, 2021, followed by two one-year site maintenance periods, with final completion on June 12, 2023. As of November 30, 2021, construction of the Package P Project has been completed, and the Phase 2 Package P Contract has transitioned to the site maintenance periods.

A contract to perform various design and construction services as part of the closeout of Dulles Metrorail Project – Phase 2 was awarded to complete requirements which must occur leading up to and after passenger service begins (the "Phase 2 Package K Contract"). The Phase 2 Package K Contract was awarded on June 12, 2020 to W.M. Schlosser Company, Inc. and Balfour Beatty Construction. To maintain competitive pricing for the Phase 2 Package K Contract, the two companies provide separate bids on each individual task order. As of November 30, 2021, 19 task orders have been issued.

In addition to the estimated costs of the Package AB Contracts, the estimated costs of the Phase 2 Package G Contract, the Phase 2 Package P Contract and the Phase 2 Package K Contract, the acquisition of 64 WMATA rail cars has been included in the Dulles Metrorail Project – Phase 2 costs identified below under "Funding of the Dulles Metrorail Project – *Capital Cost Estimate*."

*WMATA Cooperative Agreements.* The Airports Authority and WMATA entered into a Cooperative Agreement for Technical Advisory Services Phase 2 – Preliminary Engineering Dulles Corridor Metrorail Project, in February, 2010 (the "Phase 2 WMATA Preliminary Engineering Cooperative Agreement"), pursuant to which WMATA agreed to provide services to the Airports Authority to ensure that the engineering documents are in accordance with WMATA's current design criteria and standard practices, applicable codes and the other requirements of governmental units and entities and various utilities in connection with Dulles Metrorail Project – Phase 2.

The Airports Authority and WMATA also entered into a Cooperative Agreement for Phase 2 of the Dulles Corridor Metrorail Project in August, 2013 (the "Phase 2 WMATA Construction Cooperative Agreement" which, together with the Phase 2 WMATA Preliminary Engineering Cooperative Agreement, are referred to collectively herein as the "Phase 2 WMATA Cooperative Agreements"), pursuant to which WMATA agreed to serve as technical advisor to the Airports Authority for the design, construction and related support activities for the Dulles Metrorail Project – Phase 2 work to ensure that the work is performed in accordance with the WMATA design criteria and requirements and that the work, when completed, is fit for revenue service and acceptance into the Metrorail System.

## **Construction Management**

The Airports Authority hired the Dulles Metrorail Project Management Support Services Consultants (the "PMSS") to augment the Airports Authority staff in completing the Dulles Metrorail Project. The PMSS is a group of transit engineering and construction experts made up of staff from numerous firms and led by Jacobs Engineering Group Inc. ("Jacobs Engineering").

# Transfer to WMATA Upon Completion of Dulles Metrorail Project – Phase 2

WMATA, as the intended entity responsible for operating and maintaining the completed facilities at such time as they are accepted into the Metrorail System, has undertaken certain responsibilities in connection with the construction of the Dulles Metrorail Project – Phase 2. Pursuant to the Phase 2 WMATA Cooperative Agreements, WMATA is to (i) perform the Metrorail System acceptance tasks prior to incorporating Dulles Metrorail Project – Phase 2 into the Metrorail System, (ii) serve as a technical advisor for the Phase 2 Package A Contract and the Phase 2 Package B Contract, (iii) review the Work (as such term is defined in the Phase 2 Package A Contract or the Phase 2 Package B Contract, as applicable) and (iv) advise the Airports Authority on an ongoing basis as necessary to facilitate construction of the Dulles Metrorail Project – Phase 2 in accordance with WMATA design and safety-security standards, to ensure that, upon completion, it is fit for revenue service and acceptance into the Metrorail System.

The Airports Authority has contracted to reimburse WMATA for its costs and expenses incurred as technical advisor and in performing the other tasks under the Phase 2 WMATA Cooperative Agreements. The reimbursement of WMATA's costs and expenses is not an Operation and Maintenance Expense payable under the Indenture, but a capital cost of Dulles Metrorail Project – Phase 2.

WMATA's acceptance of the Dulles Metrorail Project – Phase 2 into the Metrorail System is subject to certain conditions specified in the Phase 2 WMATA Construction Cooperative Agreement, including the following:

- *Property Transfers* The Airports Authority must transfer, or cause to be transferred, to WMATA appropriate property interests in the right-of-way occupied by Dulles Metrorail Project Phase 2.
- Spare Parts and Training The Airports Authority must provide to WMATA all specified spare parts and special tools necessary to accept Dulles Metrorail Project Phase 2 into the Metrorail System, operation and maintenance manuals, and training as specified by WMATA.
- Assignment of Warranties The Airports Authority must obtain required warranties from contractors and subcontractors that comply with WMATA's technical specifications, and assign all continuing warranties to WMATA and provide all documentation necessary to enforce the warranties.
- *Permits* The Airports Authority must obtain all land use and permitting approvals from any federal, state or local regulatory agency necessary for WMATA's operation and the maintenance of Dulles Metrorail Project Phase 2.
- *Insurance* WMATA must receive the certificates of insurance required under the Phase 2 WMATA Construction Cooperative Agreement.

#### **Funding of the Dulles Metrorail Project**

*Capital Cost Estimate.* The final construction budget for Dulles Metrorail Project – Phase 1, completed in 2014, was \$2.982 billion. The Airports Authority currently estimates the cost of Dulles Metrorail Project – Phase 2 at \$2.778 billion, which includes \$133 million in unallocated contingency as of November 30, 2021. This estimated cost does not include the construction costs of five parking garages that will serve four of the Phase 2 stations. The construction and the funding of these garages was undertaken by Fairfax and Loudoun Counties, which will operate and manage the garages.

The following sets forth the budget relating to the major components of Dulles Metrorail Project – Phase 2 as of November 30, 2021:

	Estimated Cost
FTA Cost Category	<u>(in millions)</u>
Guideway and Track Elements	\$205
Stations and Parking	238
Support Facilities – Yards and Shops	240
Sitework and Utilities	755
Train Systems	231
Right-of-Way and Property Acquisition	57
Rail Cars and Support Vehicles	187
Design and Engineering Services	732
Unallocated Contingency	133
Total	\$2,778

Allocation of Capital Costs. The contributions to the Dulles Metrorail Project capital costs from the FTA, the Commonwealth and the NVTA are fixed amounts. Pursuant to the Local Funding Agreement executed in 2007, the capital contributions from Fairfax County, Loudoun County, and the Airports Authority Aviation Enterprise Fund are based on a fixed percentage of the total Dulles Metrorail Project costs (excluding the cost of the Dulles Metrorail Project – Phase 2 parking garages and financing costs). Fairfax County is obligated to contribute 16.1% of these total costs; Loudoun County's share is 4.8%; and 4.1% is allocated to the Airports Authority Aviation Enterprise Fund. All remaining capital costs are funded by the Airports Authority using Toll Road Revenues and proceeds from Bonds. The total capital contribution from the Airports Authority Dulles Corridor Enterprise Fund is not limited by any agreement or contract.

The allocation of capital costs as of November 30, 2021, shown in the following table, reflects adjustments made pursuant to the Local Funding Agreement to reflect the \$60 million of NVTA funding and an \$11 million Congestion Mitigation and Air Quality Improvement (CMAQ) grant secured in 2018 by VDRPT, Fairfax County and the Airports Authority to fund eligible costs associated with the Innovation Center Metrorail Station (Innovation Station). The federal share of the grant is 80% and VDRPT is providing the required 20% match for the combined total of \$11 million.

	Initial	Percentage of		Adjusted
Source of Capital Funds	Allocation	<u>Total</u>	<u>Adjustments</u>	<u>Allocation</u>
FTA Full Funding Grant Agreement (FFGA)	\$ 900	15.6%	-	\$ 900
Commonwealth of Virginia	575	10.0	\$11	586
Northern Virginia Transportation Authority	-	-	60	60
Loudoun County	277	$4.8^{*}$	(4)	273
Fairfax County	927	16.1*	(11)	916
Airports Authority – Aviation Enterprise Fund	236	4.1*	(3)	233
Airports Authority – Dulles Corridor Enterprise				
Fund	<u>2,845</u>	<u>49.4</u>	<u>(53)</u>	<u>2,792</u>
TOTAL SOURCES	<u>\$5,760</u>	<u>100.0%</u>	=	<u>\$5,760</u>

\* The capital contributions from Fairfax County, Loudoun County, and the Airports Authority Aviation Enterprise Fund, respectively, are based on this fixed percentage of the total Dulles Metrorail Project costs (excluding the cost of the Dulles Metrorail Project – Phase 2 parking garages and financing costs).

Status of Funding Commitments. As of November 30, 2021, approximately \$5.694 billion of the committed capital funds for the Dulles Metrorail Project have been received by the Airports Authority. This amount represents approximately 99 percent of the total committed funding of \$5.760 billion. The remaining commitments of \$66 million have been allocated to Fairfax County (\$3 million), Loudoun County (\$2 million) and the Airports Authority's Aviation Enterprise Fund (\$61 million) and are expected to be received by the Airports Authority over the next year.

# TERMINATION AND EXPIRATION OF THE PERMIT AND OPERATING AGREEMENT

## **Termination of the Permit and Operating Agreement**

Upon the occurrence of certain events, VDOT and/or the Airports Authority may terminate the Permit and Operating Agreement. However, prior to a termination of the Permit and Operating Agreement, the Airports Authority, VDOT and the Trustee have certain rights to cure the event that can give rise to a termination. See "Rights and Remedies" below. A termination of the Permit and Operating Agreement could result in the extinguishment of the Airports Authority's Interest, including the right to receive the Toll Road Revenues to pay the principal of and interest on the Bonds.

*Defaults under the Permit and Operating Agreement.* The occurrence of any one or more of the following events permit (i) VDOT and/or the Airports Authority to terminate the Permit and Operating Agreement (each, a "Default under the Permit and Operating Agreement") and (ii) the Trustee and/or the Bondholders to exercise the rights and remedies provided under the Permit and Operating Agreement and the Indenture:

- (1) the Airports Authority fails to comply with, perform or observe any operating standard which creates a material and immediate danger to the safe operation of the Dulles Toll Road;
- (2) the Airports Authority fails to use the Dulles Toll Road for vehicular transportation purposes;
- (3) the Airports Authority transfers all or a portion of the Airports Authority's Interest in contravention of the Permit and Operating Agreement;
- (4) certain acts of bankruptcy or insolvency of the Airports Authority occur;
- (5) certain bankruptcy or insolvency proceedings are commenced against the Airports Authority, or a trustee, liquidator, receiver or other similar official is appointed for all or any substantial portion of the Airports Authority's properties or of the Dulles Toll Road or any interest therein, which proceeding or appointment is not timely stayed, disposed of or vacated;
- (6) a levy is made against all or any material portion of the Dulles Toll Road or certain funds or accounts containing Toll Road Revenues in excess of a certain amount, or certain liens are created against the Dulles Toll Road or the Toll Road Revenues, which are not timely vacated, removed or stayed;
- (7) the Airports Authority fails to use its best efforts to timely complete the Dulles Metrorail Project;
- (8) prior to final acceptance of the Dulles Metrorail Project by WMATA, a Terminating Order is issued that invalidates the transfer to the Airports Authority of the Dulles Toll Road or prevents the Airports Authority from financing or constructing the Dulles Metrorail Project or operating the Dulles Toll Road;
- (9) a material non-compliance by VDOT with certain terms and provisions of the Permit and Operating Agreement occurs; and

(10) the FFGA is not issued by the FTA by December  $31, 2008.^{1}$ 

Some of the Defaults under the Permit and Operating Agreement are not curable by the Trustee or may be curable only with possession of the Dulles Toll Road, and others may be extremely difficult to cure within the time period provided in the Permit and Operating Agreement. The Defaults under the Permit and Operating Agreement described in paragraphs (4) and (5) above relate to the financial condition of the Airports Authority.

For a more complete description of the above-referenced events and the ability to cure such events, see APPENDIX C – "SUMMARIES OF THE MASTER TRANSFER AGREEMENT AND THE PERMIT AND OPERATING AGREEMENT." For a description of certain covenants of the Airports Authority to minimize the likelihood of the occurrence of a Termination Event, see APPENDIX B – "SUMMARY OF THE INDENTURE."

## Rights and Remedies

## "TERMINATION EVENTS" AS DEFAULTS UNDER THE PERMIT AND OPERATING AGREEMENT

<u>Airports Authority's Right to Cure</u>. Upon the occurrence of a Default under the Permit and Operating Agreement described in paragraphs (1) through (6) above (each, a "Termination Event"), resulting from a significant safety violation on the Dulles Toll Road, the Airports Authority's use of the Dulles Toll Road for non-vehicular transportation purposes, an unauthorized transfer of the Airports Authority's Interest, certain financial difficulties (*e.g.*, bankruptcy or insolvency) of the Airports Authority or the failure of the Airports Authority to remove certain liens on the Dulles Toll Road or the Toll Road Revenues, the Airports Authority is entitled to cure the Termination Event by providing to VDOT a written work plan within 60 days of receipt of VDOT's notice of the event. The work plan must outline the actions the Airports Authority will take to ensure future compliance with the obligation, covenant, agreement, term or condition that the Airports Authority failed to perform or observe. If VDOT approves such work plan, VDOT may not terminate the Permit and Operating Agreement so long as the Airports Authority complies in all material respects with the approved work plan.

<u>Trustee's Subsequent Right to Cure</u>. If the Airports Authority does not cure the Termination Event within the applicable cure period, VDOT is required to provide the Trustee with a written notice of the Termination Event (the "Termination Event Notice") and a reasonable opportunity to cure the Termination Event, which is generally 180 days but may be extended by VDOT.

The Trustee is required to immediately notify the Bondholders of the receipt of a Termination Event Notice. If within 12 Business Days of receiving the Trustee's notice, the Bondholders have not instructed the Trustee to proceed to attempt to cure the Termination Event or exercise other remedies, the Trustee is required to attempt to cure the Termination Event.

If the Trustee is unable to cure the Termination Event during the cure period, as it may be extended by VDOT, the Trustee is required to select and secure VDOT's approval of an operator of the Dulles Toll Road to replace the Airports Authority (a "Substituted Operator"), and the Airports Authority is required to transfer all of its rights and obligations under the Permit and Operating Agreement (*i.e.*, the Airports Authority's Interest) to the Substituted Operator prior to the end of the Trustee's cure period. Upon this transfer, the Substituted Operator will acquire the entirety of the Airports Authority's Interest and succeed

<sup>&</sup>lt;sup>1</sup> Although the FFGA was executed on March 10, 2009, the absence of an issued FFGA on December 31, 2008, technically continues to be an event that allows VDOT and the Airports Authority to mutually agree to terminate the Permit and Operating Agreement. However, the Airports Authority has covenanted in the Master Indenture that it will not terminate the Permit and Operating Agreement for this reason.

to all of the right, title, interest and obligations of the Airports Authority under the Permit and Operating Agreement and the Indenture. The Substituted Operator has to be approved by VDOT based on certain criteria set forth in the Permit and Operating Agreement. There can be no assurance, however, that a Substituted Operator can be selected by the Trustee and approved by VDOT within the applicable cure period.

## OTHER DEFAULTS UNDER THE PERMIT AND OPERATING AGREEMENT

Upon the occurrence of a Default under the Permit and Operating Agreement described in paragraph (7) above (see "Defaults under the Permit and Operating Agreement"), resulting from the Airports Authority's failure to use its best efforts to timely complete the Dulles Metrorail Project, the Airports Authority is entitled to cure the default as described in "Airports Authority's Right to Cure" above. In this case, the Trustee has no cure rights.

Upon the occurrence of a Default under the Permit and Operating Agreement described in paragraph (8) above, resulting from the issuance of a Terminating Order, the Airports Authority and VDOT are entitled to a period of at least 120 days to try to reach an agreement on how to restructure the obligations of the Airports Authority under the Permit and Operating Agreement to enable the Dulles Metrorail Project to proceed in a manner that is not inconsistent with the Terminating Order. In this case, the Trustee has no cure rights.

If the attempt to cure or overcome the Default described in either of the preceding two paragraphs is not successful, and either VDOT determines to terminate the Permit and Operating Agreement as a result of the Airports Authority's failure to use its best efforts to complete the Dulles Metrorail Project, or VDOT or the Airports Authority determines to terminate the Permit and Operating Agreement as a result of the issuance of a Terminating Order, VDOT will, at its sole discretion, either (i) enter into a new agreement with the Trustee under which VDOT would resume operating the Dulles Toll Road and collecting Tolls, and would remit appropriate payments to the Trustee for the benefit of the Bondholders, or (ii) provide funds to the Airports Authority to enable it to satisfy all Outstanding Bonds, by purchase, redemption, defeasance or otherwise. VDOT's decision to enter into a new agreement with the Trustee or to provide its funds to the Airports Authority to pay off all Outstanding Bonds is subject to the Virginia General Assembly's approval and to the appropriation of amounts to pay or otherwise provide payment for the Bonds. The Virginia General Assembly is under no obligation to approve a new agreement with the Trustee or to appropriate any amounts under such an agreement or for payment of the Bonds.

Upon the occurrence of a Default under the Permit and Operating Agreement described in paragraph (9) above, resulting from a non-compliance by VDOT with an obligation, covenant or condition of the Permit and Operating Agreement that materially impairs the Airports Authority's right to operate the Dulles Toll Road or to impose and collect Tolls, the Airports Authority may terminate the Permit and Operating Agreement. In the Indenture, however, the Airports Authority has covenanted that it will not take any action that will impair its ability to fully comply with its obligations under the Indenture and the terms of any Outstanding Bonds.

Finally, with respect to the Default under the Permit and Operating Agreement described in paragraph (10) above, there is no ability to cure. The Airports Authority, however, has covenanted in the Master Indenture that it will not terminate the Permit and Operating Agreement for this reason.

See APPENDIX B – "SUMMARY OF THE INDENTURE" and APPENDIX C – "SUMMARIES OF THE MASTER TRANSFER AGREEMENT AND THE PERMIT AND OPERATING AGREEMENT."

#### Expiration of the Permit and Operating Agreement and Return to VDOT

The Permit and Operating Agreement expires on October 31, 2058. At that time, the Airports Authority must return the Dulles Toll Road to VDOT in substantially the condition it was in when VDOT transferred the Dulles Toll Road to the Airports Authority on November 1, 2008.

Not later than 180 days preceding the end of the term of the Permit and Operating Agreement, the Airports Authority and VDOT are required to develop a transition plan to assure the orderly transition of the Dulles Toll Road from the Airports Authority to VDOT or a VDOT contractor. On the last day of the term, or the earlier termination of the Permit and Operating Agreement, the Airports Authority must surrender and deliver to VDOT the Dulles Toll Road and all Dulles Toll Road-related capital improvements on the Dulles Access Right-of-Way, free and clear of any and all liens and encumbrances created, incurred or suffered by the Airports Authority or anyone claiming under the Airports Authority, except for certain permitted encumbrances, and any and all cash reserves or escrow accounts containing Toll Road Revenues as provided in the Permit and Operating Agreement. Nothing in the Permit and Operating Agreement prevents the Airports Authority and VDOT from extending the term of the agreement or from entering into a new agreement covering substantially the same provisions.

#### **TRAFFIC AND REVENUE STUDY**

#### **Traffic and Revenue Study**

The Airports Authority retained Stantec in February 2021 after a competitive procurement process for traffic and revenue consulting services. The Traffic and Revenue Study prepared by Stantec provides estimates of potential Dulles Toll Road transactions and revenue through 2058 based on a projected toll rate schedule developed by the financial advisors to the Airports Authority for financial planning purposes. Stantec used a regional travel demand forecasting model developed by the Metropolitan Washington Council of Governments and released in March 2020. The model was calibrated to conditions in the Dulles Corridor in 2019 and 2021. The scope of work for the Traffic and Revenue Study included extensive analysis of historical and projected population and employment data for the region, surveys of Dulles Toll Road customers, and interviews with major employers regarding their policies and expectations on returning employees to the workplace as the region recovers from the COVID-19 pandemic. The Traffic and Revenue Study does not include analysis of events occurring subsequent to its date; therefore, it does not specifically reflect any adverse impacts of the Omicron variant of COVID-19 on Dulles Toll Road transactions or revenue. Stantec also performed a series of sensitivity tests to measure the potential impacts on revenue associated with hypothetical changes in certain assumptions or basic study inputs.

The Traffic and Revenue Study is set forth in APPENDIX D – "DULLES TOLL ROAD INVESTMENT-GRADE TRAFFIC AND REVENUE STUDY, DATED DECEMBER 6, 2021."

## INVESTMENT CONSIDERATIONS

#### General

The Series 2022 Bonds are limited obligations of the Airports Authority payable from the Toll Road Revenues, subject to the prior payment of Operation and Maintenance Expenses and of current debt service due on (and certain reserve fund restoration deposits, if necessary, relating to) any Outstanding First Senior Lien Bonds. The Series 2022 Bonds do not constitute a debt of the District or the Commonwealth or any agency, department or political subdivision thereof. See "SECURITY AND SOURCES OF PAYMENT FOR THE BONDS."

The following discussion is not meant to be an exhaustive list of the risks and other factors that should be considered in connection with the purchase of the Series 2022 Bonds and does not necessarily reflect the relative importance of the various risks and other factors. There can be no assurance that other risk factors will not become material in the future.

## **Risks Relating to COVID-19**

The COVID-19 global pandemic has altered the behavior of businesses and people in a manner that is having negative effects on national, regional and local economies, including areas served by the Dulles Toll Road. As a result, the pandemic has had an adverse impact on travel, including decreased traffic volume on the Dulles Toll Road. For further information regarding the COVID-19 pandemic and its impact on the Dulles Toll Road including total transactions and Toll Road Revenues, see "THE AIRPORTS AUTHORITY – COVID-19 Global Pandemic." The operating and financial information described herein does not reflect any adverse impacts of the Omicron variant of COVID-19 which, due to its relatively recent prevalence, are not yet quantifiable or determinable.

As more fully described in this Official Statement, the Airports Authority has taken certain actions to respond to the negative effects, including taking action to fully eliminate cash toll collection by the end of 2022 and using funds from the Toll Rate Stabilization Fund to pay debt service and produce Net Revenues sufficient to satisfy the Rate Covenant. The Airports Authority also has a schedule of adopting future toll rate increases. The scope of work for the Traffic and Revenue Study included extensive analysis of historical and projected population and employment data for the region, surveys of Dulles Toll Road customers, and interviews with major employers regarding their policies and expectations on returning employees to the workplace as the region recovers from the COVID-19 pandemic. Stantec also performed a series of sensitivity tests to measure the potential impacts on revenue associated with hypothetical changes in certain assumptions or basic study inputs. The Traffic and Revenue Study is set forth in APPENDIX D – "DULLES TOLL ROAD INVESTMENT-GRADE TRAFFIC AND REVENUE STUDY, DATED DECEMBER 6, 2021."

The Airports Authority cannot predict (a) the ultimate duration or extent of the COVID-19 pandemic and its associated economic impacts or changes in toll collections as a result thereof; (b) the scope or duration of restrictions or warnings related to travel, gatherings or other activities in the areas served by the Dulles Toll Road; (c) what effect any COVID-19 or other outbreak or pandemic-related restrictions or warnings may have in the future on travel, commerce, the collection and receipt of Toll Road Revenues by, and the operating expenses and capital costs of, the Airports Authority; (d) whether and to what extent COVID-19 or another outbreak or pandemic may disrupt local, regional, national or global economies, construction, manufacturing or supply chains; (e) the extent to which the COVID-19 outbreak or another outbreak or pandemic, or the resultant disruption to the local, regional, national or global economy, may result in changes in future traffic patterns and use of the Dulles Toll Road, generally; or (f) whether any of the foregoing may in the future have a material adverse effect on the financings and operations of the Airports Authority relating to the Dulles Toll Road Revenues.

# Risks Relating to Forward-Looking Statements and the Traffic and Revenue Forecast

*Forward-Looking Statements.* The statements contained in this Official Statement that are not purely historical, are forward-looking statements, including statements regarding the Airports Authority's expectations, hopes, intentions or strategies regarding the future and the projections in the Traffic and Revenue Study. All forward-looking statements included in this Official Statement are based on information available to the Airports Authority on the date hereof, and the Airports Authority assumes no obligation to update any such forward-looking statements, other than as set out in the Disclosure Agreement.

The forward-looking statements herein are based on various assumptions and estimates that are inherently subject to numerous risks and uncertainties, including the possible invalidity of underlying assumptions and estimates, possible changes or developments in social, economic, business, industry, market, legal and regulatory circumstances and conditions, and actions taken or not taken by third parties, including customers, suppliers, business partners and competitors, and legislative, judicial and other governmental authorities and officials. In addition, these assumptions and estimates involve judgments regarding, among other things, future economic, competitive and market conditions, future actions by third parties, and future events and decisions, all of which are difficult, if not impossible, to predict accurately. Therefore, there can be no assurance that the forward-looking statements in this Official Statement will prove to be accurate.

*Traffic and Revenue Forecast.* It is essential that prospective investors read and understand the Traffic and Revenue Study. The amount of gross toll revenue generated by the Dulles Toll Road will be influenced by numerous factors, including, but not limited to, household and employment trends within the Washington Metropolitan region (including telecommuting practices), the level of congestion on alternative routes and the time savings experienced by using the Dulles Toll Road, and the levels of tolls and their rate of increase over time. See "TRAFFIC AND REVENUE STUDY" and APPENDIX D – "DULLES TOLL ROAD INVESTMENT-GRADE TRAFFIC AND REVENUE STUDY, DATED DECEMBER 6, 2021."

# **Risks Relating to Management and Operation of the Dulles Toll Road**

*Future Toll Rate Increases.* The financing plan for the Dulles Corridor assumes the Airports Authority will increase toll rates periodically to generate sufficient Toll Road Revenues to pay for the operation, maintenance and improvement of the Dulles Toll Road and Annual Debt Service. Beginning in 2023, and occurring every five years thereafter, there is an assumed increase of \$0.75 at the mainline toll plaza and \$0.50 at all ramp toll plazas, except for a \$0.75 increase at all toll plazas in 2033. The Airports Authority has no plans to implement dynamic, variable or peak congestion pricing at this time.

The schedule of anticipated toll rate adjustments was developed by the financial advisors to the Airports Authority based on Annual Debt Service requirements that will change after issuance of the Series 2022 Bonds and the refunding of the Refunded Bonds. There is no assurance that the Airports Authority will implement, consistent with the Airports Authority's obligations under the Rate Covenant, the assumed future toll increases, and the assumed future toll increases may be deferred or reduced given reductions in Annual Debt Service in certain years.

Prior to adjusting toll rates, the Airports Authority follows its process for promulgating regulations, including convening public hearings in the Dulles Corridor to provide opportunities for members of the public to become informed about, and express their views on, any proposed toll rate changes. The Airports Authority also consults with the DCAC with respect to any proposed toll rate adjustments, but DCAC consent or approval of toll rate adjustments is not required under the agreements with the Commonwealth. See "SECURITY AND SOURCES OF PAYMENT FOR THE BONDS – Setting Toll Rates and Suspension of Tolls – *Process for Airports Authority to Increase Toll Rates*."

*Toll Road Maintenance Costs.* Successful operation of the Dulles Toll Road requires timely and adequate maintenance and replacement of components of the Dulles Toll Road. There can be no assurances that sufficient funds will be available to adequately maintain the Dulles Toll Road over the remaining term of the Permit and Operating Agreement. Any significant deterioration of the Dulles Toll Road could result in increased operating costs and in reduced usage, and could adversely affect the amount of funds available to pay debt service on the Airports Authority's obligations, including the Series 2022 Bonds.

*Security*. The September 11, 2001 terrorist attacks resulted in increased safety and security measures at the facilities and projects operated and managed by the Airports Authority. In spite of the increased security measures, additional acts of terrorism resulting in disruption to the use of the Dulles Toll Road, damage to the Dulles Toll Road, reductions in Dulles Toll Road vehicle traffic and/or reductions in Toll Road Revenue, remain possible. The Airports Authority maintains general liability and commercial property insurance policies covering war perils including but not limited to terrorism. Coverage under such policies might not be sufficient in the event of a catastrophic loss, and the Airports Authority may change the types of, and deductibles and limits on, the insurance it carries, subject to any requirements under the Indenture.

# **Risks Relating to Funding of the Dulles Metrorail Project**

*General.* Funding for the Dulles Metrorail Project is provided from several sources, including the federal government, the Commonwealth, NVTA, the Airports Authority (using both Bond proceeds and certain revenues from its Aviation Enterprise), Fairfax County and Loudoun County. Over \$5.694 billion, approximately 99% of the total committed funding for the Dulles Metrorail Project, has been received as of November 30, 2021. See "*Status of Funding Commitments*" under "THE DULLES METRORAIL PROJECT – Funding of the Dulles Metrorail Project."

If the remaining funding is not received as anticipated, the Airports Authority may be required to issue additional Bonds or other obligations in amounts greater than currently projected. The issuance by the Airports Authority of additional Bonds is likely to increase Annual Debt Service and decrease the projected debt service coverage of the Outstanding Bonds, but should in all events be consistent with the debt service coverage requirements of the Indenture. To issue additional Bonds payable from, and secured by a lien on and pledge of, Toll Road Revenues that is on a parity with the Series 2022 Bonds, the Airports Authority must demonstrate, among other things, that (1) the Net Revenues for the Historical Period were at least 135% of the average Annual Debt Service for all then Outstanding First Senior Lien Bonds and Second Senior Lien Bonds (excluding any Second Senior Lien Bonds being refunded) and the additional Second Senior Lien Bonds proposed to be issued; or (2) the projected Net Revenues for the current and each of the Fiscal Years through the repayment of all Outstanding Bonds following the issuance of the additional Second Senior Lien Bonds are sufficient to meet the Rate Covenant (taking into account the additional Second Senior Lien Bonds proposed to be issued and excluding any Second Senior Lien Bonds being refunded). Subject to complying with the tests for the issuance of additional First Senior Lien Bonds established under the Indenture and described herein, the Airports Authority may issue additional First Senior Lien Bonds without the consent of the holders of the Second Senior Lien Bonds (including the Series 2022 Bonds), the Subordinate Lien Bonds or the Junior Lien Bonds (if any). See "SECURITY AND SOURCES OF PAYMENT FOR THE BONDS - Additional Bonds."

Aviation Enterprise Funding Risk. While the Series 2022 Bonds are not secured by or payable from any of the revenues derived from the operations of the Airports or from assets of the Airports Authority accounted for under the Aviation Enterprise Fund, the Airports Authority has agreed to fund a portion (approximately \$233 million) of Dulles Metrorail Project – Phase 2 costs from passenger facilities charges and certain limited aviation revenues. As of November 30, 2021, the Airports Authority has funded \$172 million of its commitment. No assurances can be given that the moneys from the Aviation Enterprise Fund needed to fund the remaining \$61 million of the Airports Authority's agreed upon portion of Dulles Metrorail Project – Phase 2 costs will be available in the amounts and at the times required.

## **Risks Relating to Construction of the Dulles Metrorail Project**

*Risk of Cost Overruns*. The primary construction elements of Dulles Metrorail Project – Phase 2, the Package A Project and the Package B Project, have reached substantial completion. However, certain events have occurred requiring change orders or supplemental construction work, and other events could occur that require additional change orders or supplemental construction work. Moreover, contractor claims under the Package AB Contracts or other Dulles Metrorail Project – Phase 2 contracts, to attribute additional costs and/or additional contractor compensation to the Airports Authority, are currently as described herein and may further be pursued against the Airports Authority.

Capital Rail is seeking additional compensation for certain changes in the Package A Project since January 2015 that Capital Rail asserts have caused the amount of work and time required to complete certain aspects of the Dulles Metrorail Project – Phase 2 to increase substantially. The Airports Authority and Capital Rail are following the dispute resolution process prescribed in the Phase 2 Package A Contract with respect to these requests for change.

Hensel Phelps is seeking additional compensation for certain changes in the Package B Project since February 2019 that Hensel Phelps asserts have caused the amount of work and time required to complete certain aspects of the Dulles Metrorail Project – Phase 2 to increase substantially. In accordance with the dispute resolution process prescribed in the Phase 2 Package B Contract, Hensel Phelps has filed a certified claim with respect to a request for change and the parties are following the prescribed contractual process in an attempt to resolve the dispute.

The outcome of any Capital Rail or Hensel Phelps claim under their respective contracts is not presently determinable, and any amount of such outcome, including any amount for which the Airports Authority might be held liable, is not reasonably estimable at this time.

In addition, no assurance can be given that any of the other Dulles Metrorail Project – Phase 2 contractors will not in the future present claims for additional costs and/or additional compensation. As of November 30, 2021, the Package A Contract Price was approximately \$1.447 billion, the Package B Contract Price was approximately \$303.8 million and the Dulles Metrorail Project – Phase 2 budget included approximately \$133 million in unallocated contingency.

A claim by a Package AB Contractor for additional costs and/or additional compensation will ultimately be addressed through the dispute resolution process under the applicable Package AB Contract. The Package AB Contracts each contain the same dispute resolution process. That process provides an initial opportunity for the parties to negotiate a resolution to their dispute over the claim. Absent a resolution, the process provides for the following: (i) the submission by the contractor of a formal, written certified claim in which, among other things, it provides a detailed description of its claim and of the basis for the Airports Authority's liability for the claim, and provides cost and scheduling information in support of the claim; (ii) a preliminary written decision on the certified claim by the Airports Authority's contracting officer; (iii) the initiation by the contractor, if dissatisfied with the contracting officer decision, of mediation; and (iv) if mediation fails, a final written decision on the certified claim by the contracting officer. Under each of the Package AB Contracts, mediation is condition precedent to the contractor's ability to pursue its claim for additional costs and/or additional compensation by filing a civil action.

To pay additional costs and/or additional compensation to a Package AB Contractor or any of the other Dulles Metrorail Project – Phase 2 contractors, the Airports Authority may use Dulles Metrorail Project – Phase 2 unallocated contingency funds, use other available funds, issue additional Bonds or some combination of the foregoing sources.

*WMATA Acceptance Risk.* Pursuant to the Phase 2 WMATA Construction Cooperative Agreement, Dulles Metrorail Project – Phase 2 must meet certain conditions before it is accepted by WMATA into the Metrorail System. See "THE DULLES METRORAIL PROJECT – Transfer to WMATA Upon Completion of Dulles Metrorail Project – Phase 2." WMATA is serving as a technical advisor to the Airports Authority in connection with the construction of the Dulles Metrorail Project in order to minimize acceptance risks as the construction progresses. There can be no assurances, however, that WMATA will determine that the Dulles Metrorail Project, as constructed, satisfies its acceptance criteria. In the absence of this determination, the Dulles Metrorail Project – Phase 2 would not be transferred to WMATA and would not become part of the Metrorail System, and the Airports Authority would bear the cost of maintaining the completed project until the reasons that prevented its acceptance by WMATA were addressed to WMATA's satisfaction.

## **Risks Relating to Events of Default and Bankruptcy**

*No Right to Accelerate Debt Service.* The Indenture does not permit the Trustee or Bondholders, upon the occurrence of an Event of Default under the Indenture or for any other reason, to accelerate the maturity of the Bonds, including the Series 2022 Bonds, or the payment of principal of and interest due on any of the Bonds. Bondholders will be able to collect principal and interest that become due after an Event of Default only from the Toll Road Revenues (after payment of Operation and Maintenance Expenses) or other property included in the Trust Estate and only when such principal and interest are scheduled to be paid and only in the order of the lien priority of the Bonds held by such Bondholders.

*Enforceability of Rights and Remedies and Bankruptcy.* The rights and remedies available to the owners of the Series 2022 Bonds upon an Event of Default under the Master Indenture, or upon an event that may lead to the termination of the Permit and Operating Agreement or other agreements described herein, are in many respects dependent upon regulatory and judicial enforcement actions which are often subject to discretion and delay and could be both expensive and time-consuming to obtain.

Under existing constitutional and statutory law and judicial decisions, including specifically Title 9 of the United States Code, the remedies provided in federal bankruptcy laws, the Indenture and the various related documents may not be readily available or may be limited, and thus may not be adequate to fully protect the interests of the owners of the Series 2022 Bonds. No assurances can be given that a court or regulatory agency would enforce the rights or types of remedies available under the Indenture, the Permit and Operating Agreement or the other agreements described herein, including any rights and remedies with respect to the continued operation of the Dulles Toll Road and the pledge of Toll Road Revenues to the payment of the principal of and interest on Bonds, including the Series 2022 Bonds.

The remedies available to owners of the Bonds upon an Event of Default under the Indenture may be limited to seeking an order in a writ of mandamus or other suit, action or proceeding compelling and requiring the Airports Authority and its officers to observe and perform one or more covenants, conditions or obligations prescribed in the Indenture. The enforcement of the remedy of mandamus may be difficult and time-consuming, and must be exercised on an ongoing basis in the event of multiple payment defaults. No assurance can be given that a mandamus or other legal action to remedy a default under the Indenture would be successful. Even if a judgment against the Airports Authority could be obtained, it could not be enforced by direct levy and execution against the Airports Authority's property.

The various legal opinions to be delivered concurrently with the delivery of the Series 2022 Bonds will be qualified as to the enforceability of these rights and remedies, for example, by limitations imposed by bankruptcy, reorganization, insolvency or other similar laws affecting the rights of creditors generally and by principles of equity, including, without limitation, concepts of materiality, reasonableness, good

faith and fair dealing and the possible unavailability of specific performance or injunctive relief, regardless of whether considered in a proceeding in equity or in law.

Bankruptcy proceedings, if initiated, could subject the owners of the Series 2022 Bonds to judicial discretion and interpretation of their rights in bankruptcy proceedings or otherwise, and consequently may entail risks of delay or limitation or modification of rights.

Currently, the Airports Authority is not authorized by either of the Acts to file for bankruptcy relief, but no assurances can be given that either or both of the Acts will not be amended in the future to allow for such a bankruptcy filing, or to permit others to force the Airports Authority into bankruptcy.

In addition, the bankruptcy or insolvency of the contractors (or any one of them) chosen to design and construct the Dulles Metrorail Project – Phase 2, or their guarantors, as well as the issuers of the surety bonds in connection with the completion and payment thereof, could adversely affect the rights and remedies of the Airports Authority in enforcing the various design and construction contracts and could lead to delays in construction and/or increased costs of construction of the Dulles Metrorail Project – Phase 2 in the event that the Airports Authority were required to replace such contractors or wait for administration of a bankrupt estate. Notwithstanding the foregoing, as more fully described herein, substantial progress has been made on the construction of Dulles Metrorail Project – Phase 2 and the Airports Authority believes that such project can be completed within the construction amount, including contingency, allocated thereto.

Aviation Enterprise Insolvency. The Airports Authority could become insolvent in connection with its operations and maintenance of the Airports, even though the Dulles Toll Road is operating at a surplus. If this were to occur, a Default under the Permit and Operating Agreement or an Event of Default under the Indenture related to such insolvency could occur, even though Toll Road Revenues may be adequate to meet the Rate Covenant under the Indenture. In addition, a creditor who has a judgment against the Airports Authority as a result of activities related to the Airports may not be restricted to satisfying its judgment only to the revenues or other assets of the Aviation Enterprise Fund. Attempts to levy such a judgment against Airports Authority assets related to the Dulles Toll Road or other projects undertaken by the Airports Authority in the Dulles Corridor, or against Toll Road Revenues, could lead to an Event of Default under the Indenture.

# **Risks Relating to Termination of the Permit and Operating Agreement**

Upon the occurrence of certain events, the Permit and Operating Agreement may be terminated by VDOT and/or the Airports Authority. A termination of the Permit and Operating Agreement by VDOT could result in the extinguishment of the Airports Authority's Interest, including the right to receive and apply Toll Road Revenues to pay the principal of and interest on the Bonds, including the Series 2022 Bonds. The Trustee and the Bondholders are each authorized by the Master Indenture and the Permit and Operating Agreement to exercise certain rights and remedies that offer protection to Bondholders, including to cure certain of the events giving rise to the potential termination of the Permit and Operating Agreement and to cause the Airports Authority Interest to be transferred to a Substituted Operator which would succeed to all rights and obligations of the Airports Authority under the Permit and Operating Agreement. No assurances can be given that the Trustee and/or the Bondholders will exercise these rights and remedies or will be able to exercise them within the time periods set forth in the Master Indenture and in the Permit and Operating Agreement. See "TERMINATION AND EXPIRATION OF THE PERMIT AND OPERATING AGREEMENT."

## Risks Relating to Unexpected Events, Public Health and Global Climate Change

*General.* The Dulles Toll Road could sustain damage and loss of use as a result of certain unexpected events, such as terrorist attacks, extreme weather events and other natural occurrences, fires and explosions, spills of hazardous substances, strikes and lockouts, sabotage, wars, blockades and riots. While the Airports Authority has attempted to address the risk of loss through the purchase of insurance, certain of these events may not be covered. Furthermore, even for events that are covered by insurance, the Airports Authority cannot guarantee that coverage will be sufficient or that insurers will pay claims in a timely manner. From time to time, the Airports Authority may change the types of, and limits and deductibles on, the insurance coverage that it carries. The Airports Authority cannot predict what effects any of these events may have on the Airports Authority's ability to generate revenues, including Toll Road Revenues, but the effects may be materially adverse.

Public Health Risks. Risks related to public health may have an adverse impact on travel, including road and air travel. In response to the spread of COVID-19, federal, state and local governments mandated travel restrictions and people and businesses further altered their behavior in a manner that resulted in decreased traffic volume on the Dulles Toll Road and amount of Toll Road Revenues collected. See "THE AIRPORTS AUTHORITY – COVID-19 Global Pandemic" and "Risks Relating to COVID-19" above. Future outbreaks or pandemics of coronaviruses or other diseases are likely to occur, but the Airports Authority cannot predict the duration or extent of such events, nor the severity of disruptions to economic and travel activity that would result.

Global Climate Change. Numerous scientific studies on global climate change show that, among other effects on the global ecosystem, sea levels will rise, extreme temperatures will become more common and extreme weather events will become more frequent as a result of increasing global temperatures attributable to atmospheric pollution. Over the next 25 to 100 years, such extreme events and conditions are expected to increasingly disrupt and damage critical infrastructure and property as well as regional economies and industries that depend on natural resources and favorable climate conditions. Disruptions could include more frequent and longer-lasting power outages, fuel shortages and service disruptions. Coastal public infrastructure may be threatened by the continued increase in the frequency and extent of high-tide flooding due to sea level rise, and inland infrastructure, including access to roads, the viability of bridges and the safety of pipelines, may be affected by increases in the severity and frequency of heavy precipitation events. Near-coastal areas like the greater Washington, D.C. metropolitan area (which contains areas of land that are at or near sea level) may be at risk of substantial flood damage over time, affecting private development and public infrastructure. As a result, many residents, businesses, and governmental operations within this area could be negatively impacted and possibly displaced, reducing demand for air and land travel to or from the greater Washington, D.C. metropolitan area. In addition, local public agencies and governmental entities, including the Airports Authority, could be required to mitigate these climate change effects at a potentially material cost.

*Climate-Related Regulations.* Present, pending and future regulations aimed at curbing the effects of climate change may, directly or indirectly, materially adversely affect the operations or financial condition of the Airports Authority. Of particular note are regulations pertaining to greenhouse gas ("GHG") emissions, including but not limited to regulations which may be promulgated under provisions of the Clean Air Act, 42 U.S.C. §7401 et seq., as amended (the "CAA"). Transportation projects, including those of the Airports Authority, must comply with and conform to the CAA. The Airports Authority is unable to predict what laws and regulations with respect to GHG emissions or other environmental issues (including but not limited to air, water, hazardous substances and waste regulations) will be adopted, or what effects such laws and regulations will have on the Dulles Toll Road, its operations and revenues, including Toll Road Revenues, or the local economy.

## **Cybersecurity Risk**

The Airports Authority, like many other large public and private entities, relies upon a large and complex technology environment to conduct its operations, and faces multiple cybersecurity threats including, but not limited to, hacking, phishing, viruses, malware and other attacks on its computing and other digital networks and systems (collectively, "Systems Technology"). As a recipient and provider of personal, private, or sensitive information, the Airports Authority may be the target of cybersecurity incidents that could result in adverse consequences to its Systems Technology, requiring a response action to mitigate the consequence. Cybersecurity incidents could result from unintentional events, or from deliberate attacks by unauthorized entities or individuals attempting to gain access to the Airports Authority's Systems Technology for the purposes of misappropriating assets or information or causing operational disruption and damage. To mitigate the risk of business operations impact and/or damage from cybersecurity incidents or cyber-attacks, the Airports Authority invests in multiple forms of cybersecurity and operational safeguards. While Airports Authority cybersecurity and operational safeguards are periodically tested, no assurances can be given by the Airports Authority that such measures will ensure against cybersecurity threats and attacks, and any breach could damage the Airports Authority's Systems Technology and cause material disruption to the Airports Authority's finances or operations, including its operation of the Dulles Toll Road. The costs of remedying any such damage or protecting against future attacks could be substantial. Furthermore, cybersecurity breaches could expose the Airports Authority to material litigation and other legal risks, which could cause the Airports Authority to incur material costs.

#### **Risks Relating to Changes in Law and Litigation**

*Changes in Law.* State and federal legislation is introduced and enacted from time to time that could have a direct impact on the Airports Authority's financial condition or its operations. The likelihood of any such legislation being introduced or enacted cannot be predicted.

*Litigation.* While the Airports Authority has been successful to date in defending litigation challenges to its legal authority to impose tolls on users of the Dulles Toll Road and to operate the Dulles Toll Road, no assurances can be given that additional litigation may not be filed in the future that attempts to materially adversely affect the transactions contemplated by the Permit and Operating Agreement or the Indenture. See "LITIGATION."

## TAX MATTERS – SERIES 2022A BONDS

#### General

Nixon Peabody LLP is Bond Counsel for the Series 2022A Bonds. See APPENDIX E to this Official Statement for the form of the opinion that Bond Counsel expects to deliver when the Series 2022A Bonds are delivered.

## **Tax-Exemption**

*Federal Income Taxes.* The Internal Revenue Code of 1986, as amended (the "Code"), imposes certain requirements that must be met subsequent to the issuance and delivery of the Series 2022A Bonds for interest thereon to be and remain excluded from gross income for federal income tax purposes. Noncompliance with such requirements could cause the interest on the Series 2022A Bonds to be included in gross income for federal income tax purposes retroactive to the date of issue of the Series 2022A Bonds. Pursuant to the Indenture and the Tax Certificate as to Arbitrage and the Provisions of Sections 103 and 141-150 of the Internal Revenue Code of 1986 (the "Tax Certificate"), the Airports Authority has covenanted to comply with the applicable requirements of the Code in order to maintain the exclusion of

the interest on the Series 2022A Bonds from gross income for federal income tax purposes pursuant to Section 103 of the Code. In addition, the Airports Authority has made certain representations and certifications in the Indenture and the Tax Certificate. Bond Counsel will not independently verify the accuracy of those representations and certifications.

In the opinion of Bond Counsel, under existing law and assuming compliance with the tax covenants described herein and the accuracy of the aforementioned representations and certifications made by the Airports Authority, interest on the Series 2022A Bonds is excluded from gross income for federal income tax purposes under Section 103 of the Code. Bond Counsel is also of the opinion that such interest is not treated as a preference item in calculating the alternative minimum tax imposed under the Code.

*Commonwealth and District Taxation.* Bond Counsel is of the opinion that, under existing law, interest on the Series 2022A Bonds is exempt from income taxation by the Commonwealth and is exempt from all taxation of the District, except estate, inheritance and gift taxes. Bond Counsel expresses no opinion as to other state, Commonwealth, District, foreign or local tax consequences arising with respect to the Series 2022A Bonds.

*Original Issue Premium.* The Series 2022A Bonds sold at prices in excess of their principal amounts are "Premium Bonds." An initial purchaser with an initial adjusted basis in a Premium Bond in excess of its principal amount will have amortizable bond premium which is not deductible from gross income for federal income tax purposes. The amount of amortizable bond premium for a taxable year is determined actuarially on a constant interest rate basis over the term of each Premium Bond based on the purchaser's yield to maturity (or, in the case of Premium Bonds callable prior to their maturity, over the period to the call date, based on the purchaser's yield to the call date, based on the purchaser's yield to the call date and giving effect to any call premium). For purposes of determining gain or loss on the sale or other disposition of a Premium Bond, an initial purchaser who acquires such obligation with an amortizable bond premium is required to decrease such purchaser's adjusted basis in such Premium Bond annually by the amount of amortizable bond premium for the taxable year. The amortization of bond premium may be taken into account as a reduction in the amount of tax-exempt income for purposes of determining various other tax consequences of owning such Premium Bonds. Owners of Premium Bonds are advised that they should consult with their own advisors with respect to the state and local tax consequences of owning such Premium Bonds.

*Original Issue Discount.* Bond Counsel is further of the opinion that the excess of the principal amount of a maturity of the Series 2022A Bonds over its issue price (*i.e.*, the first price at which price a substantial amount of such maturity of the Series 2022A Bonds was sold to the public, excluding bond houses, brokers or similar persons or organizations acting in the capacity of underwriters or wholesalers) (each, a "Discount Bond" and collectively the "Discount Bonds") constitutes original issue discount which is excluded from gross income for federal income tax purposes to the same extent as interest on the Series 2022A Bonds. Further, such original issue discount accrues actuarially on a constant interest rate basis over the term of each Discount Bond and the basis of each Discount Bond acquired at such issue price by an initial purchaser thereof will be increased by the amount of such accrued original issue discount. The accrual of original issue discount may be taken into account as an increase in the amount of tax-exempt income for purposes of determining various other tax consequences of owning the Discount Bonds, even though there will not be a corresponding cash payment. Owners of the Discount Bonds are advised that they should consult with their own advisors with respect to the state and local tax consequences of owning such Discount Bonds.

Ancillary Tax Matters. Ownership of the Series 2022A Bonds may result in other federal tax consequences to certain taxpayers, including, without limitation, certain S corporations, foreign corporations with branches in the United States, property and casualty insurance companies, individuals receiving Social Security or Railroad Retirement benefits, and individuals seeking to claim the earned

income credit and taxpayers (including banks, thrift institutions and other financial institutions) who may be deemed to have incurred or continued indebtedness to purchase or to carry the Series 2022A Bonds. Prospective investors are advised to consult their own tax advisors regarding these rules.

Interest paid on tax-exempt obligations such as the Series 2022A Bonds is subject to information reporting to the Internal Revenue Service (the "IRS") in a manner similar to interest paid on taxable obligations. In addition, interest on the Series 2022A Bonds may be subject to backup withholding if such interest is paid to a registered owner that (a) fails to provide certain identifying information (such as the registered owner's taxpayer identification number) in the manner required by the IRS, or (b) has been identified by the IRS as being subject to backup withholding.

Bond Counsel is not rendering any opinion as to any federal tax matters other than those described in the opinions attached as APPENDIX E. Prospective investors, particularly those who may be subject to special rules described above, are advised to consult their own tax advisors regarding the federal tax consequences of owning and disposing of the Series 2022A Bonds, as well as any tax consequences arising under the laws of any state or other taxing jurisdiction.

*Changes in Law and Post Issuance Events.* Legislative or administrative actions and court decisions, at either the federal or state level, could have an adverse impact on the potential benefits of the exclusion from gross income of the interest on the Series 2022A Bonds for federal or state income tax purposes, and thus on the value or marketability of the Series 2022A Bonds. This could result from changes to federal or state income tax rates, changes in the structure of federal or state income taxes (including replacement with another type of tax), repeal of the exclusion of the interest on the Series 2022A Bonds for gross income for federal or state income tax purposes, or otherwise. It is not possible to predict whether any legislative or administrative actions or court decisions having an adverse impact on the federal or state income tax treatment of holders of the Series 2022A Bonds may occur. Prospective purchasers of the Series 2022A Bonds should consult their own tax advisors regarding the impact of any change in law on the Series 2022A Bonds.

Bond Counsel has not undertaken to advise in the future whether any events after the date of issuance and delivery of the Series 2022A Bonds may affect the tax status of interest on the Series 2022A Bonds. Bond Counsel expresses no opinion as to any federal, state or local tax law consequences with respect to the Series 2022A Bonds, or the interest thereon, if any action is taken with respect to the Series 2022A Bonds or the proceeds thereof upon the advice or approval of other counsel.

# TAX MATTERS – SERIES 2022B BONDS

# **Federal Income Taxes**

The following is a summary of certain anticipated United States federal income tax consequences of the purchase, ownership and disposition of the Series 2022B Bonds. The summary is based upon the provisions of the Code, the Treasury Regulations promulgated thereunder and the judicial and administrative rulings and decisions now in effect, all of which are subject to change. Such authorities may be repealed, revoked, or modified, possibly with retroactive effect, so as to result in United States federal income tax consequences different from those described below. The summary generally addresses Series 2022B Bonds held as capital assets within the meaning of Section 1221 of the Code and does not purport to address all aspects of federal income taxation that may affect particular investors in light of their individual circumstances or certain types of investors subject to special treatment under the federal income tax laws, including but not limited to financial institutions, insurance companies, dealers in securities or currencies, persons holding such Series 2022B Bonds as a hedge against currency risks or as a position in a "straddle," "hedge," "constructive sale transaction" or "conversion transaction" for tax purposes, or

persons whose functional currency is not the United States dollar. It also does not deal with holders other than original purchasers that acquire Series 2022B Bonds at their initial issue price except where otherwise specifically noted. Potential purchasers of the Series 2022B Bonds should consult their own tax advisors in determining the federal, state, local, foreign and other tax consequences to them of the purchase, holding and disposition of the Series 2022B Bonds.

The Airports Authority has not sought and will not seek any rulings from the Internal Revenue Service with respect to any matter discussed herein. No assurance can be given that the Internal Revenue Service would not assert, or that a court would not sustain, a position contrary to any of the tax characterizations and tax consequences set forth below.

U.S. Holders. As used herein, the term "U.S. Holder" means a beneficial owner of Series 2022B Bonds that is (a) an individual citizen or resident of the United States for federal income tax purposes, (b) a corporation, including an entity treated as a corporation for federal income tax purposes, created or organized in or under the laws of the United States or any State thereof (including the District of Columbia), (c) an estate whose income is subject to federal income taxation regardless of its source, or (d) a trust if a court within the United States can exercise primary supervision over the administration of the trust and one or more U.S. persons have the authority to control all substantial decisions of the trust. Notwithstanding clause (d) of the preceding sentence, to the extent provided in Treasury regulations, certain trusts in existence on August 20, 1996, and treated as United States persons prior to that date that elect to continue to be treated as United States persons also will be U.S. Holders. In addition, if a partnership (or other entity or arrangement treated as a partnership for federal income tax purposes) holds Series 2022B Bonds, the tax treatment of a partner in the partnership generally will depend upon the status of the partner and the activities of the partnership. If a U.S. Holder is a partner in a partnership (or other entity or arrangement treated as a partnership for federal income tax purposes) that holds Series 2022B Bonds, the U.S. Holder is urged to consult its own tax advisor regarding the specific tax consequences of the purchase, ownership and dispositions of the Series 2022B Bonds.

*Taxation of Interest Generally.* Interest on the Series 2022B Bonds is <u>not</u> excluded from gross income for federal income tax purposes under Section 103 of the Code and so will be fully subject to federal income taxation. Purchasers will be subject to federal income tax accounting rules affecting the timing and/or characterization of payments received with respect to such Series 2022B Bonds. In general, interest paid on the Series 2022B Bonds and recovery of any accrued original issue discount and market discount will be treated as ordinary income to a bondholder, and after adjustment for the foregoing, principal payments will be treated as a return of capital to the extent of the U.S. Holder's adjusted tax basis in the Series 2022B Bonds and capital gain to the extent of any excess received over such basis.

*Recognition of Income Generally.* Section 451(b) of the Code provides that purchasers using an accrual method of accounting for U.S. federal income tax purposes may be required to include certain amounts in income no later than the time such amounts are reflected on certain financial statements of such purchaser. In this regard, Treasury Regulations provide that, with the exception of certain fees, the rule in section 451(b) will generally not apply to the timing rules for original issue discount and market discount, or to the timing rules for de minimis original issue discount and market discount. Prospective purchasers of the Series 2022B Bonds should consult their own tax advisors regarding any potential applicability of these rules and their impact on the timing of the recognition of income related to the Series 2022B Bonds under the Code.

*Original Issue Discount*. The following summary is a general discussion of certain federal income tax consequences of the purchase, ownership and disposition of Series 2022B Bonds issued with original issue discount ("Discount Bonds"). A Series 2022B Bond will be treated as having been issued with an original issue discount if the excess of its "stated redemption price at maturity" (defined below) over its

issue price (defined as the initial offering price to the public at which a substantial amount of the Series 2022B Bonds of the same maturity have first been sold to the public, excluding bond houses and brokers) equals or exceeds one quarter of one percent of such Series 2022B Bond's stated redemption price at maturity multiplied by the number of complete years to its maturity (or, in the case of an installment obligation, its weighted average maturity).

A Series 2022B Bond's "stated redemption price at maturity" is the total of all payments provided by the Series 2022B Bond that are not payments of "qualified stated interest." Generally, the term "qualified stated interest" includes stated interest that is unconditionally payable in cash or property (other than debt instruments of the issuer) at least annually at a single fixed rate or certain floating rates.

In general, the amount of original issue discount includible in income by the initial holder of a Discount Bond is the sum of the "daily portions" of original issue discount with respect to such Discount Bond for each day during the taxable year in which such holder held such Bond. The daily portion of original issue discount on any Discount Bond is determined by allocating to each day in any "accrual period" a ratable portion of the original issue discount allocable to that accrual period.

An accrual period may be of any length, and may vary in length over the term of a Discount Bond, provided that each accrual period is not longer than one year and each scheduled payment of principal or interest occurs at the end of an accrual period. The amount of original issue discount allocable to each accrual period is equal to the difference between (i) the product of the Discount Bond's adjusted issue price at the beginning of such accrual period and its yield to maturity (determined on the basis of compounding at the close of each accrual period and appropriately adjusted to take into account the length of the particular accrual period) and (ii) the amount of any qualified stated interest payments allocable to such accrual period. The "adjusted issue price" of a Discount Bond at the beginning of any accrual period is the sum of the issue price of the Discount Bond plus the amount of original issue discount allocable to all prior accrual periods minus the amount of any prior payments on the Discount Bond that were not qualified stated interest payments. Under these rules, holders generally will have to include in income increasingly greater amounts of original issue discount in successive accrual periods.

Holders utilizing the accrual method of accounting may generally, upon election, include in gross income all interest (including stated interest, acquisition discount, original issue discount, de minimis original issue discount, market discount, de minimis market discount, and unstated interest, as adjusted by any amortizable bond premium or acquisition premium) on a Series 2022B Bond by using the constant yield method applicable to original issue discount, subject to certain limitations and exceptions.

*Market Discount*. A holder who purchases a Series 2022B Bond at a price which includes market discount (i.e., at a purchase price that is less than its adjusted issue price in the hands of an original owner) in excess of a prescribed de minimis amount will be required to recharacterize all or a portion of the gain as ordinary income upon receipt of each scheduled or unscheduled principal payment or upon other disposition. In particular, such holder will generally be required either (a) to allocate each such principal payment to accrued market discount not previously included in income and to recognize ordinary income to that extent and to treat any gain upon sale or other disposition of such a Series 2022B Bond as ordinary income to the extent of any remaining accrued market discount or (b) to elect to include such market discount in income currently as it accrues on all market discount instruments acquired by such holder on or after the first day of the taxable year to which such election applies.

The Code authorizes the Treasury Department to issue regulations providing for the method for accruing market discount on debt instruments the principal of which is payable in more than one installment. Until such time as regulations are issued by the Treasury Department, certain rules described in the

legislative history of the Tax Reform Act of 1986 will apply. Under those rules, market discount will be included in income either (a) on a constant interest basis or (b) in proportion to the accrual of stated interest.

A holder of a Series 2022B Bond who acquires such Series 2022B Bond at a market discount also may be required to defer, until the maturity date of such Series 2022B Bond or the earlier disposition in a taxable transaction, the deduction of a portion of the amount of interest that the holder paid or accrued during the taxable year on indebtedness incurred or maintained to purchase or carry a Series 2022B Bond in excess of the aggregate amount of interest (including original issue discount) includable in such holder's gross income for the taxable year with respect to such Series 2022B Bond. The amount of such net interest expense deferred in a taxable year may not exceed the amount of market discount accrued on the Series 2022B Bond and, in general, would be deductible when such market discount is includable in income. The amount of any remaining deferred deduction is to be taken into account in the taxable year in which the Series 2022B Bond matures or is disposed of in a taxable transaction. In the case of a disposition in which gain or loss is not recognized in whole or in part, any remaining deferred deduction will be allowed to the extent gain is recognized on the disposition. This deferral rule does not apply if the bondholder elects to include such market discount in income currently as described above.

*Bond Premium*. A holder of a Series 2022B Bond who purchases such Series 2022B Bond at a cost greater than its remaining redemption amount will have amortizable bond premium. If the holder elects to amortize this premium under Section 171 of the Code (which election will apply to all Series 2022B Bonds held by the holder on the first day of the taxable year to which the election applies and to all Series 2022B Bonds thereafter acquired by the holder), such a holder must amortize the premium using constant yield principles based on the holder's yield to maturity. Amortizable bond premium is generally treated as an offset to interest income, and a reduction in basis is required for amortizable bond premium that is applied to reduce interest payments. Purchasers of Series 2022B Bonds who acquire such Series 2022B Bonds at a premium should consult with their own tax advisors with respect to federal, state and local tax consequences of owning such Series 2022B Bonds.

*Surtax on Unearned Income*. Section 1411 of the Code generally imposes a tax of 3.8% on the "net investment income" of certain individuals, trusts and estates. Among other items, net investment income generally includes gross income from interest and net gain attributable to the disposition of certain property, less certain deductions. U.S. Holders should consult their own tax advisors regarding the possible implications of this provision in their particular circumstances.

Sale or Redemption of Series 2022B Bonds. A bondholder's adjusted tax basis for a Series 2022B Bond is the price such holder pays for the Series 2022B Bond plus the amount of original issue discount and market discount previously included in income and reduced on account of any payments received on such Series 2022B Bond other than "qualified stated interest" and any amortized bond premium. Gain or loss recognized on a sale, exchange or redemption of a Series 2022B Bond, measured by the difference between the amount realized and the bondholder's tax basis as so adjusted, will generally give rise to capital gain or loss if the Series 2022B Bond is held as a capital asset (except in the case of Series 2022B Bonds acquired at a market discount, in which case a portion of the gain will be characterized as interest and therefore ordinary income).

If the terms of a Series 2022B Bond are materially modified, in certain circumstances, a new debt obligation would be deemed "reissued", or created and exchanged for the prior obligation in a taxable transaction. Among the modifications which may be treated as material are those related to the redemption provisions and, in the case of a nonrecourse obligation, those which involve the substitution of collateral. In addition, the defeasance of a Series 2022B Bond under the defeasance provisions of the Master Indenture could result in a deemed sale or exchange of such Series 2022B Bond.

# EACH POTENTIAL HOLDER OF SERIES 2022B BONDS SHOULD CONSULT ITS OWN TAX ADVISOR CONCERNING (1) THE TREATMENT OF GAIN OR LOSS ON SALE, REDEMPTION OR DEFEASANCE OF THE SERIES 2022B BONDS, AND (2) THE CIRCUMSTANCES IN WHICH SERIES 2022B BONDS WOULD BE DEEMED REISSUED AND THE LIKELY EFFECTS, IF ANY, OF SUCH REISSUANCE.

*Non-U.S. Holders.* The following is a general discussion of certain United States federal income tax consequences resulting from the beneficial ownership of Series 2022B Bonds by a person other than a U.S. Holder, a former United States citizen or resident, or a partnership or entity treated as a partnership for United States federal income tax purposes (a "Non-U.S. Holder").

Subject to the discussion of backup withholding and the Foreign Account Tax Compliance Act ("FATCA"), payments of principal by the Airports Authority or any of its agents (acting in its capacity as agent) to any Non-U.S. Holder will not be subject to federal withholding tax. In the case of payments of interest to any Non-U.S. Holder, however, federal withholding tax will apply unless the Non-U.S. Holder (1) does not own (actually or constructively) 10 percent or more of the voting equity interests of the Airports Authority, (2) is not a controlled foreign corporation for United States tax purposes that is related to the Airports Authority (directly or indirectly) through stock ownership, and (3) is not a bank receiving interest in the manner described in Section 881(c)(3)(A) of the Code. In addition, either (1) the Non-U.S. Holder must certify on the applicable IRS Form W-8 (series) (or successor form) to the Airports Authority, its agents or paying agents or a broker under penalties of perjury that it is not a U.S. person and must provide its name and address, or (2) a securities clearing organization, bank or other financial institution, that holds customers' securities in the ordinary course of its trade or business and that also holds the Series 2022B Bonds must certify to the Airports Authority or its agent under penalties of perjury that such statement on the applicable IRS Form W-8 (series) (or successor form) has been received from the Non-U.S. Holder by it or by another financial institution and must furnish the interest payor with a copy.

Interest payments may also be exempt from federal withholding tax depending on the terms of an existing federal income tax treaty, if any, in force between the U.S. and the resident country of the Non-U.S. Holder. The U.S. has entered into an income tax treaty with a limited number of countries. In addition, the terms of each treaty differ in their treatment of interest and original issue discount payments. Non-U.S. Holders are urged to consult their own tax advisor regarding the specific tax consequences of the receipt of interest payments, including original issue discount. A Non-U.S. Holder that does not qualify for exemption from withholding as described above must provide the Airports Authority or its agent with documentation as to his, her, or its identity to avoid the U.S. backup withholding tax on the amount allocable to a Non-U.S. Holder. The documentation may require that the Non-U.S. Holder provide a U.S. tax identification number.

If a Non-U.S. Holder is engaged in a trade or business in the United States and interest on a Series 2022B Bond held by such holder is effectively connected with the conduct of such trade or business, the Non-U.S. Holder, although exempt from the withholding tax discussed above (provided that such holder timely furnishes the required certification to claim such exemption), may be subject to United States federal income tax on such interest in the same manner as if it were a U.S. Holder. In addition, if the Non-U.S. Holder is a foreign corporation, it may be subject to a branch profits tax equal to 30% (subject to a reduced rate under an applicable treaty) of its effectively connected earnings and profits for the taxable year, subject to certain adjustments. For purposes of the branch profits tax, interest on a Series 2022B Bond will be included in the earnings and profits of the holder if the interest is effectively connected with the conduct by the holder of a trade or business in the United States. Such a holder must provide the payor with a properly executed IRS Form W-8ECI (or successor form) to claim an exemption from United States federal withholding tax.

Generally, any capital gain realized on the sale, exchange, retirement or other disposition of a Series 2022B Bond by a Non-U.S. Holder will not be subject to United States federal income or withholding taxes if (1) the gain is not effectively connected with a United States trade or business of the Non-U.S. Holder, and (2) in the case of an individual, the Non-U.S. Holder is not present in the United States for 183 days or more in the taxable year of the sale, exchange, retirement or other disposition, and certain other conditions are met.

For newly issued or reissued obligations, such as the Series 2022B Bonds, FATCA imposes U.S. withholding tax on interest payments and, for dispositions after December 31, 2018, gross proceeds of the sale of the Series 2022B Bonds paid to certain foreign financial institutions (which is broadly defined for this purpose to generally include non-U.S. investment funds) and certain other non-U.S. entities if certain disclosure and due diligence requirements related to U.S. accounts or ownership are not satisfied, unless an exemption applies. An intergovernmental agreement between the United States and an applicable non-U.S. country may modify these requirements. In any event, bondholders or beneficial owners of the Series 2022B Bonds shall have no recourse against the Airports Authority, nor will the Airports Authority be obligated to pay any additional amounts to "gross up" payments to such persons, as a result of any withholding or deduction for, or on account of, any present or future taxes, duties, assessments or government charges with respect to payments in respect of the Series 2022B Bonds. However, it should be noted that on December 13, 2018, the IRS issued Proposed Treasury Regulation Section 1.1473-1(a)(1) which proposes to remove gross proceeds from the definition of "withholdable payment" for this purpose.

Non-U.S. Holders should consult their own tax advisors with respect to the possible applicability of federal withholding and other taxes upon income realized in respect of the Series 2022B Bonds.

Information Reporting and Backup Withholding. For each calendar year in which the Series 2022B Bonds are outstanding, the Airports Authority, its agents or paying agents or a broker is required to provide the IRS with certain information, including a holder's name, address and taxpayer identification number (either the holder's Social Security number or its employer identification number, as the case may be), the aggregate amount of principal and interest paid to that holder during the calendar year and the amount of tax withheld, if any. This obligation, however, does not apply with respect to certain U.S. Holders, including corporations, tax-exempt organizations, qualified pension and profit sharing trusts, and individual retirement accounts and annuities.

If a U.S. Holder subject to the reporting requirements described above fails to supply its correct taxpayer identification number in the manner required by applicable law or under-reports its tax liability, the Airports Authority, its agents or paying agents or a broker may be required to make "backup" withholding of tax on each payment of interest or principal on the Series 2022B Bonds. This backup withholding is not an additional tax and may be credited against the U.S. Holder's federal income tax liability, provided that the U.S. Holder furnishes the required information to the IRS.

Under current Treasury Regulations, backup withholding and information reporting will not apply to payments of interest made by the Airports Authority, its agents (in their capacity as such) or paying agents or a broker to a Non-U.S. Holder if such holder has provided the required certification that it is not a U.S. person (as set forth in the second paragraph under "Non-U.S. Holders" above), or has otherwise established an exemption (provided that neither the Airports Authority nor its agent has actual knowledge that the holder is a U.S. person or that the conditions of an exemption are not in fact satisfied).

Payments of the proceeds from the sale of a Series 2022B Bond to or through a foreign office of a broker generally will not be subject to information reporting or backup withholding. However, information reporting (but not backup withholding) may apply to those payments if the broker is one of the following: (i) a U.S. person; (ii) a controlled foreign corporation for U.S. tax purposes; (iii) a foreign person 50-percent

or more of whose gross income from all sources for the three-year period ending with the close of its taxable year preceding the payment was effectively connected with a United States trade or business; or (iv) a foreign partnership with certain connections to the United States.

Payment of the proceeds from a sale of a Series 2022B Bond to or through the United States office of a broker is subject to information reporting and backup withholding unless the holder or beneficial owner certifies as to its taxpayer identification number or otherwise establishes an exemption from information reporting and backup withholding.

The preceding federal income tax discussion is included for general information only and may not be applicable depending upon a holder's particular situation. Holders should consult their tax advisors with respect to the tax consequences to them of the purchase, ownership and disposition of the Series 2022B Bonds, including the tax consequences under federal, state, local, foreign and other tax laws and the possible effects of changes in those tax laws.

# **Commonwealth and District Taxes**

Bond Counsel is of the opinion that, under existing law, interest on the Series 2022B Bonds is exempt from income taxation by the Commonwealth and is exempt from all taxation of the District, except estate, inheritance and gift taxes. Bond Counsel expresses no opinion as to other state, Commonwealth, District, foreign or local tax consequences arising with respect to the Series 2022B Bonds.

# **Changes in Law and Post Issuance Events**

Legislative or administrative actions and court decisions, at either the federal or state level, could have an impact on the inclusion in gross income of interest on the Series 2022B Bonds for federal or state income tax purposes, and thus on the value or marketability of the Series 2022B Bonds. This could result from changes to federal or state income tax rates, changes in the structure of federal or state income taxes (including replacement with another type of tax), or otherwise. It is not possible to predict whether any such legislative or administrative actions or court decisions will occur or have an adverse impact on the federal or state income tax treatment of holders of the Series 2022B Bonds. Prospective purchasers of the Series 2022B Bonds should consult their own tax advisors regarding the impact of any change in law or proposed change in law on the Series 2022B Bonds.

IN ALL EVENTS, ALL INVESTORS SHOULD CONSULT THEIR OWN TAX ADVISORS IN DETERMINING THE FEDERAL, STATE, LOCAL, FOREIGN AND OTHER TAX CONSEQUENCES TO THEM OF THE PURCHASE, OWNERSHIP AND DISPOSITION OF THE SERIES 2022B BONDS.

# CONSIDERATIONS FOR ERISA AND OTHER U.S. BENEFIT PLAN INVESTORS

The Employee Retirement Income Security Act of 1974, as amended ("ERISA"), imposes certain fiduciary obligations and prohibited transaction restrictions on employee pension and welfare benefit plans subject to Title I of ERISA ("ERISA Plans"). Section 4975 of the Code imposes essentially the same prohibited transaction restrictions on tax-qualified retirement plans described in Section 401(a) and 403(a) of the Code, which are exempt from tax under Section 501(a) of the Code, other than governmental and church plans as defined herein ("Qualified Retirement Plans"), and on Individual Retirement Accounts ("IRAs") described in Section 408(b) of the Code (collectively, "Tax-Favored Plans"). Certain employee benefit plans such as governmental plans (as defined in Section 3(32) of ERISA) ("Governmental Plans"), and, if no election has been made under Section 410(d) of the Code, church plans (as defined in Section 3(33) of ERISA) ("Church Plans"), are not subject to ERISA requirements. Additionally, such Governmental and Church Plans are not subject to the requirements of Section 4975 of the Code but may

be subject to applicable federal, state or local law ("Similar Laws") which is, to a material extent, similar to the foregoing provisions of ERISA or the Code. Accordingly, assets of such plans may be invested in the Series 2022B Bonds without regard to the ERISA and Code considerations described below, subject to the provisions of Similar Laws.

In addition to the imposition of general fiduciary obligations, including those of investment prudence and diversification and the requirement that a plan's investment be made in accordance with the documents governing the plan, Section 406 of ERISA and Section 4975 of the Code prohibit a broad range of transactions involving assets of ERISA Plans and Tax-Favored Plans and entities whose underlying assets include plan assets by reason of ERISA Plans or Tax-Favored Plans investing in such entities (collectively, "Benefit Plans") and persons who have certain specified relationships to the Benefit Plans ("Parties In Interest" or "Disqualified Persons"), unless a statutory or administrative exemption is available. The definitions of "Party in Interest" and "Disqualified Person" are expansive. While other entities may be encompassed by these definitions, they include, most notably: (1) fiduciary with respect to a plan; (2) a person providing services to a plan; (3) an employer or employee organization any of whose employees or members are covered by the plan; and (4) the owner of an IRA. Certain Parties in Interest (or Disqualified Persons) that participate in a prohibited transaction may be subject to a penalty (or an excise tax) imposed pursuant to Section 502(i) of ERISA (or Section 4975 of the Code) unless a statutory or administrative exemption is available. Without an exemption an IRA owner may disqualify his or her IRA.

Certain transactions involving the purchase, holding or transfer of the Series 2022B Bonds might be deemed to constitute prohibited transactions under ERISA and Section 4975 of the Code if assets of the Airports Authority were deemed to be assets of a Benefit Plan. Under final regulations issued by the United States Department of Labor (the "Plan Assets Regulation"), the assets of the Airports Authority would be treated as plan assets of a Benefit Plan for the purposes of ERISA and Section 4975 only of the Code if the Benefit Plan acquires an "equity interest" in the Airports Authority and none of the exceptions contained in the Plan Assets Regulation is applicable. An equity interest is defined under the Plan Assets Regulation as an interest in an entity other than an instrument which is treated as indebtedness under applicable local law and which has no substantial equity features. Although there is little guidance on this matter, it appears that the Series 2022B Bonds should be treated as debt without substantial equity features for purposes of the Plan Assets Regulation. This determination is based upon the traditional debt features of the Series 2022B Bonds, including the reasonable expectation of purchasers of Series 2022B Bonds that the Series 2022B Bonds will be repaid when due, traditional default remedies, as well as the absence of conversion rights, warrants and other typical equity features.

However, without regard to whether the Series 2022B Bonds are treated as an equity interest for such purposes, though, the acquisition or holding of Series 2022B Bonds by or on behalf of a Benefit Plan could be considered to give rise to a prohibited transaction if the Airports Authority or the Trustee, or any of their respective affiliates, is or becomes a Party in Interest or a Disqualified Person with respect to such Benefit Plan.

Most notably, ERISA and the Code generally prohibit the lending of money or other extension of credit between an ERISA Plan or Tax-Favored Plan and a Party in Interest or a Disqualified Person, and the acquisition of any of the Series 2022B Bonds by a Benefit Plan would involve the lending of money or extension of credit by the Benefit Plan. In such a case, however, certain exemptions from the prohibited transaction rules could be applicable depending on the type and circumstances of the plan fiduciary making the decision to acquire a Series 2022B Bond. Included among these exemptions are: Prohibited Transaction Class Exemption ("PTCE") 96-23, regarding transactions effected by certain "in-house asset managers"; PTCE 90-1, regarding investments by insurance company pooled separate accounts; PTCE 95-60, regarding transactions effected by "insurance company general accounts"; PTCE 91-38, regarding investments by bank collective investment funds; and PTCE 84-14, regarding transactions effected by "qualified

professional asset managers." Further, the statutory exemption in Section 408(b)(17) of ERISA and Section 4975(d)(20) of the Code provides for an exemption for transactions involving "adequate consideration" with persons who are Parties in Interest or Disqualified Persons solely by reason of their (or their affiliate's) status as a service provider to the Benefit Plan involved and none of whom is a fiduciary with respect to the Benefit Plan assets involved (or an affiliate of such a fiduciary). There can be no assurance that any class or other exemption will be available with respect to any particular transaction involving the Series 2022B Bonds, or that, if available, the exemption would cover all possible prohibited transactions.

By acquiring a Series 2022B Bond (or interest therein), each purchaser and transferee (and if the purchaser or transferee is a plan, its fiduciary) is deemed to represent and warrant that either (i) it is not acquiring the Series 2022B Bond (or interest therein) with the assets of a Benefit Plan, Governmental plan or Church plan; or (ii) the acquisition and holding of the Series 2022B Bond (or interest therein) will not give rise to a nonexempt prohibited transaction under Section 406 of ERISA or Section 4975 of the Code or Similar Laws. A purchaser or transferee who acquires Series 2022B Bonds with assets of a Benefit Plan represents that such purchaser or transferee has considered the fiduciary requirements of ERISA, the Code or Similar Laws and has consulted with counsel with regard to the purchase or transfer.

Because the Airports Authority, the Trustee, Underwriters or any of their respective affiliates may receive certain benefits in connection with the sale of the Series 2022B Bonds, the purchase of the Series 2022B Bonds using plan assets of a Benefit Plan over which any of such parties has investment authority or provides investment advice for a direct or indirect fee may be deemed to be a violation of the prohibited transaction rules of ERISA or Section 4975 of the Code or Similar Laws for which no exemption may be available. Accordingly, any investor considering a purchase of Series 2022B Bonds using plan assets of a Benefit Plan should consult with its counsel if the Airports Authority, the Trustee or the Underwriters or any of their respective affiliates has investment authority or provides investment advice for a direct or indirect fee with respect to such assets or is an employer maintaining or contributing to the Benefit Plan.

Any ERISA Plan fiduciary considering whether to purchase the Series 2022B Bonds on behalf of an ERISA Plan should consult with its counsel regarding the applicability of the fiduciary responsibility and prohibited transaction provisions of ERISA and Section 4975 of the Code to such an investment and the availability of any of the exemptions referred to above. Persons responsible for investing the assets of Tax-Favored Plans that are not ERISA Plans should seek similar counsel with respect to the prohibited transaction provisions of the Code and the applicability of Similar Laws.

# **CONTINUING DISCLOSURE**

The Airports Authority has entered into an Amended and Restated Continuing Disclosure Agreement (the "Disclosure Agreement") with Digital Assurance Certification L.L.C. ("DAC") to assist the Underwriters in complying with the requirements of Rule 15c2-12 (the "Rule") promulgated by the SEC pursuant to the Securities Exchange Act of 1934, as amended. The Disclosure Agreement requires the Airports Authority to file with DAC (i) certain annual financial information and operating data and (ii) certain event notices. Under the Disclosure Agreement, DAC will serve as the Airports Authority's Disclosure Dissemination Agent for purposes of filing annual disclosure and any material event notices required by the Rule with the MSRB for posting on EMMA. DAC also will provide certain Airports Authority financial information through DAC's web site at http://www.dacbond.com. The form of the Disclosure Agreement is attached to this Official Statement as APPENDIX G. The Airports Authority may amend the Disclosure Agreement in the future so long as such amendments are consistent with the Rule as then in effect.

The Disclosure Agreement requires the Airports Authority to provide limited information at specified times. While the Airports Authority expects to provide substantial additional information, as it

has in the past, it is not legally obligated to do so. A default by the Airports Authority under the Disclosure Agreement is not an Event of Default with respect to the Series 2022 Bonds. The Disclosure Agreement permits any Bondholder to seek specific performance of the Airports Authority's obligations thereunder after 30 days' prior written qualifying notice to the Airports Authority and 30 days to cure, but no assurance can be given as to the outcome of any such proceeding.

The Airports Authority believes that is has complied in all material respects with its previous continuing disclosure undertakings during the last five years.

#### LEGAL MATTERS

Certain legal matters relating to the issuance of the Series 2022 Bonds are subject to the approving opinion of Bond Counsel and Disclosure Counsel to the Airports Authority, Nixon Peabody LLP, Washington, D.C., which will be furnished upon the issuance of the Series 2022 Bonds. The form of such Bond Counsel approving opinion is set forth in APPENDIX E of this Official Statement (the "Bond Opinion"). The Bond Opinion is limited to matters relating to the issuance of the Series 2022 Bonds and to the status of interest on the Series 2022 Bonds as described in "TAX MATTERS – SERIES 2022A BONDS" and "TAX MATTERS – SERIES 2022B BONDS."

Certain legal matters will be passed upon for the Airports Authority by Johnna S. Spera, Esquire, Senior Vice President and General Counsel of the Airports Authority, and for the Underwriters by their Counsel, Squire Patton Boggs (US) LLP, Washington, D.C.

#### LITIGATION

The Airports Authority is involved in various lawsuits arising in the ordinary course of business that are covered by insurance or that the Airports Authority does not believe to be material. The Airports Authority believes that any liability that is reasonably likely to be assessed against the Airports Authority as a result of pending lawsuits which are not covered by insurance will not materially adversely affect the financial position of the Airports Authority. In addition, no litigation is pending or, to the knowledge of the Airports Authority, threatened against the Airports Authority (a) seeking to restrain or enjoin the issuance of the Series 2022 Bonds or the collection of Toll Road Revenues pledged under the Indenture, or (b) in any way contesting or affecting any authority for the issuance of the Series 2022 Bonds, the validity or binding effect of the Series 2022 Bonds or the Indenture, or (c) in any way contesting the Series 2022 Bonds or the Indenture, or (c) in any way contesting the Airports Authority, the validity or effect of the Federal Act, the Federal Lease, powers or jurisdiction of the Airports Authority, the Virginia Act, the District Act, the Transfer Agreement, the Permit and Operating Agreement, the Comprehensive Agreement, the Local Funding Agreement, the Phase 2 Cooperative Agreements, the construction contracts relating to Dulles Metrorail Project – Phase 2, or any provision thereof, or the application of the proceeds of the Series 2022 Bonds.

Should the claims of Capital Rail and Hensel Phelps for additional compensation under their respective contracts not be resolved via the contractually mandated dispute resolution process, either contractor could pursue its claims in the future against the Airports Authority through litigation. See "INVESTMENT CONSIDERATIONS – Risks Relating to Construction of the Dulles Metrorail Project – *Risk of Cost Overruns.*"
## RATINGS

The Series 2022 Bonds have been assigned the long-term underlying ratings of "Baa1" (stable outlook) by Moody's Investors Service, Inc. and "A-" (stable outlook) by S&P Global Ratings. Subject to a determination by the Airports Authority to obtain bond insurance, any Series 2022 Bonds insured by AGM are expected to be assigned the insured rating of "A2" (stable outlook) by Moody's Investors Service, Inc. and "AA" (stable outlook) by S&P Global Ratings based upon the issuance of the Bond Insurance Policy by AGM at the time of delivery of the Series 2022 Bonds. See "THE SERIES 2022 BONDS – Bond Insurance."

The Airports Authority furnished the rating agencies with information contained in this Official Statement and certain other materials and information about the Airports Authority. Generally, rating agencies base their ratings on such materials and information, as well as investigations, studies and assumptions developed by the rating agencies.

A rating, including any related outlook with respect to potential changes in such ratings, reflects only the view of the agency giving such rating and is not a recommendation to buy, sell or hold the Series 2022 Bonds. An explanation of the significance of a rating may be obtained only from the rating agency furnishing the same. The ratings of the Series 2022 Bonds may be changed at any time, and no assurance can be given that one or both of such ratings will not be revised downward or withdrawn entirely by the rating agency or rating agencies if, in the judgment of the applicable rating agency, circumstances so warrant. Any such downward revision or withdrawal of any such rating is likely to have an adverse effect on the market price of the Series 2022 Bonds.

# UNDERWRITING

The underwriters of the Series 2022 Bonds listed on the cover of this Official Statement (the "Underwriters"), for whom Wells Fargo Bank, National Association acts as representative (the "Representative"), have agreed to purchase the Series 2022 Bonds. The Series 2022A Bonds are being sold at a price of \$ (consisting of \$ aggregate par amount of the Series 2022 Bonds, [plus/minus] [net] original issue [premium/discount] of \$ , and less an underwriting discount of ). The Series 2022B Bonds are being sold at a price of \$ (consisting of \$ \$ aggregate par amount of the Series 2022B Bonds less an underwriting discount of \$ ). The Series 2022 Bonds are being sold pursuant to a Bond Purchase Agreement entered into by and between the Airports Authority and the Representative (the "Bond Purchase Agreement"), on behalf of the Underwriters. The Underwriters will be obligated to purchase all of the Series 2022 Bonds if any Series 2022 Bonds are purchased. The obligations of the Underwriters to accept the delivery of the Series 2022 Bonds are subject to various conditions set forth in the Bond Purchase Agreement.

The Underwriters and their respective affiliates are full service financial institutions engaged in various activities, which may include sales and trading, commercial and investment banking, advisory, investment management, investment research, principal investment, hedging, market making, brokerage and other financial and non-financial activities and services. Certain of the Underwriters and their respective affiliates have provided, and may in the future provide, a variety of these services to the Airports Authority and to persons and entities with relationships with the Airports Authority, for which they received or will receive customary fees and expenses.

In the ordinary course of their various business activities, the Underwriters and their respective affiliates, officers, directors and employees may purchase, sell or hold a broad array of investments and actively trade debt and equity securities, derivatives, loans, commodities, currencies, credit default swaps and other financial instruments for their own account and for the accounts of their customers, and such investment and trading activities may involve or relate to assets, securities and/or instruments of the Airports Authority (directly, as collateral securing other obligations or otherwise) and/or persons and entities with relationships with the Airports Authority. The Underwriters and their respective affiliates may also communicate independent investment recommendations, market color or trading ideas and/or publish or express independent research views in respect of such assets, securities or instruments and may at any time hold, or recommend to clients that they should acquire, long and/or short positions in such assets, securities and instruments.

Wells Fargo Corporate & Investment Banking (which may be referred to elsewhere as "CIB," "Wells Fargo Securities" or "WFS") is the trade name used for the corporate banking, capital markets and investment banking services of Wells Fargo & Company and its subsidiaries, including Wells Fargo Bank, National Association ("WFBNA"), a member of the National Futures Association, which conducts its municipal securities sales, trading and underwriting operations through the Wells Fargo Bank, N.A. Municipal Finance Group, a separately identifiable department of WFBNA, registered with the U.S. Securities and Exchange Commission as a municipal securities dealer pursuant to Section 15B(a) of the Securities Exchange Act of 1934.

WFBNA, acting through its Municipal Finance Group, the senior underwriter of the Series 2022 Bonds, has entered into an agreement (the "WFA Distribution Agreement") with its affiliate, Wells Fargo Clearing Services, LLC (which uses the trade name "Wells Fargo Advisors") ("WFA"), for the distribution of certain municipal securities offerings, including the Series 2022 Bonds. Pursuant to the WFA Distribution Agreement, WFBNA will share a portion of its underwriting or remarketing agent compensation, as applicable, with respect to the Series 2022 Bonds with WFA. WFBNA has also entered into an agreement (the "WFSLLC Distribution Agreement") with its affiliate Wells Fargo Securities, LLC ("WFSLLC"), for the distribution of municipal securities offerings, including the Series 2022 Bonds. Pursuant to the WFSLLC Distribution Agreement, WFBNA pays a portion of WFSLLC's expenses based on its municipal securities transactions. WFBNA, WFSLLC, and WFA are each wholly-owned subsidiaries of Wells Fargo & Company.

BofA Securities, Inc., one of the Underwriter of the Series 2022 Bonds, has entered into a distribution agreement with its affiliate Merrill Lynch, Pierce, Fenner & Smith Incorporated ("MLPF&S"). As part of this arrangement, BofA Securities, Inc. may distribute securities to MLPF&S, which may in turn distribute such securities to investors through the financial advisor network of MLPF&S. As part of this arrangement, BofA Securities, Inc. may compensate MLPF&S as a dealer for their selling efforts with respect to the Series 2022 Bonds.

Citigroup Global Markets Inc., an Underwriter of the Series 2022 Bonds, has entered into a retail distribution agreement with Fidelity Capital Markets, a division of National Financial Services LLC (together with its affiliates, "Fidelity"). Under this distribution agreement, Citigroup Global Markets Inc. may distribute municipal securities to retail investors at the original issue price through Fidelity. As part of this arrangement, Citigroup Global Markets Inc. will compensate Fidelity for its selling efforts.

Academy Securities, Inc., an Underwriter of the Series 2022 Bonds, has entered into Third-Party Distribution Agreements with TD Ameritrade Inc., BNY Mellon Capital Markets LLC, Commonwealth Financial Network, R. Seelaus & Co., Intercoastal Capital Markets, Inc., Janney Montgomery Scott LLC, The GMS Group LLC, InspereX LLC, Mountainside Securities LLC, World Equity Group, Inc., and CINCaP Investment Group, Inc. for the retail distribution of certain municipal securities at the original issue prices. Pursuant to these Third-Party Distribution Agreements (if applicable to this transaction), Academy Securities may share a portion of its underwriting compensation with these firms.

## VERIFICATION AGENT

Robert Thomas CPA, LLC (the "Verification Agent") will verify from the information provided to it the mathematical accuracy of the computations contained in the provided schedules as of the delivery date of the Series 2022 Bonds to determine that the proceeds of the Series 2022 Bonds and other funds of the Airports Authority to be deposited with the Trustee pursuant to the Refunding Agreements will be sufficient to pay the principal and accrued interest with respect to the Refunded Bonds. The Verification Agent will express no opinion on the assumptions provided to them.

## FINANCIAL ADVISORS

Frasca & Associates LLC and Mercator Advisors LLC (the "Financial Advisors") serve as financial advisors to the Airports Authority in connection with the issuance of the Series 2022 Bonds. The Financial Advisors have assisted in the preparation of the debt issuance plan for the funding of the costs of the Dulles Metrorail Project based on information provided by the Airports Authority. In addition, they have assisted in the preparation of this Official Statement. The Financial Advisors have not undertaken to make an independent verification of, or to assume responsibility for, the accuracy, completeness or fairness of the information contained in this Official Statement.

# INDEPENDENT AUDITORS AND PROSPECTIVE FINANCIAL INFORMATION

Crowe LLP serves as the independent auditor to the Airports Authority.

This Official Statement includes certain prospective financial information, including (i) the Traffic and Revenue Study attached as APPENDIX D to this Official Statement, which was prepared by Stantec, the Traffic and Revenue Consultant, and (ii) budget information (see "THE AIRPORTS AUTHORITY – Financial Information for Dulles Corridor Enterprise Fund – *Fiscal Year 2022 Budget*"), funding information (see "THE DULLES METRORAIL PROJECT – Funding of the Dulles Metrorail Project"), and summaries of prospective financial information from the Traffic and Revenue Study, which have been prepared by, and are the responsibility of, the Airports Authority's management. The Airports Authority and its management believe that the budget information, the funding information and the summaries of prospective financial information from the Traffic and Revenue Study have been prepared on a reasonable basis, reflecting the best estimates and judgments, and represent, to the best of management's knowledge and opinion, the Airports Authority's expected course of action. However, because this information is highly subjective, it should not be relied upon as necessarily indicative of future results.

The prospective financial information in this Official Statement was not prepared with a view toward compliance with the guidelines established by the American Institute of Certified Public Accountants for preparation and presentation of prospective financial information.

Crowe LLP has neither examined, compiled nor performed any procedures with respect to the prospective financial information contained in this Official Statement and, accordingly, Crowe LLP does not express an opinion or any other form of assurance on such information or its achievability. Crowe LLP assumes no responsibility for and denies any association with the prospective financial information and any other information derived therefrom included elsewhere in this Official Statement.

The Cherry Bekaert LLP report to the audited financial statements set forth in the 2020 Annual Report refers exclusively to the Airport's Authority's historical financial information. The Cherry Bekaert LLP report does not cover any other information in this Official Statement and should not be read to do so.

#### MISCELLANEOUS

None of the Commonwealth, the District of Columbia or the Trustee has participated in the preparation of this Official Statement and therefore takes no responsibility for its content. All of the appendices are an integral part of this Official Statement and must be read together with this Official Statement. The description of the Indenture does not purport to be comprehensive or definitive, and prospective purchasers of the Series 2022 Bonds are referred to the Indenture for the complete terms thereof. Copies of the Indenture may be obtained from the Airports Authority. So far as any statements made in this Official Statement involve matters of opinion, forecasts or estimates, whether or not expressly stated, they are set forth as such and not as representations of fact. Historical data is presented for information purposes only and is not intended to be a projection of future results.

# METROPOLITAN WASHINGTON AIRPORTS AUTHORITY

By:

Chairperson

APPENDIX A

DEFINITIONS

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## **APPENDIX A**

#### DEFINITIONS

The following are definitions of certain terms used in this Official Statement (except as otherwise set forth therein).

"Account" means any account or subaccount created in any Fund created under the Master Indenture or under a Supplemental Indenture.

"Accreted Value" means (a) with respect to any Capital Appreciation Bonds or Convertible Capital Appreciation Bonds, as of any date of calculation, the sum of the amount set forth in a Supplemental Indenture as the amount representing the initial principal amount of such Capital Appreciation Bonds or Convertible Capital Appreciation Bonds plus the interest accumulated, compounded and unpaid thereon as of the most recent compounding date, or (b) with respect to any Original Issue Discount Bonds, as of the date of calculation, the amount representing the initial public offering price of such Original Issue Discount Bonds plus the amount of the discounted principal which has accreted since the date of issue; in each case the Accreted Value shall be determined in accordance with the provisions of the Supplemental Indenture authorizing the issuance of such Capital Appreciation Bonds, Convertible Capital Appreciation Bonds or Original Issue Discount Bonds.

"Acts" means, collectively, Chapter 598, Virginia Acts of Assembly of 1985, as amended, and the District of Columbia Regional Airports Authority Act of 1985, as amended.

"Additional Project" means any facility or capital improvement added to, grouped with, or otherwise constituted and declared to be a part of the Dulles Toll Road by the Airports Authority in accordance with law and the Permit and Operating Agreement as set forth in a resolution adopted by the Airports Authority.

"Airports" means Ronald Reagan Washington National Airport, located in Arlington County, Virginia, Washington Dulles International Airport, located in Fairfax County and Loudoun County, Virginia and any other airport over which the Airports Authority assumes ownership or operating responsibility and that the Airports Authority designates as a part of the Airports under the Airports Authority's Amended and Restated Master Indenture of Trust, dated as of September 1, 2001, between the Airports Authority and Manufacturers and Traders Trust Company, as the trustee, as amended and supplemented from time to time.

"Airports Authority Facilities" has the meaning given to the term "Authority Facilities" in the Acts, as amended from time to time.

"Airports Authority's Interest" has the meaning set forth in the Permit and Operating Agreement.

"Airports Authority Non-Compliance" has the meaning set forth in Section 15.01 of the Permit and Operating Agreement.

"Airports Authority Representative" means the Chairman, Vice Chairman, President and Chief Executive Officer, Executive Vice President and Chief Operating Officer, Vice President and Chief Financial Officer, Deputy Chief Financial Officer, Vice President and General Counsel, Secretary or such other person as may be designated to act on behalf of the Airports Authority by written certificate furnished to the Trustee containing the specimen signature of such person and signed on behalf of the Airports Authority by the Chairman or Vice Chairman. "Annual Debt Service" means, with respect to the Dulles Corridor Enterprise Fund, the amount of payments required to be made for principal of and interest on all Bonds, including mandatory sinking fund redemptions and Regularly Scheduled Hedge Payments to be made by the Airports Authority, and Airports Authority payments pursuant to Reimbursement Agreements with Credit Providers to reimburse such Credit Providers for debt service payments made, and to pay credit enhancement or liquidity support fees, in each case to the extent secured by the Indenture, scheduled to come due within a specified Fiscal Year, computed as follows:

(a) In determining the amount of principal to be funded in each year, payment shall (unless a different subsection of this definition applies for purposes of determining principal maturities or amortization) be assumed to be made on Outstanding Bonds (other than Short-Term/Demand Obligations) in accordance with any amortization schedule or amortization calculations established by the governing documents setting forth the terms of such Bonds, including, as a principal payment, the Accreted Value of any Capital Appreciation Bonds, Convertible Capital Appreciation Bonds or Original Issue Discount Bonds maturing or scheduled for redemption in such year; and in determining the amount of interest to be funded in each year, interest payable at a fixed rate shall (except to the extent any other subsection of this definition applies) be assumed to be made at such fixed rate and on the required funding dates.

(b) Except for any historical period for which the actual rate or rates are determinable and except as otherwise provided in the Indenture, Bonds that bear interest at a variable rate shall be deemed to bear interest at a fixed annual rate equal to (i) the average of the daily rates of such indebtedness during the 365 consecutive days (or any lesser period such indebtedness has been Outstanding) next preceding the date of computation; or (ii) with respect to any Bonds bearing interest at a variable rate which are being issued on the date of computation, the initial rate of such indebtedness upon such issuance.

(c) Any Bonds that bear interest at a variable rate and with respect to which there exists a Hedge Facility that obligates the Airports Authority to pay a fixed interest rate or a different variable interest rate shall (for the period during which such Hedge Facility is reasonably expected to remain in effect) be deemed to bear interest at the effective fixed annual rate or different variable rate thereon as a result of such Hedge Facility. In the case of any Bonds that bear interest at a fixed rate and with respect to which there exists a Hedge Facility that obligates the Airports Authority to pay a floating rate, Annual Debt Service shall (for the period during which such Hedge Facility is reasonably expected to remain in effect) be deemed to include the interest payable on such Bonds, less the fixed amounts received by the Airports Authority under the Hedge Facility, plus the amount of the floating payments (using the convention described in (b) above) to be made by the Airports Authority under the Hedge Facility.

If all or any portion of an Outstanding Series of Bonds constitute Balloon Maturities, (d) unissued Program Bonds or Short-Term/Demand Obligations, then, for purposes of determining Annual Debt Service, each maturity that constitutes a Balloon Maturity, unissued Program Bonds or Short-Term/Demand Obligations shall, unless otherwise provided in the Supplemental Indenture pursuant to which such Bonds are authorized or unless provision (e) of this definition then applies to such maturity, be treated as if it were to be amortized over a term of not more than 30 years and with substantially level annual debt service funding payments commencing not later than the year following the year in which such Balloon Maturity, unissued Program Bonds or Short-Term/Demand Obligations were issued, and extending not later than 30 years from the date such Balloon Maturity, unissued Program Bonds or Short-Term/Demand Obligations were originally issued; the interest rate used for such computation shall be that rate quoted in The Bond Buyer 25 Revenue Bond Index for the last week of the month preceding the date of calculation as published by The Bond Buyer, or if that index is no longer published, another similar index designated by an Airports Authority Representative, taking into consideration whether such Bonds bear interest which is or is not excluded from gross income for federal income tax purposes; with respect to any Series of Bonds only a portion of which constitutes Balloon Maturities, unissued Program Bonds or ShortTerm/Demand Obligations, the remaining portion shall be treated as described in (a) above or such other provision of this definition as shall be applicable, and with respect to that portion of a Series that constitutes Balloon Maturities, all funding requirements of principal and interest becoming due in any year other than the stated maturity of the Balloon Indebtedness shall be treated as described in (a) above or such other provision of this definition as shall be applicable.

(e) Any maturity of Bonds that constitutes a Balloon Maturity as described in provision (d) of this definition and for which the stated maturity date occurs within 12 months from the date such calculation of Annual Debt Service is made, shall be assumed to become due and payable on the stated maturity date, and provision (d) above shall not apply thereto, unless there is delivered to the entity making the calculation of Annual Debt Service a certificate of an Airports Authority Representative stating (i) that the Airports Authority intends to refinance such maturity, (ii) the probable terms of such refinancing and (iii) that the debt capacity of the Airports Authority is sufficient to successfully complete such refinancing; upon the receipt of such certificate, such Balloon Maturity shall be assumed to be refinanced in accordance with the probable terms set out in such certificate and such terms shall be used for purposes of calculating Annual Debt Service; provided that such assumption shall not result in an interest rate lower than that which would be assumed under provision (d) above and shall be amortized over a term of not more than 30 years from the expected date of refinancing.

(f) In any computation relating to the issuance of additional Bonds required by Section 213 of the Master Indenture and any computation required by Section 511 of the Master Indenture, there shall be excluded from the computation of Annual Debt Service principal of and interest on indebtedness for which funds are, or are reasonably expected to be, available for and which are irrevocably committed to make such payments, including without limitation (i) any such funds in an escrow account, (ii) any such funds received or to be received pursuant to the provisions of the American Recovery and Reinvestment Act of 2009.

"Arbitrage Rebate Fund" means the Arbitrage Rebate Fund created pursuant to Section 401 of the Master Indenture.

"Balloon Maturities" means, with respect to any Series of Bonds, 50% or more of the principal of which matures on the same date or within a Fiscal Year, that portion of such Series which matures on such date or within such Fiscal Year. For purposes of this definition, the principal amount maturing on any date shall be reduced by the amount of such Bonds scheduled to be amortized by prepayment or redemption prior to their stated maturity date. Commercial paper, bond anticipation notes or other Short-Term/Demand Obligations shall not be Balloon Maturities.

"Bankruptcy Related Event" means, (a) an involuntary proceeding commenced or an involuntary petition filed seeking (i) liquidation, reorganization or other relief in respect of the Airports Authority or its debts, or of a substantial part of the assets of the Airports Authority under any Insolvency Laws, or (ii) the appointment of a receiver, trustee, liquidator, custodian, sequestrator, conservator or similar official for the Airports Authority for a substantial part of the assets of the Airports Authority, and, in any case referred to in the foregoing clauses (i) and (ii), such proceeding or petition shall continue undismissed for 60 days or an order or decree approving or ordering any of the foregoing shall be entered; or (b) the Airports Authority shall (i) apply for or consent to the appointment of a receiver, trustee, liquidator, custodian, sequestrator, conservator or similar official of the Airports Authority or for a substantial part of the Airports Authority, or (ii) generally not be paying its debts as they become due unless such debts are the subject of a bona fide dispute, or become unable to pay its debts generally as they become due, or (iii) make a general assignment for the benefit of creditors, or (iv) consent to the institution of, or fail to contest in a timely and appropriate manner, any proceeding or petition with respect to it described in clause (a) of this definition,

or (v) commence a voluntary proceeding under any Insolvency Laws, or file a voluntary petition seeking liquidation, reorganization, an arrangement with creditors or an order for relief under any Insolvency Laws, or (vi) file an answer admitting the material allegations of a petition filed against it in any proceeding referred to in the foregoing subclauses (i) through (v), inclusive, of this subclause (b), or (vii) take any action for the purpose of effecting any of the foregoing, or (c)(1) all or a substantial part of the Trust Estate shall be sold or otherwise disposed of in a public or private sale or disposition pursuant to a foreclosure by the Trustee against the Trust Estate, or (2) all or a substantial part of the Trust Estate shall be transferred pursuant to a sale or disposition of such Trust Estate in lieu of foreclosure; if in either such case such action or exercise of rights or remedies results in any release or impairment of the lien on the Trust Estate granted for the benefit of the Bondholders.

"**Beneficial Owners**" means, so long as the Bonds are registered in the name of the Securities Depository, the persons for whom the Participants acquire and hold interests in the Bonds as nominees and register such interests with the Securities Depository. At any time when there is no Securities Depository holding the Bonds, the Beneficial Owners shall be the registered owners.

"Board" means the Board of Directors of the Airports Authority.

"Bond" or "Bonds" means any bonds or any other evidences of indebtedness for borrowed money issued by the Airports Authority from time to time pursuant to Article II of the Master Indenture and the terms of the Supplemental Indentures. The term "Bond" or "Bonds" shall include notes, bond anticipation notes, commercial paper and other Short-Term/Demand Obligations, Regularly Scheduled Hedge Payments, and other securities, contracts or obligations incurred through lease, installment purchase or other agreements, including any Reimbursement Agreements, or certificates of participation therein, in each case to the extent secured by the Indenture; provided that Hedge Termination Payments to be made by the Airports Authority shall not be secured by the Indenture on a parity with any Series of Bonds unless provided otherwise in a Supplemental Indenture. The terms "Bond" and "Bonds" shall include First Senior Lien Bonds, Second Senior Lien Bonds, Subordinate Lien Bonds, Junior Lien Bonds and may include Credit Provider Bonds.

"**Bond Counsel**" means an attorney or firm or firms of attorneys of national recognition, selected or employed by the Airports Authority and acceptable to the Trustee, experienced in the field of municipal bonds whose opinions are generally accepted by purchasers of municipal bonds.

"**Bond Fund**" means any of the First Senior Lien Bond Fund, the Second Senior Lien Bond Fund, the Subordinate Lien Bond Fund or the Junior Lien Bond Fund, created pursuant to Section 401 of the Master Indenture.

"**Bond Payment Date**" means, with respect to each Series of Bonds, each date set forth in the applicable Supplemental Indenture with respect to such Series of Bonds on which interest is payable, and with respect to the Series 2022 Bonds, means each April 1 and October 1, commencing October 1, 2022, and each redemption date.

**"Bond Purchase Contract"** means the contract of purchase, with respect to a Series of Bonds, between the Airports Authority and the Original Purchaser pertaining to the sale of such Series of Bonds.

"**Bond Year**" means with respect to a Series of Bonds the annual period with respect to such Series of Bonds set forth in the applicable Supplemental Indenture.

**"Book-Entry System"** means the system maintained by the Securities Depository and described in Section 207 of the Master Indenture and the applicable Supplemental Indenture.

"Business Day" means, unless specified otherwise in the applicable Supplemental Indenture, any day of the week other than Saturday, Sunday or a day which shall be, in the Commonwealth, the State of New York or in the jurisdiction in which the Corporate Trust Office of the Trustee or the principal office of the Registrar is located, a legal holiday or a day on which banking corporations are authorized or obligated by law or executive order to close.

"**Capital Appreciation Bonds**" means Bonds all or a portion of the interest on which is compounded and accumulated at the rates and on the dates set forth in a Supplemental Indenture and is payable only upon redemption or on the maturity date of such Bonds.

"Capital Improvements" means any extensions of, additions to, or major modifications, replacements or reconstruction of the Dulles Toll Road or any other roads or highways within the Dulles Corridor, excluding the Dulles Airport Access Highway, undertaken by the Airports Authority during the term of the Permit and Operating Agreement, including, but not limited to, (a) additional ramps or interchanges providing direct access to and from the Dulles Toll Road, or (b) addition of traffic lanes for bus only, high occupancy vehicle or high occupancy/toll use, or similar restricted use.

"**Capital Improvements Account**" means the Capital Improvements Account in the Construction Fund created pursuant to Section 401 of the Master Indenture.

"**Capital Improvements Fund**" means the Capital Improvements Fund created pursuant to Section 401 of the Master Indenture and Section 4.01(d)(iv) of the Permit and Operating Agreement.

"**Capital Reserve Account**" means the Capital Reserve Account in the Construction Fund created pursuant to Section 401 of the Master Indenture.

"Chairman" means the Chairman of the Board of the Airports Authority.

"**Co-Trustee**" means an additional individual or institution appointed by the Trustee to serve as a trustee in accordance with Section 716 of the Master Indenture.

"**Code**" means the Internal Revenue Code of 1986, as amended from time to time, including applicable Treasury Regulations, rulings, judicial determinations, announcements, notices, and procedures promulgated thereunder or under the Internal Revenue Code of 1954, as amended.

"**Commercial Paper Notes**" means the Dulles Toll Road Second Senior Lien Commercial Paper Notes, Series One, issued pursuant to the Seventh Supplemental Indenture.

"**Commonwealth Transportation Board**" means the Commonwealth Transportation Board of the Commonwealth of Virginia, as established by Section 33.1-1 et seq. of the Virginia Code.

"**Construction Fund**" means the Construction Fund created pursuant to Section 401 of the Master Indenture, which fund shall include a Capital Improvements Account, a Capital Reserve Account, a Metrorail Project Account and a TIFIA Account.

"Consulting Engineer" means the consulting civil engineer or engineering firm or corporation at the time employed by the Airports Authority to carry out the duties imposed by the Indenture on the Consulting Engineer.

"Convertible Capital Appreciation Bonds" means Bonds which initially are issued as Capital Appreciation Bonds, but later convert to Bonds on which interest is paid periodically. Convertible Capital

Appreciation Bonds shall be Capital Appreciation Bonds until the conversion date and from and after such conversion date shall no longer be Capital Appreciation Bonds, but shall be treated as having a principal amount equal to their Accreted Value on the conversion date.

"**Cooperative Agreement**" means the Cooperative Agreement for the Dulles Corridor Metrorail Project, dated September 14, 2007, entered into by and between the Airports Authority and WMATA.

"Corporate Trust Office" means the office of the Trustee at which its principal corporate trust business is conducted, which at the date of the Indenture is located in Baltimore, Maryland.

"**Cost**" means all costs and expenses paid or incurred or to be paid or incurred (including the reimbursement of the Airports Authority for any of such costs and expenses originally paid or incurred by the Airports Authority) in connection with:

(a) planning, designing, permitting, engineering, acquiring, installing, constructing, modifying and reconstructing the Dulles Metrorail Project, property related to the Dulles Metrorail Project and improvements to the Dulles Metrorail Project, including, but not limited to, amounts paid to other persons in consideration for the transfer to the Airports Authority of right-of-way and other property included in the Dulles Metrorail Project;

(b) planning, designing, permitting, engineering, acquiring, installing, constructing, modifying and reconstructing of any Capital Improvements, including, but not limited to, amounts paid to other persons in consideration for the transfer to the Airports Authority or others of right-of-way and other property included in the Capital Improvements;

(c) financing the Dulles Metrorail Project, the Capital Improvements and other capital projects, including, but not limited to, costs and expenses that the Airports Authority deems necessary or advantageous in connection with the sale of the Bonds and the administration of the Bonds, the Master Indenture and any Supplemental Indenture, including, but not limited to, costs and expenses relating to the engagement of toll road consultants, financial advisors, underwriters, credit and/or liquidity support providers, rating agencies, attorneys, trustees, paying agents, registrars, and other agents in connection with the issuance of the Bonds, the Master Indenture and any Supplemental Indenture and any Supplemental Indenture;

(d) payment of interest on the Bonds;

(e) costs and expenses relating to any Credit Facility entered into in accordance with the Indenture, including the reimbursement of any Credit Provider as described in the Indenture;

(f) costs and expenses relating to any Hedge Facility entered into in accordance with the Indenture; and

(g) other amounts that the Airports Authority determines are required to effect the Dulles Metrorail Project and the Capital Improvements and that are authorized by the Acts, the Transfer Agreement and/or the Permit and Operating Agreement.

"Cost of Issuance Subaccount" means, with respect to a Series of Bonds, the subaccount of that name in the Construction Fund created for such Series of Bonds pursuant to Section 401 of the Master Indenture.

"Credit Facility" or "Credit Facilities" means, with respect to a Series of Bonds, the letter of credit, line of credit, municipal bond insurance, surety policy, standby bond purchase agreement or other

form of credit enhancement and/or liquidity support, if any, for such Series of Bonds, provided for in the applicable Supplemental Indenture, including any alternate Credit Facility with respect to such Series of Bonds delivered in accordance with provisions of the Supplemental Indenture providing for the issuance of such Series of Bonds.

"Credit Provider" means, with respect to a Series of Bonds, the provider of a Credit Facility, including letter of credit, line of credit, municipal bond insurance, surety policy, standby bond purchase agreement or other form of credit enhancement and/or liquidity support, if any, for such Series of Bonds specified in the applicable Supplemental Indenture or Reimbursement Agreement.

"**Credit Provider Bonds**" means any Bonds purchased with funds provided under a Credit Facility for so long as such Bonds are held by or for the account of, or are pledged to, the applicable Credit Provider in accordance with the applicable Supplemental Indenture.

"Custodian" means a bank or trust company selected by the Airports Authority and meeting the requirements of Section 707 of the Master Indenture for qualification as a successor trustee. Unless provided otherwise in a Supplemental Indenture, the Custodian will be Manufacturers and Traders Trust Company, a New York banking corporation with trust powers and having a corporate trust office in Baltimore, Maryland.

"**Debt Service Reserve Fund**" means the First Senior Lien Debt Service Reserve Fund, the Second Senior Lien Debt Service Reserve Fund or the Subordinate Lien Debt Service Reserve Fund created pursuant to Section 401 of the Master Indenture, or any debt service reserve fund created with respect to the Junior Lien Bonds pursuant to a Supplemental Indenture.

"Debt Service Reserve Requirement" means the amount, if any, required to be on deposit in a Series Account in the First Senior Lien Debt Service Reserve Fund, the Second Senior Lien Debt Service Reserve Fund or the Subordinate Lien Debt Service Reserve Fund, as applicable, specified in the Supplemental Indenture governing the issuance of and securing the related Series of Bonds, or in any debt service reserve fund created with respect to the Junior Lien Bonds pursuant to a Supplemental Indenture governing such Junior Lien Bonds.

"Default under the Permit and Operating Agreement" means one or more events that permit VDOT or the Airports Authority to exercise the right to terminate the Permit and Operating Agreement, as described in Section 604 of the Master Indenture.

"Department Non-Compliance" has the meaning set forth in Section 15.03 of the Permit and Operating Agreement.

"DTC" means The Depository Trust Company, New York, New York.

"**Dulles Corridor**" means the transportation corridor with an eastern terminus of the East Falls Church Metrorail station at Interstate Route 66 and a western terminus of Virginia Route 772 in Loudoun County, including without limitation the Dulles Toll Road, the Dulles Airport Access Highway, outer roadways adjacent or parallel thereto, mass transit, including rail, bus rapid transit, and capacity enhancing treatments such as High-Occupancy Vehicle lanes, High-Occupancy Toll lanes, interchange improvements, commuter parking lots and other transportation management strategies.

"**Dulles Corridor Advisory Committee**" means the eight member advisory committee required to be established pursuant to the Permit and Operating Agreement which provides advice with respect to the

management, improvement and expansion of the Dulles Corridor as well as changes to the Tolls imposed on the Dulles Toll Road.

"**Dulles Metrorail Project**" means the construction by the Airports Authority of an approximately 23.1 mile extension of the rail transit system operated by WMATA, consisting of two segments, with the first segment being an approximately 11.6 mile extension of the metrorail system from the West Falls Church Metrorail Station through Tyson's Corner to a new station at Wiehle Avenue, and the second segment being an approximately 11.5 mile extension of the metrorail system from the new station at Wiehle Avenue, along the Dulles Airport Access Highway to and through Dulles International, eventually ending at a new station on Virginia Route 772, as may be further amended from time to time.

"**Dulles Toll Road**" means Omer L. Hirst-Adelard L. Brault Expressway existing on the right-ofway of the Dulles Airport Access Highway (including all bridges, tunnels, overpasses, underpasses, interchanges, toll plazas, and administration, storage, and other buildings, facilities, and improvements which the Airports Authority has deemed necessary for the operation of the presently existing Dulles Toll Road), together with all property rights, easements and interests acquired by the Airports Authority for the construction or the operation of the presently existing Dulles Toll Road, and together with all future improvements, extensions, and enlargements or additions of the presently existing Dulles Toll Road, and together with any Additional Project.

"Emergency Operation and Maintenance Reserve Account" means the Emergency Operation and Maintenance Reserve Account in the Operation and Maintenance Fund created pursuant to Section 4.01(d)(i) of the Permit and Operating Agreement and Section 401 of the Master Indenture.

"Event of Default" means any one or more of those events set forth in Section 601 of the Master Indenture.

"Extraordinary Maintenance and Repair Reserve Fund" means the Extraordinary Maintenance and Repair Reserve Fund created pursuant to Section 4.01(d)(i) of the Permit and Operating Agreement and Section 401 of the Master Indenture.

"Extraordinary Maintenance and Repair Reserve Requirement" means, with respect to the Extraordinary Maintenance and Repair Reserve Fund, an amount equal to (i) the amount in the Extraordinary Maintenance and Repair Reserve Fund initially funded with the maintenance reserves previously created and maintained by VDOT and identified in the Transfer Agreement and transferred to the Airports Authority on November 1, 2008, (ii) accumulated earnings thereon, and (iii) an amount by which the Airports Authority is required to annually supplement the balance in the Extraordinary Maintenance and Repair Reserve Fund, as necessary, in accordance with the U.S. Implicit Price Deflator Index; provided, however, that, if the Airports Authority expends any funds from the Extraordinary Maintenance and Repair Reserve Fund in accordance with Section 7.07 of the Permit and Operating Agreement, it shall replenish those funds in equal monthly installments over the ensuing five-year period.

"Federal Act" means the Metropolitan Washington Airports Act of 1986, codified at 49 U.S.C. §§ 49101-49112.

"Federal Lease" means the Lease, dated March 2, 1987, as amended, between the United States of America, acting by and through the Secretary of Transportation, and the Airports Authority, relating to the Airports Authority's assumption of operating responsibility for, among other things, Dulles International, including the Dulles Airport Access Highway, as hereinafter amended from time to time.

"**FFGA**" means the Full Funding Grant Agreement executed on March 10, 2009, by and between the Airports Authority and the FTA, with respect to the first segment of the Dulles Metrorail Project generally consisting of an approximately 11.6 mile extension of WMATA's metrorail system from the West Falls Church Metrorail Station through Tyson's Corner to a new station at Wiehle Avenue.

"Fiscal Year" means the fiscal year of the Airports Authority ending as of December 31 of each year or such other date as may be designated from time to time in writing by an Airports Authority Representative to the Trustee.

"First Senior Lien Bonds" means the Airports Authority's revenue bonds or other indebtedness or obligations secured by the First Senior Lien Bond Fund. The term "First Senior Lien Bonds" shall include notes, bond anticipation notes, commercial paper and other Short-Term/Demand Obligations, Regularly Scheduled Hedge Payments and other securities, contracts or obligations incurred through lease, installment purchase or other agreements or certificates of participation therein, in each case to the extent secured by the First Senior Lien Bond Fund pursuant to a Supplemental Indenture.

"First Senior Lien Bond Fund" means the First Senior Lien Bond Fund created pursuant to Section 401 of the Master Indenture.

"First Senior Lien Debt Service Reserve Fund" means the First Senior Lien Debt Service Reserve Fund created pursuant to Section 401 of the Master Indenture.

"**Fitch**" means Fitch, Inc. and its successors, if any, and if such corporation shall no longer perform the functions of a securities rating agency, "**Fitch**" means any other nationally recognized rating agency designated by an Airports Authority Representative.

"FTA" means the Federal Transit Administration.

"Fund" means any fund created under the Master Indenture or a Supplemental Indenture.

"Government Certificates" means (in the case of governmental obligations) evidences of ownership of proportionate interest in future interest or principal payments of Government Obligations, including depository receipts thereof. Investments in such proportionate interest must be limited to circumstances wherein (i) a bank or trust company acts as custodian and holds the underlying Government Obligations; (ii) the owner of the investment is the real party in interest and has the right to proceed directly and individually against the obligor of the underlying Government Obligations; and (iii) the underlying Government Obligations are held in a special account, segregated from the custodian's general assets, and are not available to satisfy any claim of the custodian, any person claiming through the custodian, or any person to whom the custodian may be obligated. "Government Certificates" shall also mean any other type of security or obligation that the Rating Agencies then maintaining ratings on any Bonds to be defeased have determined are permitted defeasance securities and qualify the Bonds to be defeased thereby for a rating in the highest category, or are otherwise acceptable to, each of the Rating Agencies.

"Government Obligations" means direct and general obligations of, or obligations the timely payment of principal and interest on which are unconditionally guaranteed by, the United States of America.

"Hedge Facility" means any rate swap transaction, basis swap transaction, cap transaction, floor transaction, collar transaction, or similar transaction, which is intended to convert or limit the interest rate payable with respect to any Bonds, and which (a) is designated in writing to the Trustee by an Airports Authority Representative as a Hedge Facility to relate to all or part of one or more Series of Bonds; (b) is with a Qualified Hedge Provider or an entity that has been a Qualified Hedge Provider, in either instance

identified in writing to the Trustee, within the 60 day period preceding the date on which the calculation of Annual Debt Service or Maximum Annual Debt Service is being made; and (c) has a term not greater than the term of the designated Bonds or a specified date for mandatory tender or redemption of such designated Bonds.

"Hedge Termination Payment" means an amount payable by the Airports Authority or a Qualified Hedge Provider, in accordance with a Hedge Facility, to compensate the other party to the Hedge Facility for any losses and costs that such other party may incur as a result of an event of default or the early termination of the obligations, in whole or in part, of the parties under such Hedge Facility.

"Holder" or "Bondholder" means the registered owner of any Bond; provided that with respect to any Series of Bonds which is insured by a bond insurance policy or other Credit Facility, the term "Holder" or "Bondholder" for purposes of all consents, directions, and notices provided for in the Master Indenture and any applicable Supplemental Indenture, means the issuer of such bond insurance policy or Credit Facility as long as such policy issuer or credit provider has not defaulted under its policy or Credit Facility; provided further that unless it is actually the beneficial owner of the Bonds in respect of which consent is requested, the policy issuer or credit provider shall not have the power to act on behalf of the registered owners of any Bonds to consent to changes that (a) extend the stated maturity of or time for paying the interest on such Bonds, (b) reduce the principal amount of, purchase price for, or redemption premium or rate of interest payable on such Bonds, or (c) result in a privilege or priority of any Bond over any other Bond. A Qualified Hedge Provider shall only be considered a Bondholder to the extent specified in a Supplemental Indenture.

"Indenture" means the Master Indenture, as supplemented and amended from time to time in accordance with its terms.

"Insolvency Laws" means the United States Bankruptcy Code, 11 U.S.C. § 101 et seq., as from time to time amended and in effect, and any Commonwealth bankruptcy, insolvency, receivership or similar law now or hereafter in effect.

"Interest Account" means any interest account for a Series of Bonds created in the First Senior Lien Bond Fund, the Second Senior Lien Bond Fund or the Subordinate Lien Bond Fund pursuant to Section 401 of the Master Indenture, or in the Junior Lien Bond Fund pursuant to a Supplemental Indenture.

"Junior Lien Bonds" means the Airports Authority's revenue bonds or other indebtedness or obligations secured by the Junior Lien Bond Fund and subordinate to the Senior Lien Bonds and the Subordinate Lien Bonds. The term "Junior Lien Bonds" shall include notes, bond anticipation notes, commercial paper and other Short-Term/Demand Obligations, Regularly Scheduled Hedge Payments and other securities, contracts or obligations incurred through lease, installment purchase or other agreements or certificates of participation therein, in each case to the extent secured by a Junior Lien Bond Fund pursuant to a Supplemental Indenture.

"Junior Lien Bond Fund" means the Junior Lien Bond Fund created pursuant to Section 401 of the Master Indenture.

"Latent Defects Reserve Fund" means the Latent Defects Reserve Fund created pursuant to Section 4.01(d)(v) of the Permit and Operating Agreement and Section 401 of the Master Indenture.

"Latent Defects Reserve Requirement" means, with respect to the Latent Defects Reserve Fund, an amount equal to: (i) not more than \$15 million in principal to be deposited by the Airports Authority in the Latent Defects Reserve Fund, which amount can be deposited from time to time at the discretion of the

Airports Authority but not later than October 31, 2011; and (ii) interest earnings on the moneys in the Latent Defects Reserve Fund; provided, however, that the combined principal and interest amount on deposit in the Latent Defects Reserve Fund shall not exceed \$20 million.

"**Master Indenture**" means the Master Indenture of Trust, dated as of August 1, 2009, by and between the Airports Authority and the Trustee.

"Maximum Annual Debt Service" means the maximum Annual Debt Service with respect to any specified indebtedness for any Fiscal Year during the term of such indebtedness.

"Metrorail Project Account" means the Metrorail Project Account in the Construction Fund created pursuant to Section 401 of the Master Indenture.

"Metrorail Project Fund" means the Metrorail Project Fund created pursuant to Section 4.01(d)(v) of the Permit and Operating Agreement and Section 401 of the Master Indenture.

"**Moody's**" means Moody's Investors Service, Inc., a corporation existing under the laws of the State of Delaware, its successors and assigns, and, if such corporation shall no longer perform the functions of a securities rating agency, "**Moody's**" means any other nationally recognized rating agency designated by an Airports Authority Representative.

"Net Revenues" means Toll Road Revenues less Operation and Maintenance Expenses.

"Operation and Maintenance Expenses" means expenses for operation, maintenance, repairs, ordinary renewal and replacement of the Dulles Toll Road, ordinary acquisition of equipment, and any other current expenses or obligations required to be paid by the Airports Authority under or pursuant to the provisions of the Master Indenture, any Supplemental Indenture, the Transfer Agreement and the Permit and Operating Agreement, or by law, all to the extent properly and directly attributable to the operation of the Dulles Toll Road, but not any costs or expenses for new construction or any allowance for depreciation. Operation and Maintenance Expenses may include, without limitation (but subject to the preceding sentence, including but not limited to the condition that such expenses are properly and directly attributable to the operation of the Dulles Toll Road): (a) salaries, supplies, equipment, utilities, labor, travel and rent; (b) fees and expenses for data processing, policing, insurance, legal, accounting, engineering, consulting and banking services; and (c) payments to pension, retirement, health and hospitalization funds for Airports Authority employees.

"Operation and Maintenance Account" means the Operation and Maintenance Account in the Operation and Maintenance Fund created pursuant to Section 4.01(d)(i) of the Permit and Operating Agreement and Section 401 of the Master Indenture.

"Operation and Maintenance Fund" means the Operation and Maintenance Fund created pursuant to Section 4.01(d)(i) of the Permit and Operating Agreement and Section 401 of the Master Indenture.

"Operation and Maintenance Reserve Account" means the Operation and Maintenance Reserve Account in the Operation and Maintenance Fund created pursuant to Section 4.01(d)(i) of the Permit and Operating Agreement and Section 401 of the Master Indenture.

"Opinion of Bond Counsel" means a written opinion of Bond Counsel.

"**Opinion of Counsel**" means a written opinion of an attorney or firm or firms of attorneys acceptable to the Trustee and the Airports Authority, and who (except as otherwise expressly provided in the Indenture) may be counsel for the Airports Authority or for the Trustee.

"Original Issue Discount Bonds" means Bonds which are sold at an initial public offering price of less than face value and which are specifically designated as Original Issue Discount Bonds by the Supplemental Indenture under which such Bonds are issued.

"Original Purchaser" means the person or entity designated in each Bond Purchase Contract as the initial purchaser or purchasers of a Series of Bonds or, if so designated in such Bond Purchase Contract, the representatives or lead or managing underwriters of such initial purchasers.

"Outstanding" when used with reference to a Series of Bonds means, as of any date of determination, all Bonds of such Series theretofore authenticated and delivered except: (a) Bonds of such Series theretofore cancelled by the Trustee or delivered to the Trustee for cancellation; (b) Bonds of such Series which are deemed paid and no longer Outstanding as provided in the Indenture; (c) Bonds of such Series in lieu of which other Bonds of such Series have been issued pursuant to the provisions of the Indenture relating to Bonds destroyed, stolen or lost, unless evidence satisfactory to the Trustee has been received that any such Bond is held by a bona fide purchaser; (d) after any tender date as may be provided for in the applicable Supplemental Indenture, any Bond of such Series held by a Bondholder who has given a tender notice or was required to tender such Bond in accordance with the provisions of the applicable Supplemental Indenture; and (e) for purposes of any consent or other action to be taken under the Indenture by the Holders of a specified percentage of principal amount of Bonds of a Series or all Series, Bonds held by or for the account of the Airports Authority.

"**Participants**" means the participating underwriters, securities brokers or dealers, banks, trust companies, closing corporations or other persons for which the Securities Depository holds the Bonds.

"**Paying Agent**" means, with respect to each Series of Bonds, the banks or trust companies, if any, and their successors designated in the applicable Supplemental Indenture as the paying agent for such Series of Bonds.

"**Paying Agent Agreement**" means the agreement entered into by and between the Trustee and the Paying Agent pursuant to Section 714 of the Master Indenture.

"**Payment of a Series of Bonds**" means payment in full of all principal of, purchase price of, if applicable, premium, if any, and interest on a Series of Bonds.

"**Permitted Investments**" means and include any of the following, if and to the extent the same are at the time legal for the investment of the Airports Authority's money:

- (a) Government Obligations and Government Certificates.
- (b) obligations issued or guaranteed by any of the following:
  - (i) Federal Home Loan Bank System;
  - (ii) Export-Import Bank of the United States;
  - (iii) Federal Financing Bank;
  - (iv) Government National Mortgage Association;

- (v) Farmers Home Administration;
- (vi) Federal Home Loan Mortgage Corporation;
- (vii) Federal Housing Administration;
- (viii) Private Export Funding Corp;
- (ix) Federal National Mortgage Association; and
- (x) Federal Farm Credit Bank;

or any indebtedness issued or guaranteed by any instrumentality or agency of the United States of America.

(c) Pre-refunded municipal obligations rated at the time of purchase in the highest rating category by, or otherwise acceptable to, the Rating Agencies and meeting the following conditions:

(i) such obligations are (a) not to be redeemed prior to maturity or the Trustee has been given irrevocable instructions concerning their calling and redemption and (b) the issuer of such obligations has covenanted not to redeem such obligations other than as set forth in such instructions;

(ii) such obligations are secured by Government Obligations or Government Certificates that may be applied only to interest, principal, and premium payments of such obligations;

(iii) the principal of and interest on such Government Obligations or Government Certificates (plus any cash in the escrow fund with respect to such pre-refunded obligations) are sufficient to meet the liabilities of the obligations;

(iv) the Government Obligations or Government Certificates serving as security for the obligations are held by an escrow agent or trustee; and

(v) such Government Obligations or Government Certificates are not available to satisfy any other claims, including those against the trustee or escrow agent.

(d) Direct and general long-term obligations of any state of the United States of America or the District of Columbia (for this subsection, a "**State**"), to the payment of which the full faith and credit of such State is pledged and that at the time of purchase are rated in either of the two highest rating categories by, or are otherwise acceptable to, the Rating Agencies.

(e) Direct and general short-term obligations of any State, to the payment of which the full faith and credit of such State is pledged and that at the time of purchase are rated in the highest rating category by, or are otherwise acceptable to, the Rating Agencies.

(f) Interest-bearing demand or time deposits with, or interests in money market portfolios rated AAA-m by Standard & Poor's issued by, state banks or trust companies or national banking associations that are members of the Federal Deposit Insurance Corporation ("FDIC"), including the Trustee. Such deposits or interests must be (i) continuously and fully insured by FDIC, (ii) if they have a maturity of one year or less, with or issued by banks that at the time of purchase are rated in one of the two highest short term rating categories by, or are otherwise acceptable to, the Rating Agencies, (iii) if they have a maturity longer than one year, with or issued by banks that at the time of purchase are rated in one of the two highest rating categories by, or are otherwise acceptable to, the Rating Agencies, or (iv) fully secured by Government Obligations and Government Certificates. Such Government Obligations and Government Certificates must be held by a third party (who shall not be the provider of the collateral), or by any Federal Reserve Bank or depository, as custodian for

the institution issuing the deposits or interests. Such third party should have a perfected first lien in the Government Obligations and Government Certificates serving as collateral, and such collateral is to be free from all other third party liens.

(g) Eurodollar time deposits issued by a bank with a deposit rating at the time of purchase in one of the top two short-term deposit rating categories by, or otherwise acceptable to, the Rating Agencies.

(h) Long-term or medium-term corporate debt guaranteed by any corporation that is rated in one of the two highest rating categories by, or is otherwise acceptable to, the Rating Agencies.

(i) Repurchase agreements, (i) the maturities of which are 30 days or less or (ii) the maturities of which are longer than 30 days and not longer than one year provided the collateral subject to such agreements are marked to market daily, entered into with financial institutions such as banks or trust companies, including the Trustee, organized under State law or national banking associations, insurance companies, or government bond dealers reporting to, trading with, and recognized as a primary dealer by, the Federal Reserve Bank of New York and a member of the Security Investors Protection Corporation, or with a dealer or parent holding company that is rated at the time of purchase investment grade by, or is otherwise acceptable to, the Rating Agencies. The repurchase agreement should be in respect of Government Obligations and Government Certificates or obligations described in paragraph (b) of this definition. The repurchase agreement securities and, to the extent necessary, Government Obligations and Government certificates or obligations described in the repurchase agreements. In addition, the provisions of the repurchase agreement shall meet the following additional criteria:

(A) the third party (who shall not be the provider of the collateral) has possession of the repurchase agreement securities and the Government Obligations and Government Certificates;

(B) failure to maintain the requisite collateral levels will require the third party having possession of the securities to liquidate the securities immediately; and

(C) the third party having possession of the securities has a perfected, first priority security interest in the securities.

(j) Prime commercial paper of a corporation, finance company or banking institution at the time of purchase rated in the highest short-term rating category by, or otherwise acceptable to, the Rating Agencies.

(k) Public housing bonds issued by public agencies. Such bonds must be: fully secured by a pledge of annual contributions under a contract with the United States of America; temporary notes, preliminary loan notes or project notes secured by a requisition or payment agreement with the United States of America; or state or public agency or municipality obligations at the time of purchase rated in the highest credit rating category by, or otherwise acceptable to, the Rating Agencies.

(1) Shares of a diversified open-end management investment company, as defined in the Investment Company Act of 1940, or shares in a regulated investment company, as defined in Section 851(a) of the Code, that is a money market fund that at the time of purchase has been rated in the highest rating category by, or is otherwise acceptable to, the Rating Agencies.

(m) Money market accounts of any state or federal bank, or bank, including the Trustee, whose holding parent company is, at the time of purchase rated in one of the top two short-term or long-term rating categories by, or is otherwise acceptable to, the Rating Agencies.

(n) Investment agreements, the issuer of which is at the time of purchase rated in one of the two highest rating categories, by, or is otherwise acceptable to, the Rating Agencies.

(o) Any debt or fixed income security, the issuer of which is at the time of purchase rated in the highest rating category by, or is otherwise acceptable to, the Rating Agencies.

(p) Investment agreements or guaranteed investment contracts that are fully secured by obligations described in items (a) or (b) of the definition of Permitted Investments which are (i) valued not less frequently than monthly and have a fair market value, exclusive of accrued interest, at all times at least equal to 103% of the principal amount of the investment, together with the interest accrued and unpaid thereon, (ii) held by the Trustee (who shall not be the provider of the collateral) or by any Federal Reserve Bank or a depository acceptable to the Trustee, (iii) subject to a perfected first lien on behalf of the Trustee, and (iv) free and clear from all third-party liens.

(q) Any other type of investment consistent with Airports Authority policy in which an Airports Authority Representative directs the Trustee to invest and there is delivered to the Trustee a certificate of an Airports Authority Representative stating that each of the Rating Agencies has been informed of the proposal to invest in such investment and each Rating Agency has confirmed that such investment will not adversely affect the rating then assigned by such Rating Agency to any of the Bonds.

"Person" has the meaning set forth in the Permit and Operating Agreement.

"**Principal Account**" means any principal account for a Series of Bonds created in the First Senior Lien Bond Fund, the Second Senior Lien Bond Fund or the Subordinate Lien Bond Fund pursuant to Section 401 of the Master Indenture, or in the Junior Lien Bond Fund pursuant to a Supplemental Indenture.

"**Program**" means a financing program identified in a Supplemental Indenture, including but not limited to a bond anticipation note or commercial paper program, (a) which is authorized and the terms thereof approved by a resolution adopted by the Airports Authority and the items required under Section 210 and Section 213 of the Master Indenture have been filed with the Trustee, (b) wherein the Airports Authority has authorized the issuance, from time to time, of notes, commercial paper or other indebtednesss in an authorized amount, and (c) the authorized amount of which has met the applicable additional Bonds test set forth in Section 213 of the Master Indenture and the Outstanding amount of which may vary from time to time, but not exceed the authorized amount.

"**Projected Toll Rate Schedule**" means the projection of future Tolls used by the Toll Road Consultant to develop an estimate of Toll Road Revenues, which Tolls have been presented to the Board for review.

"Qualified Hedge Provider" means an entity whose senior long-term debt obligations, or whose obligations under any Hedge Facility are (a) guaranteed by a financial institution, or subsidiary of a financial institution, whose senior long-term debt obligations, are rated at least "A1" in the case of Moody's and "A+" in the case of S&P, or the equivalent thereto in the case of any successor thereto, or (b) fully secured by obligations described in items (a) or (b) of the definition of Permitted Investments which are (i) valued not less frequently than monthly and have a fair market value, exclusive of accrued interest, at all times at least equal to 105% (or such lower percentage as shall be acceptable to the Rating Agencies) of the "notional amount" as defined in the Hedge Facility, together with the interest accrued and unpaid thereon, (ii) held by the Trustee (who shall not be the provider of the collateral) or by any Federal Reserve Bank or a depository acceptable to the Trustee, (iii) subject to a perfected first lien on behalf of the Trustee, and (iv) free and clear from all third-party liens.

"**Rate Covenant**" means the covenant of the Airports Authority to set and adjust Tolls to satisfy the requirements set forth in Section 511(a) of the Master Indenture.

"**Rating Agency**" or "**Rating Agencies**" means, with respect to a Series of Bonds, Fitch, Moody's or Standard & Poor's or any other nationally-recognized credit rating agencies specified in the related Supplemental Indenture; provided that any such rating agency shall, at the time in question, be maintaining a rating on such Series of Bonds at the request of the Airports Authority.

"**Re-Assignment Intent Notice**" means the Airports Authority Re-Assignment Intent Notice or the Department Re-Assignment Intent Notice, as defined in Section 14.01(c) of the Permit and Operating Agreement.

"**Re-Assignment Notice**" means the Airports Authority Re-Assignment Notice or the Department Re-Assignment Notice, as defined in Section 14.01(c) of the Permit and Operating Agreement.

"Rebate Requirement" has the meaning assigned to it in the Tax Certificate.

"**Record Date**" means the fifteenth (15th) day (regardless of whether a Business Day) of the calendar month immediately preceding a Bond Payment Date.

"Recovery Act" means the American Recovery and Reinvestment Act of 2009 (Pub. L. 111-5).

"**Redemption Account**" means any redemption account for a Series of Bonds created in the First Senior Lien Bond Fund, the Second Senior Lien Bond Fund or the Subordinate Lien Bond Fund pursuant to Section 401 of the Master Indenture, or in the Junior Lien Bond Fund pursuant to a Supplemental Indenture.

"**Register**" means, with respect to each Series of Bonds, the registration books of the Airports Authority kept to evidence the registration and registration of transfer of such Series of Bonds.

"**Registrar**" means the entity set forth with respect to a Series of Bonds in the applicable Supplemental Indenture, serving as keeper of the Register for such Series of Bonds.

"**Regularly Scheduled Hedge Payments**" means the regularly scheduled payments under the terms of a Hedge Facility which are due absent any termination, default or dispute in connection with such Hedge Facility.

"**Reimbursement Agreement**" means, with respect to a Series of Bonds, any agreement or agreements in each case between a Credit Provider or Credit Providers and the Airports Authority under or pursuant to which a Credit Facility for such Series of Bonds is issued, and any agreement that replaces such original agreement that sets forth the obligations of the Airports Authority to such Credit Provider or Credit Providers and the obligations of such Credit Provider or Credit Providers to the Airports Authority.

"Remaining Toll Road Revenue Fund" means the Remaining Toll Road Revenue Fund created pursuant to Section 4.01(d)(vii) of the Permit and Operating Agreement and Section 401 of the Master Indenture.

"**Renewal and Replacement Reserve Fund**" means the Renewal and Replacement Reserve Fund created pursuant to Section 4.01(d)(iii) of the Permit and Operating Agreement and Section 401 of the Master Indenture.

"**Responsible Officer**" means an officer of the Trustee assigned to the Trustee's corporate trust department, including, without limitation, any Vice-President, any Assistant Vice-President, any Trust Officer, or any other officer performing functions similar to those performed by the persons who at the time shall be such officers and also means any other officer of the Trustee to whom any corporate trust matter is referred because of his knowledge of and familiarity with the particular subject.

"Revenue Fund" means the Revenue Fund created pursuant to Section 401 of the Master Indenture.

"Safety Order" means any written order or directive of VDOT which directs that certain improvements to the Dulles Toll Road be undertaken (a) to conform to changes in safety standards or methodologies agreed to or adopted by VDOT for similar portions of highways in the Commonwealth; or (b) to correct a specific safety condition affecting the Dulles Toll Road which VDOT has determined to exist by investigation or analysis.

"Second Senior Lien Bonds" means the Airports Authority's revenue bonds or other indebtedness or obligations secured by the Second Senior Lien Bond Fund and subordinate to the First Senior Lien Bonds. The term "Second Senior Lien Bonds" shall include notes, bond anticipation notes, commercial paper and other Short-Term/Demand Obligations, Regularly Scheduled Hedge Payments and other securities, contracts or obligations incurred through lease, installment purchase or other agreements or certificates of participation therein, in each case to the extent secured by the Second Senior Lien Bond Fund pursuant to a Supplemental Indenture.

"Second Senior Lien Bond Fund" means the Second Senior Lien Bond Fund created pursuant to Section 401 of the Master Indenture.

"Second Senior Lien Debt Service Reserve Fund" means the Second Senior Lien Debt Service Reserve Fund created pursuant to Section 401 of the Master Indenture.

"Secretary" means the Secretary of the Board of the Airports Authority.

"Securities Depository" means DTC or its nominee, and any successors or assigns of such nominees, or any successor appointed pursuant to the Indenture.

"Semi-Annual Payment Date" means each April 1 and October 1 or, if such date is not a Business Day, the next Business Day following such April 1 or October 1.

"Senior Lien Bonds" means, collectively, the First Senior Lien Bonds and the Second Senior Lien Bonds.

"Series of Bonds" or "Bonds of a Series" or "Series" means a series of Bonds issued pursuant to the Master Indenture and the terms of a Supplemental Indenture.

"Series 2022 Custodian" means Manufacturers and Traders Trust Company, or its successor, as custodian and agent for the Trustee holding the Series 2022A Cost of Issuance Subaccount, the Series 2022B Cost of Issuance Subaccount and the Revenue Fund pursuant to the Master Indenture.

"Series 2022A Cost of Issuance Subaccount" means the subaccount established for the Series 2022A Bonds in the Metrorail Project Account of the Construction Fund, as set forth in the Thirteenth Supplemental Indenture.

"Series 2022A Interest Account" means the account established for the Series 2022A Bonds in the Second Senior Lien Bond Fund, as set forth in the Thirteenth Supplemental Indenture.

"Series 2022A Principal Account" means the account established for the Series 2022A Bonds in the Second Senior Lien Bond Fund, as set forth in the Thirteenth Supplemental Indenture.

"Series 2022A Rebate Account" means the account established for the Series 2022A Bonds in the Arbitrage Rebate Fund, as set forth in the Thirteenth Supplemental Indenture.

"Series 2022A Redemption Account" means the account established for the Series 2022A Bonds in the Second Senior Lien Bond Fund, as set forth in the Thirteenth Supplemental Indenture.

"Series 2022B Cost of Issuance Subaccount" means the subaccount established for the Series 2022B Bonds in the Metrorail Project Account of the Construction Fund, as set forth in the Thirteenth Supplemental Indenture.

"Series 2022B Interest Account" means the account established for the Series 2022B Bonds in the Second Senior Lien Bond Fund, as set forth in the Thirteenth Supplemental Indenture.

"Series 2022B Principal Account" means the account established for the Series 2022B Bonds in the Second Senior Lien Bond Fund, as set forth in the Thirteenth Supplemental Indenture.

"Series 2022B Redemption Account" means the account established for the Series 2022A Bonds in the Second Senior Lien Bond Fund, as set forth in the Thirteenth Supplemental Indenture.

"Seventh Supplemental Indenture" means the Seventh Supplemental Indenture of Trust, dated as of August 1, 2011, by and between the Airports Authority and the Trustee, which supplements the Master Indenture.

"Short-Term/Demand Obligations" means each Series of Bonds issued pursuant to the Indenture, the payment of principal of which is either (a) payable on demand by or at the option of the Holder at a time sooner than a date on which such principal is deemed to be payable for purposes of computing Annual Debt Service, or (b) scheduled to be payable within one year from the date of issuance and is contemplated to be refinanced for a specified period or term either (i) through the issuance of additional Short-Term/Demand Obligations pursuant to a commercial paper, auction Bond or other similar Program, or (ii) through the issuance of long-term Bonds pursuant to a bond anticipation note or similar Program.

"Special Projects" means any property, improvement or project the Airports Authority determines is not part of the Dulles Toll Road for travel by motor vehicles, including air rights, if any. Special Projects are not part of the Dulles Metrorail Project or the Capital Improvements.

"**Special Project Bonds**" means bonds, notes, loans or other obligations or arrangements that are (a) issued or entered into in connection with the financing, planning, design, engineering, acquisition, installation, construction, reconstruction, operation or maintenance of Special Projects and (b) payable from and secured by revenues derived from Special Projects. Special Project Bonds are not Bonds.

"Standard & Poor's" means Standard & Poor's Rating Group, a corporation organized and existing under the laws of the State of New York, and its successors and assigns and, if such corporation shall no longer perform the functions of a securities rating agency, Standard & Poor's means any other nationally recognized securities rating agency designated by an Airports Authority Representative.

"State" means any of the fifty states of the United States of America or the District of Columbia.

"Subordinate Lien Bonds" means the Airports Authority's revenue bonds or other indebtedness or obligations secured by the Subordinate Lien Bond Fund and subordinate to the Senior Lien Bonds. The term "Subordinate Lien Bonds" shall include notes, bond anticipation notes, commercial paper and other Short-Term/Demand Obligations, Regularly Scheduled Hedge Payments and other securities, contracts or obligations incurred through lease, installment purchase or other agreements or certificates of participation therein, in each case to the extent secured by the Subordinate Lien Bond Fund pursuant to a Supplemental Indenture.

"Subordinate Lien Bond Fund" means the Subordinate Lien Bond Fund created pursuant to Section 401 of the Master Indenture.

"Subordinate Lien Debt Service Reserve Fund" means the Subordinate Lien Debt Service Reserve Fund created pursuant to Section 401 of the Master Indenture.

"Substituted Operator" means any person or entity selected by the Trustee and approved by VDOT in accordance with Section 5.03(c) of the Permit and Operating Agreement to perform the Airports Authority's obligations and succeed to the Airports Authority's Interest after any Person acquires the Airports Authority's Interest by foreclosure or transfer in lieu of foreclosure.

"Supplemental Indenture" means an indenture supplementing or modifying the provisions of the Master Indenture entered into by the Airports Authority and the Trustee in accordance with Article IX of the Master Indenture.

"Tax Certificate" means a Tax Certificate concerning certain matters pertaining to the use of proceeds of the Bonds executed and delivered by the Airports Authority, including any and all exhibits attached thereto.

"**Tax-Exempt Bonds**" means any Bond, the interest on which is excludable from gross income of the holder for purposes of federal income tax.

"**Termination Event**" has the meaning set forth in Section 5.03(a) of the Permit and Operating Agreement.

**"Termination Event Notice**" means the notice from VDOT to the Airports Authority and the Trustee required to be provided pursuant to Section 5.03(a) of the Permit and Operating Agreement.

"**TIFIA**" means the Transportation Infrastructure Finance and Innovation Act of 1998, as amended, or any other legislation pursuant to which the United States provides loans or other forms of credit assistance similar to that provided under TIFIA.

"TIFIA Account" means the TIFIA Account in the Construction Fund created pursuant to the Master Indenture.

"**TIFIA Bondholder**" means the United States Department of Transportation, acting by and through the Federal Highway Administration, or any other agent or entity of the United States.

"**TIFIA Bonds**" means any Junior Lien Bonds that may be issued pursuant to a Supplemental Indenture to make a TIFIA Loan to the Airports Authority.

"TIFIA Loan" means the loan made pursuant to the TIFIA Loan Agreement.

"**TIFIA Loan Agreement**" means a loan agreement that shall be entered into by and between the TIFIA Bondholder and the Airports Authority in the event the Airports Authority issues TIFIA Bonds.

"**Thirteenth Supplemental Indenture**" means the Thirteenth Supplemental Indenture of Trust, dated as of February 1, 2022, by and between the Airports Authority and the Trustee, which supplements the Master Indenture.

"**Toll Rate Schedule**" means the schedule of Tolls approved by the Airports Authority as part of the regulatory process established for setting Tolls.

"**Toll Rate Stabilization Fund**" means the Dulles Corridor Enterprise Reserve and Toll Rate Stabilization Fund created pursuant to Section 4.01(d)(ii) of the Permit and Operating Agreement and Section 401 of the Master Indenture.

"**Toll Road Consultant**" means a firm or firms of national recognition with expertise and experience regarding the operation, management and financing of, and the collection of revenues from, toll roads, selected and employed by the Airports Authority from time to time.

"Toll Road Revenues" means (a) Tolls, (b) any interest income on, and any profit realized from, the investment of moneys in any Fund or Account to the extent that such income or profit is not transferred to, or retained in, the Revenue Fund or any Bond Fund, excluding, however, any interest income on, and any profit realized from, the investment of moneys in the Arbitrage Rebate Fund, the Renewal and Replacement Reserve Fund, the Capital Improvements Fund, the Metrorail Project Fund, the Latent Defects Reserve Fund, the Transit Operations Fund and the Remaining Toll Road Revenue Fund, (c) all moneys released from any Fund or Account and transferred to the Revenue Fund, (d) all proceeds of insurance payable to or received by the Airports Authority with respect to the Dulles Toll Road (whether by way of claims, return of premiums, ex gratia settlements or otherwise), including proceeds from business interruption insurance and loss of advance profits insurance, except for proceeds of fire and other casualty insurance, (e) the proceeds of any condemnation awards with respect to the Dulles Toll Road and (f) all other amounts derived from or with respect to the operation of the Dulles Toll Road, excluding, however, the proceeds of any sale of land, buildings or equipment; any interest income on, and any profit realized from, the investment of moneys in any fund or account funded from the proceeds of Special Project Bonds; any amounts received by the Airports Authority from, or in connection with, Special Projects, unless such amounts are designated as Toll Road Revenues by the Airports Authority; and any other amounts which are not deemed to be revenues in accordance with generally accepted accounting principles or which are restricted as to their use. In no event shall Toll Road Revenues include any Airports Authority assessments or revenue derived from or dedicated to operation of the Airports. Unless otherwise provided in a Supplemental Indenture, there also shall be excluded from the term "Toll Road Revenues" any Hedge Termination Payments received by the Airports Authority.

"**Tolls**" means all tolls, fares, incomes, receipts, and charges and all returns or moneys of an income nature derived by or for the benefit of the Airports Authority from motor vehicle travelers of the Dulles Toll Road.

"**Transit Operations Fund**" means the Transit Operations Fund created pursuant to Section 4.01(d)(vi) of the Permit and Operating Agreement and Section 401 of the Master Indenture.

"Trustee" means Manufacturers and Traders Trust Company and any successor to its duties under the Indenture.

**"U.S. Implicit Price Deflator Index**" means the then most recently issued year-to-year U.S. GNP Implicit Price Deflator Index, issued by the United States Department of Commerce, or, if such index shall be discontinued, a successor index as designated by the United States Government.

"VDOT" means the Virginia Department of Transportation.

"VDRPT" means the Virginia Department of Rail and Public Transportation.

"Vice Chairman" means the Vice Chairman of the Board of the Airports Authority.

"WMATA" means the Washington Metropolitan Area Transit Authority.

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# **APPENDIX B**

# SUMMARY OF THE INDENTURE

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## **APPENDIX B**

#### SUMMARY OF THE INDENTURE

The following, in addition to certain information provided under the heading "INTRODUCTION" and "THE SERIES 2022 BONDS" in this Official Statement, is a summary of certain provisions of the Master Indenture, as amended by the Thirteenth Supplemental Indenture. This summary does not purport to be complete or definitive, and reference is made to the Master Indenture and the Thirteenth Supplemental Indenture for a complete recital of the terms of such documents. During the offering period for the Series 2022 Bonds, copies of the Master Indenture and the Thirteenth Supplemental Indenture may be obtained from the Airports Authority.

### General

The Master Indenture, as amended and supplemented to date, and the Thirteenth Supplemental Indenture, as applicable, constitute an assignment by the Airports Authority to the Trustee, in trust, to secure the payment of the Bonds, of the following:

A. Amounts constituting Toll Road Revenues;

B. Amounts on deposit from time to time in the Funds and the Accounts created pursuant to the Indenture, including the earnings thereon, subject to the provisions of the Indenture permitting the application thereof for the purposes and on the terms and conditions set forth in the Indenture; provided, however, that there expressly is excluded from any pledge, assignment, lien or security interest created by the Indenture any amount on deposit in the Operation and Maintenance Fund, the Extraordinary Maintenance and Repair Reserve Fund, the Renewal and Replacement Reserve Fund, the Capital Improvements Fund, the Metrorail Project Fund, the Latent Defects Reserve Fund, the Transit Operations Fund, the Remaining Toll Road Revenue Fund and any Funds or Accounts established in connection with the issuance of any Special Project Bonds; and further provided that, with respect to TIFIA Bonds, if any, only amounts on deposit in a TIFIA sinking fund and funds deposited from time to time and earnings thereon in the TIFIA Account of the Construction Fund are included;

C. All of the Airports Authority's Interest; and

D. Any and all other property of any kind from time to time hereafter by delivery or by writing of any kind specifically conveyed, pledged, assigned or transferred, as and for additional security under the Indenture for the Bonds, by the Airports Authority or by anyone on its behalf or with its written consent in favor of the Trustee, which is authorized by the Indenture to receive any and all such property at any and all times and to hold and apply the same subject to the terms of the Indenture (collectively, the "**Trust Estate**").

## **Security for the Bonds**

(a) All Bonds issued under the Indenture and at any time Outstanding shall be equally and ratably secured, with the same right, lien and preference with respect to the Trust Estate, including the Toll Road Revenues, with all other outstanding Bonds of the same lien, subject, however, to the prior application of a portion of such amounts to other purposes as set forth in Section 422 of the Master Indenture, without preference, priority or distinction on account of the date or dates or the actual time or times of the issuance or maturity of the Bonds. The Second Senior Lien Bonds shall in all respects be junior and subordinate to the First Senior Lien Bonds, the Subordinate Lien Bonds shall in all respects be junior and subordinate to

the Senior Lien Bonds, and the Junior Lien Bonds shall in all respects be junior and subordinate to the Senior Lien Bonds and the Subordinate Lien Bonds.

(b) All Bonds of a particular Series shall in all respects be equally and ratably secured and shall have the same right, lien and preference under the Indenture established for the benefit of such Series of Bonds, including, without limitation, rights to the Construction Fund, any related Series Account in the applicable Bond Fund and any related Series Account in the applicable Debt Service Reserve Fund; provided that nothing in the Indenture shall be construed to preclude the creation of separate reserve funds or the obtaining of separate surety bonds, insurance policies and other Credit Facilities for any Series of Bonds, which may or may not be pledged toward the payment of other Series of Bonds. Amounts drawn under a Credit Facility with respect to a particular Series and all other amounts held in accounts or funds established with respect to such Series pursuant to the provisions of Article V of the Master Indenture and the Supplemental Indenture providing for the terms of such Series shall be applied solely to make payments on such Series of Bonds.

# **Revenues and Funds**

<u>Creation of Funds and Accounts</u>. Pursuant to the Master Indenture and the Thirteenth Supplemental Indenture, as applicable, the following Funds, Accounts and Subaccounts are established:

(a) First Senior Lien Bond Fund, to be held by the Trustee, which shall contain the Accounts with respect to each Series of First Senior Lien Bonds as set forth in the applicable Supplemental Indenture.

(b) First Senior Lien Debt Service Reserve Fund, to be held by the Trustee, which shall contain the Accounts with respect to each Series of First Senior Lien Bonds as set forth in the applicable Supplemental Indenture.

(c) Second Senior Lien Bond Fund, to be held by the Trustee, which shall contain the following Accounts with respect to the Series 2022 Bonds as set forth in the Thirteenth Supplemental Indenture:

- (i) The Series 2022A Interest Account;
- (ii) The Series 2022A Principal Account;
- (iii) The Series 2022A Redemption Account;
- (iv) The Series 2022B Interest Account;
- (v) The Series 2022B Principal Account; and
- (vi) The Series 2022B Redemption Account.

(d) Second Senior Lien Debt Service Reserve Fund, to be held by the Trustee, which shall contain the Series 2022 Debt Service Reserve Account as set forth in the Thirteenth Supplemental Indenture.

(e) Subordinate Lien Bond Fund, to be held by the Trustee, which shall contain the Accounts with respect to each Series of Subordinate Lien Bonds as set forth in the applicable Supplemental Indenture.

(f) Subordinate Lien Debt Service Reserve Fund, to be held by the Trustee, which shall contain the Accounts with respect to each Series of Subordinate Lien Bonds as set forth in the applicable Supplemental Indenture.

(g) Junior Lien Bond Fund, to be held by the Trustee, which shall contain the Accounts with respect to each Series of Junior Lien Bonds as set forth in the applicable Supplemental Indenture.

(h) Construction Fund, to be held by the Custodian, which shall contain the Metrorail Project Account, the Capital Improvements Account, the Capital Reserve Account and a TIFIA Account (in the event any TIFIA Bonds are issued); and

(i) Within the Metrorail Project Account:

- (i) The Series 2022A Cost of Issuance Subaccount; and
- (ii) The Series 2022B Cost of Issuance Subaccount.

(j) Arbitrage Rebate Fund, to be held by the Trustee, which shall contain the Series 2022A Rebate Account.

- (k) Toll Rate Stabilization Fund, to be held by the Trustee.
- (l) Renewal and Replacement Reserve Fund, to be held by the Airports Authority.
- (m) Capital Improvements Fund, to be held by the Airports Authority.
- (n) Metrorail Project Fund, to be held by the Airports Authority.
- (o) Latent Defects Reserve Fund, to be held by the Airports Authority.
- (p) Transit Operations Fund, to be held by the Airports Authority.
- (q) Remaining Toll Road Revenue Fund, to be held by the Airports Authority.

Amounts in the First Senior Lien Bond Fund, the First Senior Lien Debt Service Reserve Fund, the Second Senior Lien Bond Fund, the Second Senior Lien Debt Service Reserve Fund, the Subordinate Lien Bond Fund, the Subordinate Lien Debt Service Reserve Fund, the Junior Lien Bond Fund and the Toll Rate Stabilization Fund are pledged to the Bondholders to secure the Bonds. Amounts in the remaining Funds are not pledged to Bondholders to secure the Bonds.

The required and permitted use of the moneys deposited in the Funds and Accounts described above is summarized in the Official Statement under the heading "SECURITY AND SOURCES OF PAYMENT FOR THE BONDS – Flow of Funds."

### **Flow of Funds**

The amounts in the Revenue Fund shall be withdrawn and deposited or transferred at the times and in the amounts and order of priority set forth in the Official Statement under the heading "SECURITY AND SOURCES OF PAYMENT FOR THE BONDS – Flow of Funds."

# Deposits Required with Respect to the Series 2022 Bonds\*

Moneys are required to be deposited with respect to the Series 2022 Bonds as described below. The Supplemental Indenture setting forth the terms of any additional Series of Bonds may require deposit to the applicable Bond Fund and Debt Service Reserve Fund with respect to such Series of Bonds.

So long as any Series 2022 Bonds are Outstanding, the Thirteenth Supplemental Indenture requires that payments be made to the Trustee in the following manner:

# (a) <u>Second Senior Lien Bond Fund</u>.

(i) Beginning on October 1, 20\_\_, and on the first (1st) Business Day of each month thereafter, an amount equal to one-twelfth (1/12) of the next principal payment due after such date with respect to the Series 2022A Bonds shall be deposited to the Series 2022A Principal Account. On August 1, 2022, and on the first (1st) Business Day of each month thereafter to and including October 1, 2022, an amount equal to one-third (1/3) of the next interest payment due after such date with respect to the Series 2022A Bonds shall be deposited to the Series 2022A Interest Account, and thereafter beginning on the first (1st) Business Day of November 2022, and on the first (1st) Business Day of each month thereafter, an amount equal to one-sixth (1/6) of the next interest payment due after such date with respect to the Series 2022A Bonds shall be deposited to the Series 2022A Interest Account; *provided, however*, the Airports Authority shall be entitled to a credit immediately before each Bond Payment Date for (a) interest earned on the monthly deposits made by the Airports Authority and (b) the portion, if any, of the next interest payment due on the Series 2022A Bonds for which capitalized interest was funded with a portion of the proceeds of the Series 2022A Bonds.

(ii) Beginning on October 1, 20\_\_, and on the first (1st) Business Day of each month thereafter, an amount equal to one-twelfth (1/12) of the next principal payment due after such date with respect to the Series 2022B Bonds shall be deposited to the Series 2022B Principal Account. On August 1, 2022, and on the first (1st) Business Day of each month thereafter to and including October 1, 2022, an amount equal to one-third (1/3) of the next interest payment due after such date with respect to the Series 2022B Bonds shall be deposited to the Series 2022B Interest Account, and thereafter beginning on the first (1st) Business Day of November 2022, and on the first (1st) Business Day of November 2022, and on the first (1st) Business Day of each month thereafter, an amount equal to one-sixth (1/6) of the next interest payment due after such date with respect to the Series 2022B Bonds shall be deposited to the Series 2022B Interest Account; *provided, however*, the Airports Authority shall be entitled to a credit immediately before each Bond Payment Date for (a) interest earned on the monthly deposits made by the Airports Authority and (b) the portion, if any, of the next interest payment due on the Series 2022B Bonds for which capitalized interest was funded with a portion of the proceeds of the Series 2022B Bonds.

# (b) <u>Second Senior Lien Debt Service Reserve Fund</u>.

(i) To the extent not needed to maintain the balance therein equal to the Series 2022 Debt Service Reserve Requirement, earnings on the amount in the Series 2022 Debt Service Reserve Account shall be transferred after each Bond Payment Date to the Revenue Fund.

(ii) Beginning on the first (1st) Business Day of each month after a withdrawal from the Series 2022 Debt Service Reserve Account to pay interest on the immediately preceding Bond Payment Date, and on the first (1st) Business Day of each month thereafter, an amount equal to one-twenty-fourth (1/24) of the aggregate amount of each unreplenished withdrawal shall be deposited to the Series 2022 Debt

<sup>\*</sup> Preliminary, subject to change.

Service Reserve Account until the amount on deposit in the Series 2022 Debt Service Reserve Account is equal to the Series 2022 Debt Service Reserve Requirement.

(iii) Subject to the requirements of Section 412 of the Master Indenture and upon instruction from the Airports Authority Representative, the Trustee may substitute a Credit Facility in lieu of cash or investments, or cash and investments in lieu of a Credit Facility, in order to satisfy the Series 2022 Debt Service Reserve Requirement.

## **Investment of Moneys**

Moneys in all Funds and Accounts held by the Airports Authority shall be invested as soon as practicable upon receipt in Permitted Investments by the Airports Authority, and in the case of Funds and Accounts held by the Trustee or the Custodian, by the Trustee or the Custodian, as applicable, as directed in writing by an Airports Authority Representative, or, in the absence of direction by the Airports Authority, as selected by the Trustee or the Custodian, as applicable; provided that (i) the maturity date or the date on which such Permitted Investments may be redeemed at the option of the holder thereof shall coincide as nearly as practicable with (but in no event shall be later than) the date or dates on which moneys in the Funds or Accounts for which the investments were made will be required for the purposes thereof, and (ii) in the absence of direction from an Airports Authority Representative, the Trustee or the Custodian, as applicable, shall invest moneys in all Funds and Accounts held by the Trustee or the Custodian overnight in money market funds described in clause (g) of the definition of Permitted Investments, provided that the Airports Authority shall not knowingly use or direct or permit the use of any moneys of the Airports Authority in its possession or control in any manner which would cause any Bond to be an "arbitrage bond" within the meaning ascribed to such term in Section 148 of the Code, or any successor section of the Code.

## **Additional Bonds**

The Airports Authority may issue one or more Series of additional Bonds to pay the Cost of the Dulles Metrorail Project or the Capital Improvements, to refund all or a portion of a Series of Bonds, or for any combination of such purposes. Each Series of additional Bonds shall be issued pursuant to a Supplemental Indenture. If such Series of additional Bonds are First Senior Lien Bonds, they shall be equally and ratably secured under the Indenture with all other First Senior Lien Bonds. If such Series of additional Bonds over any other First Senior Lien Bonds. If such Series of additional Bonds are Second Senior Lien Bonds, they shall be equally and ratably secured under the Indenture with all other Second Senior Lien Bonds, they shall be equally and ratably secured under the Indenture with all other Second Senior Lien Bonds, without preference, priority or distinction of any Second Senior Lien Bonds, without preference, priority or distinction of any Second Senior Lien Bonds, without preference, priority or distinction of any Second Senior Lien Bonds. If such Series of additional Bonds are Subordinate Lien Bonds, they shall be equally and ratably secured under the Indenture with all other Subordinate Lien Bonds, they shall be equally and ratably secured under the Indenture with all other Subordinate Lien Bonds. If such Series of additional Bonds are Junior Lien Bonds, they shall be equally and ratably secured under the Indenture with all other subordinate Lien Bonds. If such Series of additional Bonds are Junior Lien Bonds, they shall be equally and ratably secured under the Indenture with all other Subordinate Lien Bonds. If such Series of additional Bonds are Junior Lien Bonds, they shall be equally and ratably secured under the Indenture with all other Subordinate Lien Bonds. If such Series of additional Bonds are Junior Lien Bonds, they shall be equally and ratably secured under the Indenture with all other Junior Lien Bonds, without preference, priority or distinction of any Junior Lien Bonds over any othe

The Trustee shall authenticate and deliver such additional Bonds, but only upon receipt by the Trustee of, among other things, the following:

(a) A certificate of the Airports Authority, dated as of the date of delivery of such additional Bonds, stating that, as of the date of such certificate, no event or condition has happened or existed, or is happening or existing, that continues, or that, with notice or lapse of time or both, would constitute, an Event of Default by the Airports Authority under the Indenture.

(b) If additional Bonds are being issued for the purpose of refunding all or a portion of one or more Series of Bonds, (i) evidence that the Maximum Annual Debt Service (taking into account the issuance of the additional Bonds) would not be more than the Maximum Annual Debt Service immediately prior to the issuance of such additional Bonds, or (ii) a certificate meeting the requirements set forth in paragraphs (c), (d), (e) or (f) below, as applicable.

(c) If such additional Bonds are First Senior Lien Bonds:

(i) a certificate of the Chief Financial Officer of the Airports Authority certifying that the Net Revenues for (a) the most recent Fiscal Year for which audited statements are available or (b) a 12 consecutive month period in the immediately prior 18 months were at least 200% of the Maximum Annual Debt Service for all then Outstanding First Senior Lien Bonds (excluding any First Senior Lien Bonds being refunded) and the additional First Senior Lien Bonds proposed to be issued; and

(ii) a certificate of the Toll Road Consultant stating that, based upon reasonable assumptions, the projected Net Revenues for the current and each of the Fiscal Years through the repayment of all Outstanding Bonds following the issuance of the additional First Senior Lien Bonds are sufficient to meet the Rate Covenant (taking into account the additional First Senior Lien Bonds proposed to be issued and excluding any First Senior Lien Bonds being refunded).

(d) If such additional Bonds are Second Senior Lien Bonds:

(i) a certificate of the Chief Financial Officer of the Airports Authority certifying that the Net Revenues for (a) the most recent Fiscal Year for which audited statements are available or (b) a 12 consecutive month period in the immediately prior 18 months were at least 135% of the average Annual Debt Service for all then Outstanding First Senior Lien Bonds and Second Senior Lien Bonds (excluding any Second Senior Lien Bonds being refunded) and the additional Second Senior Lien Bonds proposed to be issued; or

(ii) a certificate of the Toll Road Consultant stating that, based upon reasonable assumptions, the projected Net Revenues for the current and each of the Fiscal Years through the repayment of all Outstanding Bonds following the issuance of the additional Second Senior Lien Bonds are sufficient to meet the Rate Covenant (taking into account the additional Second Senior Lien Bonds proposed to be issued and excluding any Second Senior Lien Bonds being refunded).

(e) If such additional Bonds are Subordinate Lien Bonds:

(i) a certificate of the Chief Financial Officer of the Airports Authority certifying that the Net Revenues for (a) the most recent Fiscal Year for which audited statements are available or (b) a 12 consecutive month period in the immediately prior 18 months were at least 120% of the average Annual Debt Service for all then Outstanding First Senior Lien Bonds, Second Senior Lien Bonds and Subordinate Lien Bonds (excluding any Subordinate Lien Bonds being refunded) and the additional Subordinate Lien Bonds proposed to be issued; or

(ii) a certificate of the Toll Road Consultant stating that, based upon reasonable assumptions, the projected Net Revenues for the current and each of the Fiscal Years through the repayment of all Outstanding Bonds following the issuance of the additional Subordinate Lien Bonds are sufficient to meet the Rate Covenant (taking into account the additional Subordinate Lien Bonds proposed to be issued and excluding any Subordinate Lien Bonds being refunded).

(f) If such additional Bonds are Junior Lien Bonds:
(i) a certificate of the Chief Financial Officer of the Airports Authority certifying that the Net Revenues for (a) the most recent Fiscal Year for which audited statements are available or (b) a 12 consecutive month period in the immediately prior 18 months were at least 100% of the average Annual Debt Service for all then Outstanding Bonds (excluding any Bonds being refunded) and the additional Bonds proposed to be issued; and

(ii) a certificate of the Toll Road Consultant stating that, based upon reasonable assumptions, the projected Net Revenues for the current and each of the Fiscal Years through the repayment of all Outstanding Bonds following the issuance of the additional Junior Lien Bonds are sufficient to meet the Rate Covenant (taking into account the additional Junior Bonds proposed to be issued and excluding any Junior Lien Bonds being refunded).

(g) The Airports Authority may issue additional Bonds without satisfying the additional Bonds requirements set forth in Section 213 of the Master Indenture solely for the purpose of financing the cost of carrying out work on the Dulles Toll Road required under a Safety Order issued by VDOT pursuant to the Permit and Operating Agreement, provided an Airports Authority Representative certifies in writing that such additional Bonds are being issued for the sole purpose of financing the cost of carrying out work on the Dulles Toll Road required under a Safety Order issued by VDOT pursuant to the Permit and Operating Agreement.

# **General Covenants of the Airports Authority**

The covenants set forth below apply to the Series 2022 Bonds and any other Series of Bonds issued under the Master Indenture.

<u>Payment of Principal and Interest.</u> The Airports Authority covenants and agrees that it will pay or cause to be paid as and when due the principal of, premium, if any, interest on, and other payments with respect to each Bond issued hereunder at the place, on the dates and in the manner provided herein and in the applicable Supplemental Indenture and in such Fund according to the terms thereof but solely from the sources pledged to such payment or from such other sources or revenues as may be used for such payment. The Airports Authority has no obligation to make any payment of principal of or interest on any Bond from any assets used in or revenues derived from the operation of the Airports or any other funds of the Airports Authority, including the Aviation Enterprise Fund.

<u>Pledge of Toll Road Revenues.</u> As security for the payment of the principal of, interest and any premium on and purchase price of, if applicable, and other payments due with respect to the Bonds, the Airports Authority has granted to the Trustee a pledge of and lien on the Toll Road Revenues, subject only to application as provided in the Master Indenture and any Supplemental Indenture. Such pledge shall be valid and binding from and after the date of the Master Indenture and all Toll Road Revenues so pledged and thereafter received by the Airports Authority shall immediately be subject to the lien of such pledge without any physical delivery thereof or further act.

The Airports Authority has covenanted and agreed that it will not create any pledge, lien or encumbrance upon, or permit any pledge, lien or encumbrance to be created on, Toll Road Revenues or Net Revenues except for a pledge, lien or encumbrance subordinate to the pledge and lien granted hereby for the benefit of the First Senior Lien Bonds, the Second Senior Lien Bonds, the Subordinate Lien Bonds and the Junior Lien Bonds, or as otherwise permitted by the Master Indenture or any Supplemental Indenture.

Establishment of Tolls and Free Passage. The Airports Authority has covenanted and agreed that it has and shall maintain so long as any Bonds remain Outstanding and until all other obligations under the Master Indenture have been satisfied, the exclusive right and lawful power to establish, charge and collect

Tolls, user fees and other charges for the use of the Dulles Toll Road. The Airports Authority further has covenanted and agreed that it will take all reasonable measures permitted by law to enforce prompt payment to it of such Tolls, user fees and other charges when and as due.

The Airports Authority has covenanted to comply with all laws with respect to the exemption from Tolls and other user fees and charges of certain classes of vehicles or persons and to use its best efforts to oppose any law proposed after the date of this Master Indenture that would exempt from the payment of Tolls and other user fees and charges any classes of vehicles or persons the effect of which would have a material adverse effect on Toll Road Revenues.

The Airports Authority also has covenanted and agreed that at no time will it subject its exclusive right to establish, charge and collect Tolls and other user fees and charges for the use of the Dulles Toll Road to the approval or consent of any other individual or entity, governmental or otherwise. None of the District, the Commonwealth, VDOT or any other individual or entity, governmental or otherwise, shall have any rights or responsibilities pursuant to the Master Indenture, except as otherwise provided in the Permit and Operating Agreement.

<u>Operation and Maintenance of the Dulles Toll Road.</u> The Airports Authority has covenanted and agreed that it has taken, and, so long as any Bonds are Outstanding, that it will take, all steps necessary to ensure that it will continue to have lawful right and lawful power to operate and maintain the Dulles Toll Road as a revenue-producing facility consistent with its obligations under the Acts, the Transfer Agreement and the Permit and Operating Agreement. The Airports Authority has covenanted and agreed that it will pay all Operation and Maintenance Expenses in accordance with customary business practices.

The Airports Authority has covenanted and agreed to at all times operate the Dulles Toll Road in accordance with the requirements of the Permit and Operating Agreement, including any required operating and maintenance standards; provided, however, that, nothing contained in the Master Indenture shall be construed (i) to affect the Airports Authority's powers to finance Special Projects or (ii) to permit the Airports Authority to dispose of certain assets of the Dulles Toll Road in compliance with the Master Indenture.

The Airports Authority covenants that it will, from time to time, duly pay and discharge, or cause to be paid and discharged, any taxes, assessments or other governmental charges lawfully imposed upon the Dulles Toll Road or upon any part thereof, or upon the Toll Road Revenues, when the same shall become due, as well as any lawful claim for labor, materials, or supplies which, if unpaid, might by law become a lien or charge upon the Dulles Toll Road or the Toll Road Revenues, or which might impair the security of the Bonds.

<u>Insurance</u>. The Airports Authority covenants to carry at all times insurance (including reasonable self-insurance) or cause insurance to be carried with responsible insurance and/or reinsurance companies authorized and qualified to do business in (or with companies duly authorized and qualified to do business with companies that are authorized and qualified to do business in) the Commonwealth to assume the risk thereof consistent with insurance requirements of all agreements entered into by the Airports Authority in connection with the operation and maintenance of the Dulles Toll Road including, without limitation, Article 12 of the Permit and Operating Agreement and the construction of the Dulles Metrorail Project.

<u>Covenant Against Competing Facilities.</u> The Airports Authority covenants and agrees that it will not construct, operate, or enter into any agreement permitting or facilitating the construction or operation of, any toll roads or related road ways that will compete with the operations of the Dulles Toll Road in a manner that would materially and adversely affect the Airports Authority's ability to comply with the Rate

Covenant; provided that the operation and maintenance of the Dulles Airport Access Highway shall not be considered a competing facility.

<u>Covenants Relating to the Permit and Operating Agreement.</u> The Airports Authority has covenanted and agreed to comply with all material terms, requirements, obligations and conditions set forth in the Permit and Operating Agreement. The Airports Authority will not take, or allow any person to take, any action that would cause an event of Airports Authority Non-Compliance to occur that would permit the Commonwealth, acting by and through VDOT, or any successor to the powers and authority of VDOT, to suspend, revoke, or terminate the Permit and Operating Agreement, or any successor agreements.

The Airports Authority has covenanted and agreed that, in the event a levy is made as described in Section 15.01(g) of the Permit and Operating Agreement, it will take all actions necessary to vacate, remove or stay by court order, bond or otherwise such levy prior to the expiration of the time period that would entitle VDOT to terminate the Permit and Operating Agreement.

The Airports Authority also has covenanted and agreed that, if any event occurs that would constitute an event of Airports Authority Non-Compliance or have the effect of permitting VDOT to suspend, revoke, or terminate the Permit and Operating Agreement, or any successor agreements, the Airports Authority will take such actions as are necessary to cure such event so that no suspension, revocation or termination of the Permit and Operating Agreement or any successor agreement occurs; *provided, however*, that, except in the case of an event of Airports Authority Non-Compliance under Section 15.01(h) of the Permit and Operating Agreement, if the Airports Authority cannot cure such event within the applicable cure period set forth in the Permit and Operating Agreement, the Airports Authority covenants that, upon request of the Trustee, it shall transfer to the Substituted Operator all of the Airports Authority's Interest in the Permit and Operating Agreement not later than five (5) days after the receipt of the Trustee's request. The Airports Authority also has covenanted and agreed that it will not terminate the Permit and Operating Agreement for the reason that the FFGA was not signed by December 31, 2008.

If an event occurs that permits the Airports Authority to suspend, revoke, or terminate the Permit and Operating Agreement, or any successor agreements, the Airports Authority has covenanted and agreed that it will not take any action that will impair its ability to fully comply with its obligations under the Master Indenture, all Supplemental Indentures and the terms of all Bonds Outstanding.

Best Efforts to Cooperate with Funding Partners and Enforce Agreements. The Airports Authority has covenanted and agreed to use its best efforts to fully finance the completion of the Dulles Metrorail Project consistent with its obligations under the Permit and Operating Agreement and to cooperate with its funding partners, currently the Federal Transit Administration under the FFGA, Fairfax and Loudoun Counties under the Local Funding Agreement, and the Commonwealth and its departments, VDOT and VDRPT, under their various agreements. The Airports Authority also has covenanted and agreed to comply with the terms of the Cooperative Agreement.

The Airports Authority has covenanted and agreed to enforce its rights and remedies under the FFGA, the Local Funding Agreement, the Permit and Operating Agreement and its other agreements with the Commonwealth and its departments, VDOT and VDRPT, and the Cooperative Agreement to ensure that its ability to comply with its covenants hereunder, including its agreements to operate and maintain the Dulles Toll Road, to raise sufficient Toll Road Revenues to satisfy its obligations under the Master Indenture, including the Rate Covenant, and any Supplemental Indentures, and to use its best efforts to complete the Dulles Metrorail Project, will not be materially and adversely affected.

<u>Covenant Against Material Amendments to Other Agreements.</u> The Airports Authority has covenanted and agreed that it will not agree to amend any material term or provision of the Permit and

Operating Agreement, the FFGA, the Local Funding Agreement, the Federal Lease or the Cooperative Agreement in a manner that would adversely affect its ability to comply with its covenants contained in the Master Indenture, or that would materially adversely affect the interests of the Bondholders.

### **Rate Covenant**

Pursuant to the Indenture, the Airports Authority has covenanted that it shall establish, charge and collect Tolls for the privilege of traveling on the Dulles Toll Road at rates sufficient to meet the Operations and Maintenance Expenses and produce Net Revenues in such Fiscal Year and in each Fiscal Year thereafter that are at least:

(i) 200% of the Maximum Annual Debt Service with respect to all Outstanding First Senior Lien Bonds;

(ii) 135% of the Annual Debt Service with respect to all Outstanding First Senior Lien Bonds and all Outstanding Second Senior Lien Bonds for such Fiscal Year;

(iii) 120% of the Annual Debt Service with respect to all Outstanding First Senior Lien Bonds, all Outstanding Second Senior Lien Bonds and all Outstanding Subordinate Lien Bonds for such Fiscal Year; and

(iv) 100% of the Annual Debt Service with respect to all Outstanding Bonds and all other obligations of the Airports Authority secured by Toll Road Revenues for such Fiscal Year.

The Airports Authority also has covenanted that, if either (i) the annual budget adopted by the Airports Authority for any Fiscal Year shows that Toll Road Revenues will be inadequate to meet the Rate Covenant for such Fiscal Year or (ii) the audited financial reports regarding the Dulles Toll Road prepared by the Airports Authority show that the Airports Authority did not satisfy the Rate Covenant for a Fiscal Year, then, the Airports Authority shall:

(i) within 30 days of the date such budget is adopted or such audit is final, engage a Toll Road Consultant to conduct a study and, within 60 days of such engagement, the Toll Road Consultant shall deliver a written report to the Airports Authority containing the results of such study and the recommendations of the Toll Road Consultant as to the actions required with respect to the operation of the Dulles Toll Road and Tolls, fees and charges for the privilege of traveling on the Dulles Toll Road in order to provide sufficient Toll Road Revenues in each subsequent Fiscal Year to comply with the Rate Covenant (provided, however, that, if such study was conducted and such a report was delivered because the annual budget for a Fiscal Year showed that Toll Road Revenues would be inadequate to meet the Rate Covenant for such Fiscal Year, a second study need not be conducted and a second report need not be delivered because the audited financial reports regarding the Dulles Toll Road prepared by the Airports Authority show that the Airports Authority did not satisfy the Rate Covenant for the same Fiscal Year); and

(ii) take the actions recommended by the Toll Road Consultant in such report no later than 60 days after the receipt of such report.

Failure to comply with the Rate Covenant shall not constitute an Event of Default if either (i) the Airports Authority complies with the covenant described in the second paragraph of this section or (ii) the Toll Road Consultant provides a written opinion stating that the actions required in order to produce the required Toll Road Revenues are impracticable at that time; provided, however, that failure to comply with the Rate Covenant for a period of 36 consecutive months shall in all events constitute an Event of Default, regardless of whether an event described in clause (i) or (ii) of this subsection has occurred. For purposes

of this section, "**impracticable**" means (A) such actions would not result in an increase in Toll Road Revenues that is sufficient to comply with the Rate Covenant, (B) the economic cost of taking such actions exceeds the economic benefit resulting from such actions or (C) the Airports Authority does not have sufficient available funds to pay the cost of taking such actions.

# **Tax Covenants**

The Airports Authority has covenanted that it shall not take any action, or fail to take any action, or permit any action to be taken on its behalf or cause or permit any circumstance within its control to arise or continue, if any such action or inaction would adversely affect the exclusion from gross income for federal income tax purposes of the interest on the Series 2022A Bonds under Section 103 of the Code. Without limiting the generality of the foregoing, the Airports Authority also has covenanted that it will comply with the instructions and requirements of the applicable Tax Certificate, which is incorporated in the Indenture as if fully set forth in the Indenture. The Airports Authority has further covenanted that (i) it will not transfer any of its right, title and interest under the Permit and Operating Agreement or the Indenture to a Substituted Operator if such transfer would adversely affect the exclusion from gross income for federal income tax purposes of the interest on the Series 2022A Bonds under Section 103 of the Code, and (ii) it will provide the Trustee with an opinion of Bond Counsel to that effect in the case of any transfer. This covenant shall survive payment in full or defeasance of the Series 2022A Bonds.

#### **Default and Remedies**

Event of Default. Subject to the limitation that nonpayment alone of principal of, premium, if any, or interest on any Subordinate Lien Bond or Junior Lien Bond shall not constitute an Event of Default while any Senior Lien Bonds are Outstanding or remain unpaid, each of the following is hereby declared an "Event of Default" under the Master Indenture with respect to a Series of Bonds:

(a) if payment by the Airports Authority in respect of any installment of principal or interest on any Bond of such Series shall not have been made in full when the same became due and payable, whether at maturity or by proceedings for redemption or otherwise;

(b) if payment by the Airports Authority in respect of any Regularly Scheduled Hedge Payment or any payment pursuant to a Reimbursement Agreement with any Credit Provider with respect to any Bond of such Series shall not have been made in full when the same becomes due and payable;

(c) if the Airports Authority shall fail to observe or perform any covenant or agreement on its part under the Indenture, other than the Rate Covenant, for a period of 60 days after the date on which written notice of such failure, requiring the same to be remedied, shall have been given to the Airports Authority by the Trustee, or to the Airports Authority and the Trustee by the Holders of at least 51% in aggregate principal amount of Bonds of a Series then Outstanding; provided, however, that if the breach of covenant or agreement is one which cannot be completely remedied within the 60 days after written notice has been given, it shall not be an Event of Default with respect to such Series as long as the Airports Authority has taken active steps within the 60 days after written notice has been given to remedy the failure and is diligently pursuing such remedy;

(d) if the Airports Authority fails to comply with the Rate Covenant set forth in Section 511(a) of the Master Indenture for a period of 36 consecutive months;

- (e) the occurrence of a Bankruptcy Related Event; and
- (f) the occurrence of any Default under the Permit and Operating Agreement;

provided, however, that a Default under the Permit and Operating Agreement or the occurrence of any event described in subsections (d) and (f) above that constitutes a Default under the Permit and Operating Agreement shall not be an Event of Default as long as the Airports Authority and/or VDOT is pursuing the rights and remedies provided under the Permit and Operating Agreement and the applicable cure period, if any, available to the Airports Authority and/or VDOT under the Permit and Operating Agreement has not expired.

<u>No Acceleration or Cross Default With Respect to the Bonds.</u> There shall be no right of acceleration with respect to any Bonds, including the Series 2022 Bonds. An Event of Default with respect to one Series of Bonds shall not cause an Event of Default with respect to any other Series of Bonds unless such event or condition on its own constitutes an Event of Default with respect to such other Series of Bonds.

Remedies and Enforcement of Remedies under the Indenture. Subject to the provisions of the section of the Master Indenture that describes when a Credit Provider may control remedies, upon the occurrence and continuance of any Event of Default with respect to a Series of Bonds, the Trustee may or, upon the written request of the Holders of not less than 51% in an aggregate principal amount of the Bonds of such Series, together with indemnification of the Trustee to its satisfaction therefore, shall proceed to protect and enforce its rights and the rights of the Bondholders under the Indenture, the Acts and such Bonds by such suits, actions or proceedings, as the Trustee, being advised by counsel, shall deem expedient, including but not limited to (i) a civil action to recover money or damages due and owing, (ii) a civil action to enjoin any acts or things, which may be unlawful or in violation of the rights of the Holders of such Bonds; and (iii) enforcement of any other right of such Bondholders conferred by law, including the Acts, or hereby, including, without limitation, by suit, action, injunction, mandamus or other proceedings to enforce and compel the performance by the Airports Authority of actions required by the Acts or the Indenture, including the fixing, charging and collecting of Tolls, fees and charges for the privilege of traveling on the Dulles Toll Road; provided, however, that, upon the occurrence of an Event of Default arising from a Default under the Permit and Operating Agreement pursuant to Section 601(f) of the Master Indenture or an Event of Default pursuant to Section 601(c) or Section 601(e) of the Master Indenture which also constitutes a Default under the Permit and Operating Agreement, the Trustee shall first exercise rights and remedies, if any, in accordance with Section 606 of the Master Indenture before exercising rights and remedies set forth in Section 603 of the Master Indenture.

Subject to the provisions of the section of the Master Indenture describing when a Credit Provider may control remedies, regardless of the happening of an Event of Default, the Trustee, if requested in writing by the Holders of not less than 25% in aggregate principal amount of the Bonds of a Series, shall upon being indemnified to its satisfaction therefor, institute and maintain such suits and proceedings as it may be advised shall be necessary or expedient (i) to prevent any impairment of the security under the Indenture by any acts or omissions to act which may be unlawful or in violation of the Indenture, or (ii) to preserve or protect the interests of the Holders, provided that such request is in accordance with law and the provisions of the Indenture and, in the sole judgment of the Trustee, is not unduly prejudicial to the interest of the Holders of Bonds of each Series not making such request.

The remedies provided in the Master Indenture with respect to using the moneys on deposit in the Funds or the Accounts under the Indenture shall be limited to the Funds or Accounts under the Indenture pledged to the applicable Series of Bonds with respect to which an Event of Default exists.

#### Default Under the Permit and Operating Agreement.

Each of the following shall constitute a Default under the Permit and Operating Agreement:

(a) The occurrence of one or more events of Airports Authority Non-Compliance which gives VDOT the right to terminate the Permit and Operating Agreement pursuant to Section 14.01(a) of the Permit and Operating Agreement.

(b) The occurrence of any one or more events of Department Non-Compliance which gives the Airports Authority the right to terminate the Permit and Operating Agreement pursuant to Section 14.01(b) of the Permit and Operating Agreement.

(c) The occurrence of any one or more events described in Section 14.01(c) of the Permit and Operating Agreement that gives the Airports Authority and/or VDOT the right to terminate the Permit and Operating Agreement.

# Notice of a Default under the Permit and Operating Agreement.

(a) Upon receipt by the Trustee of a Termination Event Notice, the Trustee shall promptly, and in no event later than two (2) Business Days after receipt of such Termination Event Notice, send notice of such Termination Event to all Bondholders, which notice shall set forth at least the following:

(i) information set forth in the Termination Event Notice;

(ii) a statement of the rights and remedies available to the Trustee and/or the Bondholders set forth in the Master Indenture and Article V of the Permit and Operating Agreement;

(iii) a statement of the requirement for indemnification of the Trustee pursuant to the Master Indenture; and

(iv) request that the Bondholders notify the Trustee promptly, but not later than ten (10) Business Days after the date of the Trustee's notice to the Bondholders, of any plans to exercise any of the Bondholders' rights pursuant to the Permit and Operating Agreement and the Master Indenture.

(b) Upon receipt by the Trustee of (i) a Re-Assignment Intent Notice or a Re-Assignment Notice from the Airports Authority or VDOT, or (ii) a notice of termination of the Permit and Operating Agreement pursuant to Section 15.01(h) of the Permit and Operating Agreement, as provided in Section 14.01(d) of the Permit and Operating Agreement, the Trustee shall promptly, and in no event later than five (5) Business Days after receipt of such notice, forward such notice to all Bondholders.

(c) Upon the receipt by the Airports Authority of notice from VDOT of its intent to perform its obligations under Section 14.01(d)(i) or Section 14.01(d)(i) of the Permit and Operating Agreement, the Airports Authority shall promptly, and in no event later than five (5) Business Days after receipt of such notice, forward the VDOT notice or provide notice of VDOT's intention to the Trustee.

# Remedies and Enforcement of Remedies under the Permit and Operating Agreement.

(a) If (i) either VDOT exercises its right of termination under (x) Section 14.01(a) of the Permit and Operating Agreement pursuant to Section 15.01(h) or (y) Section 14.01(c) of the Permit and Operating Agreement, or the Airports Authority exercises its right of termination under Section 14.01(c) of the Permit and Operating Agreement, and (ii) if VDOT, at its sole option, and subject to the requirements of Section 14.01(d) of the Permit and Operating Agreement, elects to enter into a new agreement with the Trustee in accordance with Section 14.01(d)(i) of the Permit and Operating Agreement, the Trustee shall enter into such new agreement with VDOT.

If, within twelve (12) Business Days after the date of the notice from the Trustee to (b) Bondholders issued pursuant to the section titled "Notice of Default Under the Permit and Operating Agreement", the Trustee has not received (i) the written request of the Holders of not less than 51% in an aggregate principal amount of the Bonds to proceed to protect and enforce the rights of the Bondholders and (ii) direction from such Bondholders as to how to proceed to enforce such rights, the Trustee shall proceed to protect and enforce its rights as Trustee and the rights of the Bondholders available to the Trustee and the Bondholders under Sections 5.03 and 5.04 of the Permit and Operating Agreement and the Master Indenture; provided that, consistent with the Master Indenture, (i) the Trustee has been indemnified to its satisfaction, (ii) monies on deposit in any Fund or Account established under the Master Indenture and any Supplemental Indenture, whether held by the Trustee or a Custodian, are available to the Trustee to pay any and all of its reasonable expenses and advances, including reasonable costs and expenses of counsel and (iii) the right of the Trustee to such monies shall constitute a first lien on all moneys held in trust and pledged hereunder. The Airports Authority agrees to take whatever action may be necessary to cause amounts on deposit under such Funds and Accounts, including Funds and Accounts held by a Custodian, to be made available to the Trustee to pay such reasonable expenses and advances by the Trustee.

(c) If the Trustee is not able to cure the Termination Event within the applicable cure period pursuant to Section 5.03 of the Permit and Operating Agreement, in accordance with Section 5.04 of the Permit and Operating Agreement the Trustee shall use its best efforts to select a Substituted Operator, through the use of consultants and with the assistance of VDOT, and obtain VDOT approval of a Substituted Operator no later than 30 days prior to the last day of the Trustee's cure period (as such period may be extended by VDOT). Once VDOT approves the Substituted Operator selected by the Trustee or by the Holders of not less than 51% in an aggregate principal amount of the Bonds, the Trustee shall, not later than twenty-five (25) days prior to the last day of the Trustee's cure period (as such period may be extended by VDOT), request that the Airports Authority transfer to the Substituted Operator the entirety of the Airports Authority agrees to transfer the Airports Authority's Interest. Subject to satisfying certain tax covenants set forth in the Master Indenture, the Airports Authority agrees to transfer the Airports Authority's Interest to the Substituted Operator within five (5) days after the receipt of the Trustee's request. The Trustee will not accept a transfer of the Airports Authority's Interest and will not be responsible for any of the Airports Authority's obligations under the Permit and Operating Agreement during the Trustee's cure period.

(d) Upon the transfer by the Airports Authority of the Airports Authority's Interest to a Substituted Operator approved by VDOT, all references in the Permit and Operating Agreement and the Master Indenture to the Airports Authority relating to its rights and obligations under the Permit and Operating Agreement and the Master Indenture, except for the Airports Authority's obligations under the Federal Lease, shall refer instead to the Substituted Operator.

(e) Except as provided in the next sentence, neither the Holder of any Bond nor the Trustee shall seek any damages or other amounts from VDOT based on VDOT's breach of the Permit and Operating Agreement. The Bondholders may seek damages from VDOT for any breach by VDOT of its express obligations to Bondholders set forth in Article 5 of the Permit and Operating Agreement; provided, however, that the foregoing shall not affect any rights or claims of a Bondholder as a successor to the Airports Authority's Interest by foreclosure or transfer in lieu of foreclosure.

(f) No Bondholder or Trustee shall, by virtue of the Master Indenture, acquire any greater rights to or interest in the Dulles Toll Road or the Toll Road Revenues than the Airports Authority has under the Permit and Operating Agreement, other than the provisions of Article 5 of the Permit and Operating Agreement for the specific protection of the Bondholders and the Trustee.

(g) The cure or waiver of a Default under the Permit and Operating Agreement is deemed to be a cure or waiver of the underlying event that created the Event of Default hereunder.

<u>Application of Toll Road Revenues and Other Moneys After Default.</u> During the continuance of an Event of Default with respect to any Series of Bonds, all moneys held in trust and pledged under the Indenture and received by the Trustee with respect to such Series of Bonds pursuant to any right given or action taken under the provisions of Article IV of the Master Indenture shall, after payment of the expenses and advances incurred or made by the Trustee with respect thereto, including reasonable costs and expenses of counsel, be applied according to the accrued debt service deposits or payments with respect to each such Series as follows; provided, however, that money drawn under a Credit Facility, if any, and amounts held in Accounts in any Bond Fund and any Debt Service Reserve Fund shall be applied solely to pay interest or principal, as applicable, on the related Series of Bonds:

<u>First</u>: To the payment of all installments of interest then due on any First Senior Lien Bonds in the order of maturity of such installments, including installments of interest due with respect to any mandatory sinking fund redemption, Regularly Scheduled Hedge Payments or any payments made on any First Senior Lien Bonds pursuant to a Reimbursement Agreement, and, if the amount available shall not be sufficient to pay in full any installment, then to the payment of the amounts due on such date ratably, without any discrimination or preference;

<u>Second</u>: To the payment of any principal or redemption price of any First Senior Lien Bonds which shall have become due, whether at maturity or by call for redemption or otherwise or upon the tender of any First Senior Lien Bonds pursuant to the terms of the Supplemental Indenture providing for the issuance of such First Senior Lien Bonds, as well as any principal due with respect to Regularly Scheduled Hedge Payments or any payments made on any First Senior Lien Bonds pursuant to a Reimbursement Agreement, and, if the amount available shall not be sufficient to pay in full all First Senior Lien Bonds and any related obligations described above due on any particular date, then to the payment of the amounts due on such date ratably, without any discrimination or preference;

<u>Third</u>: To the payment of all installments of interest then due on any Second Senior Lien Bonds in the order of maturity of such installments, including installments of interest due with respect to any mandatory sinking fund redemption, Regularly Scheduled Hedge Payments or any payments made on any Second Senior Lien Bonds pursuant to a Reimbursement Agreement, and, if the amount available shall not be sufficient to pay in full any installment, then to the payment of the amounts due on such date ratably, without any discrimination or preference;

<u>Fourth</u>: To the payment of any principal or redemption price of any Second Senior Lien Bonds which shall have become due, whether at maturity or by call for redemption or otherwise or upon the tender of any Second Senior Lien Bonds pursuant to the terms of the Supplemental Indenture providing for the issuance of such Second Senior Lien Bonds, as well as any principal due with respect to Regularly Scheduled Hedge Payments or any payments made on any Second Senior Lien Bonds pursuant to a Reimbursement Agreement, and, if the amount available shall not be sufficient to pay in full all Second Senior Lien Bonds and any related obligations described above due on any particular date, then to the payment of the amounts due on such date ratably, without any discrimination or preference;

<u>Fifth</u>: To the payment of all installments of interest then due on any Subordinate Lien Bonds in the order of maturity of such installments, including installments of interest due with respect to any mandatory sinking fund redemption, Regularly Scheduled Hedge Payments or any payments made on any Subordinate Lien Bonds pursuant to a Reimbursement Agreement, and, if the amount available shall not be sufficient to pay in full any installment, then to the payment of the amounts due on such date ratably, without any discrimination or preference; Sixth: To the payment of any principal or redemption price of any Subordinate Lien Bonds which shall have become due, whether at maturity or by call for redemption or otherwise or upon the tender of any Subordinate Lien Bonds pursuant to the terms of the Supplemental Indenture providing for the issuance of such Subordinate Lien Bonds, as well as any principal due with respect to Regularly Scheduled Hedge Payments or any payments made on any Subordinate Lien Bonds pursuant to a Reimbursement Agreement, and, if the amount available shall not be sufficient to pay in full all Subordinate Lien Bonds and any related obligations described above due on any particular date, then to the payment of the amounts due on such date ratably, without any discrimination or preference;

<u>Seventh</u>: To the payment of all installments of interest then due on any Junior Lien Bonds in the order of maturity of such installments, including installments of interest due with respect to any mandatory sinking fund redemption, Regularly Scheduled Hedge Payments or any payments made on any Junior Lien Bonds pursuant to a Reimbursement Agreement, and, if the amount available shall not be sufficient to pay in full any installment, then to the payment of the amounts due on such date ratably, without any discrimination or preference; and

<u>Eighth</u>: To the payment of any principal or redemption price of any Junior Lien Bonds which shall have become due, whether at maturity or by call for redemption or otherwise or upon the tender of any Junior Lien Bonds pursuant to the terms of the Supplemental Indenture providing for the issuance of such Junior Lien Bonds, as well as any principal due with respect to Regularly Scheduled Hedge Payments or any payments made on any Junior Lien Bonds pursuant to a Reimbursement Agreement, and, if the amount available shall not be sufficient to pay in full all Junior Lien Bonds and any related obligations described above due on any particular date, then to the payment of the amounts due on such date ratably, without any discrimination or preference.

Whenever moneys are to be applied by the Trustee pursuant to the provisions of Section 607 of the Indenture, such moneys shall be applied by it at such times, and from time to time, as the Trustee shall determine in accordance with the Indenture, having due regard for the amount of such moneys available for application and the likelihood of additional moneys becoming available for such application in the future. Whenever the Trustee shall apply such moneys, it shall fix the date (which shall be a Bond Payment Date unless it shall deem another date more suitable) upon which such application is to be made and upon such date interest on the principal amounts to be paid on such dates shall cease to accrue if so paid. The Trustee shall give such notice as it may deem appropriate in accordance with the Indenture of the deposit with it of any such moneys and of the fixing of any such date, and shall not be required to make payment to the Holder of any Bond until such Bond shall be presented to the Trustee for appropriate endorsement of any partial payment or for cancellation if fully paid.

Whenever all installments of interest then due on the Outstanding Bonds and all unpaid principal amounts of any Outstanding Bonds that shall have become due have been paid under the provisions described above and all expenses and charges of the Trustee have been paid, and each Credit Provider, if any, has been reimbursed for all amounts drawn under the applicable Credit Facility, if any, and used to pay principal, premium, if any, and interest on the Outstanding Bonds, the Airports Authority shall resume making the transfers from the Revenue Fund in the amounts and according to the priority set forth in the section of the Master Indenture that describes the flow of funds.

<u>Remedies Not Exclusive.</u> No remedy by the terms of the Indenture conferred upon or reserved to the Trustee or the Bondholders or any Credit Provider is intended to be exclusive of any other remedy but each and every such remedy shall be cumulative and shall be in addition to every other remedy given under the Master Indenture or existing at law or in equity or by statute, including the Acts, and, in the case of a Default under the Permit and Operating Agreement, the Permit and Operating Agreement, on or after the date of the Master Indenture.

<u>Remedies Vested in Trustee.</u> All rights of action (including the right to file proof of claims) under the Master Indenture or under any of the Bonds may be enforced by the Trustee without the possession of any of the Bonds or the production thereof in any trial or other proceedings relating thereto. Any such suit or proceeding instituted by the Trustee may be brought in its name as the Trustee without the necessity of joining as plaintiffs or defendants any Holders of the Bonds. Subject to the provisions of the Master Indenture, any recovery or judgment shall be for the equal benefit of the Holders of the Outstanding Bonds.

<u>Control of Proceedings.</u> The Holders of the First Senior Lien Bonds and the Holders of the Second Senior Lien Bonds may jointly control the proceedings if there is an Event of Default with respect to either the First Senior Lien Bonds or the Second Senior Lien Bonds; provided, however, that the provisions of the Master Indenture described under the heading "Application of Toll Road Revenues and Other Moneys After Default" shall apply with respect to the application of Toll Road Revenues and other moneys after an Event of Default.

Subject to the foregoing and the additional limitation that nonpayment of principal of, purchase price of, if applicable, premium, if any, or interest on any Subordinate Lien Bonds or Junior Lien Bonds shall not alone constitute an Event of Default while any Senior Lien Bonds are Outstanding or remain unpaid, if an Event of Default with respect to a Series of Bonds shall have occurred and be continuing, the Holders of a majority in aggregate principal amount of Bonds of such Series then Outstanding shall have the right, at any time, by any instrument in writing executed and delivered to the Trustee, to direct the method and place of conducting any proceeding to be taken with respect to funds or assets solely securing such Series in connection with the enforcement of the terms and conditions of the Master Indenture, provided that such direction (i) is in accordance with law and the provisions of the Master Indenture (including indemnity to the Trustee as provided in the Master Indenture) and (ii), in the sole judgment of the Trustee, is not unduly prejudicial to the interest of Bondholders of each Series of Bonds not joining in such direction, and provided further that nothing shall impair the right of the Trustee in its discretion to take any other action under the Indenture which it may deem proper in accordance with the Indenture and which is not inconsistent with such direction by Bondholders.

If an Event of Default with respect to all Series of Bonds shall have occurred and be continuing, the Holders of a majority in aggregate principal amount of all Senior Lien Bonds then outstanding shall have the right, at any time, by any instrument in writing executed and delivered to the Trustee to direct the method and place of conducting any proceeding to be taken with respect to the Toll Road Revenues or other assets securing all Bonds in connection with the enforcement of the terms and conditions of the Master Indenture, provided that such direction is in accordance with law and the provisions of the Master Indenture (including indemnity to the Trustee as provided in the Master Indenture) and, in the sole judgment of the Trustee, is not unduly prejudicial to the interest of Bondholders not joining in such direction and provided further that nothing shall impair the right of the Trustee in its discretion to take any other action under the Master Indenture which it may deem proper in accordance with the Indenture and which is not inconsistent with such direction by Bondholders.

No owner of any Subordinate Lien Bond or Junior Lien Bond shall have any right to institute any judicial or other action or remedial proceeding (including, without limitation, bankruptcy or insolvency proceedings) against the Airports Authority or any of the Airports Authority's other rights, interests, assets or properties, to collect any moneys due, to enforce payment on its Subordinate Lien Bond or Junior Lien Bond so long as any Senior Lien Bonds remain Outstanding without the written consent of a majority of the aggregate principal amount of the Senior Lien Bonds then Outstanding. Any action commenced by an owner of any Subordinate Lien Bond or Junior Lien Bond shall terminate upon annulment of the default in respect of the Senior Lien Bonds.

<u>Individual Bondholder Action Restricted.</u> No Holder of any Bond shall have any right to institute any suit, action or proceeding in equity or at law for the enforcement of the Master Indenture or for the execution of any trust under the Master Indenture or for any remedy under the Master Indenture unless:

(a) an Event of Default has occurred with respect to such Series (A) under paragraph (a) or (b) of section titled "Events of Default" of which the Trustee is deemed to have notice, (B) under subsection (c), (d) or (e) of section titled "Events of Default" as to which a Responsible Officer has actual knowledge or as to which the Trustee has been notified in writing by the Airports Authority, or (C) under subsection (f) of section titled "Events of Default" as to which the Trustee has been notified in writing by VDOT;

(b) in the case of an Event of Default under paragraph (a) or (b) of section titled "Events of Default", the Holders of at least 51% in aggregate principal amount of Bonds of such Series then Outstanding, or in the case of an Event of Default under paragraph (c), (d), (e) or (f) of section titled "Events of Default", the Holders of at least 51% in aggregate principal amount of all Bonds Outstanding. shall have made written request to the Trustee to proceed to exercise the powers granted in the Indenture or to institute such action, suit or proceeding in its own name;

(c) such Bondholders shall have offered the Trustee indemnity as provided in the Master Indenture;

(d) the Trustee shall have failed or refused to exercise the powers in the Indenture granted or to institute such action, suit or proceedings in its own name for a period of 60 days (or 15 days in the case of an Event of Default under paragraph (f) of section titled "Events of Default" arising from a Default under the Permit and Operating Agreement) after receipt by it of such request and offer of indemnity; and

(e) during such 60-day period (or 15-day period, as applicable) no direction inconsistent with such written request has been delivered to the Trustee by the Holders of a majority in aggregate principal amount of Bonds of such Series then Outstanding in accordance the Master Indenture.

No one or more Holders of Bonds of such Series shall have any right in any manner whatsoever to affect, disturb or prejudice the security of the Master Indenture or to enforce any right under the Indenture except in the manner in the Master Indenture provided and for the equal benefit of the Holders of all Bonds of such Series then Outstanding.

Nothing contained in the Master Indenture shall affect or impair, or be construed to affect or impair, the right of the Holder of any Bond of such Series (i) to receive payment of the principal of or interest on such Bond on or after the due date thereof or (ii) to institute suit for the enforcement of any such payment on or after such due date; provided, however, no Holder of any Bond of such Series may institute or prosecute any such suit or enter judgment therein if, and to the extent that, the institution or prosecution of such suit or the entry of judgment therein would, under applicable law, result in the surrender, impairment, waiver or loss of the lien of the Indenture on the moneys, funds and properties pledged under the Indenture for the equal and ratable benefit of all Holders of Bonds of such Series.

With the exception of an action to enforce the provisions of the Permit and Operating Agreement in the case of a Default under the Permit and Operating Agreement, neither the Holder of any Bond of a Series nor the Trustee shall name or join VDOT, the Commonwealth Transportation Board or the Commonwealth or any officer thereof in any legal proceeding seeking remedies provided under the Master Indenture or other enforcement of the Master Indenture except to the extent joining VDOT is required as a necessary party in order to give a court jurisdiction over such action.

### Waiver of Event of Default.

(a) No delay or omission of the Trustee, of any Holder of the Bonds or, if provided by Supplemental Indenture, any Credit Provider to exercise any right or power accruing upon any Event of Default shall impair any such right or power or shall be construed to be a waiver of any such Event of Default or an acquiescence therein. Every power and remedy given by Article VI of the Master Indenture to the Trustee, the Holders of the Bonds and, if provided by Supplemental Indenture, any Credit Provider, respectively, may be exercised from time to time and as often as may be deemed expedient by them.

(b) The Trustee, with the written consent of any Credit Provider, if provided by Supplemental Indenture (provided, however, that such Credit Provider's consent may be required only in connection with an Event of Default on a Series of Bonds with respect to which such Credit Provider is providing a Credit Facility), may waive any Event of Default with respect to the Bonds, that in its opinion, shall have been remedied at any time, regardless of whether any suit, action or proceeding has been instituted, before the entry of final judgment or decree in any suit, action or proceeding instituted by it under the provisions of the Master Indenture, or before the completion of the enforcement of any other remedy under the Master Indenture.

(c) Notwithstanding anything contained in the Master Indenture to the contrary, (i) the Trustee, upon the written request of the Credit Provider, if any, if provided by a Supplemental Indenture, with respect to an Event of Default which applies only to the related Series of Bonds, (ii) Holders of at least a majority of the aggregate principal amount of Bonds of a Series then Outstanding with respect to any Event of Default which applies only to such Series, with the consent of the applicable Credit Provider, if any, if provided by a Supplemental Indenture or (iii) Holders of at least a majority of the aggregate principal amount of Bonds the Outstanding with respect to any Event of Default which applies to all Bonds, shall waive any such Event of Default under the Indenture and its consequences; provided, however, that a default in the payment of the principal amount of, premium, if any, or interest on any such Bond, when the same shall become due and payable by the terms thereof or upon call for redemption, may not be waived without the written consent of the Holders of all the Bonds then Outstanding of such Series to which an Event of Default applies and any consent of the applicable Credit Provider, if any, if provided by a Supplemental Indenture.

(d) In case of any waiver by the Trustee of an Event of Default under the Indenture, the Airports Authority, the Trustee, the Bondholders and, if provided by a Supplemental Indenture, the Credit Provider shall be restored to their former positions and rights under the Master Indenture, respectively, but no such waiver shall extend to any subsequent or other Event of Default or impair any right consequent thereon. The Trustee shall not be responsible to any one for waiving or refraining from waiving any Event of Default in accordance with the Master Indenture.

# The Trustee

<u>Trustee Not Required to Take Action Unless Indemnified.</u> Except as expressly required in the Master Indenture, the Trustee neither shall be required to institute any suit or action or other proceeding in which it may be a defendant, nor to take any steps to enforce its rights and expose it to liability, nor shall the Trustee be deemed liable for failure to take any such action, unless and until it shall have been indemnified, to its satisfaction, against any and all reasonable costs, expenses, outlays, counsel and other fees, other disbursements including its own reasonable fees and against all liability and damages. The Trustee nevertheless, may begin suit, or appear in and defend suit, or do anything else which in its judgment is proper to be done by it as the Trustee for all reasonable costs, expenses, outlays, counsel and other fees, and other reasonable disbursements including its own fees, and for all liability and damages suffered by the

Trustee in connection therewith, except for the Trustee's own negligent action, its own negligent failure to act, its own willful misconduct or self-dealing constituting a breach of trust under applicable law.

<u>Right to Deal in Bonds and Take Other Actions.</u> The Trustee may in good faith buy, sell or hold and deal in any Bonds with like effect as if it were not such Trustee and may commence or join in any action which a Holder is entitled to take with like effect as if the Trustee were not the Trustee.

<u>Trustee's Fees and Expenses.</u> The Airports Authority hereby agrees to pay fees to and expenses of the Trustee for its services hereunder as agreed to by the Airports Authority and the Trustee pursuant to the terms of a separate agreement. Any provision hereof to the contrary notwithstanding, if the Airports Authority fails to make any payment properly due the Trustee for its reasonable fees, costs, expenses and fees of attorneys, certified public accountants, recognized authorities in their field and agents (not employees of the Trustee) incurred in performance of its duties, the Trustee may reimburse itself from any surplus moneys on hand in any Fund or Account held by it, other than any amounts in any Bond Fund or any Debt Service Reserve Fund.

<u>Removal and Resignation of Trustee.</u> The Trustee may resign at any time. Written notice of such resignation shall be given to the Airports Authority and such resignation shall take effect upon the appointment and qualification of a successor Trustee. In addition, the Trustee may be removed at any time by the Airports Authority but only for cause by Supplemental Indenture so long as (a) no Event of Default shall have occurred and be continuing and (b) the Airports Authority determines, in such Supplemental Indenture, that the removal of the Trustee shall not have an adverse effect upon the rights or interests of the Bondholders. In the event of the resignation or removal of the Trustee or in the event the Trustee is dissolved or otherwise becomes incapable to act as the Trustee, the Airports Authority shall be entitled to appoint a successor Trustee.

#### **Supplemental Indentures**

<u>Supplemental Indentures Not Requiring Consent of Bondholders.</u> The Airports Authority and the Trustee may, without the consent of or notice to any of the Holders, enter into one or more Supplemental Indentures for one or more of the following purposes:

(a) to cure any ambiguity or formal defect or omission in the Master Indenture;

(b) to correct or supplement any provision in the Master Indenture which may be inconsistent with any other provision in the Master Indenture, or to make any other provisions with respect to matters or questions arising under the Master Indenture that shall not materially adversely affect the interests of the Holders;

(c) to grant or confer upon the Trustee for the benefit of the Holders any additional rights, remedies, powers or authority that may lawfully be granted or conferred upon them;

(d) to secure additional revenues or provide additional security or reserves for payment of the Bonds;

(e) to preserve the excludability of interest on any Bonds from gross income for purposes of federal income taxes, or to change the tax covenants set forth in Section 509 of the Master Indenture, pursuant to an Opinion of Bond Counsel that such action will not affect adversely such excludability;

(f) to remove the Trustee in accordance with the second paragraph of Section 707 of the Master Indenture;

(g) to add requirements the compliance with which is required by a Rating Agency in connection with issuing a rating with respect to any Series of Bonds;

(h) to accommodate the technical, operational and structural features of Bonds which are issued or are proposed to be issued or of a Program which has been authorized or is proposed to be authorized, including, but not limited to, changes needed to accommodate bond anticipation notes, commercial paper, auction Bonds, Hedge Facilities, Short-Term/Demand Obligations and other variable rate or adjustable rate Bonds, Capital Appreciation Bonds, Convertible Capital Appreciation Bonds, Original Issue Discount Bonds and other discounted or compound interest Bonds or other forms of indebtedness which the Airports Authority from time to time deems appropriate to incur;

(i) to accommodate the use of a Credit Facility for specific Bonds or a specific Series of Bonds;

(j) to comply with the requirements of the Code as are necessary, in the Opinion of Bond Counsel, to prevent the federal income taxation of the interest on any of the Bonds, including, without limitation, the segregation of Toll Road Revenues into different funds;

(k) to conform to the requirements of the Permit and Operating Agreement, including amendments and supplements thereto, that shall not materially adversely affect the interests of the Bondholders; and

(l) to evidence the appointment of a separate Trustee or a Co-Trustee or to evidence the succession of a new Trustee;

(m) to modify, alter, amend or supplement the Master Indenture in such manner as to permit the qualification of the Master Indenture under the Trust Indenture Act of 1939 or any similar federal statute then in effect or to permit the qualification of the Bonds for sale under the securities laws of any of the states of the United States of America and, if the Airports Authority and the Trustee so determine, to add to the Master Indenture or any indenture supplemental thereto such other terms, conditions and provisions as may be permitted by the Trust Indenture Act of 1939 or similar federal statute;

(n) to issue additional Series of Bonds pursuant to Section 213 of the Master Indenture, to provide additional Funds and Accounts relating such additional Bonds, to authorize different authorized denominations of the Bonds and to make correlative amendments and modifications to the Master Indenture regarding exchangeability of Bonds of different authorized denominations, redemptions of portions of Bonds of particular authorized denominations and similar amendments and modifications of a technical nature;

(o) to make any amendments appropriate or necessary to provide for any insurance policy, letter of credit, guaranty, surety bond, line of credit, revolving credit agreement, standby bond purchase agreement or other Credit Facility delivered to the Trustee and providing for (i) payment of the principal, interest and redemption premium on the Bonds or a portion thereof, (ii) payment into the Debt Service Reserve Fund, or (iii) payment of the purchase price of the Bonds, or (iv) any combination of (i), (ii) and (iii);

(p) to conform any provision contained in the Master Indenture to permit the issuance of Bonds to a private party or to permit the Airports Authority to participate in a public-private partnership with respect to the funding of the Dulles Metrorail Project and any Capital Improvements; and

(q) to modify, alter, amend or supplement the Master Indenture in any other respect which in the judgment of the Trustee is not inconsistent with the Master Indenture and which is not materially adverse to the interests of the Bondholders.

# Supplemental Indentures Requiring Consent of Bondholders.

The Holders of not less than a majority in aggregate principal amount of the Bonds then Outstanding may consent to or approve, from time to time, which consent or approval shall be in writing and shall not be withheld unreasonably, the execution by the Airports Authority and the Trustee of such Supplemental Indentures as shall be deemed necessary and desirable by the Airports Authority for the purpose of modifying, altering, amending, adding to or rescinding any of the terms or provisions contained in the Master Indenture; provided, that if any Supplemental Indenture modifying, altering, amending, adding to or rescinding any of the terms and provisions of the Master Indenture contains provisions which affect the rights and interests of less than all Series of Bonds and the section in the Master Indenture relating to Supplemental Indentures not requiring consent of Holders is inapplicable, then such Supplemental Indenture shall require the consent only of the Holders of a majority in Outstanding principal amount of the Series of Bonds so affected; and provided further, that nothing in the Master Indenture shall permit or be construed as permitting a Supplemental Indenture which would:

(i) extend the stated maturity of or time for paying the interest on any Bond or reduce the principal amount of or the redemption premium or rate of interest payable on any Bond without the consent of the Holder of such Bond;

(ii) prefer or give a priority to any Bond over any other Bond without the consent of the Holder of each Bond then Outstanding not receiving such preference or priority; or

(iii) reduce the aggregate principal amount of Bonds then Outstanding the consent of the Holders of which is required to authorize such Supplemental Indenture without the consent of the Holders of all Bonds then Outstanding.

If the Holders of the required principal amount or number of the Bonds Outstanding shall have consented to and approved the proposed modifications, alterations, amendments, additions to or rescissions of the provisions of the Master Indenture and the execution of such Supplemental Indenture as in the Master Indenture provided, no Holder of any Bond shall have any right to object to the execution thereof, or to object to any of the terms and provisions contained therein or the operation thereof, or in any manner to question the propriety of the execution thereof or to enjoin or restrain the Trustee or the Airports Authority from executing the same or taking any action pursuant to the provisions thereof.

# Satisfaction and Discharge

<u>Discharge.</u> If payment of all principal of, purchase price of, if applicable, premium, if any, and interest on a Series of Bonds, including the Series 2022 Bonds, in accordance with their terms and as provided in the Indenture is made, or is provided for in accordance with Article IX of the Master Indenture, and if all other sums payable by the Airports Authority under the Indenture with respect to such Series of Bonds shall be paid or provided for, then the liens, estates and security interests granted hereby shall cease with respect to such Series; provided, however, that the rebate provisions, if any, of the related Supplemental Indenture shall survive so long as there is any amount due to the federal government pursuant to the provisions of such Supplemental Indenture.

<u>Providing for Payment of Bonds.</u> Payment of a Series of Bonds, including the Series 2022 Bonds, may be provided for by the deposit with the Trustee of moneys, noncallable Governmental Obligations,

noncallable Government Certificates or pre-refunded municipal obligations described in paragraph (c) of the definition of Permitted Investments in the Master Indenture, or any combination thereof. Payment of the Bonds or any Series of Bonds shall be so provided for when the aggregate of amounts in the applicable Account of the Debt Service Reserve Fund together with other amounts available for such purpose under the Indenture are sufficient to so provide. The moneys and the maturing principal and interest income on such Government Obligations, noncallable Government Certificates or pre-refunded municipal obligations, if any, shall be sufficient and available to pay when due the principal of, whether at maturity or upon fixed redemption dates, and premium, if any, and interest on such Bonds. The moneys, Government Obligations, noncallable Government Certificates and pre-refunded municipal obligations, irrevocably in trust for the Holders of such Bonds solely for the purpose of paying the principal or redemption price of, including premium, if any, and interest on such Bonds as the same shall mature or become payable upon prior redemption, and, if applicable, upon simultaneous direction, expressed to be irrevocable, to the Trustee as to the dates upon which any such Bonds are to be redeemed prior to their respective maturities.

If payment of any Series 2022 Bonds is so provided for, the Trustee shall mail a notice so stating to each Holder of such Series 2022 Bond.

The Series 2022 Bonds the payment of which has been provided for shall no longer be deemed Outstanding under the Indenture. The obligation of the Airports Authority in respect of such Series 2022 Bonds shall nevertheless continue but the Holders thereof shall thereafter be entitled to payment only from the moneys, Government Obligations, Government Certificates and pre-refunded municipal obligations deposited with the Trustee to provide for the payment of such Series 2022 Bonds.

No Series 2022 Bond may be so provided for if, as a result thereof or of any other action in connection with which the provision for payment of such Series 2022 Bond is made, the interest payable on any Tax-Exempt Bond with respect to which an opinion of Bond Counsel has been rendered that such interest is excluded from gross income for federal income tax purposes is made subject to federal income taxes. The Trustee shall receive and may rely upon an opinion of Bond Counsel (which opinion may be based upon a ruling or rulings of the Internal Revenue Service) to the effect that the provisions of this paragraph will not be breached by so providing for the payment of any Series 2022 Bonds.

#### Non-Presentment of the Series 2022 Bonds

If any Series 2022 Bond is not presented for payment of principal of, purchase price of, if applicable, premium, if any, and interest on the Series 2022 Bonds within two (2) years after delivery of such funds to the Trustee, and absent knowledge of the Trustee of any continuing Event of Default, the moneys shall, upon request in writing by the Airports Authority, be paid to the Airports Authority free of any trust or lien and thereafter the Holder of such Series 2022 Bond shall look only to the general funds of the Airports Authority and then only to the extent of the amounts so received by the Airports Authority without any interest thereon. Prior to the transfer of any moneys, the Trustee shall give notice of such transfer to each affected Holder, and, while the Series 2022 Bonds are in the Book-Entry System, to the Securities Depository in lieu of the Holders, and publish such notice in a newspaper of general circulation in the Washington, D.C. metropolitan area. The Trustee shall have no further responsibility with respect to such moneys or payment of principal of, purchase price of, if applicable, premium, if any, and interest on the Series 2022 Bonds.

# **Governing Law**

The Master Indenture, the Thirteenth Supplemental Indenture and the Series 2022 Bonds shall be governed and construed in accordance with the laws of the Commonwealth.

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# **APPENDIX C**

# SUMMARIES OF THE MASTER TRANSFER AGREEMENT AND THE PERMIT AND OPERATING AGREEMENT

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#### **APPENDIX C**

#### SUMMARIES OF THE MASTER TRANSFER AGREEMENT AND THE PERMIT AND OPERATING AGREEMENT

Pursuant to the Master Transfer Agreement, dated as of December 29, 2006 (the "Transfer Agreement"), by and between the Virginia Department of Transportation ("VDOT") and the Metropolitan Washington Airports Authority (the "Airports Authority"), VDOT transferred the Dulles Toll Road (the "Dulles Toll Road") to the Airports Authority. Pursuant to the Permit and Operating Agreement, dated as of December 29, 2006 (the "Permit and Operating Agreement"), by and between VDOT and the Airports Authority, VDOT granted a permit to the Airports Authority to operate the Dulles Toll Road. The Transfer Agreement and the Permit and Operating Agreement contain various definitions, covenants and security provisions, certain of which are summarized below. These summaries do not purport to be comprehensive or definitive and are subject to all of the terms and provisions of the Transfer Agreement and the Permit and Operating Sused elsewhere in this Official Statement. Copies of the Transfer Agreement and the Permit and Operating Agreement are available from the Airports Authority.

# Definitions

"Assignment Agreement" means the Assignment and Assumption Agreement, dated as of June 28, 2007, between the Airports Authority and VDOT, together with any and all amendments and supplements thereto.

"Business Day" means any day other than a Saturday, Sunday or other day observed as a holiday by either the Commonwealth or the U.S. government.

"DTR Reserves" means the amounts that appeared in the financial records of VDOT as of the time of the transfer under the Transfer Agreement as assets of VDOT relating to Dulles Toll Road operations and the Dulles Toll Road, including, without limitation, all such amounts that were classified as operating reserves, revenue funds, reserve maintenance funds, transit improvement funds, and highway improvement funds.

"DTR Right-of-Way" means the property on which the Dulles Toll Road is located, as it was originally granted to the Commonwealth for the construction, operation, and maintenance of the Dulles Toll Road.

"Dulles Metrorail Project Purposes" means and is limited to the developing, permitting, design, financing, construction, installation and equipping of the Dulles Metrorail Project.

"Dulles Toll Road Purposes" means and is limited to the developing, permitting, design, financing, acquisition, construction, installation, equipping, maintenance, repair, preservation, modification, operation, management and administration of the Dulles Toll Road or any Capital Improvement.

"Encumbrance" means any lien, claim, charge, hypothecation, security interest, mortgage, pledge, easement, conditional sale or other title retention agreement, defect in title, restrictive covenant or other restrictions of any kind.

"Governmental Authority" or "Governmental Entity" means any federal, state, local, territorial, municipal or other governmental authority, department, court, commission, bureau, board, agency, tribunal,

department or other instrumentality exercising legislative, judicial, regulatory or administrative functions of, or pertaining to, government.

"Law" means any current or future order, writ, injunction, decree, judgment, law, ordinance, decision, opinion, ruling, policy, statute, code, rule or regulation of any Governmental Authority.

"Lien" means any pledge, lien, security interest, mortgage, deed of trust or other charge or Encumbrance of any kind, or any other type of preferential arrangement (including any agreement to give any of the foregoing, any conditional sale or other title retention agreement, any lease in the nature of a security instrument and the filing of or agreement to file any financing statement under the Virginia Uniform Commercial Code).

"Losses" means, with respect to any Person, any losses, liabilities, judgments, damages, fees, penalties, fines, sanctions, charges or out-of-pocket and documented costs or expenses actually suffered or incurred by such Person, including as a result of any injury to or death of Persons or damage to or loss of property.

"1983 Easements" means the two easements granted by the federal government to the Commonwealth in 1983 in connection with the construction, operation and maintenance of the Dulles Toll Road.

"Permitted Encumbrances" means, with respect to the Dulles Toll Road, (a) the rights and interests of the Airports Authority under the Permit and Operating Agreement; (b) any Lien that is being contested by VDOT (but only for so long as such contestation effectively postpones enforcement of any such Lien); (c) inchoate materialmen's, mechanics', workmen's, repairmen's, employees', carriers', warehousemen's or other similar Liens arising in the ordinary course of business of the Dulles Toll Road or VDOT's performance of its obligations under the Permit and Operating Agreement, and either (A) not delinquent or (B) which are being contested by VDOT (but only for so long as such contestation effectively postpones enforcement of any such Lien); (d) any easement, covenant, condition, right-of-way, servitude, or any zoning, building, environmental, health or safety Law relating to the development, use or operation of the Dulles Toll Road (or similar reservation, right and restriction) or other defects and irregularities in the title to the Dulles Toll Road that do not materially interfere with the operations or the right and benefits of the Airports Authority under the Permit and Operating Agreement: (e) any right reserved to or vested in any Governmental Authority (other than VDOT) by any statutory provision; (f) any other Encumbrance permitted under the Permit and Operating Agreement; (g) any Lien created, incurred, assumed or suffered to exist by the Airports Authority or any Person claiming through it; and (h) rights of VDOT in any existing facilities or structures crossing over or under the Dulles Toll Road.

"Permit, Transfer and Rail Documents" means the Permit and Operating Agreement, the Transfer Agreement, agreements transferring and conveying VDOT's interest in the Transferred Assets as defined below, including without limitation, bills of sale and assignments, the Comprehensive Agreement, the Phase 1 Design-Build Contract, the local funding agreements, including the Local Funding Agreement, and such other documents as are reasonably acceptable to each of VDOT and the Airports Authority in accordance with the terms of the Permit and Operating Agreement.

"Person" means any individual (including the heirs, beneficiaries, executors, legal representatives or administrators thereof), corporation, partnership, joint venture, trust, limited liability company, limited partnership, joint stock company, unincorporated association or other entity or a Governmental Authority.

"Renewal and Replacement Program Work" means maintenance, repair, renewal, reconstruction or replacement of any portion or component of the Dulles Toll Road of a type which is not normally included as an annually recurring cost in the Airports Authority's Dulles Toll Road maintenance and repair budgets.

"State Indemnitees" means and includes VDOT and its employees, the Virginia Transportation Commissioner, the Virginia Secretary of Transportation and employees of his office, the CTB and the Commonwealth.

"Substituted Operator" means any Person or entity selected by the Trustee and approved by VDOT in accordance with the Permit and Operating Agreement to perform the Airports Authority's obligations and succeed to the Airports Authority's Interests after any Person acquires the Airports Authority's Interests by foreclosure or transfer in lieu of foreclosure, or after the Trustee takes possession and control of the Dulles Toll Road.

"Toll Road Financing Documents" means any indenture, trust agreement or similar instrument and any other documents relating to the issuance of the debt secured by Toll Revenues issued in accordance with the terms of the Permit and Operating Agreement, together with any and all amendments and supplements thereto.

"Toll Revenues" means all amounts received by or on behalf of the Airports Authority from tolls and other User Fees applicable to vehicles for the privilege of traveling on the Dulles Toll Road or from the proceeds of any concession or similar agreement as contemplated by the Permit and Operating Agreement, subject to the exclusion of certain revenues and proceeds arising out of or relating to certain rights reserved to VDOT under the Permit and Operating Agreement. The term "Toll Revenues" as used in the Permit and Operating Agreement is generally synonymous with the "Tolls" portion of the definition of "Toll Road Revenues" used in the Indenture.

"Transfer" means to sell, convey, assign, sublease, mortgage, encumber, transfer or otherwise dispose of.

"User Fees" means fees, tolls, rates, incidental charges and other charges (including administrative charges such as late fees, insufficient funds fees, etc.) in respect of vehicles using the Dulles Toll Road and imposed by or on behalf of the Airports Authority pursuant to the Permit and Operating Agreement.

#### TRANSFER AGREEMENT

On November 1, 2008, VDOT, pursuant to the Permit and Operating Agreement, granted the Airports Authority a permit to operate the Dulles Toll Road and to receive and use the Toll Revenues. In addition, at the time of the granting of the permit, VDOT assigned to the Airports Authority for the term (the "Term") of the Permit and Operating Agreement (a 50-year term expiring on October 31, 2058, unless extended), and the Airports Authority accepted from VDOT, free and clear of all Encumbrances, except for Permitted Encumbrances, all of the right, title and interest of VDOT in and to the following assets to the extent (i) used exclusively for the Dulles Toll Road or (2) purchased from Toll Revenues derived from the Dulles Toll Road and held by VDOT solely for use in connection with the Dulles Toll Road (collectively, the "Transferred Assets"): (a) real estate rights, consisting of all permits, easements (other than the 1983 Easements), improvements, real estate leases and other real estate agreements or arrangements exclusively related or appurtenant to the Dulles Toll Road; (b) contracts and other agreements relating to the Dulles Toll Road, including all contracts, licenses, agreements, purchase orders and other agreements or arrangements of VDOT, to the extent assignable, that are related to the Dulles Toll Road and Dulles Toll Road operations (the "Assumed Contracts"); (c) DTR Reserves appearing in the financial records of VDOT as assets of VDOT relating to the Dulles Toll Road operations and the Dulles Toll Road, including operating reserves, revenue funds, reserve maintenance funds, transit improvement funds and highway improvement funds; (d) cash

and cash equivalents to the extent such amounts are not included as DTR Reserves; (e) VDOT's accounts receivable that relate to or are derived from the Dulles Toll Road and DTR operations; (f) operational information and other data; (g) equipment, supplies and other personal and movable property of VDOT that are located upon and/or used in connection with the Dulles Toll Road or Dulles Toll Road operations; (h) intellectual property relating to the Dulles Toll Road, the Transferred Assets and the Dulles Toll Road operations to the extent legally assignable; (i) all actions of any kind (including rights to insurance proceeds and rights under and pursuant to all warranties, representations and guarantees made by suppliers of products, materials or equipment, or components thereof), pertaining to, arising out of, and inuring to the benefit of VDOT to the extent related to the Dulles Toll Road; and (j) permits, licenses, approvals, certificates and authorizations granted by a Governmental Entity to VDOT that relate to the Dulles Toll Road, Dulles Toll Road operations and the Transferred Assets, except for those which are not assignable by operation of the laws of the relevant Governmental Entity (the "Assumed Governmental Permits").

Concurrently with the transfer of the Transferred Assets, VDOT assigned and delegated to the Airports Authority, and the Airports Authority assumed and undertook to pay, defend, discharge and perform in full when due, the following liabilities of VDOT (collectively, the "Assumed Liabilities"): (a) certain assumed Dulles Toll Road liabilities, including all arrangements to furnish goods, services and other non-cash benefits to another party or to pay for goods, services and other non-cash benefits that another party will furnish to it, in each case after the transfer; (b) liabilities accruing from and under the Assumed Contracts and Assumed Governmental Permits; (c) liabilities under the assumed accounts payable of VDOT; and (d) liabilities arising out of the employment by the Airports Authority of former VDOT Dulles Toll Road employees.

#### PERMIT AND OPERATING AGREEMENT

#### **Basic Agreement (Section 3.01)**

Under the Permit and Operating Agreement, VDOT granted to the Airports Authority a permit (the "**Permit**") under which the Airports Authority has the exclusive right to (a) maintain, improve, equip, modify, repair and operate the Dulles Toll Road, and (b) establish, charge and collect tolls and other User Fees for vehicles using the Dulles Toll Road and to use, pledge, assign and modify the same from time to time in accordance with the terms of the Permit and Operating Agreement.

By accepting the Permit, the Airports Authority: (a) has the exclusive right and the exclusive obligation to maintain, improve, equip, modify, repair and operate the Dulles Toll Road to the extent provided in, and subject to the provisions of, the Permit and Operating Agreement; (b) has the right and obligation to establish and charge tolls and other User Fees for vehicles using the Dulles Toll Road and to modify the same from time to time, and the right to collect, retain, use, pledge and assign the Toll Revenues, subject to the restrictions set forth in the Permit and Operating Agreement, (c) shall cause the Dulles Metrorail Project to be designed and constructed substantially as provided in the FTA's environmental record of decision, as amended or supplemented from time to time, and as provided in the Permit and Operating Agreement; and (d) has the right to plan, develop, finance, construct, operate and maintain Capital Improvements to the extent provided in the Permit and Operating Agreement.

#### Term (Section 3.03)

Unless the Permit and Operating Agreement is otherwise terminated, the term of the Permit commenced on November 1, 2008, and expires on October 31, 2058, provided, however, that, subject to the rights of holders of the Bonds and other creditors of the Dulles Toll Road, the parties may mutually agree to modify such period in their sole discretion.

# **Right to Charge Tolls; Additional Provisions Respecting Tolls (Sections 4.01 and 4.02)**

The Airports Authority has the exclusive right to establish, charge and collect tolls and other User Fees for the use of the Dulles Toll Road until expiration of the Term or the earlier termination of the Permit and Operating Agreement. The Airports Authority shall have the right to continue the utilization of the existing Toll Facilities in place as of the Effective Date, or implement a different system for collection of tolls and other User Fees and/or construct or relocate and maintain different or additional tolling facilities on the DTR Right-of-Way in accordance with the terms of the Permit and Operating Agreement. The Airports Authority's rights referenced in the preceding sentences are limited by, and conditioned on, among other provisions in the Permit and Operating Agreement, the following: (i) the toll rates shall be the same for Persons using the Dulles Toll Road under like conditions, and for this purpose "like conditions" may take into consideration type, weight and occupancy of the vehicle, number of axles, time-of-day and/or dayof-week travel, traffic congestion and/or other traffic conditions and type of facilities (provided that the Airports Authority may adopt and implement discount programs for different classes or groups of Persons using the Dulles Toll Road under like conditions, subject to the requirement of the Permit and Operating Agreement); (ii) the Airports Authority shall exempt from tolls and other User Fees classes of vehicles or Persons exempt from the payment of tolls pursuant to Law; and (iii) prior to increasing any toll rate, the Airports Authority shall follow its process for promulgating regulations, including, convening one or more public hearings in the Dulles Corridor to ensure that members of the public and the parties to the local funding agreements, including Fairfax County and Loudoun County, have the ability to be informed and express their views on any proposed toll increase. The Airports Authority shall consult with the Dulles Corridor Advisory Committee with respect to the frequency, timing and amount of any new toll rates; provided, however, that no consent or approval of the Dulles Corridor Advisor Committee is required to be obtained by the Airports Authority with respect to establishing, increasing or otherwise changing any toll rate.

All Toll Revenues shall be the property of the Airports Authority to be retained, pledged, assigned and otherwise used by the Airports Authority without further approval of the Commonwealth, VDOT or any other Person, except as otherwise provided under the Permit and Operating Agreement and the Toll Road Financing Documents. VDOT agrees that it will not have any rights regarding such Dulles Toll Road collection methods or Toll Revenues, nor will it have any rights to proceeds received from the Airports Authority's issuance of bonds or other debt instruments, or to proceeds received from any other financing arrangements, except as otherwise provided in the Permit and Operating Agreement. In addition, the Commonwealth, VDOT or any other Person will not have any rights or responsibilities with respect to the amount, timing and extent of bonds or other debt issued by the Airports Authority or pursuant to other financing arrangements, except as otherwise provided in the Permit and Operating Agreement.

Not less frequently than annually, all Toll Revenues shall be budgeted and used solely to pay, in the following order of priority, (i) all costs and expenses of operating and maintaining the Dulles Toll Road, including the funding of any reasonable cash reserves or escrow accounts in respect thereof; (ii) debt service and other amounts payable under any Toll Road Financing Documents (including, without limitation, swaps, reimbursement agreements, commercial paper or any other similar products, or any scheduled TIFIA debt), together with deposits to any reserves created under any Toll Road Financing Documents, including the funding of any reasonable cash reserves or escrow accounts in respect thereof; (iii) all deposits in respect of the Renewal and Replacement Program (the "**Renewal and Replacement Reserves**") and costs of Renewal and Replacement Work incurred during such year not funded from Renewal and Replacement Reserves; (iv) all costs and expenses of constructing any Capital Improvements required to be paid during such year not paid from proceeds of the Bonds; (v) capital costs of the Dulles Metrorail Project then due and payable and not otherwise paid or reasonably expected to be paid from proceeds of the Bonds, including the funding of a reasonable cash reserve in an amount not to exceed \$15 million plus any accrued interest earnings thereon for costs associated with remedying any latent defects related thereto, all in accordance

with the WMATA Agreement<sup>(1)</sup>; (vi) eligible costs and expenses for transit operations within the Dulles Corridor; and (vii) all remaining Toll Revenues shall be paid to the Commonwealth for allocation by the CTB for transportation programs and projects that are reasonably related to or benefit the users of the Dulles Toll Road. Notwithstanding the foregoing order of priority, the Airports Authority may change the order of priority of clauses (iv) through (vi) above. Any contemplated change to the order of priority of clauses (i) through (iii) above, or change in the use of Toll Revenues in clauses (i) through (vi) above, shall require the written consent of VDOT.

The Airports Authority shall have no right to use Toll Revenues to pay any debt, obligation or liability unrelated to Dulles Toll Road Purposes or Dulles Metrorail Project Purposes.

The Airports Authority shall maintain a toll collection system, and utilize a violation enforcement system, which collection and enforcement systems shall be interoperable with the E-ZPass toll collection system or successor system utilized on Commonwealth toll facilities.

To the extent permitted by Law, VDOT will implement and maintain a processing system for the enforcement of penalties for toll violations in the Commonwealth (for both manual and electronic toll collection systems on roads). To the extent permitted by Law, VDOT shall use diligent efforts to cause such enforcement system to be provided for the benefit of the Dulles Toll Road at the same levels of service as are provided by VDOT for any other toll roads operated within the Commonwealth.

#### **Emergency Suspension of Tolls (Section 4.03)**

In addition to the rights granted pursuant to Law, VDOT shall have the right, in its sole discretion reasonably exercised, to order immediate suspension of tolling in the event the Dulles Toll Road is designated for immediate use as an emergency mass evacuation route. VDOT shall lift such order as soon as the need for emergency mass evacuation ceases. VDOT shall have no liability to the Airports Authority for the loss of Toll Revenues or the increase in costs and expenses attributable to any order to suspend tolling to facilitate emergency mass evacuation.

In the event the Dulles Toll Road is designated for immediate use as the alternate route for diversion of traffic from another highway in the Commonwealth which is temporarily closed to all lanes in one or both directions due to a significant incident or emergency, VDOT shall have the right to order immediate suspension of tolling in the direction(s) of diversion. VDOT and the Airports Authority shall consult with each other on closure of the requested lane(s) and requested suspension(s) of tolling. VDOT shall have no liability to the Airports Authority for the loss of Toll Revenues or the increase in costs and expenses attributable to the hours that such order is in effect.

#### Funds and Accounts (Section 4.04)

The Airports Authority shall maintain all funds and accounts containing Toll Revenues, separate and apart from all other funds and accounts of the Airports Authority. The Airports Authority shall create and maintain for the Term a segregated accounting and financial reporting mechanism for the Dulles Toll Road, including all Capital Improvements and the Dulles Corridor Metrorail Project, which shall be a

<sup>&</sup>lt;sup>(1)</sup> In accordance with the WMATA Agreement, the Airports Authority and WMATA agreed that all interest and earnings in the escrow fund would remain in the escrow fund to be available to WMATA in the same manner as the principal, provided that the combined principal and interest in the fund shall not exceed \$20 million.

separate fund with its own financial statements, and which shall constitute a proprietary "enterprise fund" as defined by the Governmental Accounting Standards Board.

# Airports Authority's Responsibility for Bond Financing; No VDOT Liability for Bonds (Section 5.01)

The Airports Authority is solely responsible for obtaining and repaying all financing, at its own cost and risk and without recourse to VDOT, necessary to maintain, improve, equip, modify, repair and operate the Dulles Toll Road and any Capital Improvements throughout the Term and necessary to develop and construct the Dulles Metrorail Project.

None of the Commonwealth, the District of Columbia, VDOT, the CTB or any other agency, instrumentality or political subdivision of the Commonwealth or the District of Columbia has any liability whatsoever for payment of the principal sum of any Bonds, any other obligations issued or incurred by the Airports Authority in connection with the Permit and Operating Agreement, the Dulles Toll Road or the Dulles Metrorail Project, or any interest accrued thereon or any other sum secured by or accruing under any Toll Road Financing Document.

#### **Rights and Protections (Section 5.02)**

No Bondholder or Trustee shall acquire any greater rights to or interest in the Dulles Toll Road or the Toll Revenues through an indenture, trust agreement or similar instrument than the Airports Authority has at any applicable time under the Permit and Operating Agreement, other than from Article 5 of the Permit and Operating Agreement which addresses Bondholder rights and remedies, and authorizes specific actions to be taken by the Bondholders and the Trustee.

All rights acquired by the Bondholders or the Trustee under any indenture, trust agreement or similar instrument shall be subject to the provisions of the Permit and Operating Agreement and to the rights of VDOT thereunder.

# Airports Authority's Obligation to Design and Construct Capital Improvements and Renewal and Replacement Program Work; DTR Right-of-Way and Utilities (Sections 6.01 and 6.02)

The Airports Authority shall design and construct any Capital Improvements and any Renewal and Replacement Program Work in accordance with: (i) all applicable regulatory approvals and Laws, including all applicable federal requirements; (ii) all professional engineering and construction practices and procedures customarily accepted as industry standards for projects similar in nature, size and complexity to the Capital Improvement or Renewal and Replacement Program Work; and (iii) the requirements of the Permit and Operating Agreement, including design and construction specifications, criteria, standards and procedures established by or acceptable to VDOT.

The Airports Authority shall be responsible for paying all costs and expenses associated with the acquisition of real property interests and utility relocations necessary for the construction, maintenance and/or operation of any Capital Improvement (except to the extent paid by third parties or otherwise provided for), including land required for permanent or temporary works outside of the DTR Right-of-Way. Delays in acquisition of any right-of-way with respect to the Dulles Corridor Metrorail Project are the Airports Authority's risk.

#### Best Efforts to Achieve Substantial Completion of the Dulles Metrorail Project (Section 6.06)

The Airports Authority will use its best efforts to achieve substantial completion of the Dulles Metrorail Project by December 31, 2015, or as such date may be extended. The Airports Authority will confirm or modify the December 31, 2015 date in writing to VDOT within 60 days of execution of the FFGA, which shall be consistent with the terms and conditions of the FFGA, and again within 60 days of completion of preliminary engineering for Metrorail Project - Phase 2 of the Dulles Metrorail Project, in each case notifying VDOT of the reasons for any changes to such date. To confirm or modify the substantial completion date, the Airports Authority shall consider the entire Dulles Metrorail Project and consider, among other relevant reasons, engineering and design efficiencies and effectiveness, variations in construction costs, financing costs and market timing, public interests as such items would relate to schedule trade-offs, and events beyond the Airports Authority's ability to influence and control. Thereafter, the Airports Authority may request further changes to the substantial completion date only with the concurrence of VDOT, which shall not be unreasonably withheld.

#### Airports Authority's Responsibilities for Toll Road Management (Section 7.01)

The Airports Authority shall, throughout the Term, cause the Dulles Toll Road to be managed and operated in compliance with all Laws, all regulatory approvals and the terms, conditions and standards set forth in the Permit and Operating Agreement.

Throughout the Term, the Airports Authority shall cause the Dulles Toll Road to be open for use by members of the public at all times, provided the applicable tolls and other User Fees are paid, and provided that temporary closures shall be permitted as provided in the Permit and Operating Agreement.

#### **Renewal and Replacement Program (Section 7.06)**

In November 2008, the Airports Authority provided to VDOT a base line asset condition report that evaluates Dulles Toll Road assets and their physical condition as of the date of such report (the "**Baseline Asset Condition Report**"). Every eight years thereafter, the Airports Authority shall conduct a re-assessment of the physical condition of the Dulles Toll Road assets, including any Capital Improvements on the DTR Right-of-Way, and compare such conditions to the conditions as they were rated in the initial Baseline Asset Condition Report (or with respect to any new Capital Improvements on the DTR Right-of-Way, their condition of such Capital Improvements), and taking into account changes in federal requirements and issuance of any safety orders. If and to the extent the condition of any identified Dulles Toll Road asset or Capital Improvement on the DTR Right-of-Way falls below its assessment rating in the initial Baseline Asset Condition Report or the original condition of the Capital Improvements on the DTR Right-of-Way, the Airports Authority will, within 120 days of the delivery of such assessment, develop and submit to VDOT a plan to restore such Dulles Toll Road asset, including any Capital Improvement, to its baseline or original condition, as applicable, including a budget(s), timeline and identification of the funding sources that will be utilized to bring such Dulles Toll Road asset or such Capital Improvement to its baseline or original condition, as applicable.

The Airports Authority shall annually prepare and provide to VDOT a full five-year period maintenance plan that considers life cycle asset maintenance for the Dulles Toll Road (the "Life Cycle Maintenance Plan"). The Life Cycle Maintenance Plan shall include a description of all Renewal and Replacement Program Work to be undertaken during the following five-years, the estimated costs and timing relating to each task specified therein, and such other information as may be reasonably related to the foregoing.

The Airports Authority shall annually budget and, at a minimum but not less than annually, fund a renewal and replacement program for the Dulles Toll Road (the "**Renewal and Replacement Program**") that shall be available exclusively for funding major maintenance expenditures, including, but not limited to, overlays, bridge deck replacements, erosion and drainage control, and Dulles Toll Road plaza renovations and similar projects not normally encompassed in routine maintenance activities.

### **Extraordinary Maintenance and Repair Reserve (Section 7.07)**

The Airports Authority shall establish an Extraordinary Maintenance and Repair Reserve which will be funded with the maintenance reserves previously created and maintained by VDOT and transferred to the Airports Authority. The moneys in the Extraordinary Maintenance Repair and Reserve, including all interest earnings thereon, shall be deposited with a third party trustee and shall be supplemented by the Airports Authority on an annual basis as necessary, taking into account accumulated earnings thereon, such that the total amount therein is increased in accordance with the U.S. Implicit Price Deflator Index. All moneys to be provided by the Airports Authority shall be held by the third-party trustee for the benefit of VDOT, except that, with the prior written approval of VDOT, the Airports Authority shall have the ability to use all or any portion of such funds for any Dulles Toll Road purpose, any Dulles Metrorail Project purpose or any transportation improvements in the Dulles Corridor. If any funds are expended as provided above, the Airports Authority shall replace all such expended funds over the ensuing five-year period out of Toll Revenues. Upon expiration or earlier termination of the Permit and Operating Agreement, the balance in the Extraordinary Maintenance and Repair Reserve shall be paid to VDOT.

#### **Obligation to Turn Over Dulles Toll Road at End of Term (Section 7.08)**

Upon the last day of the Term or earlier termination of the Term, the Airports Authority shall surrender and deliver the Dulles Toll Road and all Capital Improvements on the DTR Right-of-Way, free and clear of any and all Liens and Encumbrances created, incurred or suffered by the Airports Authority or anyone claiming under the Airports Authority, except for Permitted Encumbrances that existed as of November 1, 2008, and any Airports Authority Permitted Encumbrances, and in the same or better condition than that existed on the date of the initial Baseline Asset Condition Report, or its original condition, as applicable, and any and all cash reserves or escrow accounts containing Toll Revenues shall be transferred to VDOT.

# Capital Improvements (Articles 8, 9 and 11)

*General*. Subject to the adequacy of Toll Revenues, the Airports Authority shall have the right to design, construct, operate and maintain Capital Improvements within the DTR Right-of-Way, and shall have the right, subject to the approval of VDOT, to design and construct all other Capital Improvements.

VDOT and the Airports Authority shall jointly review on an annual basis needs for Capital Improvements to the Dulles Toll Road and in the Dulles Corridor. Either party may make recommendations for such Capital Improvements. For Capital Improvements within the DTR Right-of-Way, the Airports Authority shall identify to VDOT the Capital Improvements that the Airports Authority intends to design, construct, finance, operate and maintain. Thereafter, the Airports Authority shall have the right to proceed with these Capital Improvements. The Airports Authority and VDOT shall mutually agree on Capital Improvements outside the DTR Right-of-Way but within the Dulles Corridor that the Airports Authority should design, construct and finance, and the Airports Authority thereafter shall have the right to proceed with these Capital Improvements in accordance with the then agreed terms and conditions.

*Safety Orders.* VDOT may issue Safety Orders to the Airports Authority at any time during the Term. After VDOT issues a Safety Order, the Airports Authority shall proceed with necessary environmental, design and construction work to carry out the Safety Order, at its sole cost and expense. The Airports Authority shall have the right to dispute whether a Safety order should be compensated by VDOT at its sole cost and expense under the dispute resolution procedures set forth in Article 15 of the Permit and Operating Agreement, but the Airports Authority shall have no right to delay the carrying out of the Safety Order.

*VDOT's Right to Review.* Upon reasonable advance written notice, VDOT shall have the right at all times to review all aspects of the design, permitting, acquisition, construction, installation, equipping, maintenance, repair, preservation, modification, operation, management and administration of the Dulles Toll Road and any Capital Improvements. VDOT shall have the right to review and approve the design of (i) any Capital Improvement located within the DTR Right-of-Way that has an expected useful life that extends beyond the Term to the extent provided in the Permit and Operating Agreement, and (ii) any Capital Improvement located outside the DTR Right-of-Way.

*VDOT's Rights With Respect To Transportation Facilities.* VDOT has the right to modify existing facilities, to construct new facilities, including but not limited to Capital Improvements, and to perform planned and emergency maintenance, renewal and replacement, safety and repair activities on existing and new facilities adjacent to or near the Dulles Toll Road regardless of the impact of such activities on the Dulles Toll Road.

The Airports Authority shall cooperate with VDOT in managing the Dulles Toll Road as part of the overall transportation network in Northern Virginia. VDOT can request that the Airports Authority, at its sole cost and expense, implement a congestion pricing methodology on the Dulles Toll Road that is not inconsistent with VDOT's then current plans and programs for highway system management of the overall transportation network in Northern Virginia.

# **Indemnification and Insurance (Article 12)**

*Indemnification.* The Airports Authority shall indemnify and hold harmless each State Indemnitee from and against any Losses actually suffered or incurred by such State Indemnitee (except for such Losses to the extent caused by the negligence or willful conduct of such State Indemnitee), due to third party claims that are directly related to or arise out of (i) any failure by the Airports Authority to comply with the Permit and Operating Agreement, (ii) any actual or willful misconduct or negligence of an Airports Authority party in direct connection with the Dulles Toll Road or any Capital Improvement, (iii) any intellectual property right infringements by an Airports Authority in direct connection with the Dulles Toll Road or any Capital Improvement, (iv) inverse condemnation, trespass, nuisance or similar taking of or harm to real property committed or caused by an Airports Authority party in direct connection with the Dulles Toll Road or any Capital Improvement, or (v) certain assumed liabilities.

The Airports Authority shall indemnify, protect, hold harmless and release each State Indemnitee from and against any and all Losses, damages, costs, fines, penalties and expenses, including reasonable attorney's fees, such State Indemnitee incurs, and the Airports Authority shall defend each State Indemnitee from and against any claims, asserted by third parties, arising out of: (i) any pre-existing Hazardous Substances located within the DTR Right-of-Way and from and after the Effective Date, any Hazardous Substances located within the DTR Right-of-Way originally introduced to or brought onto the DTR Rightof-Way during the Term by any Airports Authority party or any other Person other than a State Indemnitee or any representative of VDOT, the Commissioner, the Secretary of State, or the CTB; (ii) exacerbation, due to negligence, recklessness or willful misconduct or failure to provide proper engineering controls of any Airports Authority party, of the release, spreading, migration or toxicity of Hazardous Substances which are or become known by any Airports Authority party proper to such exacerbation; or (iii) a Hazardous Substance in, on or under any Capital Improvement located outside the DTR Right-of-Way, except any Hazardous Substance introduced after acceptance of title thereto by VDOT, and provided that VDOT shall be responsible for the maintenance of any mitigation technique after acceptance of title thereto by VDOT.

*Insurance*. The Airports Authority shall provide and maintain at its own expense, or cause to be maintained, the insurance coverage specified in the Permit and Operating Agreement, insuring the Dulles Toll Road and all Dulles Toll Road Operations, including the following insurance policies:

- property insurance at replacement cost, covering loss, damage or destruction to the Dulles Toll Road, including improvements and betterments, and also including business interruption insurance for loss of projected Toll Revenues for at least one full year from the occurrence of the risk resulting from physical damage to the Dulles Toll Road and any relevant feeder roads;
- commercial general liability insurance or its equivalent with limits of not less than \$50 million per occurrence for bodily injury, personal injury and property damage liability;
- automobile liability insurance with limits of not less than \$10 million combined single limit or per occurrence for bodily injury and property damage;
- builder's risk insurance with respect to any construction, maintenance or repairs to the Dulles Toll Road, including any Capital Improvements, at replacement cost for material, supplies, equipment, machinery and fixtures that are or will be part of the Dulles Toll Road; and
- workers' compensation and employer's liability insurance for all Airports Authority employees.

If any insurance required to be maintained pursuant to the Permit and Operating Agreement ceases to be available on a commercially reasonable basis, the Airports Authority shall provide written notice to VDOT accompanied by a letter from the Airports Authority's insurance advisor stating that such insurance is unavailable on a commercially reasonable basis. If the Airports Authority demonstrates to VDOT's reasonable satisfaction that it has used diligent efforts in the global insurance and reinsurance markets to place the insurance coverage that it is required to provide under the Permit and Operating Agreement, and, if despite such diligent efforts and through no fault of the Airports Authority any of such coverages (or any of the required terms of such coverages, including policy limits) become unavailable on a commercially reasonable basis, VDOT will consider in good faith alternative insurance packages and programs that provide risk coverage.

The Airports Authority reserves the right to implement reasonable levels of self-insurance through programs using deductibles and/or self-insured retentions.

# Events That Could Result in a Termination of the Permit and Operating Agreement by VDOT

The occurrence of any one or more of the following events constitutes an Airports Authority Non-Compliance event that would permit VDOT to terminate the Permit and Operating Agreement:

• <u>Safety Danger</u> – if the Airports Authority fails to comply with, perform or observe any operating standard which creates a material and immediate danger to the safety of the Dulles Toll Road operations or a failure to use the Dulles Toll Road for vehicular transportation purposes. (Sections 15.01(c) and 15.02(a))

- <u>Impermissible Transfer</u> if the Permit and Operating Agreement or all or any portion of the Airports Authority's Interest is Transferred in contravention of the Permit and Operating Agreement, as described below under the heading "Transfers by the Airports Authority." (Section 15.01(d))
- <u>Certain Bankruptcy or Insolvency Events</u> if the Airports Authority (i) admits, in writing, that it is unable to pay its debts as they become due, (ii) makes an assignment for the benefit of its creditors, (iii) files a voluntary petition under Title 11 of the U.S. Code, or if such petition is filed against it and an order for relief is entered, or if the Airports Authority files any petition or answer seeking, consenting to or acquiescing in any reorganization, arrangement, composition, readjustment, liquidation, dissolution or similar relief under the present or any future U.S. bankruptcy code or any other present or future applicable Law, or shall seek or consent to or acquiesce in or suffer the appointment of any trustee, receiver, custodian, assignee, sequestrator, liquidator or other similar official of the Airports Authority, or of all or any substantial part of its properties or of the Dulles Toll Road or any interest therein, or (iv) takes any corporate action in furtherance of any action described in this paragraph. (Section 15.01(e))
- <u>Failure to Dismiss Certain Proceedings or Appointment of Receiver or Similar Official</u> if within 90 days after the commencement of any proceeding against the Airports Authority seeking any reorganization, arrangement, composition, readjustment, liquidation, dissolution or similar relief under the present or any future U.S. bankruptcy code or any other present or future applicable Law, such proceeding has not been dismissed, or if, within 90 days after the appointment, without the consent or acquiescence of the Airports Authority, of any trustee, receiver, custodian, assignee, sequestrator, liquidator or other similar official of the Airports Authority or of all or any substantial part of its properties or of the Dulles Toll Road or any interest therein, such appointment has not been vacated or stayed on appeal or otherwise, or if, within 90 days after the expiration of any such stay, such appointment has not been vacated. (Section 15.01(f))
- <u>Levy or Attachment</u> if a levy under execution or attachment has been made against all or any material portion of the Dulles Toll Road, funds or accounts containing Toll Revenues in excess of an amount equal to the annual average of aggregate Toll Revenues received by the Airports Authority (or VDOT if prior to November 1, 2008) in each of the previous eight years, or any interest in Toll Revenues as a result of any Lien (other than a Lien relating to the Bonds) created, incurred, assumed or suffered to exist by the Airports Authority or any Person claiming through it, and such execution or attachment has not been vacated, removed or stayed by court order, bonding or otherwise within a period of 60 days, unless such levy resulted from actions or omissions of VDOT or its representatives. (Section 15.01(g))
- <u>Failure to Use Best Efforts to Complete Dulles Metrorail Project</u> if the Airports Authority fails to comply with its obligation to use its best efforts to complete the Dulles Metrorail Project as described above under the heading "Best Efforts to Achieve Substantial Completion of the Dulles Metrorail Project" and such failure to use best efforts continues unremedied for a period of 120 days following notice thereof (giving particulars of the failure in reasonable detail) from VDOT to the Airports Authority or for such longer period as may be reasonably necessary to cure such failure, provided, in the latter case, that the Airports Authority has demonstrated to the satisfaction of VDOT, acting reasonably, that (i) it is proceeding, and will proceed, with all due diligence to cure or cause to be cured such failure, (ii) its proceeding can be reasonably expected to cure or cause to be cured such failure within a reasonable period of time acceptable to VDOT, acting reasonably, and (iii) such failure is in fact cured within such period of time.

For the avoidance of doubt, any failure by the Airports Authority to complete the Dulles Metrorail Project by the date set forth in the Permit and Operating Agreement, as it may be extended thereunder, despite its best efforts, shall not constitute Non-Compliance under this paragraph. (Section 15.01(h))

Subject to the Trustee's right to cure as described below under the heading "Trustee's Right to Cure Most Termination Events," VDOT may terminate the Permit and Operating Agreement by giving 60 days' prior written notice to the Airports Authority and the Trustee upon the occurrence of any of the above-referenced events; provided, however, that the Airports Authority is entitled to cure an Airports Authority Non-Compliance by providing VDOT with a written work plan within such 60-day period outlining the actions by which the Airports Authority will ensure future compliance with the obligation, covenant, agreement, term or condition in the Permit and Operating Agreement that the Airports Authority failed to perform or observe, which work plan is approved by VDOT, but any failure of the Airports Authority to comply in any material respect with such approved work plan following 60 days' notice of such failure from VDOT to the Airports Authority to cure such Airports Authority Non-Compliance by the delivery of an approved work plan shall not apply thereto. Such termination shall automatically extinguish the Airports Authority's interest and all liens and claims on or against the Airports Authority's Interest. (Section 15.02(a))

# Terminating Order That Could Result in a Termination of the Permit and Operating Agreement by VDOT or the Airports Authority (Section 14.01(c))

Either the Airports Authority or VDOT may terminate the Permit and Operating Agreement if any Terminating Order is issued or entered prior to final acceptance of the Dulles Metrorail Project that (i) prevents, prohibits, or invalidates the transfer to the Airports Authority of operational control over the Dulles Toll Road under the Permit and Operating Agreement, (ii) prevents or prohibits the Airports Authority from being able to obtain or maintain the financing permitted by the Permit and Operating Agreement to enable the Airports Authority to meet its obligations with respect to Dulles Toll Road operations or the Dulles Metrorail Project, or (iii) prevents or prohibits the Airports Authority from being able to construct the Dulles Metrorail Project, in any such case, for a reason not arising directly and solely from an intentional act of malfeasance or misfeasance by the Airports Authority. After final acceptance of the Dulles Metrorail Project, either the Airports Authority or VDOT may terminate the Permit and Operating Agreement if any Terminating Order is issued or entered that prevents, prohibits, or invalidates the transfer to the Airports Authority of operational control over the Dulles Toll Road under the Permit and Operating Agreement. In the event that such a Terminating Order is issued or entered, the rights and obligations summarized in the following three paragraphs are the sole remedy available to VDOT and the Airports Authority.

If the Airports Authority chooses to exercise such termination rights it shall, within 14 days of the issuance of the Terminating Order, issue written notice to VDOT, VDRPT and the Trustee of its intent to exercise such right (the "Airports Authority Re-Assignment Intent Notice"). If an Airports Authority Re-Assignment Intent Notice is issued, the Airports Authority and VDOT shall, as promptly as is practicable, meet with VDRPT to determine the feasibility of restructuring the obligations of the Airports Authority set forth in the Permit, Transfer and Rail Documents to enable the Dulles Metrorail Project to proceed in a manner that is not inconsistent with the terms of the Terminating Order. If the Airports Authority concludes that such restructuring is achievable, it shall in good faith negotiate with VDOT appropriate amendments to such of the Permit, Transfer and Rail Documents as are necessary to reflect such restructuring. If, after the meeting with VDOT and VDRPT, the Airports Authority concludes that such restructuring is not feasible, or despite the negotiation efforts described in the immediately preceding sentence, either (i) the parties conclude that such restructuring isn't feasible or (ii) within a period of 120

days after issuance of the Airports Authority Re-Assignment Intent Notice, the parties are unable to agree on mutually acceptable amendments to the Permit, Transfer and Rail Documents, the Airports Authority may thereafter issue written notice to VDOT, VDRPT and the Trustee of the exercise of its termination right (the "Airports Authority Re-Assignment Notice"). The Airports Authority shall not have the right to terminate the Permit and Operating Agreement if the Terminating Order is a result of an Airports Authority Non-Compliance.

If VDOT chooses to exercise such termination right, it shall, within 14 days of the issuance of the Terminating Order, issue written notice to the Airports Authority, VDRPT and the Trustee of its intent to exercise such right (the "Department Re-Assignment Intent Notice"). If a Department Re-Assignment Intent Notice is issued, VDOT and the Airports Authority shall, as promptly as is practicable, meet with VDRPT to determine the feasibility of restructuring the obligations of the Airports Authority set forth in the Permit, Transfer and Rail Documents to enable the Dulles Metrorail Project to proceed in a manner that is not inconsistent with the terms of the Terminating Order. If VDOT concludes that such restructuring is achievable, it shall in good faith negotiate appropriate amendments to such of the Permit, Transfer and Rail Documents as are necessary to reflect such restructuring. If, after the meeting with VDRPT and the Airports Authority, VDOT concludes that such restructuring is not feasible, or despite the negotiation efforts described in the immediately preceding sentence, either (i) the parties conclude that such restructuring isn't feasible or (ii) within a period of 120 days after issuance of the VDOT Re-Assignment Intent Notice, the parties are unable to agree on mutually acceptable amendments to the Permit, Transfer and Rail Documents, VDOT may thereafter issue written notice to the Airports Authority, VDRPT and the Trustee of the exercise of its termination right (the "Department Re-Assignment Notice"). VDOT shall not have the right to terminate the Permit and Operating Agreement if the Terminating Order is a result of a VDOT Non-Compliance event.

### FFGA Not Issued by FTA by December 31, 2008

In the event the FFGA is not issued by the FTA by December 31, 2008, the Airports Authority and VDOT may mutually agree thereafter to terminate the Permit and Operating Agreement.

# **Trustee's Right to Cure (Section 5.03)**

Should any event or condition occur which would either immediately or, following the applicable grace period or the giving of notice or both, enable VDOT to terminate or suspend its obligation under the Permit and Operating Agreement (each, a "**Termination Event**"), except as a remedy for a Non-Compliance relating to the failure of the Airports Authority to use its best efforts to complete the Dulles Metrorail Project as described above under the subheading "Failure to Use Best Efforts to Complete Dulles Metrorail Project" or issuance of a Terminating Order as described above, VDOT shall not terminate the Permit and Operating Agreement until it first gives written notice of such Termination Event to the Trustee, and provides the Trustee a reasonable opportunity to cure such Termination Event, as described below:

• The Trustee may, within 45 days (such 45-day period to be in addition to any cure period provided to the Airports Authority in the Permit and Operating Agreement) after receipt of written notice thereof from VDOT to the Trustee, remedy such Termination Event or cause the same to be remedied by an entity to be designated by the Trustee reasonably acceptable to VDOT. If the Termination Event is such that it cannot be remedied within such 45-day period despite the exercise of diligent efforts commencing promptly after delivery of the written notice of the Termination Event, or if possession is necessary in order to effect such cure, the Trustee shall have commenced a cure within such period or shall have commenced the appropriate legal or other action to foreclose the liens of the Indenture so as to take possession of the Dulles Toll Road and shall thereafter diligently continue to pursue such

remedy to completion, but in all events in not more than 180 days after written notice from VDOT as provided in the preceding paragraph. If the Termination Event is peculiar to the Airports Authority and is not curable by the Trustee, such as insolvency, bankruptcy or a similar proceeding, or liquidation of the Airports Authority or its properties, then notwithstanding VDOT's right to terminate, the Trustee shall not be required to cure such Termination Event but shall instead be entitled to exercise its rights under the Indenture and the Permit and Operating Agreement.

• If the Trustee is prohibited by any process, stay or injunction issued by any court or by any bankruptcy or insolvency proceeding involving the Airports Authority from curing any Termination Event, the time specified above for curing any Termination Event shall be extended for the period of such prohibition, but not in excess of 180 days.

If the Trustee's right to cure an Airports Authority Non-Compliance has not expired, and the Trustee is acting to cure such Airports Authority Non-Compliance in accordance with the Permit and Operating Agreement, then VDOT shall not exercise its right to terminate the Permit and Operating Agreement by reason of such Airports Authority Non-Compliance. In furtherance of the foregoing, VDOT shall permit the Trustee and its Substituted Operator the same access to the Dulles Toll Road as is permitted to the Airports Authority under the Permit and Operating Agreement. VDOT shall accept any such performance by the Trustee as though the same had been done or performed by the Airports Authority.

Any payment to be made or action to be taken by the Trustee under the Permit and Operating Agreement as a prerequisite to keeping the Permit and Operating Agreement in effect shall be deemed properly to have been made or taken by the Trustee if such payment is made or action is taken by a Substituted Operator approved by VDOT. VDOT's approval of a proposed Substituted Operator may be withheld only if VDOT reasonably determines that the proposed Substituted Operator does not have the financial resources, qualifications or experience to timely perform the Airports Authority's obligations under the Permit and Operating Agreement. To be qualified, the proposed Substituted Operator and its affiliates must not have been debarred or prohibited from participation in state or federally-funded projects, or indicted, convicted, pled guilty or nolo contendere to a violation of Law involving fraud, conspiracy, collusion, bribery, perjury, material misrepresentation, or any other violation that shows a similar lack of moral or ethical integrity. VDOT will approve or disapprove a proposed Substituted Operator within 30 days after it receives from the Trustee a request for approval together with such information, evidence and supporting documentation concerning the financial resources, qualifications and experience of the proposed Substituted Operator as VDOT may request in good faith.

The foregoing shall not preclude or delay VDOT from exercising any remedies for an Airports Authority Non-Compliance, other than termination of the Permit and Operating Agreement.

# **VDOT's Remedies Upon Occurrence of Events That Could Result in a Termination of the Permit and Operating Agreement**

If VDOT exercises its right of termination in connection with the events described above under the sub-headings "Safety Danger," "Impermissible Transfer," "Certain Bankruptcy or Insolvency Events," "Failure to Dismiss Certain Proceedings or Appointment of Receiver or Similar Official" or "Levy or Attachment," subject to the Trustee's right to cure as described above, then VDOT may (i) terminate the Airports Authority's right of possession of the Dulles Toll Road and in such event, VDOT or VDOT's agents may immediately or at any time thereafter re-enter the Dulles Toll Road and remove all Persons and all or any property therefrom, by any available action or proceeding at law or in equity, and with or without terminating the Permit and Operating Agreement, and repossess and enjoy the Dulles Toll Road; provided, however, that no reentry by VDOT shall be construed as an election on its part to terminate the Permit and

Operating Agreement unless a notice of such intention is given to the Airports Authority; provided, further, that any re-entry or termination of the Permit and Operating Agreement made in accordance with the Permit and Operating Agreement as against the Airports Authority shall be valid and effective against the Airports Authority even though made subject to the rights of the Trustee to cure any default or non-compliance of the Airports Authority and continue as in the place of the Airports Authority under the Permit and Operating Agreement or any other agreement as provided therein; (ii) subject to applicable Law, distrain against any of the Airports Authority's goods situated on the Dulles Toll Road, and the Airports Authority waives any statutory protections and exemptions in connection therewith; and/or (iii) close any and all portions of the Dulles Toll Road. (Section 15.02(f))

If VDOT and/or the Airports Authority, as applicable, exercises its right of termination in connection with the events described above under the sub-headings "Terminating Order That Could Result in a Termination of the Permit and Operating Agreement by VDOT or the Airports Authority," "Failure to Use Best Efforts to Complete Dulles Metrorail Project" or "FFGA Not Issued by FTA by December 31, 2008," then VDOT shall, subject to General Assembly approval, as required, and subject to appropriation by the General Assembly, either (i) enter into a new agreement with the Trustee to continue to collect tolls on the Dulles Toll Road and remit them to the Trustee for the benefit of the Bondholders or (ii) provide sufficient funds to the Airports Authority to pay, purchase, redeem, defease or otherwise provide for the satisfaction of any outstanding Bonds; provided, however, that contemporaneously with the execution of any such agreement with the Trustee or the provision of sufficient funds to the Airports Authority, the Airports Authority shall reassign to VDOT (x) all then existing Transferred Assets that were assigned or transferred by VDOT to the Airports Authority pursuant to the Transfer Agreement, and any other assets acquired by the Airports Authority after November 1, 2008 with Toll Revenues, excluding assets acquired for or in connection with the Dulles Metrorail Project (which assets are transferred to VDRPT in accordance with the provisions of the Assignment Agreement) and (y) after reimbursement to the Airports Authority of its outstanding expenditures required by the Permit and Operating Agreement, the Transfer Agreement and the Assignment Agreement, all remaining proceeds of any outstanding Bonds and all moneys held in any reserve fund created under the Indenture that in either case are not required to be applied to reduce outstanding amounts thereunder, together with all Toll Revenues held by or under the control of the Airports Authority. The decision to proceed under the provisions of either clause (i) or clause (ii) above shall be made by VDOT at its sole option. In carrying out its obligations in either clause (i) or (ii) above, VDOT annually shall request necessary appropriations of Toll Revenues from the General Assembly. (Section 14.01(d))

# Airports Authority Non-Compliance Events That Will <u>Not</u> Result in a Termination of the Permit and Operating Agreement by VDOT (Section 15.01(a), (b) and (c))

The occurrence of any one or more of the following events during the Term constitutes an "Airports Authority Non-Compliance" event that permits VDOT to exercise certain rights and remedies under the Permit and Operating Agreement, but does <u>not</u> permit VDOT to terminate the Permit and Operating Agreement:

- if any representation or warranty made by the Airports Authority in the Permit and Operating Agreement is inaccurate or misleading in any respect as of November 1, 2008, and a material adverse effect upon the ability of the Airports Authority to meet its obligations under the Permit and Operating Agreement or VDOT's rights under the Permit and Operating Agreement results therefrom;
- if the Airports Authority fails to pay to VDOT when due all monies payable to VDOT under the Permit and Operating Agreement, and such failure continues unremedied for a period of 30 days following notice thereof; or
• if the Airports Authority fails to comply with, perform or observe any material obligation, covenant, agreement, term or condition in the Permit and Operating Agreement (other than as described under the subheading above entitled "Safety Danger" and such failure is not excused by force majeure and continues unremedied for a period of 90 days following notice thereof (giving particulars of the failure in reasonable detail) from VDOT to the Airports Authority or for such longer period as may be reasonably necessary to cure such failure, provided, in the latter case, that the Airports Authority has demonstrated to the satisfaction of VDOT, acting reasonably, that (i) it is proceeding, and will proceed, with all due diligence to cure or cause to be cured such failure, (ii) its proceeding can be reasonably expected to cure or cause to be cured such failure within a reasonable period of time acceptable to VDOT, acting reasonably, and (iii) such failure is in fact cured within such period of time.

# VDOT Remedies Upon Airports Authority Non-Compliance <u>Not</u> Resulting in Termination (Section 15.02)

Upon the occurrence of an Airports Authority Non-Compliance, VDOT may, by notice to the Airports Authority with a copy to the Trustee, declare the Airports Authority to be in non-compliance with the Permit and Operating Agreement. If the Airports Authority Non-Compliance permits VDOT to terminate the Permit and Operating Agreement, see "VDOT's Remedies Upon Airports Authority Non-Compliance Events That Could Result in a Termination of the Permit and Operating Agreement" above. In all cases, VDOT may do any or all of the following as VDOT, in its discretion, shall determine:

- If the Airports Authority Non-Compliance is by reason of the failure to pay any monies, VDOT may (without any obligation to do so) make payment on behalf of the Airports Authority of such monies, and any amount so paid by VDOT shall be payable by the Airports Authority to VDOT within three Business Days after demand therefore.
- VDOT may cure the Airports Authority Non-Compliance (but this shall not obligate VDOT to cure or attempt to cure an Airports Authority Non-Compliance or, after having commenced to cure or attempted to cure an Airports Authority Non-Compliance, to continue to do so), and all costs and expenses reasonably incurred by VDOT in curing or attempting to cure the Airports Authority Non-Compliance, including VDOT's reasonable allocable costs, together with an administrative fee equal to 15% of such costs and expenses, shall be payable by the Airports Authority to VDOT within three Business Days of demand; provided, however, that (i) VDOT shall not incur any liability to the Airports Authority for any act or omission of VDOT or any other Person in the course of remedying or attempting to remedy any Airports Authority Non-Compliance, and (ii) VDOT's cure of any Airports Authority Non-Compliance shall not affect VDOT's rights against the Airports Authority by reason of the Airports Authority Non-Compliance.
- VDOT may seek specific performance, injunction or other equitable remedies, it being acknowledged that damages are an inadequate remedy for an Airports Authority Non-Compliance.
- VDOT may seek to recover its Losses arising from such Airports Authority Non-Compliance and any amounts due and payable under the Permit and Operating Agreement (including the Airports Authority's obligation to pay interest at the rate set forth in the Permit and Operating Agreement from the date a payment is due until paid) and, in connection therewith, exercise any recourse available to any Person who is owed damages or a debt.

- In the event any Toll Revenues are used to pay a claim or obligation unrelated to Dulles Toll Road purposes and Dulles Metrorail Project purposes, the Airports Authority shall reimburse such funds in full to the Dulles Toll Road account containing such funds, or, if the Permit and Operating Agreement has been terminated, shall repay the amount of such Toll Revenues to VDOT, without interest, in either case from any other available revenues or funds of the Airports Authority (other than Toll Revenues), which obligation shall survive the termination of the Permit and Operating Agreement.
- VDOT may exercise any of its other rights and remedies provided for under the Permit and Operating Agreement or at law or equity.

# Airports Authority's Rights to Terminate the Permit and Operating Agreement (Section 14.01(c) and Section 15.03))

The Airports Authority may terminate the Permit and Operating Agreement if any Terminating Order is issued or entered prior to final acceptance of the Dulles Metrorail Project. See "Airports Authority Non-Compliance That Could Result in a Termination of the Permit and Operating Agreement by VDOT – Terminating Order."

In addition, the Airports Authority is entitled to terminate the Permit and Operating Agreement in the event of a material VDOT Non-Compliance that materially impairs the Airports Authority's rights to realize the benefits of the Permit granted under the Permit and Operating Agreement (more particularly, that materially impairs the Airports Authority's rights under the Permit and Operating Agreement to operate the Dulles Toll Road and to impose and collect tolls on the users thereof).

The occurrence of any one or more of the following events shall constitute a "VDOT Non-Compliance" under the Permit and Operating Agreement:

- if any representation or warranty made by VDOT in the Permit and Operating Agreement is inaccurate or misleading in any respect as of November 1, 2008, and a material adverse effect upon the Dulles Toll Road or the Airports Authority's rights or obligations under the Permit and Operating Agreement results therefrom;
- if VDOT fails to comply with or observe any material obligation, covenant, agreement, term or condition in the Permit and Operating Agreement, and such failure is not excused by force majeure and continues unremedied for a period of 90 days following notice thereof (giving particulars of the failure in reasonable detail) from the Airports Authority to VDOT or for such longer period as may be reasonably necessary to cure such failure, provided, in the latter case, that VDOT has demonstrated to the satisfaction of the Airports Authority, acting reasonably, that (i) it is proceeding with all due diligence to cure or cause to be cured such failure, (ii) its proceeding can be reasonably expected to cure or cause to be cured such failure within a reasonable period of time acceptable to the Airports Authority, acting reasonably, and (iii) such failure is in fact cured within such period of time;
- if a levy under execution or attachment has been made against all or any part of the Dulles Toll Road or the Airports Authority's Interest as a result of any Lien (other than a permitted Lien) created, incurred, assumed or suffered to exist by VDOT or any Person claiming through it, and such execution or attachment has not been vacated, removed or stayed by court order, bonding or otherwise within a period of 60 days, unless such levy resulted from actions or omissions of the Airports Authority or its representatives or if all or a material part of the Dulles

Toll Road is subject to a condemnation or a similar taking by the Commonwealth or any agency thereof; and

if VDOT (i) admits, in writing, that it is unable to pay its debts as they become due, (ii) makes an assignment for the benefit of its creditors, (iii) files a voluntary petition under Title 11 of the U.S. Code, or if such petition is filed against it and an order for relief is entered, or if VDOT files any petition or answer seeking, consenting to or acquiescing in any reorganization, arrangement, composition, readjustment, liquidation, dissolution or similar relief under the present or any future U.S. bankruptcy code or any other present or future applicable Law, or shall seek or consent to or acquiesce in of suffer the appointment of any trustee, receiver, custodian, assignee, sequestrator, liquidator or other similar official of VDOT, or of all or any substantial part of its properties (in each case, to the extent applicable to a state agency), or (iv) takes any action in furtherance of any action described in this paragraph; or if within 90 days after the commencement of any proceeding against VDOT seeking any reorganization, arrangement, composition, readjustment, liquidation, dissolution or similar relief under the present or any future U.S. bankruptcy code or any other present or future applicable Law, such proceeding has not been dismissed, or if, within 90 days after the appointment, without the consent or acquiescence of VDOT, of any trustee, receiver, custodian, assignee, sequestrator, liquidator or other similar official of VDOT or of all or any substantial part of its properties (in each case, to the extent applicable to a state agency), such appointment has not been vacated or stayed on appeal or otherwise, or if, within 90 days after the expiration of any such stay, such appointment has not been vacated.

#### **Remedies of the Airports Authority upon VDOT Non-Compliance (Section 15.04)**

Upon the occurrence of a VDOT Non-Compliance, the Airports Authority may by notice to VDOT declare VDOT to be in non-compliance and may do any or all of the following as the Airports Authority, in its discretion, shall determine:

- upon the occurrence of an event described in the second bullet point under the heading "Airports Authority's Rights to Terminate the Permit and Operating Agreement," the Airports Authority may terminate the Permit and Operating Agreement by giving 90 days' prior written notice to VDOT; provided, however, that VDOT shall be entitled to cure a VDOT Non-Compliance by providing the Airports Authority with a written work plan within such 90-day period outlining the actions by which VDOT will ensure future compliance with the obligation, covenant, agreement, term or condition in the Permit and Operating Agreement that VDOT failed to perform or observe, which work plan is approved by the Airports Authority (which approval shall not be unreasonably withheld, delayed or conditioned), but any failure of VDOT to comply in any material respect with such approved work plan following 90 days' notice of such failure from the Airports Authority to VDOT shall be deemed to be a VDOT Non-Compliance and the entitlement of VDOT to cure such VDOT Non-Compliance by the delivery of an approved work plan shall not apply thereto; and, upon such termination VDOT shall be obligated to take the actions set forth in the Permit and Operating Agreement, plus pay, without duplication, the reasonable out-of-pocket and documented costs and expenses incurred by the Airports Authority as a result of such termination, including its reasonable allocable costs, provided, however, that VDOT will be entitled to receive from the Airports Authority the remaining proceeds from any outstanding Bonds;
- the Airports Authority may exercise any of its rights and remedies at law or in equity;

- the Airports Authority may seek to recover its Losses and any amounts due and payable under the Permit and Operating Agreement (including VDOT's obligation to pay interest at the rate set forth in the Permit and Operating Agreement from the date a payment is due until paid) and, in connection therewith, exercise any recourse available to any Person who is owed damages or a debt; and
- the Airports Authority may exercise any of its other rights and remedies provided for in the Permit and Operating Agreement.

#### **Transfers by the Airports Authority (Article 18)**

Without the written consent of VDOT, the Airports Authority shall not Transfer, or otherwise permit the Transfer of, any or all of the Airports Authority's Interest to or in favor of any Person (a "**Transferee**") unless it is the Trustee, a Bondholder or a transferee from the Trustee. Any Transfer made in violation of the foregoing provision shall be null and void ab initio and of no force and effect.

With the express written consent of VDOT, the Airports Authority may enter into a concession or similar agreement with a private Person to operate and maintain the Dulles Toll Road; provided, however, the Airports Authority is not precluded from entering into an agreement with any Person to provide contract services to the Airports Authority.

No Transfer of all or any of the Airports Authority's Interest shall be made or have any force or effect if, at the time of such Transfer there has occurred an Airports Authority Non-Compliance that has not been remedied or an event that with the lapse of time, the giving of notice or otherwise would constitute an Airports Authority Non-Compliance.

VDOT may transfer and assign its interests in the Dulles Toll Road and the Permit and Operating Agreement to any other public agency or public entity as permitted by Law and the 1983 Easements, provided that thee successor or assignee has assumed all of VDOT's obligations, duties and liabilities under the Permit and Operating Agreement, and has provided the Airports Authority with reasonable assurance of its legal authority and sufficient financial resources to honor and perform the same.

#### Airports Authority's Actions Upon Termination (Section 14.02)

On the effective date of termination of the Permit and Operating Agreement or the Airports Authority's rights thereunder, whether due to expiration or earlier termination of the Term, the Airports Authority shall deliver to VDOT, among other things, the Transferred Assets and all amounts that appear in the financial records of the Airports Authority relating to the Dulles Toll Road Operations and the Dulles Toll Road.

VDOT shall, as of the effective date of termination of the Permit and Operating Agreement or the Airports Authority's rights thereunder, whether due to expiration or earlier termination of the Term, assume full responsibility for the Dulles Toll Road Operations, and as of such date, the Airports Authority shall have no liability or responsibility for such Dulles Toll Road Operations occurring after such date; provided, however, that VDOT and the Airports Authority shall remain fully responsible for all of their respective obligations or liabilities under the Permit and Operating Agreement arising before the effective date of termination.

## **APPENDIX D**

## DULLES TOLL ROAD INVESTMENT-GRADE TRAFFIC AND REVENUE STUDY, DATED DECEMBER 6, 2021

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# Dulles Toll Road Investment Grade Traffic and Revenue Study

F Y I

Final Report

December 6, 2021



Stantec Consulting Services Inc.

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# Abbreviations

ACM	Automatic Cash Machines
CAGR	Compound Annual Growth Rate
CES	Current Employment Statistics
DTR	Dulles Toll Road
ETC	Electronic Toll Collection
HOV	High-Occupancy Vehicle
НОТ	High Occupancy Toll
IAD	Dulles International Airport
JSL	J. Scott Lane Company
LRTP	Visualize 2045 Long-Range Transportation Plan for The National Capital Region
MCV	MCV Associates, Inc.
MWCOG	Metropolitan Washington Council of Governments
SCC	State Corporation Commission
SOV	Single-Occupancy Vehicle
SR	State Route
T&R	Traffic and Revenue
TIP	FY 2021–2024 Transportation Improvement Program for the National Capital Region
VDOT	Virginia Department of Transportation
VOT	Value of Time
WFH	Work From Home



# **1.0 INTRODUCTION**

Stantec Consulting Services Inc. (Stantec) was retained by the Metropolitan Washington Airports Authority (Airports Authority or MWAA) to develop a long-term traffic and revenue (T&R) forecast for the Dulles Toll Road (DTR). The study analysis is conducted at an investment-grade level and is considered suitable for use in project financing.

This T&R study incorporates up-to-date assumptions regarding proposed highway and transit network improvements within the study area, the economic outlook for the jurisdictions in the region, and actual DTR T&R performance through September 2021. Additionally, the forecast incorporates impacts of prior and planned future toll rate adjustments on both the DTR and nearby competing facilities.

## 1.1 STUDY AREA

The DTR, which makes up part of State Route (SR) 267, runs between I-495 and Virginia Route 28 in eastern Loudoun County, Virginia where it connects directly with the Dulles Greenway, as shown in Figure 1-1. A map of the DTR within the region along with the surrounding major roadway network, including existing and planned toll roads is shown in Figure 1-2. These parallel and intersecting roads influence traffic on the DTR. Northern Virginia has a heavily travelled, congested roadway network owing to a population that is both high density and high income.

The DTR provides access within the Dulles Corridor to well-established activity centers in the Northern Virginia region, such as Tysons Corner and the Reston-Herndon area in Fairfax County, Washington Dulles International Airport (IAD) and eastern Loudoun County. The western terminus of the DTR, SR 267 becomes the Dulles Greenway, which is a privately owned 14-mile toll road that runs westward to US 15/SR 7 in Leesburg. The Dulles Greenway provides access to IAD near its eastern end.





Figure 1-1 Regional Location Map





Figure 1-2 Study Area Major Roadway Network



Parallel roads that are alternatives to the DTR include:

- Interstate 66 (I-66) Outside the Beltway (the beltway around the Washington, D.C. area)
- US Route 29 (Lee Highway)
- US Route 50 (Lee-Jackson Memorial Highway / Arlington Boulevard)
- State Route 7 (Leesburg Pike)

Roadways that intersect with the DTR and serve as complementary feeder routes include:

- Dulles Greenway
- I-495 (Capital Beltway)
- I-66 Inside the Beltway
- State Route 28 (Sully Road)
- State Route 123 (Chain Bridge Road)
- State Route 286 (Old Route 7100, Fairfax County Parkway)

Other major roadways in the region:

- I-95
- I-395
- I-270

Based on the FY 2021–2024 Transportation Improvement Program for the National Capital Region (TIP) and Visualize 2045 Long-Range Transportation Plan for The National Capital Region (LRTP), additional future toll facility expansions include:

- I-66 Outside the Beltway to widen and construct high occupancy toll (HOT) lanes from University Boulevard to I-495 (2023);
- I-95 Express Lanes Fredericksburg Extension to continue Express Lanes on I-95 from the existing terminus to US 17 (2025);
- 495 Express Lanes, to expand existing HOT system from the George Washington Parkway to the American Legion Bridge (2025); and
- Express Lanes on I-495 from the American Legion Bridge to the Woodrow Wilson Bridge and I-270 from I-495 to I-70 (Maryland). These are proposed public private partnership projects sponsored by the Maryland Department of Transportation.

## 1.2 THE AIRPORTS AUTHORITY

The Airports Authority was established in 1986 to operate, maintain, improve, develop, protect, and promote both Ronald Reagan Washington National Airport and Washington Dulles International Airport (the Airports). Pursuant to a 1987 agreement with the federal government, the Airports Authority assumed operating responsibility for both Airports and obtained a leasehold interest in, and other rights with respect to, the Airports and the Dulles Access Right-of-Way, a 16.2-mile stretch of land, located between I-66, in eastern Fairfax County, Virginia and the eastern boundary of IAD.

In November 2008, the Airports Authority assumed the responsibility of operating the DTR, as well as the construction of the Dulles Metrorail Project – a 23-mile extension of the existing Metrorail system operated by the Washington Metropolitan Area Transit Authority (WMATA) referred to as the "Silver Line" or the Dulles Metrorail Project. The first phase of the Dulles Metrorail Project (Dulles Metrorail Project – Phase 1)



was completed in 2014 and turned over to WMATA. The second phase of the Dulles Metrorail Project (Dulles Metrorail Project – Phase 2), which extends from Wiehle Avenue in western Fairfax County, through IAD, to Route 772 in eastern Loudoun County has achieved substantial completion and is expected to open to passengers in 2022. Once the Dulles Metrorail Project - Phase 2 is completed and turned over to WMATA, all associated operating expenses become the sole responsibility of WMATA.

Proceeds from debt secured by DTR revenue have provided a significant portion of the funding for the Dulles Metrorail Project. The Airports Authority has covenanted to plan and implement periodic toll rate increases as needed to operate and maintain the DTR and meet its debt service obligations.

## 1.3 THE DULLES TOLL ROAD

The DTR is an eight-lane, tolled roadway with four lanes in each direction. It is approximately 13.4 miles in length and runs between I-495 and Virginia Route 28 in eastern Loudoun County, Virginia where it connects directly with the Dulles Greenway. The DTR was constructed by the Virginia Department of Transportation (VDOT) and opened to traffic in October 1984. The DTR is configured with one mainline toll plaza at the eastern end and a total of 19 ramp toll plazas at various interchanges throughout the roadway.

When it originally opened in 1984, the DTR included two lanes in each direction and eight full interchanges. A ninth interchange and two partial interchanges were subsequently constructed as a means of increasing local access. In 1992, VDOT widened the DTR to six lanes, followed by further widening to eight lanes in 1998; both widenings were in response to increasing demand. Major improvements to the I-495 ramps were made first in 2005 and more recently, with interchange improvements and reconfigurations associated with the 495 Express Lanes project (a privately financed and operated 14-mile HOT lane segment extending from the Springfield interchange to north of the DTR), which opened in November 2012.

A limited-access, non-toll highway, known as the Dulles International Airport Access Highway (Access Highway), runs through the center of the DTR. It is a four-lane highway, with two lanes in each direction. The Access Highway is a toll-free option that only customers of IAD, certain public mass transit vehicles, and persons with business at IAD are permitted to use. The Airports Authority police strictly enforce proper usage of the Access Highway.



## 1.4 PROJECT CONFIGURATION

Figure 1-3, below, shows a diagram of the DTR from I-66 to the Dulles Greenway mainline plaza. The DTR has one mainline toll plaza at the eastern end near Spring Hill Road. There are 19 toll plazas on interchange ramps along the length of the roadway. The gantry locations on both the ramps and mainline, as well as the present toll rates are also depicted in the map and listed below from west to east.

- Sully Road South Westbound Off-Ramp (Exit 9A)
- Sully Road North Westbound Off-Ramp (Exit 9B)
- Sully Road Eastbound On-Ramp
- Centreville Road Westbound Off-Ramp (Exit 10)
- Centreville Road Eastbound On-Ramp
- Fairfax Parkway Westbound Off-Ramp (Exit 11)
- Fairfax Parkway Eastbound On-Ramp
- Reston Parkway Westbound Off-Ramp (Exit 12)
- Reston Parkway Eastbound On-Ramp
- Wiehle Avenue Westbound Off-Ramp (Exit 13)
- Wiehle Avenue Eastbound On-Ramp
- Huntermill Road Westbound Off-Ramp (Exit 14)
- Huntermill Road Eastbound On-Ramp
- Monroe Street P&R Eastbound On-Ramp
- SR 7 Eastbound Off-Ramp (Exit 16)
- Mainline Plaza Westbound
- Mainline Plaza Eastbound
- Spring Hill Road Westbound On-Ramp
- Spring Hill Road Eastbound Off-Ramp (Exit 17)
- Spring Hill Road Westbound Off-Ramp (Exit 17)
- Spring Hill Road Eastbound On-Ramp

Figure 1-3 also includes the Access Highway made up of two lanes in each direction along the entire length of the DTR but separated by a physical barrier. There are several ramps that allow customers westbound entrance to or eastbound exit from the Access Highway, thereby only allowing direct trips to or from IAD.

#### Figure 1-3 Dulles Toll Road Map, Access Locations, and 2021 Toll Costs





Historically, tolls on the DTR were collected through cash payments at attended toll booths, exact change, or E-ZPass. In response to the COVID-19 pandemic (the pandemic) and for the safety of the traveling public, the Airports Authority suspended manual toll collections in April 2020 but continues to accept exact change coin payments.

The Airports Authority has undertaken several capital improvements on the DTR in recent years, including replacement of the toll collection system and the addition of digital lane signage, enhanced violation camera technology, and upgraded vehicle classification readers and antennas. With these technological enhancements in place, customers without an E-ZPass are currently being invoiced for only the toll charge, with no additional charges unless non-payment occurs, resulting in a violation. Although exact change only cash payment is still an option for DTR customers via automatic cash machines (ACM), the Airports Authority plans to phase out the ACM payment option in 2022.

## 1.5 DTR TOLL RATES

The DTR opened in 1984 with an initial ramp toll of \$0.25 and a mainline toll of \$0.50. Since that time, there have been seven toll increases. In 2011, 2012, and 2014, only the mainline toll rate increased while the ramp tolls remained the same. The most recent toll increase occurred in January 2019, when rates were increased by \$0.75 for two-axle vehicles at the mainline toll plaza and by \$0.50 at ramps. Currently, ramp tolls are \$1.50, and the mainline toll rate is \$3.25 for two-axle vehicles. Three-axle vehicles pay double the two-axle rate with an additional \$0.50 on ramps and \$1.25 on the mainline for each axle beyond the first three. Toll rates are the same regardless of payment type. Future toll increases are planned for the DTR starting in 2023 and every five years thereafter. For the purposes of this study, future DTR toll rate adjustments are based on the projected toll rate schedule developed by the financial advisors to the Airports Authority for financial planning purposes. Both a history of DTR toll rates and future planned tolls are shown in Table 1-1.

At the western terminus of the DTR, the Dulles Greenway has a mainline toll plaza in both directions. In addition to the Dulles Greenway mainline toll collected at this plaza, a toll is collected and remitted back to the Airports Authority as DTR toll revenue. The DTR portion of the toll is equal to the ramp rate of \$1.50 for two-axle vehicles or the appropriate multi-axle tolls.



				Ma	ainli	ne				
Year	2	Axles	3	Axles	4	Axles	5	Axles	6 Axles	
1984	\$	0.50	\$	1.00	\$	1.00	\$	1.00	\$	1.00
2005	\$	0.75	\$	1.00	\$	1.25	\$	1.50	\$	1.75
2010	\$	1.00	\$	1.25	\$	1.50	\$	1.75	\$	2.00
2011	\$	1.25	\$	1.50	\$	1.75	\$	2.00	\$	2.25
2012	\$	1.50	\$	1.75	\$	2.00	\$	2.25	\$	2.50
2013	\$	1.75	\$	3.50	\$	4.50	\$	5.25	\$	6.25
2014	\$	2.50	\$	5.00	\$	6.25	\$	7.50	\$	8.75
2019	\$	3.25	\$	6.50	\$	7.75	\$	9.00	\$	10.25
2023	\$	4.00	\$	8.00	\$	10.00	\$	12.00	\$	14.00
2028	\$	4.75	\$	9.50	\$	11.88	\$	14.25	\$	16.63
2033	\$	5.50	\$	11.00	\$	13.75	\$	16.50	\$	19.25
2038	\$	6.25	\$	12.50	\$	15.63	\$	18.75	\$	21.88
2043	\$	7.00	\$	14.00	\$	17.50	\$	21.00	\$	24.50
2048	\$	7.75	\$	15.50	\$	19.38	\$	23.25	\$	27.13

Ramps Year 2 Axles 3 Axles 4 Axles 5 Axles 6 Axles 1984 \$ 0.25 \$ 0.50 \$ 0.50 \$ 0.50 \$ 0.50 2005 \$ 0.50 \$ 0.75 \$ 1.00 \$ 1.25 \$ 1.50 \$ 0.75 \$ 1.00 \$ 1.25 \$ 1.25 \$ 1.50 2010 1.00 1.25 0.75 \$ 1 25 \$ 2011 \$ \$ \$ 1 50 2012 \$ 0.75 \$ 1.00 \$ 1.25 \$ 1.25 \$ 1.50 2013 \$ 1.00 \$ 2.00 2.50 \$ 3.00 \$ 3.50 \$ \$ \$ \$ 2014 \$ 1.00 2.00 \$ 2.50 3.00 3.50 \$ 1.50 \$ 3.00 \$ 3.50 \$ 4.00 \$ 4.50 2019 2.00 \$ 4.00 5.00 \$ 6.00 \$ 7.00 2023 \$ \$ 2028 \$ 2 50 \$ 5.00 6 25 \$ 7 50 \$ 8 75 \$ 2033 \$ 3.25 \$ 6.50 \$ 8.13 \$ 9.75 \$ 11.38 2038 \$ 3.75 \$ 7.50 \$ 9.38 \$ 11.25 \$ 13.13 2043 \$ 4.25 \$ 8.50 \$ 10.63 \$ 12.75 \$ 14.88 2048 \$ 4.75 \$ 9.50 \$ 11.88 \$ 14.25 \$ 16.63

#### Table 1-1 DTR Historical and Future Planned Toll Rates

## 1.6 DULLES GREENWAY TOLL RATES

The Dulles Greenway opened to traffic on September 29, 1995, with a base toll of \$1.75 for two-axle vehicles and \$3.50 for all other vehicles. Effective September 13, 1999, an E-ZPass discount payment option was available on the roadway. In October 2007, the toll rate schedule was modified to have three-axle vehicles pay a multiplier of two times that of the two-axle vehicle base toll, four-axle vehicles pay 2.5 times, five-axle vehicles pay 3.0 times, and six-or-more-axle vehicles pay 3.5 times. To manage congestion, a peak surcharge was introduced on January 1, 2009. The surcharge, which is applicable only to weekday traffic in the peak period and direction, is currently \$0.80.

Tolls on the privately-owned Dulles Greenway can only be increased with the permission of the Virginia State Corporation Commission (SCC). In December 2019, Toll Road Investors Partnership II, the Dulles Greenway owner and operator, filed an application to increase toll rates annually over the five-year period 2021 to 2025. However, due to economic uncertainty resulting from the pandemic, the SCC approved a shorter-term increase in April 2021 that allowed the maximum off-peak toll rate for the Dulles Greenway toll facility to be increased from \$4.75 to \$5.00 for the remainder of 2021 and from \$5.00 to \$5.25 effective January 1, 2022. For the purposes of this analysis, it is assumed that the Dulles Greenway will continue to increase tolls annually at the same rate as inflation after 2022.

## 1.7 OTHER TOLL FACILITIES IN THE REGION

There are multiple express lanes in the region that charge dynamically priced tolls as a means of optimizing traffic flows and revenues. For this study, these policies were assumed to continue during the forecast period. For facilities yet to come online, it is assumed that dynamically tolled lanes will optimize revenue and as such, is assumed in the T&R modeling platforms.



Additionally, the Maryland Transportation Authority operates many toll facilities in the region, although none are adjacent to the DTR. It is assumed that its current policies will remain in effect and no future toll increases will occur.

## 1.7.1 495 Express Lanes

At the eastern end of the DTR, in the median of the I-495 Capital Beltway, motorists can access the 495 Express Lanes, a 14-mile facility with two HOT lanes in each direction that have end points just north of the DTR and west of the I-495 Springfield Interchange with I-95. The toll rate for the 495 Express Lanes is dynamically priced to manage traffic.

### 1.7.2 I-66 Express Lanes - Inside the Beltway

In December 2017, I-66 east of I-495 (Inside the Beltway) to US 29 in Rosslyn (approximately 9 miles) was converted from operating as high occupancy vehicles of two passengers or more (HOV2+) during peak direction/hours to allow single-occupancy vehicles (SOVs) access to the roadway by paying a toll that varies based on traffic volumes and travel times. As part of the transition, the HOV-restricted hours were extended by 90 minutes in the morning and evening, with SOVs tolled on weekdays from 5:30 AM to 9:30 AM eastbound and 3:00 PM to 7:00 PM westbound. The lanes remain open to all users during off-peak periods and weekends.

HOV2+ and vanpools can travel for free with an E-ZPass Flex transponder switched to HOV-mode. Buses, motorcycles and emergency response vehicles also travel for free. The I-66 Express Lanes will switch to HOV3+ (requiring at least 3 passengers in the vehicle) when the I-66 Outside the Beltway Express Lanes open in 2023, matching the current HOV rules on the I-495 and I-95 Express Lanes.

SOVs traveling to and from IAD and those with a Clean Special Fuel License Plate are not permitted to use the I-66 HOV lanes during peak periods without paying applicable tolls.

## 1.7.3 I-66 Express Lanes - Outside the Beltway

Approximately 22 miles of I-66, extending from I-495 to Gainesville (Outside the Beltway) continues as a free route to I-81 in the Shenandoah Valley region of northwestern Virginia. One HOV2+ lane per direction is currently operational from Haymarket to I-495 in the eastbound travel direction from 5:30 AM to 9:30 AM and in the westbound travel direction from 3:00 PM to 7:00 PM Additionally, shoulder lanes are open for additional use eastbound from 5:30 AM to 11:00 AM and westbound from 2:00 PM to 8:00 PM. HOV lanes act as general purpose travel lanes outside these restricted hours, while the shoulder lanes are fully closed to vehicular travel outside the noted hours of operation. Construction is underway to convert the HOV lanes to HOT lanes and add one additional high-occupancy travel lane per direction by 2023. Final project designs present three general purpose lanes, two HOT-3+ lanes, plus a 14-foot shoulder per direction, with additional auxiliary lanes where needed.

## 1.8 SCOPE OF STUDY

Stantec reviewed the latest travel demand model from the Metropolitan Washington Council of Governments (MWCOG) to create a modified study area model. Additionally, the latest socioeconomic forecasts for Loudoun and Fairfax Counties and the entire MWCOG model region were reviewed and compared to multiple other forecasts from both official and independent sources to refine the model.



During the summer of 2021, Stantec conducted a data collection program which focused on comparing operating conditions in the Dulles Corridor to previous conditions from 2017 and 2019. This included a traffic count program, as well as obtaining speed data throughout the Dulles Corridor.

The traffic model was updated to reflect the travel patterns, trip characteristics and values of times of DTR customers. The project configuration was coded, and the model was calibrated to represent observed traffic volumes and speeds more reasonably throughout the Dulles Corridor for the model base years of 2019 and 2021.

Finally, detailed highway networks were prepared for the base model years of 2019 and 2021 and for future years 2025, 2030, 2040, and 2045. The future-year networks reflect changes envisioned by the TIP and the LRTP, which contain projects that are expected to be constructed or implemented in the region. The projects identified affect the DTR by either expanding or improving access to the DTR or improving alternate routes. Documentation of the type, scope and timing of these projects is provided in Chapter 4.

Stantec's traffic model assignments reflect tolls charged on the DTR by using Stantec toll diversion algorithms. As toll rates are adjusted, toll roads become more or less desirable relative to free roads. The toll algorithms were calibrated to reflect the actual elasticities experienced from the 2019 DTR toll increase. The projections made using this approach have been accepted by toll road agencies and funding authorities throughout the United States.

To replicate the impacts of the pandemic, work related trips were reduced for both the short-term and to a lesser extent to the long-term, as an estimated new normal level of traffic. After making the applicable traffic model assignments in the specified model years, estimated volumes in intermediate years were calculated through interpolation. Revenue was then calculated by multiplying the tolls collected at each plaza by the corresponding traffic volume at that plaza. The revenue at each plaza was summed to determine total annual toll revenue estimates for the DTR.

## 1.9 REPORT LAYOUT

This report is laid out to provide a logical progression beginning with data collection and review, to the assumptions and methodology of the analysis, and the resulting T&R estimates for the DTR as outlined below:

- Chapter 2: Existing Conditions. This section presents the existing conditions of traffic and toll revenue on the DTR and traffic patterns in the Dulles Corridor.
- Section 3: Corridor Growth Assessment. This section reviews historical and projected population and employment data that drives future demand in the Dulles Corridor.
- Chapter 4: Model Development. The development and assumptions of the forecasting model are covered.
- Chapter 5: Traffic and Revenue Forecast and Sensitivities. The traffic and revenue forecast, as well as sensitivity tests, are presented.
- Appendix A: Dulles Toll Road Return to Work Commuter Research Survey and In-Depth Interviews, Eureka Facts LLC



- Appendix B: Demographic Forecast Review, J.S. Lane Company
- Appendix C: Travel Demand Model Development and Calibration



# 2.0 EXISTING CONDITIONS

This chapter summarizes the characteristics of traffic demand on the Dulles Corridor, both in terms of historical transaction and revenue trends and existing traffic conditions on the DTR. The data presented in this chapter provide the foundation for the modeling effort and the development of key assumptions used in the traffic and revenue forecast.

## 2.1 HISTORICAL TRAFFIC AND REVENUE

Historical data presented in this chapter include transaction and revenue growth, monthly, daily, and hourly profiles, as well as transaction and revenue breakdowns by payment type. The historical discussion focuses on data through 2019. Pandemic-related traffic impacts in 2020 and 2021 are discussed in section 2.1.5.

	Year	Transactions	Revenue
	2008	110,798,902	\$ 65,480,803
	2009	109,332,616	\$ 64,893,554
	2010*	104,686,184	\$ 88,038,167
	2011*	101,534,955	\$ 94,659,539
	2012*	99,891,072	\$ 101,596,088
	2013*	98,676,217	\$ 127,059,841
	2014*	96,507,025	\$ 148,652,741
	2015	98,240,643	\$ 151,431,759
	2016	97,718,528	\$ 151,731,033
	2017	97,089,912	\$ 152,022,663
	2018	96,332,714	\$ 151,396,932
	2019*	90,971,898	\$ 197,407,329
Table 2-1 and	2020	55,079,397	\$ 122,086,646

### 2.1.1 Annual Historical Traffic and Revenue

\* Indicates a toll increase in that year

Figure 2-1 shows annual total transactions and toll revenues on the DTR from 2008 through 2020. Six toll rate increases between 2008 and 2019 resulted in increased toll revenues and declining transactions. From 2008 to 2019, toll revenues increased by approximately 11 percent per year from \$65.5 million to nearly \$200 million. Conversely, transactions decreased by approximately two percent per year from approximately 111 million transactions in 2008 to approximately 91 million transactions in 2019.



Year	Transactions	Revenue
2008	110,798,902	\$ 65,480,803
2009	109,332,616	\$ 64,893,554
2010*	104,686,184	\$ 88,038,167
2011*	101,534,955	\$ 94,659,539
2012*	99,891,072	\$ 101,596,088
2013*	98,676,217	\$ 127,059,841
2014*	96,507,025	\$ 148,652,741
2015	98,240,643	\$ 151,431,759
2016	97,718,528	\$ 151,731,033
2017	97,089,912	\$ 152,022,663
2018	96,332,714	\$ 151,396,932
2019*	90,971,898	\$ 197,407,329
2020	55,079,397	\$ 122,086,646

**Table 2-1 Annual Transactions and Revenue** 

\* Indicates a toll increase in that year

\$250 120 100 \$200 Transactions (millions) Revenue (millions) 80 \$150 60 \$100 40 \$50 20 0 \$-2008 2009 2010\*2011\*2012\*2013\*2014\* 2015 2016 2017 2018 2019\* 2020 Calendar Year Revenue — Transactions

Figure 2-1 Annual Transactions and Revenue

\* Indicates a toll increase in that year



## 2.1.2 Monthly Historical Traffic and Revenue

Table 2-2 shows monthly total transactions from January 2008 through September 2021. As discussed, annual transactions on the DTR have generally decreased in response to toll increases in 2010, 2011, 2012, 2013, 2014, and 2019. The most recent toll increase in 2019 caused the greatest pre-pandemic reduction in annual transactions with a five percent decrease compared to 2018. As shown in Table 2-2, there is greater variability in month-over-month transaction growth due to the greater number of variables that can cause shorter-term fluctuations in traffic; these include weather conditions, road closures, holidays, and schools opening or closing for the season.

Table 2-3 shows monthly toll revenues from January 2008 through September 2021. Annual toll revenues on the DTR increased after toll rate increases in 2010, 2011, 2012, 2013, 2014, and 2019. The greatest revenue growth occurred after the 2010 toll increase in which revenue grew 36 percent, when compared to the previous year. Similar to transactions, there is greater variability in month-over-month revenue growth due to a number of variables that can cause shorter-term fluctuations in traffic, such as weather conditions, road closures, holidays, and schools opening or closing for the season.



Month	2008	% Change	2009	% Change	2010	% Change	2011	% Change	2012	% Change
January	9,207,781	-8%	8,466,696	-2%	8,299,024	-6%	7,824,547	3%	8,022,521	-1%
February	8,709,460	-3%	8,416,445	-21%	6,657,821	17%	7,764,687	2%	7,889,749	-6%
March	9,351,455	0%	9,310,414	0%	9,349,797	-4%	9,018,150	-4%	8,687,041	-8%
April	9,585,976	-3%	9,337,263	-1%	9,199,462	-8%	8,483,334	-4%	8,181,616	5%
May	9,578,599	-2%	9,360,939	-3%	9,115,093	-3%	8,835,657	-1%	8,717,049	1%
June	9,385,082	3%	9,630,452	-2%	9,389,948	-5%	8,949,690	-2%	8,726,637	-4%
July	9,478,858	0%	9,508,324	-5%	9,011,255	-7%	8,375,850	1%	8,418,491	0%
August	9,158,359	2%	9,298,209	-3%	9,016,174	-4%	8,681,495	0%	8,700,231	-2%
September	9,185,049	0%	9,173,068	-5%	8,748,923	-3%	8,476,912	-4%	8,113,485	2%
October	9,731,826	-2%	9,573,659	-5%	9,140,399	-5%	8,724,624	-3%	8,428,482	3%
November	8,482,508	3%	8,710,278	-3%	8,420,491	-3%	8,169,587	0%	8,161,592	-3%
December	8,943,949	-4%	8,546,869	-2%	8,337,797	-1%	8,230,422	-5%	7,844,178	-2%
Total	110,798,902	-1%	109,332,616	-4%	104,686,184	-3%	101,534,955	-2%	99,891,072	-1%
Month	2013	% Change	2014	% Change	2015	% Change	2016	% Change	2017	% Change
Month January	<b>2013</b> 7,919,077	% Change	<b>2014</b> 7,533,849	% Change	<b>2015</b> 7,421,306	<b>% Change</b> -8%	<b>2016</b> 6,801,818	<b>% Change</b> 14%	<b>2017</b> 7,720,943	% Change
			-	Ū					-	
January	7,919,077	-5%	7,533,849	-1%	7,421,306	-8%	6,801,818	14%	7,720,943	0%
January February	7,919,077 7,409,382	-5%	7,533,849 6,897,287	-1% 1%	7,421,306 6,949,373	-8% 9%	6,801,818 7,597,218	14% -3%	7,720,943	0%
January February March	7,919,077 7,409,382 7,979,292	-5% -7% -2%	7,533,849 6,897,287 7,813,556	-1% 1% 3%	7,421,306 6,949,373 8,067,467	-8% 9% 6%	6,801,818 7,597,218 8,546,164	14% -3% -2%	7,720,943 7,397,887 8,402,723	0% -2% -6%
January February March April	7,919,077 7,409,382 7,979,292 8,596,720	-5% -7% -2% -3%	7,533,849 6,897,287 7,813,556 8,366,358	-1% 1% 3% 2%	7,421,306 6,949,373 8,067,467 8,531,503	-8% 9% 6% -2%	6,801,818 7,597,218 8,546,164 8,376,903	14% -3% -2% -5%	7,720,943 7,397,887 8,402,723 7,991,692	0% -2% -6% 3%
January February March April May	7,919,077 7,409,382 7,979,292 8,596,720 8,773,942	-5% -7% -2% -3% -1%	7,533,849 6,897,287 7,813,556 8,366,358 8,677,032	-1% 1% 3% 2% -1%	7,421,306 6,949,373 8,067,467 8,531,503 8,630,483	-8% 9% 6% -2% -2%	6,801,818 7,597,218 8,546,164 8,376,903 8,486,112	14% -3% -2% -5% 2%	7,720,943 7,397,887 8,402,723 7,991,692 8,614,230	0% -2% -6% 3% -1%
January February March April May June	7,919,077 7,409,382 7,979,292 8,596,720 8,773,942 8,388,250	-5% -7% -2% -3% -1% 1%	7,533,849 6,897,287 7,813,556 8,366,358 8,677,032 8,475,065	-1% 1% 3% 2% -1% 3%	7,421,306 6,949,373 8,067,467 8,531,503 8,630,483 8,763,974		6,801,818 7,597,218 8,546,164 8,376,903 8,486,112 8,761,470	14% -3% -2% -5% 2% -2%	7,720,943 7,397,887 8,402,723 7,991,692 8,614,230 8,608,525	0% -2% -6% 3% -1% -3%
January February March April May June July	7,919,077 7,409,382 7,979,292 8,596,720 8,773,942 8,388,250 8,437,968	-5% -7% -2% -3% -1% 1% 0%	7,533,849 6,897,287 7,813,556 8,366,358 8,677,032 8,475,065 8,425,436	-1% 1% 3% 2% -1% 3% 2%	7,421,306 6,949,373 8,067,467 8,531,503 8,630,483 8,763,974 8,622,889	8% 9% 6% 2% 2% 0% 5%	6,801,818 7,597,218 8,546,164 8,376,903 8,486,112 8,761,470 8,156,218	14% -3% -2% -5% 2% -2% -3%	7,720,943 7,397,887 8,402,723 7,991,692 8,614,230 8,608,525 7,930,833	0% -2% -6% 3% -1% -3% 1%
January February March April May June July August	7,919,077 7,409,382 7,979,292 8,596,720 8,773,942 8,388,250 8,437,968 8,550,839	-5% -7% -2% -3% -1% 1% 0% -6%	7,533,849 6,897,287 7,813,556 8,366,358 8,677,032 8,475,065 8,425,436 8,074,295	-1% 1% 3% 2% -1% 3% 2% 3%	7,421,306 6,949,373 8,067,467 8,531,503 8,630,483 8,763,974 8,622,889 8,348,215	8% 9% 6% 2% 2% 0% 5% 2%	6,801,818 7,597,218 8,546,164 8,376,903 8,486,112 8,761,470 8,156,218 8,502,760	14% -3% -2% -5% 2% -2% -3% -1%	7,720,943 7,397,887 8,402,723 7,991,692 8,614,230 8,608,525 7,930,833 8,427,385	0% -2% -6% 3% -1% -3% 1% 0%
January February March April May June July August September	7,919,077 7,409,382 7,979,292 8,596,720 8,773,942 8,388,250 8,437,968 8,550,839 8,293,200	5% 7% 2% 3% 1% 1% 0% 6% 1%	7,533,849 6,897,287 7,813,556 8,366,358 8,677,032 8,475,065 8,425,436 8,074,295 8,175,388	-1% 1% 3% 2% -1% 3% 2% 3% 2%	7,421,306 6,949,373 8,067,467 8,531,503 8,630,483 8,763,974 8,622,889 8,348,215 8,316,546	8% 9% 6% 2% 2% 0% 5% 2% 2%	6,801,818 7,597,218 8,546,164 8,376,903 8,486,112 8,761,470 8,156,218 8,502,760 8,153,590	14% -3% -2% -5% 2% -2% -3% -1% -1%	7,720,943 7,397,887 8,402,723 7,991,692 8,614,230 8,608,525 7,930,833 8,427,385 8,063,784	0% -2% -6% 3% -1% -3% 1% 0% -3%
January February March April May June July August September October	7,919,077 7,409,382 7,979,292 8,596,720 8,773,942 8,388,250 8,437,968 8,550,839 8,293,200 8,713,861	-5% -7% -2% -3% -1% 1% 0% -6% -1% -1%	7,533,849 6,897,287 7,813,556 8,366,358 8,677,032 8,475,065 8,425,436 8,074,295 8,175,388 8,670,164	-1% 1% 3% 2% -1% 3% 2% 3% 2% 0%	7,421,306 6,949,373 8,067,467 8,531,503 8,630,483 8,763,974 8,622,889 8,348,215 8,316,546 8,660,062	-8% 9% 6% -2% -2% 0% -5% 2% -2% -1%	6,801,818 7,597,218 8,546,164 8,376,903 8,486,112 8,761,470 8,156,218 8,502,760 8,153,590 8,584,122	14% -3% -2% -5% 2% -2% -3% -1% -1% 0%	7,720,943 7,397,887 8,402,723 7,991,692 8,614,230 8,608,525 7,930,833 8,427,385 8,063,784 8,564,148	0% -2% -6% 3% -1% -3% 1% 0% -3% 2%
January February March April May June July August September October November	7,919,077 7,409,382 7,979,292 8,596,720 8,378,242 8,388,250 8,437,968 8,550,839 8,293,200 8,713,861 7,944,233	-5% -7% -2% -3% -1% 1% 0% -6% -1% -1% -6%	7,533,849 6,897,287 7,813,556 8,366,358 8,677,032 8,475,065 8,425,436 8,074,295 8,175,388 8,670,164 7,504,223	-1% 1% 3% 2% -1% 3% 2% 3% 2% 0% 4%	7,421,306 6,949,373 8,067,467 8,531,503 8,630,483 8,763,974 8,622,889 8,348,215 8,316,546 8,660,062 7,806,575	8% 9% 6% 2% 2% 0% 5% 2% 2% 1% 1%	6,801,818 7,597,218 8,546,164 8,376,903 8,486,112 8,761,470 8,156,218 8,502,760 8,153,590 8,584,122 7,889,319	14% -3% -2% -5% 2% -2% -3% -1% -1% 0% 0%	7,720,943 7,397,887 8,402,723 7,991,692 8,614,230 8,608,525 7,930,833 8,427,385 8,063,784 8,564,148 7,888,215	0%   -2%   -6%   3%   -1%   -3%   1%   0%   -3%   2%   -2%

**Table 2-2 DTR Monthly Transactions** 

Month	2018	% Change	2019	% Change	2020	% Change	2021
January	7,721,766	-7%	7,144,353	1%	7,237,663	-44%	4,038,582
February	7,220,350	-7%	6,711,659	4%	6,978,219	-47%	3,694,488
March	7,881,365	0%	7,867,055	-38%	4,889,939	1%	4,934,146
April	8,240,851	-6%	7,784,296	-73%	2,139,828	141%	5,166,538
May	8,554,042	-4%	8,187,345	-66%	2,782,419	99%	5,523,587
June	8,333,660	-7%	7,749,606	-51%	3,816,576	53%	5,827,120
July	8,042,336	-3%	7,764,267	-44%	4,359,409	38%	6,018,562
August	8,469,333	-9%	7,737,501	-42%	4,494,911	33%	5,974,012
September	7,815,932	-3%	7,583,554	-39%	4,663,477	29%	6,006,920
October	8,752,423	-7%	8,124,594	-38%	5,033,153		
November	7,747,540	-9%	7,062,355	-38%	4,372,510		
December	7,553,116	-4%	7,255,313	-41%	4,311,293		
Total	96,332,714	-6%	90,971,898	-39%	55,079,397		

Notes:

- 1. Toll rates were adjusted in January 2010, January 2011, January 2012, January 2013, January 2014, and January 2019.
- 2. Transactions include cash and electronic transactions, violations, and non-revenue transactions (i.e., police, emergency vehicles, school and public transit buses, etc.)



Month		2008	% Change		2009	% Change		2010	% Change		2011	% Change		2012	% Change
January	\$	5,447,177	-8%	\$	4,985,174	39%	\$	6,943,140	4%	\$	7,252,137	13%	\$	8,178,917	23%
February	\$	5,155,941	-4%	\$	4,966,879	11%	\$	5,527,103	30%	\$	7,207,088	12%	\$	8,054,220	17%
March	\$	5,529,627	-1%	\$	5,480,864	45%	\$	7,926,739	5%	\$	8,357,690	6%	\$	8,819,788	16%
April	\$	5,672,881	-3%	\$	5,525,242	40%	\$	7,758,412	2%	\$	7,899,087	6%	\$	8,398,229	29%
Мау	\$	5,668,517	-2%	\$	5,557,699	38%	\$	7,682,533	7%	\$	8,222,220	8%	\$	8,900,082	28%
June	\$	5,553,988	3%	\$	5,731,147	38%	\$	7,881,709	7%	\$	8,395,804	6%	\$	8,884,182	21%
July	\$	5,527,081	3%	\$	5,708,503	33%	\$	7,576,203	4%	\$	7,897,235	9%	\$	8,579,991	26%
August	\$	5,304,363	4%	\$	5,517,772	38%	\$	7,615,869	6%	\$	8,107,776	9%	\$	8,824,605	26%
September	\$	5,439,259	1%	\$	5,483,727	34%	\$	7,374,258	7%	\$	7,918,571	4%	\$	8,255,318	31%
October	\$	5,765,472	-1%	\$	5,697,597	35%	\$	7,673,235	6%	\$	8,145,202	5%	\$	8,549,445	35%
November	\$	5,034,561	3%	\$	5,183,999	39%	\$	7,191,951	7%	\$	7,665,907	7%	\$	8,235,967	26%
December	\$	5,381,936	-6%	\$	5,054,951	36%	\$	6,887,014	10%	\$	7,590,822	4%	\$	7,915,344	23%
Total	\$	65,480,803	-1%	\$	64,893,554	36%	\$	88,038,167	8%	\$	94,659,539	7%	\$	101,596,088	25%
	-														
Month		2013	% Change		2014	% Change		2015	% Change		2016	% Change		2017	% Change
									-						
January	\$	10,053,324	16%	\$	11,628,573	-2%	\$	11,389,551	-7%	\$	10,543,515	14%	\$	12,029,155	1%
January February	\$ \$	10,053,324 9,443,886	16% 13%	\$ \$	11,628,573 10,649,396	-2% 0%	\$ \$	11,389,551 10,642,237	-7% 10%	\$ \$	10,543,515 11,704,668	14% -1%	\$ \$	12,029,155 11,530,241	1% -2%
-										·					
February	\$	9,443,886	13%	\$	10,649,396	0%	\$	10,642,237	10%	\$	11,704,668	-1%	\$	11,530,241	-2%
February March	\$ \$	9,443,886 10,204,385	13% 18%	\$ \$	10,649,396 12,024,127	0% 3%	\$ \$	10,642,237 12,344,215	10% 7%	\$ \$	11,704,668 13,167,526	-1% -3%	\$ \$	11,530,241 12,738,684	-2% -8%
February March April	\$ \$ \$	9,443,886 10,204,385 10,830,020	13% 18% 19%	\$ \$ \$	10,649,396 12,024,127 12,881,743	0% 3% 2%	\$	10,642,237 12,344,215 13,092,256	10% 7% -1%	\$ \$ \$	11,704,668 13,167,526 12,896,331	-1% -3% -1%	\$ \$ \$	11,530,241 12,738,684 12,741,647	-2% -8% 7%
February March April May	\$ \$ \$ \$	9,443,886 10,204,385 10,830,020 11,411,164	13% 18% 19% 16%	\$ \$ \$	10,649,396 12,024,127 12,881,743 13,288,581	0% 3% 2% 0%	\$ \$ \$	10,642,237 12,344,215 13,092,256 13,324,202	10% 7% -1% -2%	\$ \$ \$ \$	11,704,668 13,167,526 12,896,331 13,116,779	-1% -3% -1% 2%	\$ \$ \$	11,530,241 12,738,684 12,741,647 13,351,053	-2% -8% 7% 0%
February March April May June	\$ \$ \$ \$	9,443,886 10,204,385 10,830,020 11,411,164 10,787,616	13% 18% 19% 16% 22%	\$ \$ \$ \$	10,649,396 12,024,127 12,881,743 13,288,581 13,173,845	0% 3% 2% 0% 2%	\$ \$ \$ \$ \$	10,642,237 12,344,215 13,092,256 13,324,202 13,442,996	10% 7% -1% -2% 0%	\$ \$ \$ \$	11,704,668 13,167,526 12,896,331 13,116,779 13,454,426	-1% -3% -1% 2% 0%	\$ \$ \$ \$	11,530,241 12,738,684 12,741,647 13,351,053 13,420,335	-2% -8% 7% 0% -3%
February March April May June July	\$ \$ \$ \$ \$	9,443,886 10,204,385 10,830,020 11,411,164 10,787,616 10,820,010	13% 18% 19% 16% 22% 20%	\$ \$ \$ \$ \$	10,649,396 12,024,127 12,881,743 13,288,581 13,173,845 12,991,259	0% 3% 2% 0% 2% 2%	\$ \$ \$ \$ \$	10,642,237 12,344,215 13,092,256 13,324,202 13,442,996 13,284,638	10% 7% -1% -2% 0% -4%	\$ \$ \$ \$ \$	11,704,668 13,167,526 12,896,331 13,116,779 13,454,426 12,716,315	-1% -3% -1% 2% 0% -2%	\$ \$ \$ \$ \$	11,530,241 12,738,684 12,741,647 13,351,053 13,420,335 12,500,196	-2% -8% 7% 0% -3% -1%
February March April May June July August	\$ \$ \$ \$ \$ \$ \$	9,443,886 10,204,385 10,830,020 11,411,164 10,787,616 10,820,010 11,114,413	13% 18% 19% 16% 22% 20% 13%	\$ \$ \$ \$ \$ \$ \$	10,649,396 12,024,127 12,881,743 13,288,581 13,173,845 12,991,259 12,548,064	0% 3% 2% 0% 2% 2% 4%	\$ \$ \$ \$ \$ \$	10,642,237 12,344,215 13,092,256 13,324,202 13,442,996 13,284,638 12,991,819	10% 7% -1% -2% 0% -4% 2%	\$ \$ \$ \$ \$ \$ \$	11,704,668 13,167,526 12,896,331 13,116,779 13,454,426 12,716,315 13,221,979	-1% -3% -1% 2% 0% -2% 0%	\$ \$ \$ \$ \$ \$	11,530,241 12,738,684 12,741,647 13,351,053 13,420,335 12,500,196 13,249,423	-2% -8% 7% 0% -3% -1% 3%
February March April May June July August September	\$ \$ \$ \$ \$ \$ \$ \$	9,443,886 10,204,385 10,830,020 11,411,164 10,787,616 10,820,010 11,114,413 10,778,250	13%   18%   19%   22%   20%   13%   19%	\$ \$ \$ \$ \$ \$ \$ \$ \$	10,649,396 12,024,127 12,881,743 13,288,581 13,173,845 12,991,259 12,548,064 12,777,532	0% 3% 2% 0% 2% 2% 4%	\$ \$ \$ \$ \$ \$ \$ \$ \$	10,642,237 12,344,215 13,092,256 13,324,202 13,442,996 13,284,638 12,991,819 12,918,314	10% 7% -1% -2% 0% -4% 2% -1%	\$ \$ \$ \$ \$ \$ \$ \$ \$	11,704,668 13,167,526 12,896,331 13,116,779 13,454,426 12,716,315 13,221,979 12,794,683	-1% -3% -1% 2% 0% -2% 0% -1%	\$ \$ \$ \$ \$ \$ \$ \$ \$	11,530,241 12,738,684 12,741,647 13,351,053 13,420,335 12,500,196 13,249,423 12,713,052	-2% -8% 7% 0% -3% -1% 3% -3%
February March April May June July August September October	\$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$	9,443,886 10,204,385 10,830,020 11,411,164 10,787,616 10,820,010 11,114,413 10,778,250 11,503,339	13%   18%   19%   16%   22%   20%   13%   19%   14%	\$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$	10,649,396 12,024,127 12,881,743 13,288,581 13,173,845 12,991,259 12,548,064 12,777,532 13,127,022	0% 3% 2% 0% 2% 2% 4% 1% 2%	\$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$	10,642,237 12,344,215 13,092,256 13,324,202 13,442,996 13,284,638 12,991,819 12,918,314 13,374,739	10%   7%   -1%   -2%   0%   -4%   2%   -1%   1%	\$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$	11,704,668 13,167,526 12,896,331 13,116,779 13,454,426 12,716,315 13,221,979 12,794,683 13,558,343	-1% -3% -1% 2% 0% -2% 0% -1%	\$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$	11,530,241 12,738,684 12,741,647 13,351,053 13,420,335 12,500,196 13,249,423 12,713,052 13,481,517	-2% -8% 7% 0% -3% -1% 3% -3% 2%
February March April May June July August September October November	\$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$	9,443,886 10,204,385 10,830,020 11,411,164 10,787,616 10,820,010 11,114,413 10,778,250 11,503,339 10,339,310	13%   18%   19%   22%   20%   13%   19%   14%   11%	\$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$	10,649,396 12,024,127 12,881,743 13,288,581 13,173,845 12,991,259 12,548,064 12,777,532 13,127,022 11,523,551	0% 3% 2% 0% 2% 2% 4% 1% 2% 5%	\$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$	10,642,237 12,344,215 13,092,256 13,324,202 13,442,996 13,284,638 12,991,819 12,918,314 13,374,739 12,114,303	10% 7% -1% -2% 0% -4% 2% -1% 1% 2%	\$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$	11,704,668 13,167,526 12,896,331 13,116,779 13,454,426 12,716,315 13,221,979 12,794,683 13,558,343 12,336,830	-1% -3% -1% 2% 0% -2% 0% -1% -1% 1%	\$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$	11,530,241 12,738,684 12,741,647 13,351,053 13,420,335 12,500,196 13,249,423 12,713,052 13,481,517 12,456,183	-2% -8% 7% 0% -3% -1% 3% -3% 2% -2%

**Table 2-3 DTR Monthly Revenue** 

Month	2018	% Change	2019	% Change	2020	% Change	2021
January	\$ 12,186,157	26%	\$ 15,304,619	2%	\$ 15,645,973	-41%	\$ 9,269,807
February	\$ 11,348,785	27%	\$ 14,416,763	8%	\$ 15,545,289	-46%	\$ 8,419,543
March	\$ 11,679,743	43%	\$ 16,716,570	-32%	\$ 11,284,790	-1%	\$ 11,093,435
April	\$ 13,601,677	22%	\$ 16,622,211	-69%	\$ 5,224,023	123%	\$ 11,500,556
May	\$ 13,351,664	31%	\$ 17,557,114	-65%	\$ 6,126,169	91%	\$ 12,149,067
June	\$ 12,986,914	29%	\$ 16,708,351	-49%	\$ 8,450,974	54%	\$ 12,664,690
July	\$ 12,344,931	37%	\$ 16,889,013	-44%	\$ 9,466,658	39%	\$ 13,248,533
August	\$ 13,633,094	24%	\$ 16,884,497	-43%	\$ 9,700,914	38%	\$ 13,349,239
September	\$ 12,323,123	37%	\$ 16,888,256	-41%	\$ 9,967,194	31%	\$ 13,322,606
October	\$ 13,717,697	30%	\$ 17,896,898	-39%	\$ 10,987,180		
November	\$ 12,173,457	29%	\$ 15,643,702	-36%	\$ 10,061,746		
December	\$ 12,049,690	32%	\$ 15,879,335	-39%	\$ 9,625,736		
Total	\$ 151,396,932	30%	\$ 197,407,329	-38%	\$ 122,086,646		

Notes:

- 1. Toll rates were adjusted in January 2010, January 2011, January 2012, January 2013, January 2014, and January 2019.
- 2. Revenue includes collected toll and violation revenue.



Table 2-4 and Figure 2-2 show the average monthly total transactions indexed to the average monthly transactions for each year from 2015 through 2019. The monthly index shows the relative demand for each month compared to other months in the same calendar year. An index greater than 1.0 indicates transactions for that month are greater than the annual average, while an index less than 1.0 indicates transactions for that month are less than the annual average. Throughout the period shown, the average number of transactions have been decreasing. However, monthly indices show only a slight variation in traffic from month to month. In general, warmer months are slightly higher with indices over 1.0, while colder months are slightly lower with indices just below 1.0.

Month	2015	Index	2016	Index	2017	Index	2018	Index	2019
January	7,421,306	0.91	6,801,818	0.84	7,720,943	0.95	7,721,766	0.96	7,144,353
February	6,949,373	0.85	7,597,218	0.93	7,397,887	0.91	7,220,350	0.90	6,711,659
March	8,067,467	0.99	8,546,164	1.05	8,402,723	1.04	7,881,365	0.98	7,867,055
April	8,531,503	1.04	8,376,903	1.03	7,991,692	0.99	8,240,851	1.03	7,784,296
Мау	8,630,483	1.05	8,486,112	1.04	8,614,230	1.06	8,554,042	1.07	8,187,345
June	8,763,974	1.07	8,761,470	1.08	8,608,525	1.06	8,333,660	1.04	7,749,606
July	8,622,889	1.05	8,156,218	1.00	7,930,833	0.98	8,042,336	1.00	7,764,267
August	8,348,215	1.02	8,502,760	1.04	8,427,385	1.04	8,469,333	1.06	7,737,501
September	8,316,546	1.02	8,153,590	1.00	8,063,784	1.00	7,815,932	0.97	7,583,554
October	8,660,062	1.06	8,584,122	1.05	8,564,148	1.06	8,752,423	1.09	8,124,594
November	7,806,575	0.95	7,889,319	0.97	7,888,215	0.97	7,747,540	0.97	7,062,355
December	8,122,250	0.99	7,862,834	0.97	7,479,547	0.92	7,553,116	0.94	7,255,313
Average	8,186,720		8,143,211		8,090,826		8,027,726		7,580,992

Table 2-4 DTR Monthly Transactions and Index

Notes:

1. Toll rates were adjusted in January 2019.

2. Transactions include cash and electronic transactions, violations, and non-revenue transactions (i.e., police, emergency vehicles, school and public transit buses, etc.)



**Figure 2-2 Monthly Transaction Index** 



#### 2.1.3 Daily Historical Traffic and Revenue

Table 2-5 shows average daily transactions indexed to the average daily transactions for each year for 2018 and 2019. Saturday and Sunday consistently have the lowest index, with significantly fewer commuters utilizing the DTR on the weekend. Tuesday, Wednesday, and Thursday have the highest traffic volumes. Figure 2-3 compares the daily index for 2018 and 2019 showing that the pre-pandemic daily split of average traffic was relatively constant, despite an overall decline in total transactions on the DTR.

Day of Week	2018	Index	2019	Index
Sunday	151,207	0.57	141,297	0.57
Monday	277,368	1.05	264,917	1.06
Tuesday	309,906	1.17	289,858	1.16
Wednesday	307,594	1.17	292,719	1.17
Thursday	314,743	1.19	295,578	1.19
Friday	298,213	1.13	279,786	1.12
Saturday	187,830	0.71	180,301	0.72
Average	263,837		249,208	

Table 2-5 Daily Transactions and Index

Notes:

1. Toll rates were adjusted in January 2019.



#### Figure 2-3 Average Daily Traffic Index



#### 2.1.4 Hourly Historical Traffic and Revenue

Figure 2-4 shows the October 2019 average weekday hourly traffic profile by direction on the DTR. The DTR has both a morning peak and an evening peak, which is typical for roadways highly utilized by daily commuters. The morning peak is in the eastbound direction, toward Washington, D.C., with the evening peak in the westbound direction.





## 2.1.5 Pandemic Related Traffic Trends

The onset of the pandemic in March 2020, along with the associated business shutdowns and the shift to working from home, caused a significant reduction in traffic on the DTR and surrounding area. It also changed the monthly, daily, and hourly traffic patterns on the DTR, which began to more closely reflect regional traffic statistics influenced by pandemic related infection rates and related government and workplace policies rather than historical trends.

Figure 2-5 and Figure 2-6 show the 7-day rolling average percent loss in transactions and revenues, respectively, from January 7, 2020, through October 13, 2021, against 2019 pre-pandemic transactions and revenues on an equivalent 7-day average. Total transactions in April 2020 were nearly 80 percent below the same month in 2019. Transactions recovered to slightly more than 40 percent below 2019 levels by the end of the year. In January 2021, transaction levels declined once again due to another wave of pandemic-related cases. As a result, transactions remained 40 to 50 percent below 2019 levels for the first two months of 2021 as seen in Figure 2-5. Since March 2021, transactions have steadily increased reaching approximately 20 percent below pre-pandemic levels by October 2021. Revenues followed a similar trend, as shown in Figure 2-6.





Figure 2-5 DTR 7-Day Rolling Average Transactions Percent Loss Compared to 2019

Figure 2-6 DTR 7-Day Rolling Average Revenue Percent Loss Compared to 2019





#### 2.1.5.1 DTR Monthly Traffic During the Pandemic

Figure 2-7 compares the average monthly transactions in 2020 and 2021 to average monthly transactions in 2019. April 2020 was the first full month that included shutdowns and stay-at-home orders, and those actions resulted in a significant reduction in monthly transactions - dropping from nearly five million transactions in March 2020, which included pandemic related traffic reductions for part of the month, to just over two million in April 2020. The average monthly transactions have steadily increased since the low point in April 2020, reaching approximately six million average monthly transactions by July 2021. However, the phased openings of businesses along with the fluctuating waves of pandemic cases continue to cause month-to-month shifts in transactions in 2020 and 2021, although in smaller increments.



Figure 2-7 Average Monthly Transactions by Year



#### 2.1.5.2 Daily Traffic During the Pandemic

Figure 2-8 compares the average daily traffic index in 2019, before the onset of the pandemic, to 2021 year-to-date through mid-October. In 2019, transactions on the DTR were highest on the weekdays, especially on Tuesday through Thursday due to high volumes of commuter traffic. Throughout 2021, cities, counties, and private businesses in the region implemented plans with varying requirements for return to work and school. These plans have continually evolved and often been delayed, particularly in response to the Delta variant in the summer and fall of 2021. The 2021 data shown in Figure 2-8 reflect a region in flux, as government, private employers, school boards, and others responded to the pandemic. Overall, the weekday index is lower than 2019, due to the fact that many of the DTR's past commuters are still telecommuting and schools were not fully open for in-person learning for much of the year. However, the average daily traffic index on the weekend is higher than 2019, which may reflect a faster recovery in non-work-related trips.



Figure 2-8 Average Daily Traffic Pandemic Shift



Note: Includes daily traffic data for 2019 and for 2021 through October 13, 2021.

#### 2.1.5.3 Hourly Traffic During the Pandemic

Figure 2-9 compares hourly transactions from October 2019 and June 2021 and shows a visual comparison of how traffic patterns have shifted before and during the pandemic. Prior to the onset of the pandemic, there were clear peak travel periods. The eastbound direction, toward Washington, D.C., had an AM peak period and the westbound direction had a PM peak period. Since the pandemic, the AM peak has substantially decreased because many commuters work from home or have adopted flexible or hybrid schedules. The PM peak period has also decreased, but to a slightly lesser degree. Many of the trips on the DTR are now personal trips unrelated to work and do not correlate to typical commuting hours.






## 2.1.5.4 Payment Type Changes During the Pandemic

On March 24, 2020, the private owners of the adjacent Dulles Greenway toll facility reduced the numbers of hours each day that customers could pay the toll in cash. On March 30, 2020, cash toll collection on the Dulles Greenway was eliminated as a pre-emptive measure to help prevent the spread of the virus to customers.

In support of VDOT's statewide response to the pandemic and for the safety of the traveling public, the Airports Authority suspended manual toll collections on the DTR and removed all toll both operators in April 2020. DTR customers without E-ZPass, other electronic forms of payment or exact change are sent payment notices by mail. These transactions are considered violations, but applicable administrative fees are waived if the amount due is paid before the second notice is sent to the customer. Currently, DTR customers are still able to pay exact change tolls at ACM in lanes with no attendant present. The Airports Authority plans to phase out ACM payment in 2022.

Figure 2-10 shows recent trends in the utilization of electronic toll collection on the DTR. February 2020 represents a pre-pandemic month with an 88 percent E-ZPass penetration rate, a six percent cash payment rate, and a six percent violation rate. In April 2020, the first month without cash collection attendants at toll booths on both the DTR and Dulles Greenway, the number of DTR transactions recorded as violations rose to 10 percent. This reflects the current toll policy to record all DTR users who do not use a transponder or ACM as a violation. While they are classified in the toll collection system as violations, the Airports Authority currently waives fees for the first notice that is sent to these customers. Therefore, only the E-ZPass toll is being charged for their trips as opposed to additional violation fees. If the first invoice is not paid, subsequent notices are treated as traditional violations. In August 2021, approximately 13 percent of total transactions were recorded as violations as defined above.



Figure 2-10 Recent Trends in Electronic Toll Collection

Note: Payment type split is estimated based on toll system reporting.



### 2.1.5.5 Frequency of Travel During the Pandemic

The overall frequency of travel for customers on the DTR changed significantly during the pandemic. The data were analyzed to determine which segments of the customer base were most affected by the pandemic and which customers might contribute to transaction growth in the future.

Figure 2-11 through Figure 2-14 present DTR trip frequency data for 2019 and 2020. The 2019 data represent the average for the calendar year and the 2020 data were collected for April to December to isolate the impacts of the pandemic. The bars represent the percent share in each frequency category, while the dotted line represents the cumulative percentage of customers or transactions moving to the right of the graph. The 2019 distribution of customers and transactions are fairly common for urban toll facilities serving a variety of trip purposes. While over 40 percent of the unique customers on the DTR are very infrequent, two times per year or less, the majority of transactions (and revenue) come from frequent customers. Almost 30 percent of transactions and revenue are attributed to customers taking the DTR five times per week or more.

Between 2019 and 2020, the percentage of customers who used the DTR more than five times per week decreased from 1.8 percent of all customers to 0.9 percent. As a result, the percentage of total transactions and revenue generated by the most frequent customers dropped from almost 30 percent to approximately 17 percent.

Figure 2-15 and Figure 2-16 provide an analysis of the change in trip frequency in 2020 by customers who used the DTR frequently in 2019. Customers who used the DTR frequently in 2019 reduced their use by approximately half during the pandemic. Of the approximately 34,000 customers that were making five trips or more per week in 2019, only 25 percent continued with that frequency. The majority continued usage one time a week or more, at almost 90 percent of total customers. The analysis suggests that a relatively small increase in the number of frequent customers will have a significant impact in terms of recovery to pre-pandemic transaction levels.





Figure 2-11: DTR Customers based on Trip Frequency, 2019



Figure 2-12: Total DTR Transactions based on Trip Frequency, 2019



2-15



Figure 2-13: DTR Customers based on Trip Frequency, April 2020 to December 2020

Figure 2-14: Total DTR Transactions based on Trip Frequency, April 2020 to December 2020







Figure 2-15: Trip Frequency in 2020 by Most Frequent DTR Customers from 2019



Figure 2-16: Transactions Generated in 2020 by Most Frequent Customers of 2019

In addition to actual frequency of travel for DTR customers, a customer survey was conducted in June 2021 to provide insight into the potential future travel patterns of DTR customers. Details of the customer survey and a complementary employer survey are provided in Appendix A.



2-17

Figure 2-17 shows the percentage of pre-pandemic frequent (greater than 5 times per week) DTR customers that have returned or plan to return to the DTR at the same frequency of greater than 5 times per week. According to the survey, 33 percent of pre-pandemic frequent customers have already returned to the DTR at the same rate of greater than 5 times per week. By Fall 2021/Winter 2022, 42 percent of pre-pandemic frequent customers are expected to be using the DTR at the same rate, while 50 percent plan to be back to using the DTR greater than 5 times per week in 2022, as the pandemic lessens. These data are used as an input related to commuting trips and are incorporated into the forecast.



Figure 2-17 Percent of Pre-Pandemic Frequent Users Who are Current Frequent Users



## 2.1.6 E-ZPass Utilization

Table 2-6 summarizes the total toll revenue by payment type collected between 2004 and 2020 on the DTR. The toll revenue E-ZPass penetration rate increased from 55.6 percent in 2004 to 90.8 percent in 2020, despite having no toll discount for E-ZPass customers, which is available on many other toll facilities. In 2018, a total of \$131.5 million was collected in E-ZPass payments, resulting in an E-ZPass percentage of 86.9 percent. In 2019, a total of \$174.3 million was collected in E-ZPass payments, compared to \$23.1 million in non-E-ZPass payments, resulting in an 88.3 percentage of E-ZPass payments. Despite a significant decline in toll revenues in 2020 attributable to the pandemic, the E-ZPass penetration rate rose to 90.8 percent.

Year	E-ZPass	N	on-E-ZPass	Total	Percent E-ZPass
2004	\$ 23,315,063	\$	18,630,558	\$ 41,945,621	55.6%
2005	\$ 34,963,825	\$	21,110,421	\$ 56,074,246	62.4%
2006	\$ 42,809,087	\$	22,371,086	\$ 65,180,173	65.7%
2007	\$ 44,025,804	\$	21,557,862	\$ 65,583,666	67.1%
2008	\$ 44,844,629	\$	20,636,174	\$ 65,480,803	68.5%
2009	\$ 45,004,121	\$	19,889,433	\$ 64,893,554	69.4%
2010	\$ 63,263,063	\$	24,775,104	\$ 88,038,167	71.9%
2011	\$ 70,634,125	\$	24,025,414	\$ 94,659,539	74.6%
2012	\$ 78,613,468	\$	22,982,620	\$ 101,596,088	77.4%
2013	\$ 102,478,081	\$	24,581,760	\$ 127,059,841	80.7%
2014	\$ 123,537,397	\$	25,115,344	\$ 148,652,741	83.1%
2015	\$ 127,562,090	\$	23,869,669	\$ 151,431,759	84.2%
2016	\$ 128,853,731	\$	22,877,302	\$ 151,731,033	84.9%
2017	\$ 130,080,380	\$	21,942,283	\$ 152,022,663	85.6%
2018	\$ 131,515,100	\$	19,881,832	\$ 151,396,932	86.9%
2019	\$ 174,343,696	\$	23,063,633	\$ 197,407,329	88.3%
2020	\$ 110,798,012	\$	11,288,634	\$ 122,086,646	90.8%

### Table 2-6 Revenue by Payment Type

Notes:

1. 2004 to 2007 data estimated based on toll system reporting.

2. Toll rates were adjusted in January 2011, January 2012, January 2013, January 2014, and January 2019.

3. Non-E-ZPass revenue includes cash revenue and violations.

As part of an Electronic Toll Collection (ETC) Agreement between the Airports Authority and VDOT, VDOT is responsible for providing electronic toll collection services on the DTR. Figure 2-7 shows the percentage of all toll revenues processed through ETC transactions for the years 2011 through 2020.



Year	ETC			
Tear	Share			
2011	74.6%			
2012	77.4%			
2013	80.7%			
2014	83.1%			
2015	84.2%			
2016	87.1%			
2017	88.2%			
2018	90.0%			
2019	92.4%			
2020	95.8%			

### **Table 2-7 Annual ETC Share**

Source: Records of the Airport Authority

# 2.2 HISTORICAL ELASTICITY

Initial DTR toll rates in 1984 were 50 cents at the mainline toll plaza and 25 cents at ramp toll plazas, except for a 35-cent toll at SR 28. During the first 20 years of operation, there were no toll rate adjustments. T rates have been increased seven times (in 2005, 2010, 2011, 2012, 2013, 2014, and 2019) to generate funds for transit improvements in the Dulles Corridor. Toll rate increases, especially if they outpace inflation, may result in a decrease in traffic, as some users may divert to an alternative free route, choose an alternative mode of transportation, or reduce their number of trips. Toll elasticity refers to the relationship between a change in traffic volume during the period after a toll rate increase. Elasticity is expressed as a negative value where the higher the absolute value, the more likely the roadway will lose traffic in response to a toll rate increase. Table 2-8 shows the elasticity for the prior toll increases on the DTR.

Year	Prior Toll		New Toll			1	Change in	Change in	Change in	Elasticity		
i eai	Ма	inline	R	amp	Ма	inline	R	amp	Transactions	Revenue	Toll	LIASLICITY
2005					\$	0.75	\$	0.50	-5.3%	54.5%	61.7%	-0.086
2010	\$	0.75	\$	0.50	\$	1.00	\$	0.75	-5.5%	34.9%	41.3%	-0.133
2011	\$	1.00	\$	0.75	\$	1.25	\$	0.75	-4.1%	8.0%	11.5%	-0.354
2012	\$	1.25	\$	0.75	\$	1.50	\$	0.75	-3.3%	7.9%	10.6%	-0.317
2013	\$	1.50	\$	0.75	\$	1.75	\$	1.00	-2.7%	23.4%	25.6%	-0.107
2014	\$	1.75	\$	1.00	\$	2.50	\$	1.00	-4.1%	18.5%	22.3%	-0.182
2019	\$	2.50	\$	1.00	\$	3.25	\$	1.50	-9.7%	25.7%	37.9%	-0.256

Table 2-8 Change in Toll and Elasticity

# 2.3 TRAFFIC DATA COLLECTION PROGRAM

Stantec worked with a subconsultant, MCV Associates, Inc. (MCV), to conduct a comprehensive traffic data collection program within the study area. The data were used to calibrate the travel demand model against existing conditions and to better understand the recovery on area roadways since the onset of the pandemic. The data collection effort included historical traffic counts from 2019 to assist in the calibration of the base year model and new traffic counts in June 2021.



The model calibration, which is discussed in greater detail in Appendix C, refers to the process of adjusting the travel demand model so that it reasonably replicates existing traffic volumes, speeds, and patterns. Part of the calibration process is verifying that the travel demand model is reasonably estimating traffic not just on the DTR, but also on parallel routes that are alternatives to the DTR as well as perpendicular routes that feed the DTR. Parallel and or competing routes to the DTR include I-66, SR 7, US 50, and US 29.

"Screenlines" are drawn across parallel and/or perpendicular roadways, and model estimates at various points on each screenline are compared to actual traffic counts to verify the model is estimating the appropriate share of the traffic on each roadway at that point. Figure 2-18 shows the designated screenlines labeled A through E used to calibrate the DTR travel demand model.



Figure 2-18 2019 Screenline Map

Additional traffic counts were collected in 2021 by MCV along screenlines C, D, and E, as shown in Figure 2-19.





Figure 2-19 2021 Count Program Screenline Map

A comparison of similar count locations from 2017, 2019, and 2021 shows that traffic is returning to the study area as a function of recovery from the pandemic. As shown in Figure 2-20, screenlines C and D are above both 2017 and 2019 levels, while screenline E, the easternmost, is still lagging compared to 2019 due to the reduced travel demand in the employment centers on the I-495 corridor, and destinations to the east as users continue to work from home.



Figure 2-20 Screenline Comparison



## 2.3.1 StreetLight Origin-Destination and Demand Data

Trip origin and destination data were also collected via a sample of anonymous tracking of cell phones from the StreetLight Data (StreetLight) platform which uses smartphones to measure traffic, understand travel patterns and estimate trip purposes. Traffic analysis districts were created to study movements from one district to another from the StreetLight sample and to enable comparison with movements estimated from the travel demand model. The districts used in this study are presented in Figure 2-21. The model estimation in base year 2019 is in line with trip movements to and from these districts by time of day based on sample data from StreetLight.



#### Figure 2-21 Origin and Destination Districts

The sample data from StreetLight also provides demand by trip purpose and time of day across many years. Table 2-9 compares trips by trip purpose and time of day for 2019 and 2021. Sample data from StreetLight indicate that total trips in the study area have slightly increased from 2019 to 2021, as represented by the 1.6 percent growth of total trips. However, the length of trips has decreased, as previous commuting trips are being supplanted by shopping, social, and other types of trips. Home-based work trips (trips to the workplace that begin or end at home) are down seven percent, while home-based other trips are up 12.9 percent. Additionally, AM trip making (between the hours of 5:30 am and 9:30 am) for all trip purposes continues to be well below 2019 levels.



Trip Purpose	Time of Day	Year	Trip	Percent Change from 2019 to 2021	
			Value	TOD %	2019 10 2021
	AM	2019	179,379	28.3%	-19.2%
	Alvi	2021	144,888	24.6%	-19.27
	MD	2019	149,963	23.7%	-5.0%
	ND	2021	142,476	24.2%	-5.0 %
Home-based Work	PM	2019	189,921	30.0%	-6.8%
Trip	1 101	2021	176,964	30.1%	0.070
	Night	2019	113,605	18.0%	9.3%
	- Tight	2021	124,163	21.1%	0.070
	Total	2019	632,869	100.0%	-7.0%
	Total	2021	588,491	100.0%	1.070
	AM	2019	198,890	13.8%	-6.6%
	7 (101	2021	185,772	11.4%	0.070
	MD	2019	393,633	27.3%	18.0%
	NID	2021	464,318	28.5%	10.078
Home-based Other	PM	2019	427,234	29.6%	24.1%
Trip	F IVI	2021	530,354	32.5%	24.170
	Night	2019	423,668	29.4%	6.1%
		2021	449,584	27.6%	0.170
	Total	2019	1,443,425	100.0%	12.9%
		2021	1,630,028	100.0%	
	AM	2019	215,646	16.0%	-14.2%
		2021	185,007	14.7%	-14.27
	MD	2019	564,749	41.9%	-4.3%
		2021	540,613	42.9%	-4.070
Non-home-based	PM	2019	397,835	29.5%	-6.3%
Trip	1 101	2021	372,954	29.6%	-0.378
	Night	2019	170,818	12.7%	-4.8%
	Night	2021	162,610	12.9%	4.070
	Total	2019	1,349,049	100.0%	-6.5%
	TOLAI	2021	1,261,183	100.0%	-0.3%
	<b>A N A</b>	2019	593,916	17.3%	10.00/
	AM	2021	515,667	14.8%	-13.2%
	MD	2019	1,108,345	32.4%	2 50/
	MD	2021	1,147,407	33.0%	3.5%
Total Tripa	PM	2019	1,014,990	29.6%	6.4%
Total Trips		2021	1,080,271	31.0%	0.4 /0
	Night	2019	708,091	20.7%	4.0%
	INIGHT	2021	736,356	21.2%	4.0 %
	Total	2019	3,425,342	100.0%	1 60/
	Total	2021	3,479,701	100.0%	1.6%

### Table 2-9 Trip Demand in Study Area by Trip Purpose and Time of Day, 2019 and 2021

Note: AM = 5:30 AM to 9:30 AM, MD = 9:30 AM to 3:00 PM, PM = 3:00 PM to 7:00 PM, Night = 7:00 PM to 5:30 AM



## 2.3.2 Income Profiles

Additional data were collected to understand the income of motorists in the Dulles Corridor compared to the travel demand model estimates of incomes and values of time. The average income estimates for December 2019 through February 2020 provided in Figure 2-22 are from Replica, a demographics data platform. Almost 30 percent of motorists are estimated to have incomes above \$200,000, with approximately two thirds of motorists having income levels above \$100,000. This compares favorably to the median household income for the Washington, D.C.-Baltimore region, which is approximately \$86,000 based on Replica data. Income is directly related to the estimated value of time and propensity to choose a tolled option for time savings.





Source: Replica data



# 2.3.3 Speed Data

A key calibration dataset is observed speeds on the DTR as well as the alternative routes and feeder roads in the study area. Table 2-10 shows observed speeds by model time period for the full length of each listed facility. The speed data collected includes pre-pandemic conditions to match the 2019 base year of the travel demand model. The DTR and Dulles Greenway provide fairly consistent travel speeds even in the peak period and peak direction. Conversely, Route 7 and US 50 experience more varied speeds throughout the day that are consistently lower than the toll facilities.

		Observed				
Facility	Dir	AM	MD	РМ	NT	
Dulles Toll Rd	WB	62	61	49	59	
Dulles Toll Ru	EB	52	59	61	59	
Dulles Greenway	WB	60	62	61	61	
Dulles Greenway	EB	63	62	62	61	
I-66	WB	59	55	28	58	
1-00	EB	35	48	55	60	
VA-7	WB	41	38	30	45	
VA-1	EB	35	37	37	45	
US-50	WB	34	34	26	39	
03-30	EB	30	31	28	37	
US-15	NB	45	46	46	48	
03-15	SB	48	47	45	50	
VA-606	NB	25	30	31	37	
VA-000	SB	30	29	23	37	
VA-28	NB	55	58	51	58	
VA-20	SB	56	56	38	57	
VA-286	NB	38	39	40	47	
VA-200	SB	45	42	36	47	
VA-674	NB	30	31	30	34	
VA-0/4	SB	31	30	26	34	
VA-828	NB	25	25	23	29	
VA-020	SB	24	23	22	28	
AM: 5:30 AM to 9:30 AM						
Midday: 9:30 AM to 3:00 PM						
PM: 3:00 PM to 7:00 PM						
Night: 7:00 PM to 5:30 AM						

Table 2-10 Observed Speeds in the Study Area

Source: INRIX, a provider of location-based data analytics that utilizes GPS devices, smartphones, cameras, and other devices to collect travel time information.

# 2.4 AIRPORT TRAFFIC DEMAND

The Access Highway offers toll-free movements to and from IAD. Based on historical traffic data, it is estimated that approximately 75 percent of vehicles entering or exiting IAD use the Access Highway or DTR and the remaining vehicles use the Dulles Greenway or Sully Road. This same ratio was used for



future years. Using the Airports Authority's airport consultant's passenger figures for 2019 and 2020 and projections through 2026 (which include the potential impacts of the Dulles Metrorail Project – Phase 2 completion), traffic from IAD on the Access Highway was estimated. Estimated annual vehicles traveling to and from IAD are summarized in Table 2-11 and provide an understanding of potential recovery of background traffic on the roadway network.

	Origin and	Vehicle Trips to/from IAD			
Year	Destination	Total	Dulles Greenway	Access Airport	
	Passengers	TOLAI	or Sully RD	Highway or DTR	
2019	17,122	14,437	3,637	10,800	
2020	5,216	3,815	961	2,854	
2021	8,780	6,421	1,617	4,803	
2022	13,420	9,814	2,472	7,342	
2023	14,700	10,750	2,708	8,042	
2024	15,300	11,189	2,819	8,371	
2025	15,900	11,628	2,929	8,699	
2026	16,500	12,067	3,040	9,027	

Table 2-11 Annual Estimate of Vehicles to/from Dulles International Airport (000s)

Note: Origin and Destination Passengers are calculated by doubling the origin enplanements from the Report of the Airport Consultant prepared by Leigh Fisher on 5/1/21.



# 3.0 CORRIDOR GROWTH ASSESSMENT

This section reviews the historical and projected drivers of travel demand including historical population estimates, short-term employment and work-from-home (WFH) estimates, and projections of population and employment by transportation analysis zones. In addition, a review of the performance of past forecasts by local planning entity, the MWCOG, was conducted to determine the appropriateness of key input assumptions. For long-range planning purposes, forecasts of population, employment, and households in the Washington, D.C. metropolitan area are developed through a cooperative process involving the MWCOG, its member jurisdictions, the Baltimore region, the states of Maryland and Virginia and other planning agencies. Further details on the MWCOG and its forecasts may be found in section 3.3.

# 3.1 HISTORICAL POPULATION GROWTH

The Washington, D.C. metropolitan area, as defined by the 21 local governments that comprise the MWCOG, has experienced significant population growth over the last 70 years. Counties that provide the most residential origins for vehicles on the DTR have grown at an even quicker pace. This growth is shown in Table 3-1 along with average annual growth rates. Since 1990, the region has added over 2 million people, with an average annual growth rate of 1.5 percent. Loudoun County has seen much higher growth during this time period, with an average annual growth rate of 5.4 percent, representing a quintupling of its population. This is notably depicted in Figure 3-1, which shows population over this time period indexed to 1990. Fairfax County experienced a similar level of growth from 1950 to 1990, but has since experienced slower growth of 1.5 percent, similar to region-wide growth rates.



Year	Washington DC Region	Loudoun County	Fairfax County					
1950	1,298,000	21,147	98,557					
1960	1,823,000	24,549	275,002					
1970	2,488,000	37,150	455,021					
1980	2,777,000	57,427	596,901					
1990	3,376,000	86,129	818,584					
2000	3,949,000	169,599	969,749					
2010	4,604,000	312,311	1,081,726					
2020	5,322,000	420,959	1,150,309					
	Average Annual Growth Rate							
1950 to 1960	3.5%	1.5%	10.8%					
1960 to 1970	3.2%	4.2%	5.2%					
1970 to 1980	1.1%	4.5%	2.8%					
1980 to 1990	2.0%	4.1%	3.2%					
1990 to 2000	1.6%	7.0%	1.7%					
2000 to 2010	1.5%	6.3%	1.1%					
2010 to 2020	1.5%	3.0%	0.6%					

Table 3-1 Washington, D.C. Metropolitan Area Historical Population Growth

Figure 3-1: Washington, D.C. Metropolitan Area Population by Geography Indexed 1990 = 1.0





# 3.2 SHORT TERM EMPLOYMENT OUTLOOK

In order to understand the impact of employment and WFH policy estimates, a review of employment in the study area before and during the pandemic was undertaken. Different employment sectors have had and will continue to have varying abilities to allow for WFH. The distribution of employment by sector from the Bureau of Labor Statistics before the pandemic is presented in Figure 3-2. As shown, the Washington-Arlington-Alexandria, DC-VA-MD-WV Metropolitan Division has a diverse set of employment opportunities with no single sector representing over 25 percent of the work force. Certain sectors have very limited ability to effectively allow WFH, such as leisure and hospitality, while others, such as professional and business services, may have more opportunities to provide WFH options.





Additionally, the pandemic and related travel restrictions caused a loss in employment. This loss and recovery are presented in Figure 3-3, which reflects data from February 2020 (pre-pandemic), April 2020 (the height of restrictions and employment loss), and February 2021 (a comparison of the same month to pre-pandemic levels). As shown, almost all sectors experienced an initial loss followed by subsequent recovery. This is further illustrated in Figure 3-4 and Figure 3-5, where different employment sectors, sorted by degree of pandemic-related impact, are shown over time. These figures also present a forecast by sector, with an estimated slow and steady recovery of employment continuing through 2026. The exception is a quicker than anticipated recovery of leisure and hospitality, as this sector was most impacted by the pandemic restrictions with employment less than 50 percent of pre-pandemic levels in April 2020. The recovery rate for leisure and hospitality was much faster in 2021, reflecting a higher capacity for growth due to the extreme losses in that sector.





Figure 3-3: Employment Recovery by Sector







Figure 3-5: Employment by Sector, More Impacted Industries

Layered on top of the employment data and projections by sector is the estimated ability to WFH by sector. The estimated slow and steady recovery to 2026 is reflected in Figure 3-6, with an estimated steady state by 2023, shows an increase in WFH from 7.9 percent pre-pandemic to 13.7 percent of all employed people in the region. This estimated increase in WFH is the basis for an assumed reduction in work-based trips in the travel demand model for the entire forecast period.



Figure 3-6: Estimated Employment Recovery and Work from Home Percentages



# 3.3 MWCOG POPULATION AND EMPLOYMENT FORECASTS

The cooperative forecasting program, established in 1975 and administered by MWCOG, enables local, regional and federal agencies in the Washington, D.C. metropolitan area to work together to produce a single long-range forecast for use in regional planning. The most recent official MWCOG forecast (Round 9.1a) was adopted in October 2018. The MWCOG forecast is created by reconciling the regional econometric model with local jurisdiction forecasts. The regional econometric model projects population, employment, and households for the Washington, D.C. metropolitan area based on both national economic and local demographic trends. Local jurisdictions also develop their own separate projections of population, employment, and households, based on projects in development, market conditions, planned transportation improvements, and adopted land use plans and zoning, considering the preliminary regional projections.

To estimate short-term development activity, local jurisdictions consider the number of permits submitted for approval. To estimate longer-term development activity, jurisdictions review comprehensive plans. The MWCOG Cooperative Forecasting and Data Subcommittee, made up of local government planners, economists, and demographers, compares and reconciles the two sets of projections. The regional model and local jurisdictional projections are required to be within three percent of each other for the new set of forecasts to be officially reconciled.

MWCOG released its draft Round 9.2 forecast (Round 9.2) in March 2021 and expects formal adoption in 2022. Round 9.2 was reviewed to understand changes from the currently adopted Round 9.1a forecast. Stantec utilized Round 9.1a as the basis for DTR analysis. Socioeconomics trends, such as changes in population, employment, and households, included in the MWCOG forecast provide a foundation to the forecast and were used to develop trip generation projections for the travel demand model.

In order to assess the reasonableness of the socioeconomic data used in the MWCOG forecast, independent economist J. Scott Lane (JSL) was retained by Stantec to conduct an analysis of the MWCOG forecast. JSL also reviewed other independent socioeconomic reports including that of Woods & Poole Economics. Key aspects of JSL's analysis are discussed below. The full report from JSL is provided as Appendix B.

Through discussions with the MWCOG and local government staff, as well as a review of the forecast development process, JSL developed a high degree of confidence in both the methodology and results of the MWCOG forecast. Each local government generates an individual forecast that is sensitive to the nuances of its particular area. Additionally, since the forecasts are updated frequently and tied to Census releases, emerging trends can quickly be captured, and any significant discrepancies can be quickly detected. Further, the MWCOG closely monitors the individual forecasts. Consequently, the Round 9.1a forecast was deemed appropriate for use as-is and provides a conservative base for the DTR T&R forecast.

Figure 3-7 and Figure 3-8 depict the evolution of historical employment in the MWCOG forecasts for both Loudon and Fairfax Counties. In Loudoun County, the forecast is consistently more conservative than actual employment. In Fairfax County, actual employment levels were higher than the various MWCOG forecasts prior to 2000. However, for the past 20 years, actual employment was lower than the MWCOG forecasts.









Figure 3-9 and Figure 3-10, actual population levels trended closer to the MWCOG forecasts for both Loudoun and Fairfax Counties. Although there was greater variation between the actual Loudoun County population and the MWCOG forecasts, the actual population trend follows the trajectory of the MWCOG forecasts. In Fairfax County, actual population growth closely follows the MWCOG forecast for all years.









Figure 3-10 Fairfax County MWCOG Forecast Population

Figure 3-11 and Figure 3-12 depict the estimated population growth from 2015 through 2045 from various sources. For Loudoun County, MWCOG's recently released draft Round 9.2 forecast is slightly higher than the two previous MWCOG forecasts, while Woods & Poole projects more significant growth in population. For Fairfax County, the Round 9.2 forecast projects population growth to be in between the projected growth of both, the previous Round 9.0 and Round 9.1a forecasts, while Woods & Poole estimates that Fairfax County will grow more slowly than the other forecasts.









# 3.4 OVERALL STUDY AREA TRENDS

The Washington, D.C. metropolitan area population and employment projections and associated growth rates are key inputs for trip generation when building trip tables for the travel demand model. Both employment and population trends can directly impact travel behaviors, so it is important to understand the existing conditions and growth during the forecast period.

## 3.4.1 Study Area Employment Summary

Figure 3-13, Figure 3-14, and Figure 3-15 show actual and anticipated employment trends for 2020, 2030, and 2045, respectively in the Washington, D.C. metropolitan area. Areas shaded with dark red indicate higher estimated populations, which can lead to more trips. Figure 3-16 and Figure 3-17 show the growth between 2020-2030 and 2030-2045, respectively. Figure 3-18 and Figure 3-19 show the compound annual growth rate (CAGR) in each of those timeframes. The figures reflect anticipated growth in the corridor, specifically near IAD and the area where the DTR connects with I-495. Additionally, the trends reflect higher growth in Loudoun County than in Fairfax County.



Figure 3-13 2020 Washington, D.C. Metropolitan Area Employment Density





Figure 3-14 2030 Washington, D.C. Metropolitan Area Employment Density

Figure 3-15 2045 Washington, D.C. Metropolitan Area Employment Density







Figure 3-16 Washington, D.C. Metropolitan Area Employment Growth 2020-2030

Figure 3-17 Washington, D.C. Metropolitan Area Employment Growth 2030-2045







Figure 3-18 Washington, D.C. Metropolitan Area Employment CAGR 2020-2030

Figure 3-19 Washington, D.C. Metropolitan Area Employment CAGR 2030-2045





## 3.4.2 Study Area Population Summary

Figure 3-20, Figure 3-21, and Figure 3-22 show actual and anticipated population trends for 2020, 2030, and 2045, respectively in the Washington, D.C. metropolitan area. Areas with darker color indicate a higher estimated population and therefore anticipated higher traffic levels coming from those areas. Figure 3-23 and Figure 3-24 show the growth between 2020-2030 and 2030-2045, respectively. Population growth results in increases in trips from one model year to the next from these darker shaded areas. Figure 3-25 and Figure 3-26 show the CAGR. The figures presented reflect anticipated growth in the corridor, also with higher growth expected in Loudoun County than in Fairfax County.



Figure 3-20 2020 Washington, D.C. Metropolitan Area Population





Figure 3-21 2030 Washington, D.C. Metropolitan Area Population

Figure 3-22 2045 Washington, D.C. Metropolitan Area Population







Figure 3-23 Washington, D.C. Metropolitan Area Population Growth 2020-2030

Figure 3-24 Washington, D.C. Metropolitan Area Population Growth 2030-2045







Figure 3-25 Washington, D.C. Metropolitan Area Population CAGR 2020-2030

Figure 3-26 Washington, D.C. Metropolitan Area Population CAGR 2030-2045





# 4.0 MODEL DEVELOPMENT

This chapter presents an overview of the modeling methodology that was used to estimate traffic and toll revenue for the DTR, and the assumptions and key inputs to that modeling process. A more detailed review of the calibration of the travel demand model used in developing the forecasts is presented in Appendix C.

Stantec used the regional travel demand forecasting model provided by MWCOG (Version 2.4). This model was reviewed and enhanced by Stantec to provide a more accurate forecast for the DTR tolling points. The key components of that refinement included calibration of the model to 2019 and 2021 existing conditions in the Dulles Corridor, use of Stantec toll diversion algorithms for the assignment of traffic on the transportation network, refinement of future transportation improvements on the network based on the most recent information available, and confirmation of the reasonableness of future population and employment estimates in the region.

## 4.1 BASIC ASSUMPTIONS

The following provides the basic assumptions of the traffic and toll revenue forecast, all of which are considered reasonable by Stantec for this investment-grade T&R study.

- 1. The DTR is assumed to provide four travel lanes in each direction, for a total of eight lanes, over its entire length.
- 2. No expansion of the DTR is expected or assumed in the forecast period.
- 3. Based on the LRTP, a frontage road is assumed to be constructed along the DTR from Wiehle Avenue to I-495 in 2038 that will consist of two lanes in each direction that are not tolled.
- The physical configuration of the DTR will remain broadly unchanged throughout the forecast period.
- 5. The future toll rates used in this study were developed for financial planning purposes by the Airports Authority and its financial advisors. Toll rates on the DTR facility are in future year dollars as set forth subsequently in this chapter. Commercial vehicle rates will continue to be incrementally higher than passenger cars based on the current multipliers, shown in Table 1-1.
- 6. With the exception of the removal of the ACMs in 2022, the current toll collection technology and methods of payment are assumed to be in place throughout the forecast period. This includes continuation of the current practice of invoicing non-E-ZPass transactions at the applicable toll rate for the first invoice notice sent to customers. It is understood that policies to enhance collection of non-E-ZPass transactions may occur in the future but have not been assumed for this analysis. It is also assumed that toll collection operations will continue to be actively monitored and strictly enforced to minimize potential revenue losses due to toll evasion and/or system failure.
- 7. An inflation rate of 4.5 percent from 2021 to 2022 has been assumed for purposes of escalating values of time within the model. This is based on current estimates of inflation at the time of this analysis in July 2021. A long-term inflation rate of 2.3 percent for 2023 and beyond has been



assumed based on historical averages. Annual toll revenue estimates and toll rates are expressed in future year dollars.

- 8. It is assumed that future toll increases on the Dulles Greenway will be implemented at the inflation rate each year. Future toll increases on other regional toll facilities have been estimated per assumed future toll rate policies and objectives of the other agencies/operators.
- 9. Annual transactions and toll revenue have not been adjusted to reflect any "ramp-up" characteristics as the DTR is a mature toll road facility.
- 10. The percentage of transactions using E-ZPass as a payment method is assumed to be approximately 85 percent throughout the forecast period.
- 11. The percentage of transactions from vehicles with 3 or more axles is assumed to stay relatively constant through the forecast period at approximately 2 percent.
- 12. The only assumed highway improvements in the study area are those that are committed in the following documents, as presented in Section 4.1.1: TIP and LRTP.
- 13. MWCOG's 4-step travel demand model was used as the basis to assess mode choice between highway and transit modes. Diversion to the Dulles Corridor Metrorail is represented by the adjustments made in the MWCOG highway trip tables generated through the 4-step travel demand modeling process. The Dulles Metrorail Project Phase 2 is assumed to begin service in 2022. Transit fares were as given in the MWCOG model. No other competing or feeder bus line service or service frequency has been assumed along the DTR corridor, other than as addressed in the TIP, LRTP and MWCOG plans.
- 14. Only airport traffic and transit buses are eligible to use the Access Highway. It is assumed that active monitoring, rigorous airport traffic enforcement and administrative adjudication processes will be in place to avoid potential misuse of the Access Highway for toll evasion and to minimize potential revenue losses.
- 15. Regional and corridor socioeconomic growth is in accordance with forecasts provided by MWCOG.
- 16. Travel demand modeling was performed by estimating average travel on the DTR and on other study area roadways between Tuesday and Thursday. To annualize transactions and toll revenue, it is assumed that the existing base relationship between weekday and annual trips observed at each toll plaza will remain constant in the future at pre-pandemic levels, including violations and non-revenue transactions including police, emergency vehicles, and military vehicles. The average annualization factor in the long-term forecast is 310.

Any factors that cause a significant departure from the above assumptions could materially affect the estimates for traffic and toll revenue on the DTR presented in this study.



# 4.2 KEY MODEL INPUTS

This section describes two key model inputs: planned transportation improvements and assumed future DTR toll rate increases.

### 4.2.1 Future Transportation Network Improvements

Stantec consulted the most recent versions of regional transportation improvement plans to identify the changes required to create accurate future network models, including the TIP and LRTP. The plans provide details on financially committed transportation projects in the area that may affect the flow of traffic throughout the transportation network once completed.

Figure 4-1 contains a map and corresponding list of major roadway improvements within the study area that are scheduled to be completed in future model years. The Dulles Metrorail Project – Phase 2, which achieved substantial completion in November 2021 and began operational readiness testing, is assumed to open for passenger service in 2022.

The included transportation improvement projects with major impacts during the forecast period are as follows:

- SR 7 Widening VDOT is widening SR 7/Leesburg Pike to six lanes, with one new travel lane in each direction. The project also includes the addition of shared use paths and intersection improvements along the corridor. These changes will help traffic flow along SR 7, increase capacity, and improve safety. The estimated completion date is 2024.
- SR 28 Widening In 2020, SR 28 was widened to eight lanes from Sterling Boulevard to I-66. In 2040, one lane in each direction will be converted to HOV from I-66 to the DTR.
- Dulles Toll Road Frontage Road A 2-lane collector-distributor road is planned in both directions from Wiehle Avenue to I-495 to allow for additional closely spaced interchanges to be constructed in Tysons Corner. The estimated completion date is 2035.
- Boone Boulevard Extension This extension will be extended west as a 4-lane roadway from SR 123 to the DTR at Ashgrove Lane with pedestrian facilities included. The estimated completion date is 2037.
- **Boone Boulevard Interchange** This project includes ramp construction from the DTR to the new Boone Boulevard extension at Ashgrove Lane. The estimated completion date is 2037.
- **Greensboro Drive Interchange** This project includes ramp construction from the DTR to the new Greensboro Drive extension at Tyco Road. The estimated completion date is 2036.
- I-66 HOT (Outside the Beltway) This project includes 22.5 miles of new Express Lanes through a phased construction approach. The Express Lanes (HOT3+) will run from University Boulevard in Gainesville to I-495 and are estimated to open in December 2022.
- I-66 HOT (Inside the Beltway) When the Outside the Beltway Express Lanes open as HOT3+ in December 2022, the I-66 HOT Lanes Inside the Beltway will be converted from HOT2+ to HOT3+ during peak hours from I-495 in Fairfax County to Route 29 near Roslyn, Arlington County.



### **Figure 4-1 Future Transportation Projects**

#### **Major Future Highway Projects**

north of Duke Street and south of Edsall Road

03. I-66 Widen - Add 1 lane from Dulles Connector

04. Jones Branch Drive Connector – Construct connector between SR 123 and I-495 Express

05. Spring Street Widen - Widen to 6 lanes from

Herndon Parkway to Fairfax County Parkway

06. Belmont Ridge Road Widen - Widen to 4 lanes

D7. Sycolin Road Widen – Widen to 4 lanes from SR 7/US 15 Leesburg Bypass to the Leesburg Town Line

from Dulles Toll Road to SR 7

#### 2021

to Fairfax Drive

Lanes

- Construct grade-separated interchange at Route 7 and Battlefield Parkway Edsail Road to Eads Street in Arlington
- 2025
  - 20. US 29 Widen Widen to 6 lanes from Espana Court to I-495

19. Route 7 and Battlefield Parkway Interchange

- 21. I-495 HOT Expansion Construct 4 HOT lanes from Old Dominion Road to George Washington Parkway
- SR 7 Widen Widen to 6 lanes from Dulles Toll Road to SR 743
- 23. US 50 Widen Widen to 6 lanes from SR 659 to Poland Road
- 24. Evergreen Mill Road Widen Widen from 2 to 4 lanes from King Street to Leesburg Town Line

- 1-495 HOT Expansion Expand existing HOT system from George Washington Parkway to American Legion Bridge
- 26. Frontier Dr Extension Extend from Franconia-Springfield Parkway to Loisdale Road
- 27. VA Route 28 Widen Widen from 4 to 6 lanes from Prince William County Line to Route 29
- Soapstone Connector New multimodal roadway between Sunset Hills Rd and Sunrise Valley Drive in Reston
- Lee Highway Widening Phase II Widen Route
  from 4 lanes to 6 lanes from Union Mill Road to Buckley's Gate Drive.
- 30. Route 621 Balls Ford Road Widen Widen to 4 lanes from Groveton Road to Sudley Road
- 31. VA Route 7 North Collector Road Extension Construction of a four-lane divided roadway from the Route 15 Bypass in Leesburg to the George Washington Boulevard in Ashburn

08. Battlefield Parkway Construction – Construct new 4 lane parkway from US 15 to Dulles Greenway

- SR 7 Widen Widen Leesburg Pike to 6 lanes from Seven Corners to Baily's Crossroads
   I-66 HOV Access to Vienna Metro Station -
- Construct a direct connection access from HOV/ HOT lanes to Vienna Metro Station
- SR 28 Widen Widen to 8 lanes from Sterling Boulevard to I-66
- 12. SR 659 Widen Widen from 2 to 4 lanes from Croson Lane to Dulles Greenway
- Route 7/ Route 659 Interchange Construct interchange at Route 7 and Route 659 to alleviate congestion and reduce accidents
- 14, I-395/ Seminary Rd Reversible lane ramp Construct new single lane, reversible HOV ramp on I-395 HOV lanes to the third level of the Seminary Road Interchange
- Jones Branch Drive Connector Provide a connection between Route 123 and the I-495 Express Lane (HOV/HOT lanes) ramps
- 16. Route 606 Loudoun County Parkway Reconstruction – Reconstruct and widen Route 606 to a four lane divided roadway from Evergreen Mills Road and Dulles Greenway
- Sudley Road Widen Construct the 3rd lane northbound between Grant Avenue and Godwin Drive
- I-395 HOT Construct additional lane and revise operation from HOV 3+ during peak to HOT 3+





2040

### Figure 4-1 Future Transportation Projects (Continued)

 Manassas Battlefield Bypass – Construct 4 lane by pass from SR 234 to US 29 and close portions US 29

 Boone Boulevard Extension – Extend west as 4 lane roadway from SR 123 to Dulles Toll Road

49. Greensboro Drive Interchange – Construct Dulles Toll Road access at Greensboro Drive

50. Boone Boulevard Interchange - Construct Dulles

51. SR 28 HOV Conversion - Convert 1 lane in each

direction to HOV from I-66 to Dulles Toll Road

 SR 7/US 15 Widen – Widen to 6 lanes from South King Street to East Market Street

53. I-66 HOT (Outside Beltway) – Widen and construct HOT lanes from University Boulevard to I-495

Toll Road access at Boone Boulevard Extension

#### **Major Future Highway Projects**

- 32. Connector Road from Sunrise Valley Drive to Innovation Avenue – Construct a four-lane roadway over the Dulles Toil Road from Sunrise Valley Drive on the south side to Innovation Avenue in Loudoum County on the north side
- 33. Popes Head Road Interchange Construct an interchange at the intersection of Fairfax County Parkway, Popes Head Road and future Shirley Gate Road Extension
- 34, I-66 HOT (Inside Beltway) Revise operations from HOT 2+ to HOT 3+ during peak hours from I-495 in Fairfax County to Route 29 near Roslyn, Arlington County
- I-66 HOT (Outside Beltway) Widen and construct HOT lanes from University Boulevard to I-495
- 36. Silver Line Extension Extends the line from the Wiehle-Reston East station to the Dulles International Airport and ends at Route 772 in eastern Loudourn County to I-495

#### 2030

- 37. SR 7 Widen Widen to 6 lanes from 1-495 to 1-66
- SR 123 Widen Widen to 8 lanes from Leesburg Pike to I-495
- Capital Beltway Auxiliary Lanes Construct 2 auxiliary lanes in both directions on 1-495 from north of Hemming Avenue Underpass to Braddock Road
- 40. I-495/Dulles Access Road Interchange Construct new ramp from the southbound general purpose lanes on I-495 to westbound Dulles Airport Access Road
- 41. VA 234 Bypass Interchange at Balls Ford Road – Construct an interchange from south of existing Balls Ford Road to existing Balls Ford Road
- 42. VA Route 645 Extension Extend road to provide an additional connection across Broad Run between Loudoun County Parkway and the Old Ox Road corridor.
- University Blvd. Extension ~ Extend from Devlin Road to Progress Court.

#### 2035

- 44. Fairfax County Parkway Expansion Widen to 6 lanes from I-66 to Sunrise Valley Drive, 1 lane HOV per direction during peak period
- Sycolin Road Widen Widen Sycolin Road from 2 to 4 lanes from Leesburg Town Limits to Belmont Ridge Road
- Dulles Toll Road Frontage Road Construct 2 lane frontage road system in both directions from Wiehle Avenue to 1-495




#### 4.2.2 Toll Rate Schedule

Table 4-1 presents the historical and assumed projected toll rate schedule for the DTR ramps and the mainline plaza. The projected toll rate schedule was developed by the financial advisors to the Airports Authority for financial planning purposes. For purposes of this study, the next toll increase is assumed to occur in 2023, with two-axle customers at the mainline toll plaza paying an additional \$0.75 and a \$0.50 increase at all ramp toll plazas. Every five years thereafter, there is an assumed increase of \$0.75 at the mainline toll plaza. Tolls at ramp toll plazas are also assumed to be adjusted every five years, generally by \$0.50, except for the \$0.75 increase in 2033. The last assumed toll increase is scheduled for 2048. For the purposes of this study, the toll rate multiplier between two-axle and three or more axle vehicle will remain constant as presented in the table. There is no assumed toll differential between E-ZPass and other payment options.

	Mainline											
Year	2	Axles	3	Axles	4	Axles	5	Axles	6	Axles		
1984	\$	0.50	\$	1.00	\$	1.00	\$	1.00	\$	1.00		
2005	\$	0.75	\$	1.00	\$	1.25	\$	1.50	\$	1.75		
2010	\$	1.00	\$	1.25	\$	1.50	\$	1.75	\$	2.00		
2011	\$	1.25	\$	1.50	\$	1.75	\$	2.00	\$	2.25		
2012	\$	1.50	\$	1.75	\$	2.00	\$	2.25	\$	2.50		
2013	\$	1.75	\$	3.50	\$	4.50	\$	5.25	\$	6.25		
2014	\$	2.50	\$	5.00	\$	6.25	\$	7.50	\$	8.75		
2019	\$	3.25	\$	6.50	\$	7.75	\$	9.00	\$	10.25		
2023	\$	4.00	\$	8.00	\$	10.00	\$	12.00	\$	14.00		
2028	\$	4.75	\$	9.50	\$	11.88	\$	14.25	\$	16.63		
2033	\$	5.50	\$	11.00	\$	13.75	\$	16.50	\$	19.25		
2038	\$	6.25	\$	12.50	\$	15.63	\$	18.75	\$	21.88		
2043	\$	7.00	\$	14.00	\$	17.50	\$	21.00	\$	24.50		
2048	\$	7.75	\$	15.50	\$	19.38	\$	23.25	\$	27.13		

Mainline

Table 4-1 DTR Historical and Future Planned Toll Rates

Ramps										
Year	2 Axles		3 Axles		4 Axles		5 Axles		6	Axles
1984	\$	0.25	\$	0.50	\$	0.50	\$	0.50	\$	0.50
2005	\$	0.50	\$	0.75	\$	1.00	\$	1.25	\$	1.50
2010	\$	0.75	\$	1.00	\$	1.25	\$	1.25	\$	1.50
2011	\$	0.75	\$	1.00	\$	1.25	\$	1.25	\$	1.50
2012	\$	0.75	\$	1.00	\$	1.25	\$	1.25	\$	1.50
2013	\$	1.00	\$	2.00	\$	2.50	\$	3.00	\$	3.50
2014	\$	1.00	\$	2.00	\$	2.50	\$	3.00	\$	3.50
2019	\$	1.50	\$	3.00	\$	3.50	\$	4.00	\$	4.50
2023	\$	2.00	\$	4.00	\$	5.00	\$	6.00	\$	7.00
2028	\$	2.50	\$	5.00	\$	6.25	\$	7.50	\$	8.75
2033	\$	3.25	\$	6.50	\$	8.13	\$	9.75	\$	11.38
2038	\$	3.75	\$	7.50	\$	9.38	\$	11.25	\$	13.13
2043	\$	4.25	\$	8.50	\$	10.63	\$	12.75	\$	14.88
2048	\$	4.75	\$	9.50	\$	11.88	\$	14.25	\$	16.63

There are multiple express lanes in the region, such as the 495 Express Lanes, I-66 Inside the Beltway, and I-66 Outside the Beltway. These lanes have dynamically priced tolls in order to optimize traffic flows and revenues. For the Stantec forecast, the existing policies were assumed to continue during the forecast period. For future facilities that have not yet opened, it is assumed that dynamically tolled lanes will optimize revenue.

The Maryland Transportation Authority toll facilities in the region, although none are adjacent to the DTR, are assumed to maintain current policies and no future toll increases will occur.



## 4.3 MODELING METHODOLOGY

This section describes the modeling effort and highlights key inputs and assumptions.

#### 4.3.1 MWCOG Model Framework

As discussed in Chapter 3, the MWCOG regional transportation model is the traffic forecasting model designed to forecast traffic volumes in the Washington, D.C. metropolitan area, which includes parts of Maryland, West Virginia, and Virginia as well as the District of Columbia. The MWCOG regional model version 2.4 includes the latest approved underlying socioeconomic forecasts of MWCOG defined as Round 9.1a. The MWCOG model includes all inputs and application files required to execute the travel demand model for the MWCOG base year of 2014, future years 2025, 2030, 2040, and horizon year 2045 as released by MWCOG in 2020.

#### 4.3.2 Mode-Choice and Potential Diversion to Rail

The regional model generates trips based on the traditional four-step transportation demand modeling process (trip generation, trip distribution, mode choice, and highway assignment) with several loop-back steps to take congestion levels into account. Trip tables representing AM peak period, PM peak period, midday, and night travel are developed in the MWCOG model using factors from regional household surveys.

The model predicts mode choice based on the relative costs of each mode. Diversion from highway to rail after the Dulles Metrorail Project – Phase 2 is opened is expected to be relatively low, similar to the actual experience after Phase 1 opened in 2014. Review of the regional model confirmed that the transit share of travel mode choice is low and insensitive to other factors such as tolls. It is important to note that the passenger capacity of the Dulles Metrorail Project – Phase 2 is small relative to the hundreds of thousands of commuters that travel the DTR and competing highway routes on a daily basis. In addition, DTR customers have very diverse travel patterns that are not conveniently served by the Dulles Metrorail Project – Phase 2.

#### 4.3.3 Socioeconomic Assumptions

Stantec retained JSL, an independent economist, to review the socioeconomic inputs that provide the trip generation and develop travel patterns in the model. JSL undertook a detailed review of the MWCOG Round 9.1a demographic inputs and deemed the data reasonable for use in this study as described in Chapter 3 and Appendix B.

#### 4.3.4 Model Calibration

Stantec invested time and effort to calibrate the travel demand model to existing conditions. Two base years were calibrated (2019 and 2021) to reflect both pre-pandemic conditions and current conditions as of spring/summer 2021. Most of the calibration effort was focused on 2019 and included adjustments to the trip tables, highway network, and traffic assignment assumptions to match traffic counts, speeds, origin and destination patterns, and trip purpose estimations by time period. In addition, key assumptions of the toll diversion algorithms, including value of time (VOT) by trip purpose, used in the traffic assignment process were calibrated to reflect the impact of the 2019 toll increase. The result of the calibration process was a



forecasting model that accurately reflected 2019 traffic counts on the DTR and roadways that feed or compete with the DTR by time of day.

The calibration of the 2021 model was focused on the estimated impact of the pandemic. Using the modeling platform from the 2019 calibration, work-based trip purposes were reduced to reflect actual traffic counts in 2021 by time period. Section 4.3.5 further details trip purposes. Details of the calibration process and results for both 2019 and 2021 are provided in Appendix C.

#### 4.3.5 Toll Diversion Assignment Process

For this study, the toll diversion assignment process used to estimate the traffic and revenue on the DTR took advantage of the significant detail provided by the MWCOG model, including income and trip purposes of potential customers. Using this information, toll diversion equations were established for each of 25 unique trip types as a function of vehicle class, trip purpose, and income. Vehicle classes include SOVs, HOV2+, HOV3+, and trucks. The trip purposes addressed are home-based work, home-based shopping, home-based other, non-home work and non-home other. For each trip purpose, income was stratified into low and high categories to better reflect travel choices by income class.

Inputs for diversion equations were adjusted to reflect the impact of the 2019 toll increase on the DTR. A detailed review of the toll diversion assignment process with all assumptions including value of time by trip purpose and the utility function that assigns traffic is provided in Appendix C.

#### 4.3.6 Pandemic Impact on Forecasts

A detailed review of the impact of the pandemic on current and future DTR transactions and toll revenue was undertaken. Downward adjustments were made to work-based trips in the model based on the results from employer interviews, customer surveys, frequency of use analyses, estimated recovery of employment and WFH shares by sector as well as the 2021 model calibration efforts. The reductions had a larger impact during the AM peak period because the commuter trips comprise a relatively higher share of the overall demand. The resulting approximately 6.3 percent reduction in work-based trips was kept constant throughout the forecast period, starting in model year 2025. Further information regarding the adjustment to work-based trips is provided in Appendix C.



## 5.0 TRAFFIC AND REVENUE FORECAST AND SENSITIVITIES

The forecasts of toll transactions and toll revenue for the DTR from calendar year 2021 through 2058 are presented in this chapter. The forecast assumes a future toll rate schedule that was developed by the Airports Authority and its financial advisors for financial planning purposes. The toll rates are subject to change. Following the estimates, a toll sensitivity analysis is presented showing potential transactions and toll revenues for 2030 to assess the reasonableness of assumed future toll increases for the DTR.

Finally, several sensitivities tests were conducted to understand the potential impacts associated with changes to certain aspects of Stantec's assumptions.

## 5.1 TRAFFIC & REVENUE FORECASTS

Stantec developed traffic and toll revenue forecasts for the DTR based on the enhanced travel demand model which incorporated future year network assumptions, socioeconomic forecasts, and revised toll diversion assignment to factor in short- and long-term impacts of the pandemic. The travel demand modeling process, including application of MWCOG models and the toll diversion model, was applied to select horizon years (2025, 2030, 2040, 2045) to create annual traffic estimates. Intermediate year estimates were developed via interpolation techniques and the years beyond 2045 were estimated via extrapolation.

Stantec reviewed model-based forecasts, summarized estimated traffic for each of the Dulles Corridor screenlines, and reviewed transactions and revenue for each horizon year. Transaction and revenue streams were then prepared against key metrics related to payment type and vehicle type, along with both average weekday and annual estimates for total transactions and paying transactions using revenue collection statistics. Gross revenue estimates were then prepared by multiplying transactions at the toll locations by the effective toll structure by vehicle type and payment type for each year. Adjustments were also included to reflect effective toll collection rates. These weekday estimates were then translated to annual estimates of transactions and revenue through the annualization factor.

The annual traffic and revenue estimates for the DTR are presented in Table 5-1 with information on the average toll per transaction and the rates for two-axle vehicles in each year. The estimated revenue includes the gross collected toll revenue and estimated fee revenue from transactions recorded as violations. Table 5-2 shows the percentage change in transactions and revenue each year and Figure 5-1 graphically depicts the forecast.

For calendar year 2022, estimated transactions and toll revenue are approximately 64 million and \$143 million, a 16.4 percent and 17.0 percent increase over 2021 transaction and toll revenue values, respectively. Transactions are expected to continue to recover from the pandemic through 2025, with sustained steady growth rates of transactions and revenue thereafter. Growth in transactions in 2023 is impacted by the scheduled toll rate increase.



	Dulles Toll Road Transaction and Revenue Forecast										
Year	Transactions			Gross Collected Revenue incl. Violation Revenue			Avg Toll			2 axle Toll Rate	
	E-ZPass	Non-E-ZPass	Total	E-ZPass	Non-E-ZPass	Total	E-ZPass	Non-E-ZPass	Total	Mainline	Ramp
2017	81,464,259	15,625,653	97,089,912	\$127,811,226	\$24,211,437	\$152,022,663	\$1.57	\$1.55	\$1.57	\$2.50	\$1.00
2018	82,127,336	14,205,378	96,332,714	\$128,826,533	\$22,570,399	\$151,396,932	\$1.57	\$1.59	\$1.57	\$2.50	\$1.00
2019	77,873,444	13,098,454	90,971,898	\$168,728,951	\$28,678,378	\$197,407,329	\$2.17	\$2.19	\$2.17	\$3.25	\$1.50
2020	47,135,371	7,944,026	55,079,397	\$105,461,911	\$16,624,735	\$122,086,646	\$2.24	\$2.09	\$2.22	\$3.25	\$1.50
2021	55,990,497	8,105,526	64,096,023	\$125,642,161	\$17,186,779	\$142,828,940	\$2.24	\$2.12	\$2.23	\$3.25	\$1.50
2022	67,234,000	9,710,000	76,944,000	\$148,502,000	\$20,042,000	\$168,544,000	\$2.21	\$2.06	\$2.19	\$3.25	\$1.50
2023	68,084,000	9,816,000	77,900,000	\$190,541,000	\$25,462,000	\$216,003,000	\$2.80	\$2.59	\$2.77	\$4.00	\$2.00
2024	71,727,000	10,331,000	82,058,000	\$199,437,000	\$26,486,000	\$225,923,000	\$2.78	\$2.56	\$2.75	\$4.00	\$2.00
2025	75,269,000	10,832,000	86,101,000	\$208,037,000	\$27,473,000	\$235,510,000	\$2.76	\$2.54	\$2.74	\$4.00	\$2.00
2026	76,613,000	11,024,000	87,637,000	\$211,611,000	\$27,939,000	\$239,550,000	\$2.76	\$2.53	\$2.73	\$4.00	\$2.00
2027	77,958,000	11,216,000	89,174,000	\$215,180,000	\$28,404,000	\$243,584,000	\$2.76	\$2.53	\$2.73	\$4.00	\$2.00
2028	74,176,000	10,671,000	84,847,000	\$248,707,000	\$32,802,000	\$281,509,000	\$3.35	\$3.07	\$3.32	\$4.75	\$2.50
2029	75,473,000	10,811,000	86,284,000	\$253,029,000	\$33,230,000	\$286,259,000	\$3.35	\$3.07	\$3.32	\$4.75	\$2.50
2030	76,769,000	10,952,000	87,721,000	\$257,350,000	\$33,659,000	\$291,009,000	\$3.35	\$3.07	\$3.32	\$4.75	\$2.50
2031	78,089,000	11,094,000	89,183,000	\$261,746,000	\$34,093,000	\$295,839,000	\$3.35	\$3.07	\$3.32	\$4.75	\$2.50
2032	79,431,000	11,238,000	90,669,000	\$266,217,000	\$34,533,000	\$300,750,000	\$3.35	\$3.07	\$3.32	\$4.75	\$2.50
2033	75,448,000	10,631,000	86,079,000	\$311,243,000	\$40,156,000	\$351,399,000	\$4.13	\$3.78	\$4.08	\$5.50	\$3.25
2034	76,767,000	10,771,000	87,538,000	\$316,463,000	\$40,649,000	\$357,112,000	\$4.12	\$3.77	\$4.08	\$5.50	\$3.25
2035	78,109,000	10,913,000	89,022,000	\$321,771,000	\$41,148,000	\$362,919,000	\$4.12	\$3.77	\$4.08	\$5.50	\$3.25
2036	79,475,000	11,056,000	90,531,000	\$327,168,000	\$41,654,000	\$368,822,000	\$4.12	\$3.77	\$4.07	\$5.50	\$3.25
2037	80,865,000	11,202,000	92,067,000	\$332,655,000	\$42,165,000	\$374,820,000	\$4.11	\$3.76	\$4.07	\$5.50	\$3.25
2038	74,985,000	10,343,000	85,328,000	\$351,565,000	\$44,347,000	\$395,912,000	\$4.69	\$4.29	\$4.64	\$6.25	\$3.75
2039	76,401,000	10,641,000	87,042,000	\$357,931,000	\$45,578,000	\$403,509,000	\$4.68	\$4.28	\$4.64	\$6.25	\$3.75
2040	77,817,000	10,939,000	88,756,000	\$364,285,000	\$46,806,000	\$411,091,000	\$4.68	\$4.28	\$4.63	\$6.25	\$3.75
2041	79,233,000	11,237,000	90,470,000	\$370,909,000	\$48,083,000	\$418,992,000	\$4.68	\$4.28	\$4.63	\$6.25	\$3.75
2042	80,650,000	11,535,000	92,185,000	\$377,530,000	\$49,359,000	\$426,889,000	\$4.68	\$4.28	\$4.63	\$6.25	\$3.75
2043	78,286,000	11,288,000	89,574,000	\$412,750,000	\$54,405,000	\$467,155,000	\$5.27	\$4.82	\$5.22	\$7.00	\$4.25
2044	79,637,000	11,572,000	91,209,000	\$419,859,000	\$55,776,000	\$475,635,000	\$5.27	\$4.82	\$5.21	\$7.00	\$4.25
2045	80,988,000	11,856,000	92,844,000	\$426,966,000	\$57,147,000	\$484,113,000	\$5.27	\$4.82	\$5.21	\$7.00	\$4.25
2046	81,798,000	11,975,000	93,773,000	\$431,236,000	\$57,718,000	\$488,954,000	\$5.27	\$4.82	\$5.21	\$7.00	\$4.25
2047	82,582,000	12,090,000	94,672,000	\$435,368,000	\$58,271,000	\$493,639,000	\$5.27	\$4.82	\$5.21	\$7.00	\$4.25
2048	79,845,000	11,689,000	91,534,000	\$468,687,000	\$62,731,000	\$531,418,000	\$5.87	\$5.37	\$5.81	\$7.75	\$4.75
2049	80,544,000	11,791,000	92,335,000	\$472,788,000	\$63,280,000	\$536,068,000	\$5.87	\$5.37	\$5.81	\$7.75	\$4.75
2050	81,215,000	11,890,000	93,105,000	\$476,728,000	\$63,807,000	\$540,535,000	\$5.87	\$5.37	\$5.81	\$7.75	\$4.75
2051	81,858,000	11,984,000	93,842,000	\$480,502,000	\$64,312,000	\$544,814,000	\$5.87	\$5.37	\$5.81	\$7.75	\$4.75
2052	82,472,000	12,074,000	94,546,000	\$484,106,000	\$64,794,000	\$548,900,000	\$5.87	\$5.37	\$5.81	\$7.75	\$4.75
2053	83,056,000	12,160,000	95,216,000	\$487,535,000	\$65,253,000	\$552,788,000	\$5.87	\$5.37	\$5.81	\$7.75	\$4.75
2054	83,610,000	12,241,000	95,851,000	\$490,785,000	\$65,688,000	\$556,473,000	\$5.87	\$5.37	\$5.81	\$7.75	\$4.75
2055	84,133,000	12,318,000	96,451,000	\$493,852,000	\$66,099,000	\$559,951,000	\$5.87	\$5.37	\$5.81	\$7.75	\$4.75
2056	84,624,000	12,390,000	97,014,000	\$496,733,000	\$66,485,000	\$563,218,000	\$5.87	\$5.37	\$5.81	\$7.75	\$4.75
2057	85,082,000	12,457,000	97,539,000	\$499,424,000	\$66,845,000	\$566,269,000	\$5.87	\$5.37	\$5.81	\$7.75	\$4.75
2058	85,507,000	12,519,000	98,026,000	\$501,921,000	\$67,179,000	\$569,100,000	\$5.87	\$5.37	\$5.81	\$7.75	\$4.75

#### Table 5-1 Long-term Traffic and Revenue Forecast

Actual Historical Toll Increases Future Toll Increases



	Dulles Toll R	oad	Transaction an	d Revenue Forec	ast
Year	Total Transactions	Т	otal Revenue	Total Transactions	Total Revenue
2017	97.089.912	\$	152,022,663	Transactions	
2017	96,332,714	\$	151,396,932	-0.8%	-0.4%
2010	90,971,898	ф \$	197,407,329	-5.6%	30.4%
2019	55,079,397	<del>9</del> \$	122,086,646	-39.5%	-38.2%
2020	64,096,023	<b>₽</b> \$	142,828,940	16.4%	17.0%
2021	76,944,000	\$	168,544,000	20.0%	18.0%
2022	77,900,000	э \$	216,003,000	1.2%	28.2%
2023	82,058,000	\$	225,923,000	5.3%	4.6%
2024	86,101,000	\$	235,510,000	4.9%	4.0%
2026	87,637,000	\$	239,550,000	1.8%	1.7%
2020	89,174,000	\$	243,584,000	1.8%	1.7%
2028	84,847,000	\$	281,509,000	-4.9%	15.6%
2029	86,284,000	\$	286,259,000	1.7%	1.7%
2030	87,721,000	\$	291,009,000	1.7%	1.7%
2031	89,183,000	\$	295,839,000	1.7%	1.7%
2032	90,669,000	\$	300,750,000	1.7%	1.7%
2033	86,079,000	\$	351,399,000	-5.1%	16.8%
2034	87,538,000	\$	357,112,000	1.7%	1.6%
2035	89,022,000	\$	362,919,000	1.7%	1.6%
2036	90,531,000	\$	368,822,000	1.7%	1.6%
2037	92,067,000	\$	374,820,000	1.7%	1.6%
2038	85,328,000	\$	395,912,000	-7.3%	5.6%
2039	87,042,000	\$	403,509,000	2.0%	1.9%
2040	88,756,000	\$	411,091,000	2.0%	1.9%
2041	90,470,000	\$	418,992,000	1.9%	1.9%
2042	92,185,000	\$	426,889,000	1.9%	1.9%
2043	89,574,000	\$	467,155,000	-2.8%	9.4%
2044	91,209,000	\$	475,635,000	1.8%	1.8%
2045	92,844,000	\$	484,113,000	1.8%	1.8%
2046	93,773,000	\$	488,954,000	1.0%	1.0%
2047	94,672,000	\$	493,639,000	1.0%	1.0%
2048	91,534,000	\$	531,418,000	-3.3%	7.7%
2049	92,335,000	\$	536,068,000	0.9%	0.9%
2050	93,105,000	\$	540,535,000	0.8%	0.8%
2051	93,842,000	\$	544,814,000	0.8%	0.8%
2052	94,546,000	\$	548,900,000	0.8%	0.7%
2053	95,216,000	\$	552,788,000	0.7%	0.7%
2054	95,851,000	\$	556,473,000	0.7%	0.7%
2055	96,451,000	\$	559,951,000	0.6%	0.6%
2056	97,014,000	\$	563,218,000	0.6%	0.6%
2057	97,539,000	\$	566,269,000	0.5%	0.5%
2058	98,026,000	\$	569,100,000	0.5%	0.5%

Table 5-2 Long-term Traffic and Revenue Forecast

#### Actual

Historical Toll Increases Future Toll Increases





Figure 5-1 Long-Term Forecast

## 5.2 TOLL SENSITIVITY ANALYSIS

The concept of toll sensitivity is illustrated in Figure 5-2. When there is a toll increase, some customers may no longer use the toll facility because the time savings and other benefits no longer outweigh the cost of the toll. These customers may find another route or cease to make a trip. As the toll rate continues to increase, the portion of travelers leaving the roadway will grow, causing a decrease in transactions. Despite the reduction in total transactions, higher toll rates, up to the revenue maximization toll point, will result in an overall increase in toll revenue.

A toll sensitivity analysis may assist in testing the reasonableness of possible future toll increases for the DTR beyond what was assumed in the base case. If a toll increase results in an overall reduction in revenue, then it is not a viable option. The specific sensitivity curve for the DTR depends on several factors including competing facilities, projected congestion levels, values of time, and year of the analysis.

In order to estimate the ability of the DTR to increase tolls, Stantec conducted a toll sensitivity analysis for model year 2030. The planned toll rate increases scheduled for 2023, 2028, 2033, 2038, 2043 and 2048 were tested in the 2030 forecasting model. Figure 5-2 depicts the average weekday toll sensitivity curves for model year 2030. As toll rates increase and transactions decrease, revenue continues to increase even with a mainline two-axle vehicle toll rate of \$7.75, which is \$3.00 higher than the \$4.75 mainline toll rate assumed for 2030, indicating that the revenue maximization point is higher.





**Figure 5-2 Toll Sensitivity** 

## 5.3 SENSITIVITY ANALYSIS

The base case T&R estimates for the DTR shown in Table 5-3 are based on certain assumptions about potential DTR customers and forecasts of population, employment, and households in the Washington, D.C. metropolitan area. It is standard practice to conduct sensitivity tests to provide an indication of the potential impact on the T&R results when certain inputs and variables are changed. A sensitivity analysis specifically focused on toll rates was discussed in Section 5.2. Additional sensitivity tests considered for this study include:

- 1. Reduced Work-based Trips 100 percent increase of the reduction in work-based trips (i.e., double the reduction) in the base case T&R forecast as a proxy for increased WFH.
- 2. Lower VOT VOT assumptions in the base case were lowered by 25 percent.
- 3. No Economic Growth No future growth in trips in the region after 2021.
- 4. Lower Long-Term Economic Growth Annual growth in trips in the region reduced by 25 percent over the base case trip growth.
- 5. Higher Long-Term Economic Growth Annual growth in trips in the region increased by 25 percent over the base case trip growth.

The magnitude of the hypothetical changes from the base case assumptions is arbitrary, and the sensitivity scenarios are not intended to represent conditions that are likely or anticipated to occur.

A summary of the sensitivity test results compared to the base case forecast is shown in Table 5-3. For each of the five sensitivity tests analyzed by Stantec, the table provides the resulting annual toll transactions and revenue in years 2025 and 2040, a calculation of the resulting gain or loss of both annual transactions and revenue compared to the base case forecast in those years, as well as the percentage impact compared to the base case forecast.



Scenario	Total Tran	sactions	Toll Revenue		
Scenario	2025	2040	2025	2040	
Base Case	86,100	88,914	\$235,486	\$411,986	
1. WFH Impact Increased 100% <sup>1</sup>	80,003	82,491	\$218,781	\$382,145	
Difference	(6,097)	(6,423)	(\$16,705)	(\$29,841)	
Percent Difference	-7.1%	-7.2%	-7.1%	-7.2%	
2. Lower VOT - Reduce 25% <sup>2</sup>	74,796	74,515	\$203,649	\$344,130	
Difference	(11,304)	(14,399)	(\$31,837)	(\$67,856)	
Percent Difference	-13.1%	-16.2%	-13.5%	-16.5%	
3. No Economic Growth <sup>3</sup>	80,001	69,196	\$218,900	\$322,656	
Difference	(6,099)	(19,718)	(\$16,586)	(\$89,330)	
Percent Difference	-7.1%	-22.2%	-7.0%	-21.7%	
4. Lower Economic Growth - Reduce 25% <sup>4</sup>	84,577	83,973	\$231,306	\$389,641	
Difference	(1,524)	(4,941)	(\$4,180)	(\$22,345)	
Percent Difference	-1.8%	-5.6%	-1.8%	-5.4%	
5. Higher Economic Growth - Increase 25% <sup>5</sup>	87,727	94,168	\$239,815	\$435,662	
Difference	1,627	5,254	\$4,329	\$23,675	
Percent Difference	1.9%	5.9%	1.8%	5.7%	

Table 5-3 Sensitivity Test Results: Annual Transactions and Revenue (Thousands)

1. Model adjusted to reduce work-based trips by 12.6 percent, twice the amount in the base case forecast

2. Model includes a 25 percent decrease in VOT over the base case forecast

3. Model includes no future growth in trips from 2021 trip table

4. Model includes a 25 percent decrease of the trip table growth over the base case forecast

5. Model includes a 25 percent increase of the trip table growth over the base case forecast

#### 5.3.1 Reduced Work-based Trips

For the base case T&R estimates, work-based trips generated by the travel demand model were reduced to reflect the potential impact of WFH policies in the region. The magnitude of the adjustment was based on employer interviews, customer surveys, frequency of use analysis, estimated recovery of employment and WFH shares by sector, and 2021 model calibration efforts. Reducing the number of work-based trips by approximately 12.6 percent, twice the level in the base case forecast, results in a reduction of annual toll transactions by an estimated 7.1 percent in 2025 and 7.2 percent in 2040 compared to the base case forecast. The resulting revenue reduction is estimated at 7.1 percent in 2025 and 7.2 percent in 2040.



#### 5.3.2 Lower Value of Time

In the base case forecast, Stantec estimated VOT based on incomes in the region and the calibrated toll diversion model. Since VOT can be difficult to quantify throughout the many years of the forecast, a VOT sensitivity test was performed to assess the potential impacts to the DTR forecasts resulting from a 25 percent reduction of the estimated VOT for the DTR customers (which reduces the value of projected time savings from using the DTR when compared to alternative toll-free routes). This decreased VOT was analyzed for both 2025 and 2040 model years. As shown in Table 5-3, this sensitivity test results in lowering the annual transactions by an estimated 13.1 percent in 2025 and by 16.2 percent in 2040. The resulting toll revenue would be reduced by 13.5 percent in 2025 and a 16.5 percent in 2040.

#### 5.3.3 No Economic Growth

The base case forecast was predicated upon the regional socioeconomic growth forecasts incorporated in the regional travel model as updated and refined by Stantec. The socioeconomic forecasts were reviewed for reasonableness by the independent economist JSL. To evaluate the impact of the economic growth assumptions on the base case forecast, Stantec developed a sensitivity scenario with no economic growth beyond the base year. This sensitivity test eliminated the annual growth in trips in the region between the base year of 2021 after removing adjustments made to reflect the pandemic (adjusted 2021) and the future years of 2025 and 2040.

As noted from Table 5-3, the no economic growth sensitivity results in an estimated 7.1 percent reduction in annual DTR transactions in 2025 and an estimated 22.2 percent reduction in 2040. Similarly, toll revenue would be reduced by 7.0 percent in 2025 and 21.7 percent in 2040, when compared to the base case forecast.

#### 5.3.4 Lower Long-Term Economic Growth

Incorporating a 25 percent decrease in the rate of trip growth between the adjusted 2021 base year and the future years of 2025 and 2040 decreases annual transactions by an estimated 1.8 percent in 2025 and 5.6 percent in 2040 compared to the base case forecast. The resulting revenue reduction is estimated at 1.8 percent in 2025 and 5.4 percent in 2040.

#### 5.3.5 Higher Long-Term Economic Growth

Increasing trip growth rates by 25 percent between the adjusted 2021 base year and the future years of 2025 and 2040 resulted in an increase of annual transactions by an estimated 1.9 percent in 2025 and by approximately 5.9 percent in 2040. The resulting toll revenue would increase by 1.8 percent in 2025 and 5.7 percent in 2040.

## 5.4 DISCLAIMER

It is Stantec's opinion that the traffic and toll revenue forecasts presented in this study represent reasonable and achievable levels of traffic and toll revenues that can be expected to accrue on the DTR over the forecast period. The forecasts have been prepared in accordance with accepted industry-wide practices. However, as should be expected with any forecast, and given the uncertainties within the current economic



climate, the pandemic recovery trajectory, and other factors, it is important to note the following assumptions, which, in our opinion, are reasonable:

- This study presents the highlighted results of Stantec's consideration of the information available as of the date hereof and the application of Stantec's experience and professional judgment to that information. It is not a guarantee of any future events or trends.
- The traffic and toll revenue estimates will be subject to future economic and social conditions, demographic developments, and regional transportation construction activities that cannot be predicted with certainty.
- The estimates contained in this document, while presented with numeric specificity, are based on a number of estimates and assumptions, which, though considered reasonable to us, are inherently subject to economic and competitive uncertainties and contingencies, many of which will be beyond Stantec's control and that of the Airports Authority and cannot be predicted with certainty. In many instances, a broad range of alternative assumptions could be considered reasonable. Any changes in the assumptions used could result in material differences in estimated outcomes.
- If, for any reason, any of these stated conditions should change due to changes in the economy or competitive environment, or other factors, Stantec's calculations may require amendment or further adjustments. Some of these conditions include:
  - The standards of operation and maintenance on the DTR will be maintained as planned within business rules and practices.
  - The general configuration and location of the DTR and its interchanges will remain as discussed in the study.
  - o Access to and from the DTR will remain as discussed in the study.
  - No other new competing highway projects are assumed to be constructed or significantly improved in the project corridor during the project period, except those identified within the study.
  - Major highway improvements that are currently underway or fully funded will be completed as planned.
  - The DTR will be well maintained, efficiently operated, and effectively signed to encourage usage.
  - No reduced growth initiatives or related controls that would significantly inhibit normal development patterns will be introduced during the forecast period.
  - o There will be no future serious protracted recession during the forecast period.



 No local, regional, or national emergency including future pandemics will arise that will abnormally restrict the use of motor vehicles.

Many statements contained in this study that are not historical facts are forward-looking statements, which are based on Stantec's opinions, as well as assumptions made by, and information currently available to, the management and staff of Stantec. Because the statements are based on expectations about future events and economic performance and are not statements of fact, actual results may differ materially from those projected. The words "anticipate", "assume", "estimate", "expect", "objective", "projection", "plan", "forecast", "goal", "budget", or similar words are intended to identify forward-looking statements. The words or phrases "to date", "now", "currently", and the like are intended to mean as of the date of this report.

In Stantec's opinion, the assumptions underlying the study provide a reasonable basis for the analysis. However, any financial projection is subject to uncertainties. Inevitably, some assumptions used to develop the projections will not be realized, and unanticipated events and circumstances may occur. There are likely to be differences between the projections and actual results, and those differences may be material. Because of these uncertainties, Stantec makes no guaranty or warranty with respect to the projections in this study.

This document, and the opinions, analysis, evaluations, or recommendations contained herein are for the sole use and benefit of the contracting parties. There are no intended third-party beneficiaries, and Stantec Consulting Services Inc. (and its affiliates) shall have no liability whatsoever to any third parties for any defect, deficiency, error, omission in any statement contained in or in any way related to this document or the services provided.

Stantec is not, and has not been, a municipal advisor as defined in Federal law (the Dodd-Frank Bill) to the Airports Authority and does not owe a fiduciary duty pursuant to Section 15B of the Exchange Act to the Airports Authority with respect to the information and material contained in this document. Stantec is not recommending and has not recommended any action to the Airports Authority. The Airports Authority should discuss the information and material contained in this document with any and all internal and external advisors that it deems appropriate before acting on this information

Neither this document nor any information contained therein or otherwise supplied by Stantec Consulting Services Inc. in connection with the study and the services provided to our client shall be used in connection with any financing solicitation, proxy, and proxy statement, proxy soliciting materials, prospectus, Securities Registration Statement or similar document without the express written consent of Stantec Consulting Services Inc.



# **APPENDICES**

Appendix A: Dulles Toll Road Return to Work Commuter Research Survey and In-Depth Interviews, Eureka Facts LLC

Appendix B: Demographic Forecast Review, J.S. Lane Company

Appendix C: Travel Demand Model Development and Calibration





## Dulles Toll Road Return to Work Commuter Research Survey and In-depth Interviews

Final Report December 6, 2021



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#### 1. Introduction

The Metropolitan Washington Airports Authority (Airports Authority) has retained Stantec Consulting Services, Inc. (Stantec) to prepare an investment grade traffic and revenue study for the Dulles Toll Road (DTR) which includes forecasts of toll road traffic and revenue (T&R). In support of this effort, Stantec has retained EurekaFacts, LLC (EurekaFacts) to conduct a study of DTR customers in order to understand behavioral changes, both during and after the COVID-19 pandemic (pandemic). EurekaFacts developed a customer survey and performed in-depth employer interviews to understand DTR customer driving habits as well as regional employer policies and expectations on returning to work as the region recovers from the effects of the ongoing pandemic.

EurekaFacts is headquartered in Baltimore, Maryland and has provided insightful market research for both public and private clients for almost two decades, bringing in-depth local knowledge of commuting and employment trends from the completion of a wide array of projects across the mid-Atlantic region. EurekaFacts holds certifications as a Small Business Enterprise, Disadvantaged Business Enterprise, and Minority Business Enterprise.

The role of EurekaFacts was to conduct a three-part study of DTR customers to understand driving habits as well as expectations on returning to the workplace.

The three phases of the EurekaFacts study included:

- Literature Review: This portion of work covered research and identification of relevant context regarding remote work patterns and the outlook for returning to work in-person.
- Survey of DTR Customers: A quantitative survey of E-ZPass users focused on the frequency of DTR use and geographic proximity to the toll road to include inquiry on stated preferences and future expectations for utilizing the DTR and other behaviors.
- In-Depth Interviews with Regional Employers: This consisted of a qualitative study of human resource (HR) and other decision-makers to examine anticipated policies and expectations on returning to the workplace as the region recovers from the COVID-19 pandemic.

These phases of research aid in the understanding of DTR usage on both the supply side (employers) and the demand side (customers) by capturing the behaviors and future expectations of each. This also provides information from the following perspectives regarding the topics listed below:

- 1. Employers (supply side)
  - a. Work-from-home policies pre-pandemic, throughout the recovery, and post-pandemic
  - b. Future work-from-home policies and demand for these policies
  - c. Timing of policy shifts and who will take advantage of them
  - d. Types of firms executing these changes
- 2. DTR Customers (demand side)
  - a. Trip patterns pre-pandemic, throughout the recovery, and post-pandemic, further classified as patterns in the near and far future
  - b. Timing of these behavioral shifts
  - c. Reasons for using the DTR as related to overall usage patterns

## 2. DTR Survey

#### 2.1 Key Findings: DTR Survey

Key findings from the survey research conducted with DTR *E-ZPass* users regarding driving frequency prior to the pandemic, throughout the recovery, and anticipated use of the DTR post-pandemic are summarized below. Pre-pandemic was defined in the survey as prior to March 2020. This section also highlights findings on satisfaction with the DTR and with specific features of the roadway.

- Overall survey results indicate that DTR customers are very satisfied with the customer experience and sense of value provided by the DTR. This sentiment was consistent across all DTR usage segments studied.
- Almost 80% of DTR customers (79%) are satisfied with their experience as a DTR customer and 70% are satisfied with the value they receive.
- Between 78% and 94% of DTR customers expressed satisfaction across a broad range of categories including: "road conditions" (94%), "the E-ZPass account" (94%), "customer service" (90%), "messaging on traffic conditions" (87%), and the "overall safety and service in exchange for the toll paid" (78%).
- According to the survey results, the most frequent reasons for choosing the DTR included: time savings (58%), "less traffic congestion" (18%) as well as "shorter driving distances" (14%).
- The modal time savings across all four DTR usage segments is "10 to 14 minutes" according to 35% of the DTR customers surveyed.

Impacts of the pandemic resulted in several changes to driving behavior by DTR customers, as further described in the following paragraphs. To analyze behavioral changes over time, these survey questions were asked for three time periods: before March 2020 (prepandemic), the "past three months" and in "next six months."

Survey results showed that the share of customers using the DTR "more than five times per week" declined from 32% before March 2020 to 12% in the "past three months". In the "next six months" time period, 16% anticipated using the DTR with this level of frequency and 19% expected to drive the DTR more than five times per week in 2022. Customers using the DTR "3-5 times per week" declined from 27% before March 2020 to 15% in the "past three months".

Overall, in the "next six months", it was estimated that 20% of customers anticipated using the DTR with this level of frequency, and 23% foresaw trips 3-5 times a week in 2022.

The proportion of customers using the DTR "1-2 times per week" remained stable pre-March 2020 compared with behaviors "three months ago" (13% and 16% respectively). In the "next six months" and in 2022, approximately 20% of customers anticipated using the DTR 1-2 times per week.

Customers not currently using the DTR cited "working from home ... due to the pandemic" (56%), and "the toll cost is too high" (53%), as primary reasons for not using the roadway. Most DTR motorists from each of the different driving cohorts (frequent to less frequent) experience significant time savings when using the DTR as opposed to other routes and have indicated that the time savings provided by the roadway is one of the major reasons the DTR was chosen (approximately 60%) over other options. Only 22% of customers indicated that the DTR does not offer enough time savings for their trip.

#### 2.2 Customer Survey Methodology

The section below describes the methodologies adopted for the research design, sampling, data collection, data management, analysis and reporting of the customer survey and in-depth employer interviews.

#### Sampling and Data Collection

A 15-minute online survey was designed and emailed to select *E-ZPass* customers that use the DTR. The survey focused primarily on past, present, and potential future use of the DTR as well as trip purposes and priorities. Additional topics included satisfaction with various aspects and features of the DTR, including customer satisfaction and road conditions.

The sample frame consisted of the 586,651 individual E-ZPass tag identification numbers (TagIDs) within the Virginia Department of Transportation (VDOT) *E-ZPass* system with transactions on the DTR during 2019. From the original set of TagIDs, a random selection of 50,850 DTR customers were selected and sent an invitation to complete the survey. This selection of users oversampled the more frequent customers driving the DTR multiple times per week over less frequent customers driving the DTR only a few times per month or less. This approach ensured that more frequent customers of the DTR were well-represented in the survey.

Data collection was conducted from July 30 – August 17, 2021, using a web-based survey platform (Verint EFM). The survey was accessible 24-hours a day, seven days a week and was designed to save partial survey responses allowing participants to complete the survey in multiple sessions. Survey recipients were afforded the opportunity to win one of ten \$100 gift cards as an incentive to complete the survey.

At the close of the survey period, Eureka Facts reviewed the survey data and refined to include only responses from participants that met specific criteria. Responses from participants that had moved away from the study area were discarded, as were those that provided a primary home ZIP code outside of Fairfax, Loudoun, Arlington or Prince William County or Alexandria City. The final sample size for the DTR customer survey was 6,376 valid participants with a response rate of 12.5%. At a 95% level of confidence, the margin of error for the final sample is plus or minus 1.2 percent.

## Sample Composition

The DTR customer survey of 6,376 users was primarily analyzed based on four segments of DTR frequency profiles prior to the pandemic in March 2020. Demographic and behavioral groupings of the sample composition are presented in Table 2.2-1.

	Margin of error (% pts.)	Sample size (N)	Percentage of sample (%)
TOTAL	±1.2	6,376	100
Driving Frequency Pre-Pandemic			
Near Daily Customers (>5x/ week)	±2.2	2,060	32
Frequent Customers (3-5x/ week)	±2.4	1,725	27
Regular Customers (1-2x/ week)	±3.4	821	13
Infrequent Customers (less than weekly)	±2.3	1,745	28
Geography	· · · · ·		-
Fairfax County	±1.7	3,208	52
Loudoun County	±2.1	2,273	37
Arlington County	±5.2	358	6
Prince William County	±7.2	187	3
Alexandria City	±8.9	122	2
Employment Status			
Employed full-time	±1.5	4,545	73
Employed part-time	±5.5	316	5
Self-employed	±3.9	636	10
Disabled or unemployed	±3.7	706	12
Income			
Less than \$100K	±2.8	1,204	21
\$100K to less than \$200K	±2.0	2,359	42
\$200K or more	±2.1	2,117	37
Age			
18 to 44	±2.3	1,801	31
45 to 54	±2.4	1,610	27
55 to 64	±2.6	1,464	25
65 and older	±3.1	1,016	17
Gender			
Male	±1.6	3,752	60
Female	±2.0	2,504	40

Source: EurekaFacts Dulles Toll Road Return to Work Commuter Research (2021), July 30 – Aug. 17, 2021. Note: Percentage of sample is based on those who answered each question as sub-group sample sizes may not add to total sample size.

#### Statistical Analysis

The **Quantitative analysis** of the DTR customer survey relies on descriptive statistics – frequencies of marginal results and cross tabulations of pairs of survey questions. Survey questions are cross tabulated by other related survey questions to provide a deeper understanding of customer driving patterns and experiences. Questions are mostly cross tabulated by pre-pandemic driving cohorts; however, select responses are analyzed by more recent driving patterns. Response options are often collapsed, especially scales, for concise reporting of common assessments and perceptions (e.g., "very" and "somewhat" satisfied may be collapsed into "net satisfied" when discussed in the text). Additionally, analysis may focus on the most intense opinion in a scale to provide clear ranking of sub-items or to differentiate behaviors between groups (e.g., "very satisfied" vs. other response options).

**Regression analysis** in section 2.3.5.2 is an additional technique employed to estimate the independent contribution of multiple factors (e.g., questions) in predicting a particular outcome, holding all other items constant. Here, the model is predicting for what attitudes and characteristics correlate to driving on the DTR near daily as compared to a lower frequency. The results of the logistic regression analysis produce a set of coefficients, or relative weights, for each question in the analysis. Therefore, each question has a different impact on the overall score, depending on how strongly each item is related to DTR driving frequency. This analytical framework ultimately provides additional depth for understanding high frequency DTR customers.

#### 2.3 Customer Survey: Detailed Findings

The online survey of Virginia *E-ZPass* users residing in Northern Virginia consisted of 6,376 completed surveys capturing responses to structured multiple choice questions and gathered insights regarding: (1) DTR usage patterns and impacts of the pandemic to measure behavioral changes over time and expectations for future travel on the DTR, (2) trip destinations and rationale, (3) satisfaction measures regarding customer experience and value of the roadway, (4) DTR features and operations including *E-ZPass* and the High Occupancy Vehicle (HOV) lane usage and payment of toll violations and roadside services, among other traits. These survey data were analyzed using frequency tables, cross tabulations, and regression analysis to distill findings from survey responses among all DTR driver cohorts (e.g., high frequency to low frequency) and by geographic location as described in Section 2.3.

Survey results were evaluated within cohorts of customers based on frequency of DTR use, enabling a better understanding of DTR driver behaviors and expectations pre-pandemic and during the pandemic, as well as anticipated behaviors in the immediate and long-term future. The DTR driver cohorts are defined as follows, based on pre-pandemic usage patterns:

- "Near Daily Customers" traveled the DTR greater than five times per week in the pre-pandemic period (representing 32% of the customers and the quantity of respondents (N)=2,060 respondents to the survey).
- "Frequent Customers" traveled the DTR three to five times per week in the prepandemic period (representing 27% of the customers and N=1,725 respondents to the survey).
- "Regular Customers" navigated the DTR one to two (1-2) times per week in the pre-pandemic period (representing 13% of the customers and N=821 respondents to the survey).
- "Infrequent Customers" of the DTR drove on the facility three to four times per month or less in the pre-pandemic period (representing 28% of customers and N=1,745 respondents to the survey).

Survey responses regarding the impact of the pandemic and DTR usage, including subsequent stay at home and remote work guidelines and policies, are consistent with declines in DTR use. The survey provided additional context regarding changes in driving behavior within cohorts as well as expectations for future DTR use.

Survey results showed that the share of customers using the DTR "more than five times per week" (Near Daily Customers) declined from 32% before March 2020 to 12% in the "past three months". In the "next six months" time period, 16% anticipated using the DTR with this level of frequency and 19% expected to drive the DTR more than five times per week in 2022.

Customers using the DTR "3-5 times per week" (Frequent Customers) declined from 27% before March 2020 to 15% in the "past three months". Overall, in the "next six months", it was estimated that 20% of these customers anticipated using the DTR with this level of frequency, and 23% foresaw trips 3-5 times a week in 2022.

The proportion of customers using the DTR "1-2 times per week" (Regular Customers) remained stable pre-March 2020 compared with behaviors "three months ago" (13% and 16% respectively). In the "next six months" and in 2022, approximately 20% of customers anticipated using the DTR 1-2 times per week. This cohort consists of a blended subset of customers, including many from the more frequent driving cohorts with reduced travel frequencies from pre-pandemic levels.

Customers not currently using the DTR cited "working from home ... due to the pandemic" (56%), and "the toll cost is too high" (53%), as primary reasons for not using the roadway. Most DTR motorists from each of the four driving cohorts experience significant time savings when using the DTR as opposed to other routes and have indicated that the time savings provided by the roadway as one of the major reasons the DTR was chosen (approximately 60%) over other options. Only 22% of customers indicated that the DTR does not offer enough time savings for their trip.

Based on survey responses, by 2022 driving behavior may return to 85% of Near Daily Customers driving the DTR at least 1-2 times per week, 77% of Frequent Users returning to 1-2 trips per week, and 62% of the Regular Users who previously used the DTR 1-2 times per week returning to their prior frequency.

#### 2.3.1 Usage of the DTR Among Near Daily Customers

Figure 2.3.1-1 shows that in the "past three months", 65% of pre-Near Daily Customers used the DTR at least a few times per week, with 33% of customers back to pre-pandemic driving behavior. For that same time period, 35% of Near Daily Customers had less than weekly DTR trips (1- 2 times per month or less often).

In the immediate "next six months", 78% of this cohort expects to use the DTR at least 1-2 times per week, including 42% who plan to drive on the facility more than five times weekly. Only 22% of pre-pandemic Near Daily Customers expect to use the roadway less than weekly over the "next six months" period.



In 2022, 85% of Near Daily Customers expect to drive on the DTR at least 1-2 times per week, and 50% will resume driving more than five trips per week. As shown in Figure 2.3.1-2, 79% of this cohort most often used the DTR for work or school commuting prior to March 2020. Other top reasons for DTR usage among this cohort included shopping and leisure (40%), personal errands (35%), and work-related business trips (31%). Respondents were able to select multiple responses that were applicable to this question.



Figure 2.3.1-3 shows the top four reasons that daily customers traveled the DTR. The primary reason for using the DTR among this cohort is commuting (75%) and work-related business travel (14%). Current driving habits are also primarily related to work and school commutes, but have declined to 54%. The portion of customers in this cohort primarily using the DTR for shopping or leisure and personal errands has increased since March 2020 to 13% and 11%, respectively.



read across for comparison. Percentages also read down but do not sum to 100% as only top 4 reasons are shown.

The Near Daily Customer cohort reports saving more time using the roadway than any other segment. Approximately 27% reports saving 20 minutes or more, 26% reports saving 15 to 19 minutes, and 32% reports 10 to 14 minutes of time savings (the modal time point), as shown in Table 2.3.1-4. Overall, 60% of this cohort responded that saving time was the main reason for use of the DTR as opposed to an alternative route.

Survey results indicate that 20% of the Near Daily Customer driving cohort received a toll violation in the last year, with 75% of respondents indicating that they are very or somewhat satisfied with the process for resolving violations. Other benefits that make the DTR the preferred route among this cohort include: "less traffic congestion" and "shorter driving distance" (15% each).

Reasons for DTR Usage a	•	a Time Savings	
Most frequent reason for	DTR >5		DTR >
choosing DTR over	times/	Time savings using	times/
alternative route	week	the DTR	week
	%		%
Save driving time	60	20 minutes +	27
Less traffic	15	15-19 minutes	26
congestion			
Shorter driving distance	15	10-14 minute	32
alotarioo			
Only route I know for trip	4	5-9 minutes	13
Better road conditions	2	Less than 5 min	2
Feel safer driving DTR	2		1
Other	2		

#### 2.3.2 Usage of the DTR Among Frequent Customers

For Frequent Customers utilizing the roadway 3-5 times per week, 50% used the DTR at least a few times per week, with 27% back to pre-pandemic driving behavior in the "past three months", as shown in Figure 2.3.2-1. In addition, 42% traveled on the DTR a few times per month and 8% traveled the roadway less often.

In the immediate "next six months", 66% of this cohort expects to use the DTR at least 1-2 times per week, including 37% who plan to drive 3 to 5 times weekly. Approximately 34% of Frequent Customers expect to use the roadway less than weekly over the "next six months". In 2022, 77% of Frequent Customers plan to drive on the facility 1 to 2 times per week, and approximately 47% will resume 3 to 5 trips on the DTR per week.



As shown in Figure 2.3.2-2, Frequent Customers commonly use the toll road for work or school commuting (72%), as well as shopping and leisure (34%), personal errands (30%), or for work-related business (25%).



Figure 2.3.2-3 shows the top four reasons that Frequent Customers traveled the DTR. The primary reason for using the DTR among this cohort was related to work or school commuting, which declined from 67% pre-pandemic to 50% currently. While a reduction was seen in the top category there were shifts shopping and social activities (from 9% to 15%) as well as personal errands (from 6% to 11%).



As shown in Table 2.3.2-4, among Frequent Customers, 20% report saving 20 minutes or more by using the DTR. Approximately 26% save 15-19 minutes and the modal time savings is 10-14 minutes (36%) for frequent DTR motorists. Among this cohort 58% identify "saving drive time" as the main benefit of using the DTR in lieu of another route. Additional benefits include "less traffic congestion" (19%) and "shorter driving distance" (14%).

Most frequent reason for choosing DTR over alternative route	DTR 3-5 times/ week	Time savings using the DTR	DTR 3-5 times/ week
	%		%
Save driving time	58	20 minutes +	20
Less traffic congestion	19	15-19 minutes	26
Shorter driving distance	14	10-14 minute	36
Only route I know for trip	3	5-9 minutes	17
Better road conditions	3	Less than 5 min	1
Feel safer driving DTR	2		
Other	2		

#### 2.3.3 Usage of the DTR Among Regular Customers

Current and predicted DTR usage of Regular Customers who traveled the DTR 1-2 times per week prior to the pandemic indicates that currently 46% of this cohort uses the DTR 1-2 times per week or greater, with 35% returning to pre-pandemic travel routines. Approximately 49% of these customers reported taking DTR trips only a few times per month, with 5% reported using the DTR less often or never.

In the "next six months", 56% of this cohort plans to take trips on the DTR at least 1-2 times per week. In 2022 anticipated driving plans among this cohort are similar to plans for the "next six months". Approximately 62% of Regular Customers expect to use the DTR at least 1-2 times per week.

According to survey results, Regular Customers of the DTR currently use the roadway for shopping or social activities (50%), to run personal errands (41%), and for work or school commuting needs (36%).

The primary uses of the DTR for this cohort have shifted modestly from pre-pandemic behaviors. Before March 2020, the primary reason for using the DTR among this cohort was for work or school commuting (29%) and shopping and leisure activities (21%). During recent months, shopping and leisure has become the primary reason for using the DTR (27%) while work commuting has declined from 29% to 21%.

Among Regular Customers, approximately 21% report saving twenty or more minutes by using the DTR in lieu of another route. Approximately 24% report saving 15-19 minutes, with a modal time savings of 10-14 minutes for 41% of this cohort.

Regular DTR customers chose the roadway over alternatives. Primary reasons are to save drive time (60%), of less traffic congestion (19%) and shorter driving distances (15%).

#### 2.3.4 Usage of DTR Among Infrequent Customers

Among Infrequent Customers of the DTR that utilized the roadway 3-4 times or less per month pre-pandemic, 90% reported using the DTR monthly or less often in the "last three months". Similarly, approximately 88% plan to use the DTR at this frequency, both in the "next six months" and into 2022 (87%). In the "next six months", 43% of this cohort expects to return to pre-pandemic driving patterns, 12% plan on increased trips, while 44% project to use the DTR less frequently.

This driving cohort uses the DTR mainly for leisure or social activities (47%) or to run personal errands (36%). Behavior within the "last three months" also aligned with leisure activities: 27% each in the pre-pandemic period and currently.

More than a third (37%) of Infrequent Customers save 10 to 14 minutes using the DTR (the modal category for Virginia customers overall).

#### 2.3.5 Satisfaction with the DTR

#### 2.3.5.1 Customer Experience and Value

As seen in Figure 2.3.5.1-1, more than three-quarters (79%) of DTR customers are 'very satisfied' or 'somewhat satisfied' with their customer experience, including about one-third (32%) who are 'very satisfied' with their experience. This is consistent across driving segments. About 80% of customers are satisfied with their experience, whether they were Near Daily Customers (77%) before March of 2020 or only a few times a month or less (81%). Few are dissatisfied with their experience with only 8% saying they are 'very dissatisfied.'

As seen in Figure 2.3.5.1-2, slightly fewer but still a significant majority (70%) of DTR customers are satisfied with the value they receive from using the road, including 25% who are 'very satisfied' with the value. This is also consistent across driving segments and varies by only a few points. 30% of customers report being 'somewhat' or 'very dissatisfied' with the value they receive, but only11% feel 'very dissatisfied.'



<sup>30 –</sup> Aug. 17, 2021. N=6,376 Note: Percentages are from one half of the question and read across and may not sum exactly due to rounding.



High satisfaction with their overall experience with using the DTR carries over into customer satisfaction with various features on and associated with the DTR. This satisfaction is very consistent across driving segments. Nearly all customers are satisfied with the fundamentals of driving on and paying for the road. As shown in Figure 2.3.5.1-3, 94% of customers are satisfied with the process to maintain their E-ZPass account, including 64% who are "very satisfied" with this aspect. If customers need to speak with the Customer Service Center about their toll charge or other issues, 90% of customers are satisfied with the response they receive.

When driving on the road itself, 94% are satisfied with the road conditions including a majority (57%) who are "very satisfied". The roadway signage and messaging system that alerts customers of traffic conditions are also satisfactory to most customers (87%), including 44% who are 'very satisfied' with the signage.

78% of DTR customers are satisfied with the safety, service, and convenience of using the roadway in exchange for the toll they paid. When asked directly about what their payment provides them, satisfaction is more muted, with more customers reporting feeling "somewhat" (42%) rather than "very satisfied" (32%) in this regard.

The toll payment provides additional safety in the form of the free roadside assistance

provided by the DTR Safety Service Patrol, which 2% of customers report using. Essentially all customers (98%) of this service were satisfied with their experience, including 89% who were "very satisfied".



#### 2.3.5.2 Likelihood to Drive Frequently on DTR: Regression Analysis

In addition to understanding the driving intentions, the reasons for using the DTR and satisfaction with the experience among different cohorts of customers, it is valuable to know what independent factors distinguish the views and behaviors of frequent versus less frequent users of the DTR. This analysis identifies those features that discriminate best between two cohorts of customers that have been part of analytical lens for this report: Near Daily Customers (greater than five times per week) and Frequent Customers (3-5 times per week).

Table 2.3.5.2-1 displays results of a multinomial logistic regression model where satisfaction scores from the survey, along with demographic characteristics of customers are regressed on the category of driving frequency.
		DTF >5 tim		e-pande <b>3-5 ti</b>	
			ek	week	
Indicator	Variable Definition	<b>β (SE)</b> ρ		β (SE)	р
Satisfaction value	Satisfaction with the value you receive from using the DTR	.172	.014	.104	.156
Satisfaction experience	Satisfaction with your experience as a DTR experience	098	.181	088	.253
Satisfaction road conditions	Satisfaction with road conditions on DTR	036	.595	125	.079
Satisfaction signage	Satisfaction with signage system on traffic conditions	155	.008	149	.016
Satisfaction E-ZPass	Satisfaction with EZ-Pass account	.135	.043	.157	.025
Satisfaction with Customer service	Satisfaction with customer service center	099	.116	101	.127
Satisfaction toll paid	Satisfaction with exchange of toll paid	19	.725	.037	.515
Income	Income: \$50K-\$100K, \$100K-150K, <u>\$150K+</u> – Reference category Less than \$50K.	.418	.023	.183	.317
Age	Age: 45-54, 55-64, <u>65+</u> – Reference category 18-44 years of age	-1.04	.001	789	.001
Gender	Male – Reference category is female	.152	.037	045	.551

The survey found that having greater overall satisfaction with the value received from using the DTR is more strongly associated with being a Near Daily Customer, relative to using it infrequently.

Reporting high satisfaction with the signage and messaging systems as well as having greater satisfaction with the process for maintaining an *E-ZPass* account are associated with Near Daily Customers of the DTR and Frequent Customers of the DTR, relative to those who use it just a few times per week or less often. Demographic characteristics, such as higher income earners, being a senior (65+) and being male are also highly associated with the profile of Near Daily Customer of the DTR.

## 2.3.6 Payment of Tolls on DTR

DTR customers rely strongly on E-ZPass for paying their toll and are generally satisfied with all aspects related to toll payment. Nearly all DTR customers have been E-ZPass customers at least three years (95%). They are not only satisfied with the process to maintain their account (see Figure 2.3.5.1-3) but also said it is easy to use their E-ZPass (99%). In fact, 86% of E-ZPass users say it is 'very easy' to use. All driver segments report nearly the same duration of owning E-ZPass, including 93% of Infrequent Customers as shown in Table 2.3.6-1.

E-ZPass among DTR Customers How long have you had an E-ZPass?	%
E-ZPass?	0/2
	70
More than 3 years	95
Three years or less	5
How easy or difficult is it to use your E-ZPass?	%
Very easy	86
Somewhat easy	13
NET EASY	99
NET DIFFICULT	1
	100

The strong reliance on E-ZPass and the typical methods to pay the toll has left little need for customers to use other smartphone apps for payment. No more than 40% of customers reported they have heard of these alternative apps, including Go Toll (40%), Slora, Uproad, and Peasey drive (36% each). Very few have elected to use these apps to pay DTR tolls. Only 4% have used the most recognized app, Go Toll, and only 1% report using any of the other options. This is consistent across pre-pandemic driver segments. Table 2.3.6-2 summarizes this information.

Payments on D	DTR		
Few customers	use any of	these apps	5
Percent who			Not aware of
use	Yes	No	this option
	%	%	%
Go Toll	4	36	61
Slora	1	35	64
Uproad	1	35	64
Peasey Drive	1	35	64

Some customers may have received and then need to resolve and/or pay toll violations. As shown in Table 2.3.6-3, only 14% of customers have received a toll violation from VDOT in the past year for trips made on the DTR. Customers who used the toll road more frequently before the pandemic correspondingly have driven on the roadway more often in recent months. Accordingly, more Near Daily Customers reported receiving a toll violation (20%) compared to less frequent customers with 9% of Infrequent Customers receiving a toll violation.

Table 2.3.6-3: Receipt of DTR Toll Violation in the Past Year by Pre-pandemic Customers							
	Based on DTR use before Pandemic						
Percent who	TOTAL	> 5 times per wk	3-5 times per wk	1-2 times per wk	Less often		
	%	%	%	%	%		
Received violation	14	20	14	12	9		
Did not receive violation	86	80	86	88	91		
Source: Q49. Eureka	aFacts Dulle	es Toll Road Re	eturn to Work	Commuter Re	esearch		

(2021), July 30 – Aug. 17, 2021. N=6,376 Note: Percentages read down and may not add to 100% due to rounding. As expected, in the "past three months" (June-August 2021) a greater percentage of Near Daily, Frequent and Regular Customers of the DTR reported receiving a toll violation in the past year compared to Infrequent Customers. 28% of Near Daily Customers in the "past three months" received a violation compared to 19% of Frequent Customers, 15% of Regular Customers, and 10% of Infrequent Customers as shown in Table 2.3.6-4.

Current Users							
Based on DTR use in past 3 months							
Percent who	TOTAL	> 5 times per wk	3-5 times per wk	1-2 times per wk	Less often		
	%	%	%	%	%		
Received violation	14	28	19	15	10		
Did not receive violation	86	72	81	85	90		

Among those who received a toll violation, 73% were "Net satisfied" with their resolution of the issue, including 37% who were "very satisfied." The remaining 27% of violators were split between feeling "somewhat dissatisfied" (15%) and "very dissatisfied" (13%) with the resolution. Nonetheless, speaking to the Customer Service Center, which is the main contact for resolving toll issues, results in a satisfying experience for 90% of customers as shown in Table 2.3.6-5.

Customer Service				
Generally satisfied with re	solution, es	pecially	interactions wit	h
Customer Service Center		,peerang :		
Percent who are with	NET satisfied	Very	NET dissatisfied	Very
	%	%	%	%
Process to resolve toll violation issue	73	37	27	13
Response from Customer Service Center when I have an issue	90	44	10	4

show intense opinion and is not part of row % calculation.

## 2.3.7 Navigating Delays and Traffic on the DTR

Traffic and construction delays are inevitable on any roadway, and customers turn to the most convenient outlet for getting updated information about potential delays. As shown in Table 2.3.7-1, out of the many available sources to learn about traffic incidents on the DTR, more than one-third (36%) of customers turn to their local news media for information about traffic or construction delays. Phone notification and apps and radio are also two common sources of information (28% and 22%, respectively). A few of the customers turn to social media for this type of information (6%) and even fewer rely on their E-ZPass statement (4%) or the DTR website (3%).

Three Months" by	Current C	Sustomers			
		Based o	n DTR use l	before Pand	lemic
Percent who encountered traffic in past 3 months	TOTAL	> 5 times per wk	3-5 times per wk	1-2 times per wk	Less often
•	%	%	%	%	%
Often	4	6	4	3	3
Sometimes	18	25	23	19	15
Seldom	45	49	51	50	41
Never	33	20	23	28	41

Aug. 17, 2021. N=5,748 Note: Percentages read down and may not add to 100% due to rounding.

Fortunately, more than three quarters (78%) of the customers who drove on the DTR in the "past three months" (June-August 2021) indicated they either "seldom" (45%) or "never" (33%) encountered a significant traffic delay. This includes Near Daily Customers in this time frame, with 69% saying they "seldom" or "never" encountered such heavy delays, including 20% with none. As expected, more of these Near Daily Customers encountered significant delays but only 25% reported this happened "sometimes" in the "past three months" and very few (6%) said this happened "often" (31%). On the low end, 18% of Infrequent Customers over this time span noted coming across significant delays "sometimes" (15%) or "often" (3%).

To move through traffic more quickly, customers who have a qualifying occupancy will use the HOV lanes where available. Nearly half (46%) of the DTR customers have not used the HOV lanes in the "past three months", due to the following reasons: not legally allowed to, do not drive during times when the lanes have such status, or the HOV lanes are not in the section of the DTR they drive. For recent DTR customers that have used these lanes, they indicated the following frequency: 29% "seldom" use these lanes and 18% use the lanes only "sometimes." Very few customers use these lanes "often" (7%).

More frequent customers were more likely to use the HOV lanes at some point compared to those who drove on the roadway only one to four times a month during this time span (64% vs 48%, respectively.) Frequent Customers and Regular Customers behaved similarly in their frequency of HOV lane use.

# 3. Employer In-Depth Interviews

## 3.1 Key Findings

Employer in-depth qualitative interviews were conducted with HR personnel from regional businesses, government agencies and other organizations on (1) the impact of the pandemic as well as (2) strategic plans for post-pandemic workplace policies on commuting and remote work that may impact DTR usage. The key findings from those interviews are summarized below.

- Many staff prefer to work remotely at least one or two days per week, as a result of their work-at-home experience during the pandemic.
- Due to the experience provided by the pandemic, senior managers and business owners have become increasingly comfortable with remote work and have often seen no reduction in employee productivity or timeliness.
- Due to the pandemic, employers made the required investment in technology needed to support remote work.
- An increasing number of functions have successfully migrated from on-site to online during the pandemic.
- The downsizing of physical space is likely to provide cost savings to businesses.
- There will continue to be challenges to effective implementation of pandemicrelated requirements in the office environment as the state and federal health regulations/guidance continue to evolve.

## 3.2 In-depth Interview Methodology

## Recruitment and Data Collection Procedures

The qualitative component of the study was conducted to understand employer and business changes that may influence customer driving patterns on the DTR. EurekaFacts used a third-party recruitment vendor specializing in outreach to professional populations to recruit HR professionals for the in-depth interviews. Individuals were screened using the following criteria to ensure that they: (1) were knowledgeable about their organization's teleworking policy, (2) participate in the decision-making process for those policies, and (3) work for an organization located in Washington, D.C.; Montgomery County, Maryland; Alexandria City, Virginia; and Arlington, Fairfax or Loudoun County, Virginia. Once qualified for an interview, additional

questions about the organization and their HR professionals were asked to ensure that a diverse set of businesses was represented in the sample.

HR professionals were told the intent of the research and topics that would be discussed during the interview session and provided a document of "Frequently Asked Questions." Upon agreement to an approximately 20-minute interview session, EurekaFacts emailed each participant a date and time for the interview, along with a meeting link and instructions. The third-party vendor also confirmed the interview 24-hours in advance.

In total, 20 in-depth interviews were conducted between July 27, 2021 and August 16, 2021, using GoToMeeting software. Discussions with the HR professionals focused on each organization's teleworking policy (both pre-pandemic and currently), institutional responses to the pandemic, as well as physical, technological, and general commuting behavior changes observed in each organization. Sessions were audio recorded to allow for further review by analysts and followed standardized policies and procedures to protect the participants' privacy, security, and confidentiality. Written consent was obtained via email prior to the interview and anonymous identifiers were assigned to each participant.

## Sample Demographics

The organizations represented in the in-depth interviews are clustered along the DTR and range from small non-profit organizations of less than 50 employees to large governmental entities with more than 2,500 employees. Half of the interviews were conducted with private sector employers of varying sizes and across various industries (for example, IT, media, and hospitality). Table 3.2-1 provide the compositional breakdown of businesses represented in the in-depth interviews by organizational characteristics.

Table 3.2-1: Summary of Interviewed Organizations by Classification and Number of Employees							
	Cla	Classification of organization					
	Private	Public	Non-Profit or NGO	TOTAL			
Number of employees in the organization	(sample size)	(sample size)	(sample size)	(sample size)			
100 or less	3		3	6			
101 to 500	4	1	2	7			
501 or more	3	4		7			
TOTAL	10	5	5	20			
Source: EurekaFacts Dulles Toll Road	Return to Work Commuter R	esearch (2021), HR interview	ws, July 27 – Aug. 16, 2021.				

The interviews included HR professionals, directors, managers, and business partners with an average of seven years of employment with their organization. Most participants were women across a range of races and ethnicities. Table 3.2-2 provides the compositional breakdown of the HR professionals interviewed.

Table 3.2-2: Summary of HR Staff Sample by Participant Gender and Race/ethnicity							
		Race of participant					
	White, non- Hispanic	Black, non- Hispanic	Other (Hispanic or Asian)	TOTAL			
Gender of HR professional interviewed	(sample size)	(sample size)	(sample size)	(sample size)			
Female	7	7	3	17			
Male	2	1		3			
TOTAL	9	8	3	20			
Source: EurekaFacts Dulles Toll Road	Return to Work Commuter R	esearch (2021), HR interview	vs, July 27 – Aug. 16, 2021.	•			

## Qualitative Analysis

Qualitative analysis began with a review of each recording in order to summarize participants responses and key quotes in a datafile. Participant responses were then grouped by discussion topic and analyzed across key topic domains based on major themes, trends, and patterns.

Response data was further categorized based on research questions of high interest. Based on emerging themes and response patterns, codes were developed to categorize participants' words and responses accordingly. Findings within each topic domain were summarized to identify broader ideas and concepts that were discussed. Ultimately, these summaries, themes, and patterns were connected to explain findings and answer research questions. Inter-coder reliability was established through triangulation to identify themes, ascribe meaning, and sort answers into correct codes according to degree of importance and frequency of response.

## Qualitative Research Benefits and Limitations

Qualitative in-depth interviews have the ability to provide candid feedback from a segment of the target population (i.e., employers along the DTR). While in-depth interviews may not provide definitive answers, the sessions can play a large role in gauging employer attitudes and future considerations for employee teleworking. Interviews with HR professionals provided detailed insights regarding how companies are creating work environments to adapt to impacts of the pandemic, including discussions of commuting to the office vs. working remotely. While a variety of employers were recruited for the study, and many concepts and themes were similar across interviews, the 20 interviews conducted provide only a sample representation of data and cannot be considered definitive.

## 3.3 Employer In-Depth Interviews: Detailed Findings

Interviews with the 20 HR professionals were conducted to create a better understanding of the remote work decision process of businesses in the Washington, D.C. metropolitan area. This research found six key indicators of reduced commuting that are listed in Section 3.1 above. This section categorizes these findings into three main groups describing them in more detail.

## 3.3.1 Current Office or Worksite Physical Location

The common denominator for all interviewed organizations is a location close to metropolitan Washington, D.C. Physical location of offices or worksites for each organization varied from inner city to suburb to exurb. Many of the interviewed HR professionals directly pointed to the draw of amenities and workforce available in the Washington, D.C. area:

"We have a lot of amenities near our office, (in Rosslyn, VA)." -IT business with 101-500 employees in Arlington Co., VA with other DMV locations

"This area is a hub for technology and talent." -Media/entertainment company with more than 2500 employees in Loudoun Co., VA with other DMV locations

"In this area we get the top people." Public sector organization with more than 2500 employees in Washington, D.C. with other DMV locations

Respondents noted their organizations (or the headquarters included in these interviews) are not likely to leave the D.C. area. Several respondents discussed an interest in moving to smaller offices as a direct outcome of a decrease in onsite staff caused by the increase in remote work. Some comments made regarding the executed and potential changes to the physical space include the following:

"We gave back six or seven hundred square feet because of COVID-19." -Engineering company with less than 50 employees in Montgomery Co., MD with no other locations

"We're going to review our footprint with so many people working from home and the cost of the lease." - Public sector organization with more than 501-1000 employees in Montgomery Co., MD with other DMV locations

Office downsizing appears to be a trend, and the respondents indicated that the effect of the pandemic remains fluid. The responses did not indicate that all staff would work remotely on

a permanent basis after the pandemic. Having employees in an office continues to offer benefits to their organizations. Some examples include stronger interpersonal communications and relationship building, as well as centralized and more efficient administrative services. Several respondents reinforced this fact:

> "We always will want a physical location." -IT business with 101-500 employees in Arlington Co., VA with other DMV locations

"As much as we could, 100% [worked offsite], but as we got the guidance for those positions that did require in-presence we started working to get those in there safely." - Public sector organization with more than 2500 employees in Washington, D.C with other DMV locations

Additionally, several respondents included branches of the federal government or U.S. military contractors and therefore do not have the same opportunities to relocate.

Therefore, physical office location changes are not likely to be a driver of material changes in commuting patterns.

## 3.3.2 Business Structure

Respondents reported that prior to COVID-19 remote work was in most cases rare. For other organizations remote work was the exception rather than the norm. The pandemic and its associated restrictions significantly altered those earlier work practices. Between March 2020 and spring 2021 nearly all of the staff of interviewed organizations worked remotely. In most cases certain functions continued to require at least partial time in the office; these included job categories such as administration (including communications and correspondence), IT, financial management, and some HR. During the pandemic other organizations were able to perform some of those functions remotely.

A primary reason that remote work was rare prior to the pandemic was that organizational leadership feared lower productivity or operational disruptions among remote workers and on-site staff. Other leaders believed that on site work simply should remain the norm for their organization. Several HR personnel reinforced this line of thinking:

"We are old school; we like in person...it's a matter of trust." -Recruiter for 4 years at management consulting business with less than 50 employees in Fairfax Co., VA "It's the nature of what we do (regarding on site versus remote)." -HR program manager for a year at public sector organization with 1001-5000 employees in Washington, D.C.

The most prevalent among reasons stated as to why an organization preferred on site working was the value of direct interpersonal communications. A second common reason stated was client preferences for an employee was assigned to work at a particular client site.

The pandemic appears to have contributed to potential long-term changes in workplace structure and commuting. Respondents reported that a number of key functions have migrated from on site to remote, including internal meetings, employee onboarding, employee evaluation reviews, and conferences. These interviews indicated those changes are generally expected to be long term, but at minimum will continue as long as COVID-19 remains a threat. Functions that have migrated to online will reduce the amount of commuting and out of town business travel. One HR manager noted the change in their hiring process:

"We now do virtual onboarding." -HR manager for 6 years in management consultant company with less than 50 employees in Arlington Co., VA

Long-term planning of business structures post-pandemic point towards increased virtual work. Recent surveys of senior executives reveal that employers expect about 1-in-5 (19%) of the workforce to by fully remote post-pandemic.<sup>1</sup> Employers are also heavily leaning towards a hybrid onsite/remote work week, but there are varying estimates on how prevalent this will be. The Willis Towers Watson report notes that the majority (58%) of workplaces are allowing for some tasks to be remote and others onsite (2020).<sup>2</sup> The McKinsey report takes a more stringent assessment. Accounting for remote work that can be done "without loss of productivity", they predict 20-25% of employees can telework three to five days a week.<sup>3</sup> In total, predictions range that about 39-77% of the workforce would be engaging in some virtual work.

The popularity of an onsite/remote hybrid work environment is seen on both sides of the manager/employee spectrum. These research interviewers indicate that managers and owners are increasingly comfortable with remote work and that many staff prefer to work remotely (mostly

<sup>&</sup>lt;sup>1</sup> Willis Towers Watson. (2020, August 3). Survey Report: Actions to Restore Stability Survey.

https://www.willistowerswatson.com/en-US/Insights/2020/07/actions-to-restore-stability-survey <sup>2</sup> Willis Towers Watson. (2020, August 3). *Survey Report: Actions to Restore Stability Survey.* 

https://www.willistowerswatson.com/en-US/Insights/2020/07/actions-to-restore-stability-survey

<sup>&</sup>lt;sup>3</sup> McKinsey Global Institute. (2021, February 18). The future of work after COVID-19.

https://www.mckinsey.com/featured-insights/future-of-work/the-future-of-work-after-covid-19

from home). The most common expressed forms of executing these hybrid structures are splitting the week into one or two days remote or one or two onsite.

"We still have a lot of people working from home, due to COVID." -Hospitality/travel business with more than 2500 employees in Fairfax Co., VA with other DMV locations

"We are hesitant to open (to on site employees) due to potential liability." -IT business with 101-500 employees in Arlington Co, VA with other DMV locations

Also, according to PwC's June 2020 survey: "Most office workers (83%) want to work from home at least one day a week, and half of employers (55%) anticipate that most of their workers will do so long after COVID-19 is not a concern."<sup>4</sup>

Plus, according to a Pew Research Center October 2020 survey: "more than half of employed adults who say that their job responsibilities can mostly be done from home (54%) say that, if they had a choice, they'd want to work from home all or most of the time when the coronavirus outbreak is over."<sup>5</sup>

Phased re-openings are another short-term plan, partly due to logistics and partly due to ongoing concerns about the pandemic as well as state and federal regulations or guidance. Since the status of COVID-19 continues to evolve, the business community is inclined to remain flexible about on site versus remote staff until there is clarity on the post pandemic world. Several HR decision makers made note of planning for continued remote work:

"Since we can't bring back all employees simultaneously, we will do a hybrid." -Media/entertainment company with more than 2500 employees in Loudoun Co., VA with other DMV locations

"We were already cutting back-office space and doing more 'hoteling' in 2019 so to convert to all remote work was seamless." -Non-profit with less than 50 employees in Montgomery Co., MD with no other DMV locations

The hybrid work structure and phased office reopening will create commuter patterns that differ from the pre-pandemic commuting trends.

<sup>&</sup>lt;sup>4</sup> PwC. (2020, June 25). *When everyone can work from home, what's the office for? PwC's US Remote Work Survey.* https://www.pwc.com/us/en/library/covid-19/assets/pwc-return-to-work-survey.pdf <sup>5</sup> Parker, K., Horowitz, J. M., Minkin, R. (2020, December 9). *How the Coronavirus Outbreak Has – and* 

Hasn't – Changed the Way Americans Work. https://www.pewresearch.org/social-trends/2020/12/09/how-the-coronavirus-outbreak-has-and-hasnt-changed-the-way-americans-work/

## 3.3.3 Technology Investments to Support Remote Work

As extensively discussed, during the pandemic the prominence of remote work increased. Throughout the pandemic organizations continually analyzed how much to invest in technologies that supported remote work weighing that against their future planned investments in office-based technologies. Interview responses indicated there was a substantial investment in technology to support remote work during the pandemic. The most prominent investments were new laptop computers, video conference services (e.g., Zoom and Microsoft Teams), additional server capacity, upgraded virtual private networks, enhanced security protocols (especially for government contractors), expanded Wi-Fi hot spots, and furniture for remote work locations.

The interviews also indicated a high likelihood that those investments in remote technologies would continue beyond the pandemic. Two key reasons cited for the long-term (or permanent) use of remote work technologies are how it supports the increasingly popular hybrid business structure (split the week remote and in office); and that fact that the investment has already been made to initiate those remote work technologies. HR personnel made clear both the effort and longevity associated with these upgrades:

"We made tremendous investment in technology (for remote work) and all the upgrades are likely to be permanent." -Hospitality/travel business with more than 2500 employees in Fairfax Co., VA with other DMV locations

"We will keep the equipment for remote work and a hybrid model." -Engineering company with less than 50 employees in Montgomery Co., MD with no other locations

Concerns were also expressed over technology's limitations for achieving organizational goals through interpersonal communications and relationship building. This concern stems from the belief that in-person contact is more effective and lasting.

"Technology is limited for working from home for getting to know people better." -Management consultant company with less than 50 employees in Arlington Co., VA with no other DMV locations

The investments of time, money, and effort to initiate and maintain remote work technologies combined with the popularity of working remotely are additional indicators of reduced office-based commuting in the future.

# 4. Attachments

Attachments include the following documents:

- Attachment A: Questionnaire for Dulles Toll Road Customer Survey
- Attachment B: Survey topline results and breakout by four pre-Pandemic driving frequency cohorts for majority of questions
- Attachment C: In-depth interview protocol for HR professional interviews

# Attachment A. DTR Customer Survey Topline

Metropolitan Washington Airports Authority (MWAA) Dulles Toll Road Customer Survey Final Topline for survey conducted: July 30, 2021 – August 17, 2021 Total N= 6,376

[TEXT IN BRACKETS ARE PROGRAMMING INSTRUCTIONS OR LOGIC]

#### [SCREENING QUESTION 1 - NOT SHOWN. NO QUESTIONS 2 - 10]

## [MODULE 2: USAGE OF DULLES TOLL ROAD]

[SHOW ALL:] These next questions are about all your past and potential future use of the Dulles Toll Road.



[ASK ALL:] The Dulles Toll Road is 14 miles and includes interchanges between Washington Dulles International Airport (Exit 9) to the Capital Beltway (I-495). See map above.

Q.11 Before the COVID-19 pandemic (before March 2020), how frequently did you use the Dulles Toll Road?

	Base	d on DTR use	e before COV	′ID	
	> 5 times	3-5 times	1-2 times	Less	
<b>TOTAL</b> <sup>6</sup>	per wk	per wk	per wk	often	
	(N=2,060)	(N=1,725)	(N=821)	(N=1,745)	
%	%	%	%	%	
32	100				More than 5 times per week
27		100			3-5 times per week
13			100		1-2 times per week
11				42	3-4 times per month
9				32	1-2 times per month
5				19	3-4 times per year
2				5	1-2 times per year
1				2	Less than one time per year
*				<u>1</u>	Not at all
100	100	100	100	100	

<sup>&</sup>lt;sup>6</sup> No question required a response from participants apart from screening questions. Percentages may not sum to 100% due to rounding. All percentages based on unweighted data and unweighted N. Responses less than .5% reported with asterisks (\*). Responses with no data are marked with a dash (-). Response are shown on total participants and the two sub-groups of only/primary payment method.

#### Q.12 Thinking of the past 3 months, how frequently did you use the Dulles Toll Road?

	Base	d on DTR us			
TOTAL	> 5 times per wk	3-5 times per wk	1-2 times per wk	Less often	
%	%	%	%	%	
12	33	4	2	2	More than 5 times per wee
15	17	27	9	3	3-5 times per week
16	15	20	35	5	1-2 times per week
19	15	19	21	21	3-4 times per month
30	17	24	28	51	1-2 times per month
<u>9</u>	<u>4</u>	<u>7</u>	<u>5</u>	<u>17</u>	Not at all
100	100	100	100	100	

[ASK ALL:]

Q.13 In the <u>next 6 months</u>, how frequently do you expect to use the Dulles Toll Road?

	Base	d on DTR use	′ID		
	> 5 times	3-5 times	1-2 times	Less	
TOTAL	per wk	per wk	per wk	often	
%	%	%	%	%	
16	42	5	3	2	More than 5 times per week
20	22	37	10	3	3-5 times per week
18	14	23	44	7	1-2 times per week
18	10	16	23	27	3-4 times per month
23	9	15	19	50	1-2 times per month
<u>5</u>	<u>2</u>	<u>4</u>	<u>2</u>	<u>11</u>	Not at all
100	100	100	100	100	

[ASK ALL:]

Q.14 In 2022, as the COVID-19 <u>pandemic lessens</u>, how frequently do you anticipate using the Dulles Toll Road? If you are not certain, please provide an estimate.

	Base	d on DTR use	e before COV	′ID	
	> 5 times	3-5 times	1-2 times	Less	
TOTAL	per wk	per wk	per wk	often	
%	%	%	%	%	
19	50	6	2	1	More than 5 times per week
23	23	47	13	4	3-5 times per week
19	12	24	47	7	1-2 times per week
15	7	11	20	28	3-4 times per month
13	5	7	12	30	1-2 times per month
6	2	2	4	16	3-4 times per year
3	1	1	1	9	1-2 times per year
1	*	-	*	2	Less than one time per year
<u>2</u>	<u>1</u>	<u>2</u>	<u>1</u>	<u>2</u>	I do not anticipate using it
100	100	100	100	100	

[IF RESPONDENT HAS NEVER USED THE DTR AND NEVER PLANS TO USE THE DTR (Q.11=9 AND Q.12=6 AND Q.13=6 AND Q.14=9), GO TO TERMINATE:]

## [NO QUESTIONS 15 - 30]

## [MODULE 3: OTHER DTR TRAVEL BEHAVIORS]

[SHOW ALL:] For the next set of questions, please think about all of the reasons you travel on the Dulles Toll Road. [ASK ALL:]

Q.31 Why did/do you typically use the Dulles Toll Road? Please select all reasons that apply from list below.

	Base	d on DTR use	e before COV	′ID	
TOTAL	> 5 times per wk	3-5 times per wk	1-2 times per wk	Less often	[RANDOMIZED LIST – RANK ORDERED BY TOTAL]
%	%	%	%	%	
55	79	72	36	19	Commute to or from work or school
42	40	36	50	47	Shopping/leisure, social activities w/ family & friends
35	35	30	41	36	Personal errands, such medical appt. & fitness centers
28	26	23	30	32	Travel for leisure primarily within the state of Virginia
27	31	25	30	23	Work-related business travel (non-commute)
26	24	22	28	31	Travel to/from Dulles International Airport
17	17	15	17	18	Travel for leisure primarily outside the state of Virginia

[ASK IF Count for Q.31 > 1:]

Please focus on the primary or most frequent reason for using the Dulles Toll Road before March 2020.

Q.32<sup>7</sup> From the reasons you previously selected, what was your primary reason for using the Dulles Toll Road before the COVID-19 pandemic?

#### [AMONG THOSE WITH MULTIPLE REASONS THEY USE THE DULLES TOLL ROAD, THE PRIMARY REASON IS...]

	Base	d on DTR use	e before COV	′ID	
	> 5 times	3-5 times	1-2 times	Less	
TOTAL	per wk	per wk	per wk	often	[RANK ORDERED BY TOTAL]
%	%	%	%	%	
47	75	63	25	10	Commute to or from work or school
17	5	12	27	29	Shopping/leisure, social activities w/ family & friends
12	11	12	16	12	Work-related business travel (non-commute)
11	5	8	16	18	Personal errands, such medical appt. & fitness centers
6	2	2	7	13	Travel to/from Dulles International Airport
5	2	3	6	11	Travel for leisure primarily within the state of Virginia
3 <b>(3,702)</b>	1 ( <b>1,214)</b>	1 <b>(966)</b>	3 <b>(507)</b>	7 <b>(1,003)</b>	Travel for leisure primarily outside the state of Virginia (N Size)

#### [COMBINED Q.31/Q.32 OF ONLY OR PRIMARY REASON TO USE DTR PRE-COVID]<sup>8</sup>

	Base	d on DTR use	e before COV	′ID	
	> 5 times	3-5 times	1-2 times	Less	
TOTAL	per wk	per wk	per wk	often	[RANK ORDERED BY TOTAL]
%	%	%	%	%	
50	75	67	29	13	Commute to or from work or school
15	4	9	25	27	Shopping/leisure, social activities w/ family & friends
14	14	13	17	13	Work-related business travel (non-commute)
10	4	6	15	18	Personal errands, such medical appt. & fitness centers
10	4	O	15	10	Personal errands, such medical appr. & fitness centers
5	1	2	5	11	Travel to/from Dulles International Airport
-	_	_	-		
5	2	2	6	12	Travel for leisure primarily within the state of Virginia
3	1	1	2	7	Travel for leisure primarily outside the state of Virginia

<sup>&</sup>lt;sup>7</sup> Percentages calculated for this, and all other conditional questions, are based on the number of respondents who received it. For this question, the total N= 3,702.

<sup>&</sup>lt;sup>8</sup> The combined results of Q.31 and Q.32 to determine each participant's primary reason to use the DTR before March 2020,

whether it was the only option selected in Q.31 or the option selected in Q.32.

[Asked if Customer responded to Q.31 > 1:]

Please focus on the primary or most frequent reason for using the Dulles Toll Road over the past month.

Q.33<sup>9</sup> From the reasons you previously selected, what is your primary reason for using the Dulles Toll Road currently?

[AMONG THOSE WITH MULTIPLE REASONS THEY USE THE DULLES TOLL ROAD, THE PRIMARY REASON IS...]

	Base	d on DTR use	e before COV	′ID	
	> 5 times	3-5 times	1-2 times	Less	
TOTAL	per wk	per wk	per wk	often	[RANK ORDERED BY TOTAL]
%	%	%	%	%	
26	40	32	14	8	Commute to or from work or school
25	19	22	30	29	Shopping/leisure, social activities w/ family & friends
19	16	18	23	20	Personal errands, such medical appt. & fitness centers
9	10	8	12	8	Work-related business travel (non-commute)
7	5	7	8	11	Travel for leisure primarily within the state of Virginia
5	4	3	5	10	Travel to/from Dulles International Airport
5	3	4	5	7	Travel for leisure primarily outside the state of Virginia
4 (3,701)	3 <b>(1,213)</b>	5 <b>(964)</b>	3 <b>(507)</b>	8 <b>(1,002)</b>	I do not currently use the Dulles Toll Road (N Size)

<sup>9</sup> Total N= 3,701.

	Based on DTR use before COVID		′ID		
	> 5 times	3-5 times	1-2 times	Less	
TOTAL	per wk	per wk	per wk	often	[RANK ORDERED BY TOTAL]
%	%	%	%	%	
37	54	50	21	11	Commute to or from work or school
19	13	15	27	27	Shopping/leisure, social activities w/ family & friends
14	11	12	20	19	Personal errands, such medical appt. & fitness centers
12	13	11	15	11	Work-related business travel (non-commute)
7	4	5	7	12	Travel for leisure primarily within the state of Virginia
5	3	2	4	9	Travel to/from Dulles International Airport
4	2	2	4	7	Travel for leisure primarily outside the state of Virginia
3	2	3	2	4	I do not currently use the Dulles Toll Road

## [COMBINED Q.31/Q.33 OF ONLY OR PRIMARY REASON TO USE DTR CURRENTLY]<sup>10</sup>

#### **NO QUESTIONS 34-35**

[ASK IF Q.33=8 (currently doesn't use DTR):]

Q.36<sup>11</sup> What are your reasons for not using the Dulles Toll Road? Please select all that apply.

## [BASED ON THOSE NOT CURRENTLY USING THE DTR:]

TOTAL %	[RANK ORDERED BY TOTAL]
56	I have been working or attending school from home due to the pandemic
53	The toll cost is too high
22	The toll road does not offer enough time savings (or any time savings at all) for my trip
15	I only needed to use it for a specific reason and don't intend to use it again
6	The stores or businesses I typically travel to/from are closed or moved
1	I no longer have an <i>E-ZPass</i> account
012	I no longer live in the area

<sup>&</sup>lt;sup>10</sup> The combined results of Q.31 and Q.33 to determine each participant's primary reason to use the DTR currently whether it was the only option selected in Q.31 or the option selected in Q.33.

<sup>&</sup>lt;sup>11</sup> Total N= 165. Not enough sample size to report by DTR segments.

<sup>&</sup>lt;sup>12</sup> This question was used to create the valid group of final respondents. Valid respondents must have a ZIP code in the counties of interest and affirm they have not moved out of the area as a reason for not using the DTR.

## [MODULE 4: DTR SATISFACTION]

## NO QUESTIONS 37 – 38

## [ASK ALL:]

Q.39 Overall, are you satisfied or dissatisfied with the value you receive from using the Dulles Toll Road?

	Base	d on DTR use	e before COV	′ID	
	> 5 times	3-5 times	1-2 times	Less	
TOTAL	per wk	per wk	per wk	often	
%	%	%	%	%	
70	69	68	72	71	NET SATISFIED
25	25	23	27	26	Very satisfied
45	43	46	46	45	Somewhat satisfied
30	31	32	28	29	NET DISSATISFIED
19	20	21	17	18	Somewhat dissatisfied
11	12	11	10	12	Very dissatisfied
100	100	100	100	100	

[ASK ALL:]

Q.40 Overall, are you satisfied or dissatisfied with your experience as a customer using the Dulles Toll Road?

	Base	d on DTR use	'ID		
	> 5 times	3-5 times	1-2 times	Less	
TOTAL	per wk	per wk	per wk	often	
%	%	%	%	%	
79	77	77	81	81	NET SATISFIED
32	32	30	34	34	Very satisfied
46	45	47	47	47	Somewhat satisfied
22	23	23	19	19	NET DISSATISFIED
14	15	15	13	12	Somewhat dissatisfied
8	9	8	6	8	Very dissatisfied
100	100	100	100	100	

[ASK ALL:]

Q.41 Which of the following best describes your most frequent reason for choosing Dulles Toll Road over an alternative route?

	Based on DTR use before COVID		′ID		
	> 5 times	3-5 times	1-2 times	Less	
TOTAL	per wk	per wk	per wk	often	[RANDOMIZED LIST – RANK ORDERED BY TOTAL]
%	%	%	%	%	
58	60	58	60	55	Saves driving time
18	15	19	19	21	Less traffic congestion
14	15	14	15	13	Shorter driving distance
4	4	3	2	6	This is the only route that I know for my trip
2	2	3	2	2	Better road conditions
2	2	2	2	1	Feel safer driving the Dulles Toll Road route
<u>2</u>	<u>2</u>	<u>2</u>	<u>2</u>	<u>2</u>	Other
100	100	100	100	100	

## [ASK IF Q.41 = 1]

Q.42<sup>13</sup> How much time would you estimate that you typically save by using the Dulles Toll Road rather than an alternative route to make your trip?

#### BASED ON THOSE WHO SAY THEIR MAIN REASON FOR USING DTR IS SAVING DRIVE TIME:

	Base	d on DTR use	e before COV	'ID	
	> 5 times	3-5 times	1-2 times	Less	
TOTAL	per wk	per wk	per wk	often	[RANDOMIZED LIST – RANK ORDERED BY TOTAL]
%	%	%	%	%	
22	27	20	21	17	20 minutes or more
26	26	26	24	25	15 to 19 minutes
35	32	36	41	37	10 to 14 minutes
16	13	17	13	18	5 to 9 minutes
<u>2</u>	2	1	1	2	Less than 5 minutes
100	100	100	100	100	
(3,670)	(1,228)	(966)	(486)	(946)	(N Size)

[SHOW ALL:] For the next set of questions, we want to know your payment and driving experiences associated with using the Dulles Toll Road.

[ASK ALL:]

Q.43 How satisfied or dissatisfied are you with the following features of the Dulles Toll Road?

то	TAL	NET SATISFIED %	Very satisfied %	Somewhat satisfied	Some dissatisfied %	Very dissatisfied
a.	Road conditions on the DTR	94	57	37	5	1
b.	Signage/messaging systems on current traffic conditions on the DTR	87	44	44	10	3
с.	Process to maintain E- ZPass account	94	64	30	4	2
d.	Response from Customer Service Center when I have an issue	90	44	46	6	4
e.	Overall safety, service, and convenience of the DTR in exchange for the toll paid	78	37	42	15	7

#### NO QUESTIONS 44 - 47

<sup>&</sup>lt;sup>13</sup> Total N= 3,670

Q.48 Have you used any of the available smartphone applications to make payments for the Dulles Toll Road?

то	TAL	Yes	No	Not aware of this payment option
		%	%	%
a.	Go Toll smartphone app	4	36	61
b.	Slora smartphone app	1	35	64
с.	Uproad smartphone app	1	35	64
d.	Peasey Drive smartphone	1	35	64

[ASK ALL:]

Q.49 Thinking about the past year, have you received any toll violation notices from Virginia Department of Transportation Customer Service Center for travel on the Dulles Toll Road?

	Based on DTR use before COVID				
> 5 times 3-5 times 1-2 times Less				Less	
TOTAL	per wk	per wk	per wk	often	
%	%	%	%	%	
14	20	14	12	9	Yes
<u>86</u>	<u>80</u>	<u>86</u>	<u>88</u>	<u>91</u>	No
100	100	100	100	100	

[ASK IF Q.49=1 (yes):]

Q.50<sup>14</sup> How satisfied or dissatisfied would you say that are you with the process to resolve the toll violation issue?

## BASED ON THOSE WHO HAVE RECEIVED TOLL VIOLATION NOTICES FROM VDOT FOR TRAVEL ON DTR:

	Based on DTR use before COVID				
	> 5 times	3-5 times	1-2 times	Less	
TOTAL	per wk	per wk	per wk	often	
%	%	%	%	%	
73	75	69	76	71	NET SATISFIED
37	36	33	41	41	Very satisfied
36	39	35	35	30	Somewhat satisfied
27	25	31	24	29	NET DISSATISFIED
15	13	17	11	17	Somewhat dissatisfied
13	<u>12</u>	14	12	12	Very dissatisfied
100	100	100	100	100	
(898)	(405)	(237)	(97)	(156)	(N Size)

<sup>&</sup>lt;sup>14</sup> Total N= 898

Q.51 Have you received free roadside assistance from the Dulles Toll Road Safety Service Patrol?

TOTAL	
%	
2	Yes
<u>98</u>	No
100	

## [ASK IF Q.51=1 (yes):]

Q.52<sup>15</sup> How satisfied or dissatisfied would you say that you are with your roadside assistance experience from the Dulles Toll Road Safety Patrol?

TOTAL	
%	
89	Very satisfied
8	Somewhat satisfied
1	Somewhat dissatisfied
<u>2</u>	Very dissatisfied
100	

## [ASK ALL:]

Q.53 How long have you had an *E-ZPass* account?

TOTAL	
%	
*	Less than six months
*	Between six months and one year
5	Between one to three years
95	More than three years
*	I no longer have an account
100	

## [ASK ALL:]

Q.54 How easy or difficult would you say that it is to use *E-ZPass*?

## TOTAL

%	
86	Very easy
13	Somewhat easy
1	Somewhat difficult
*	Very difficult
100	

<sup>&</sup>lt;sup>15</sup> Total N= 109. Not enough n size to report by DTR segments.

Q.55 How do you typically get information about the Dulles Toll Road, including traffic conditions and construction alerts?

## TOTAL

- %
- 36 Local news media
- 28 Phone notification/app
- 22 Radio
- 6 Social media
- 4 E-ZPass statement
- 3 Dulles Toll Road website

100

## [ASK IF USED IN PAST 3 MONTHS, Q.12≠ 6 (never used it):]

Q.56<sup>16</sup> In the <u>past 3 months</u>, how frequently would you say that you used the high occupancy vehicle (HOV) lanes on the Dulles Toll Road?

	Based on DTR use before COVID				
	> 5 times	3-5 times	1-2 times	Less	
TOTAL	per wk	per wk	per wk	often	
%	%	%	%	%	
7	10	7	5	5	Often
19	20	18	21	16	Sometimes
29	28	29	30	28	Seldom
<u>46</u>	<u>43</u>	<u>46</u>	44	<u>51</u>	Never
100	100	100	100	100	
(5,818)	(1,984)	(1,596)	(773)	(1,443)	(N Size)

[ASK IF USED IN PAST 3 MONTHS, Q.12≠ 6 (never used it):]

Q.57<sup>17</sup> In the past 3 months, how frequently did you encounter significant traffic delays on the Dulles Toll Road?

	Based on DTR use before COVID				
	> 5 times	3-5 times	1-2 times	Less	
TOTAL	per wk	per wk	per wk	often	
%	%	%	%	%	
4	5	3	3	3	Often
18	20	18	21	15	Sometimes
45	45	48	44	44	Seldom
<u>33</u>	<u>30</u>	<u>31</u>	<u>32</u>	<u>39</u>	Never
100	100	100	100	100	
(5,748)	(1,965)	(1,575)	(764)	(1,424)	(N Size)

[End of main survey questions.]

<sup>&</sup>lt;sup>16</sup> Total N= 5,818

<sup>&</sup>lt;sup>17</sup> Total N= 5,748

# Attachment B. Final DTR Customer Questionnaire

## Metropolitan Washington Airports Authority (MWAA) Dulles Toll Road Customer Survey Final Questionnaire (Programming Version)

[TEXT IN BRACKETS ARE PROGRAMMING INSTRUCTIONS, LOGIC, OR IDENTIFICATION OF TREND QUESTIONS]

## [INTRODUCTION]

Welcome to the Dulles Toll Road Customer Survey.

EurekaFacts is conducting this survey on behalf of the Metropolitan Washington Airports Authority, the operator of the Dulles Toll Road, to obtain information that will help improve the travel experience for all customers. Your answers will remain anonymous and will be used for analysis and planning purposes only.

All individuals who complete the survey will have the opportunity to enter a drawing for a chance to win one of ten \$100 gift cards!

This survey will take about 10 minutes to complete. You are encouraged, but not required, to answer every question to the best of your ability. Thank you for your participation!

## [MODULE 1: PARTICIPANT SCREENER FOR AGE ELIGIBILTY]

[ASK ALL: REQUIRED]

Q.1 Are you currently 18 years of age or older?

- 1 Yes, 18 or older [CONTINUE]
- 2 No, under 18 [TERMINATE]
- 3 Prefer not to answer [TERMINATE]

NO QUESTIONS 2 - 10

## [MODULE 2: USAGE OF DULLES TOLL ROAD]

[SHOW ALL:] These next questions are about all your past and potential future use of the Dulles Toll Road.

## [Page break]



[SHOW ALL:] The Dulles Toll Road is 14 miles and includes interchanges between Washington Dulles International Airport (Exit 9) to the Capital Beltway (I-495). See map above.

## [ASK ALL:]

Q.11 Before the COVID-19 pandemic (before March 2020), how frequently did you use the Dulles Toll Road?

- 1 More than 5 times per week
- 2 3-5 times per week
- 3 1-2 times per week
- 4 3-4 times per month
- 5 1-2 times per month
- 6 3-4 times per year
- 7 1-2 times per year
- 8 Less than one time per year
- 9 Not at all

Q.12 Thinking of the past 3 months, how frequently did you use the Dulles Toll Road?

- 1 More than 5 times per week
- 2 3-5 times per week
- 3 1-2 times per week
- 4 3-4 times per month
- 5 1-2 times per month
- 6 Not at all

## [ASK ALL:]

Q.13 In the <u>next 6 months</u>, how frequently do you expect to use the Dulles Toll Road?

- 1 More than 5 times per week
- 2 3-5 times per week
- 3 1-2 times per week
- 4 3-4 times per month
- 5 1-2 times per month
- 6 Not at all

#### [ASK ALL:]

- Q.14 In 2022, as the COVID-19 <u>pandemic lessens</u>, how frequently do you anticipate using the Dulles Toll Road? If you are not certain, please provide an estimate.
  - 1 More than 5 times per week
  - 2 3-5 times per week
  - 3 1-2 times per week
  - 4 3-4 times per month
  - 5 1-2 times per month
  - 6 3-4 times per year
  - 7 1-2 times per year
  - 8 Less than one time per year
  - 9 I do not anticipate using it

# [IF RESPONDENT HAS NEVER USED THE DTR AND NEVER PLANS TO USE THE DTR (Q11=9 AND Q12=6 AND Q13=6 AND Q14=9), GO TO TERMINATE]

NO QUESTIONS 15 - 30

## [MODULE 3: OTHER DTR TRAVEL BEHAVIORS]

[SHOW ALL:] For the next set of questions, please think about all of the reasons you travel on the Dulles Toll Road.

## [ASK ALL:]

Q.31 Why did/do you typically use the Dulles Toll Road? Please select all reasons that apply from the list below.

## [RANDOMIZE]

- 1 Commute to or from work or school
- 2 Work-related business travel (non-commute)
- 3 Shopping and leisure, including social activities with family and friends
- 4 Personal errands, such medical appointments and fitness centers
- 5 Travel to/from Dulles International Airport
- 6 Travel for leisure primarily within the state of Virginia
- 7 Travel for leisure primarily outside the state of Virginia

#### [ASK IF Count for Q.31 > 1:]

Please focus on the primary or most frequent reason for using the Dulles Toll Road before March 2020.

- Q.32 From the reasons you previously selected, what was your primary reason for using the Dulles Toll Road before the COVID-19 pandemic?
  - 1 Commute to or from work or school [Show if Q.31=1]
  - 2 Work-related business travel (non-commute) [Show if Q.31=2]
  - 3 Shopping and leisure, including social activities with family and friends [Show if Q.31=3]
  - 4 Personal errands, such medical appointments and fitness centers [Show if Q.31=4]
  - 5 Travel to/from Dulles International Airport [Show if Q.31=5]
  - 6 Travel for leisure primarily within the state of Virginia [Show if Q.31=6]
  - 7 Travel for leisure primarily outside the state of Virginia [Show if Q.31=7]

## [ASK IF Count for Q.31 > 1:]

Please focus on the primary or most frequent reason for using the Dulles Toll Road over the past month.

- Q. 33 From the reasons you previously selected, what is your primary reason for using the Dulles Toll Road <u>currently</u>?
  - 1 Commute to or from work or school [Show if Q.31=1]
  - 2 Work-related business travel (non-commute) [Show if Q.31=2]
  - 3 Shopping and leisure, including social activities with family and friends [Show if Q.31=3]
  - 4 Personal errands, such medical appointments and fitness centers [Show if Q.31=4]
  - 5 Travel to/from Dulles International Airport [Show if Q.31=5]
  - 6 Travel for leisure primarily within the state of Virginia [Show if Q.31=6]
  - 7 Travel for leisure primarily outside the state of Virginia [Show if Q.31=7]
  - 8 I do not currently use the Dulles Toll Road

#### **NO QUESTION 34**

## [ASK IF Q.33=8 (currently doesn't use DTR):]

- Q.36 What are your reasons for not using the Dulles Toll Road? Please select all that apply.
  - 1 I no longer live in the area
  - 2 I have been working or attending school from home due to the pandemic
  - 3 The toll road does not offer enough time savings (or any time savings at all) for my trip
  - 4 The toll cost is too high
  - 5 I no longer have an *E-ZPass* account
  - 6 The stores or businesses I typically travel to/from are closed or moved
  - 7 I only needed to use it for a specific reason and don't intend to use it again

## [MODULE 4: DTR SATISFACTION]

#### NO QUESTIONS 37 – 39

[ASK ALL:]

Q.39 Overall, are you satisfied or dissatisfied with the value you receive from using the Dulles Toll Road?

- 1 Very satisfied
- 2 Somewhat satisfied
- 3 Somewhat dissatisfied
- 4 Very dissatisfied
- Q.40 Overall, are you satisfied or dissatisfied with your experience as a customer using the Dulles Toll Road?
  - 1 Very satisfied
  - 2 Somewhat satisfied
  - 3 Somewhat dissatisfied
  - 4 Very dissatisfied

#### [ASK ALL:]

Q.41 Which of the following best describes your most frequent reason for choosing Dulles Toll Road over an alternative route?

#### [RANDOMIZE]

- 1 Saves driving time
- 2 Shorter driving distance
- 3 Better road conditions
- 4 Feel safer driving the Dulles Toll Road route
- 5 Less traffic congestion
- 6 This is the only route that I know for my trip
- 7 Other (Specify: \_\_\_\_) [ALWAYS SHOWN LAST]

## [IF Q.41 = 1]

- Q.42 How much time would you estimate that you typically save by using the Dulles Toll Road rather than an alternative route to make your trip?
  - 1 20 minutes or more
  - 2 15 to 19 minutes
  - 3 10 to 14 minutes
  - 4 5 to 9 minutes
  - 5 Less than 5 minutes

[SHOW ALL:] For the next set of questions, we want to know your payment and driving experiences associated with using the Dulles Toll Road.

[ASK ALL:]

Q.43 How satisfied or dissatisfied are you with the following features of the Dulles Toll Road?

## [RANDOMIZE ORDER]

- a. Road conditions on the Dulles Toll Road
- b. Signage and messaging systems on current traffic conditions on the Dulles Toll Road
- c. Process to maintain *E-ZPass* account
- d. Response from Customer Service Center when I have an issue
- e. Overall safety, service, and convenience of the Dulles Toll Road in exchange for the toll paid

#### [RESPONSE OPTIONS]

- 1 Very satisfied
- 2 Somewhat satisfied
- 3 Somewhat dissatisfied
- 4 Very dissatisfied

#### NO QUESTIONS 44 - 47

[ASK ALL:]

Q.48 Have you used any of the available smartphone applications to make payments for the Dulles Toll Road?

- a. Go Toll smartphone app
- b. Slora smartphone app
- c. Uproad smartphone app
- d. Peasey Drive smartphone app

## [RESPONSE OPTIONS]

- 1 Yes
- 2 No
- 3 Not aware of this payment option

- Q.49 Thinking about the past year, have you received any toll violation notices from Virginia Department of Transportation Customer Service Center for travel on the Dulles Toll Road?
  - 1 Yes, I have
  - 2 No, I have not

#### [ASK IF Q.49=1 (yes):]

- Q.50 How satisfied or dissatisfied would you say that are you with the process to resolve the toll violation issue?
  - 1 Very satisfied
  - 2 Somewhat satisfied
  - 3 Somewhat dissatisfied
  - 4 Very dissatisfied

## [ASK ALL:]

- Q.51 Have you received free roadside assistance from the Dulles Toll Road Safety Service Patrol?
  - 1 Yes, I have
  - 2 No, I have not

#### [ASK IF Q.51=1 (yes):]

- Q.52 How satisfied or dissatisfied would you say that you are with your roadside assistance experience from the Dulles Toll Road Safety Patrol?
  - 1 Very satisfied
  - 2 Somewhat satisfied
  - 3 Somewhat dissatisfied
  - 4 Very dissatisfied

#### [ASK ALL:]

- Q.53 How long have you had an *E-ZPass* account?
  - 1 Less than six months
  - 2 Between six months and one year
  - 3 Between one to three years
  - 4 More than three years
  - 5 I no longer have an account

## [ASK ALL:]

- Q.54 How easy or difficult would you say that it is to use *E-ZPass*?
  - 1 Very easy
  - 2 Somewhat easy
  - 3 Somewhat difficult
  - 4 Very difficult

- Q.55 How do you typically get information about the Dulles Toll Road, including traffic conditions and construction alerts?
  - 1 Local news media
  - 2 Phone notification/app
  - 3 Social media
  - 4 Radio
  - 5 Dulles Toll Road website
  - 6 E-ZPass statement

#### [ASK IF USED IN PAST 3 MONTHS, Q.12≠ 6 (never used it):]

- Q.56 In the <u>past 3 months</u>, how frequently would you say that you used the high occupancy vehicle (HOV) lanes on the Dulles Toll Road?
  - 1 Often
  - 2 Sometimes
  - 3 Seldom
  - 4 Never

#### [ASK IF USED IN PAST 3 MONTHS, Q.12≠ 6 (never used it):]

Q.57 In the past 3 months, how frequently did you encounter significant traffic delays on the Dulles Toll Road?

- 1 Often
- 2 Sometimes
- 3 Seldom
- 4 Never

## NO QUESTIONS 58-63

#### [MODULE 5: Demographics]

[SHOW ALL:] Finally, we have a few questions about you. The information is for statistical purposes only.

#### [ASK ALL:]

Q.64 What is your gender?

- 1 Female
- 2 Male
- 3 Other

[ASK ALL:]

Q.65 What is your age?

## [DROP DOWN MENU OF AGES]

Q.66 Are you currently enrolled in school?

- 1 Yes, I am currently a student
- 2 No, I am not a student

[ASK ALL:]

Q.67 Are you currently retired?

- 1 Yes, I am currently retired
- 2 No, I am not retired

## [If STUDENT OR RETIREE (Q.66=1 OR Q.67=1) READ:]

Some people who are enrolled in school or who are retired do some type of work for pay ...

#### [ASK ALL:]

Q.68 What category represents your current employment status?

- 1 Employed full-time
- 2 Employed part-time
- 3 Self-employed
- 4 Disabled
- 5 Unemployed and looking for work
- 6 Unemployed and not looking for work

## [ASK ALL:]

Q.69 Please estimate your household income in 2020, before taxes:

1	Less than \$10,000
-	EC35 (man \$10,000

- 2 \$10,000 to \$29,999
- 3 \$30,000 to \$49,999
- 4 \$50,000 to \$69,999
- 5 \$70,000 to \$99,999
- 6 \$100,000 to \$149,999
- 7 \$150,000 or \$199,000
- 8 \$200,000 or more

#### [ASK ALL:]

Q.70 What is the 5-digit ZIP code of your primary home address?

## [OPEN ANSWER]

[SHOW ALL:] Thank you very much for participating in this survey.

#### [Go to Terminate: Terminated Participants]

Thank you very much for your time, but you do not qualify to participate in this research.

#### [Go to Complete: Completed Participants]

Thank you very much for your time. If you have any questions regarding this survey, please contact the project director, Robert Suls, at [email].
# Attachment C. Employer In-Depth Interview Protocol Guide

### Metropolitan Washington Airports Authority (MWAA) Dulles Toll Road Employer Interviews Final In-Depth Interview Guide

#### [All information in brackets are instructions to interview. Not to be read/stated to the respondent(s).]

#### [Introduction and Guidelines]

Hello. Thank you for participating in today's research. My name is \_\_\_\_\_\_ and I work for a research company called EurekaFacts in Rockville, Maryland. The purpose of this interview is to gain insights into work-from-home and on-site workplace policies, as well as, commuting practices for your employees.

Before we start, here are a few guidelines for a productive interview.

- 1. In this type of research there are no wrong answers, just your thoughts, opinions, etc.
- 2. I have a list of topics to cover but please feel free to say anything that comes to mind about what we are talking about, though there may be times when I will want us to move on in the interest of time.
- 3. We will [audio/video] recording the interview so we can carefully review it, and I may have a colleague listening to take notes. However, we will hold your input in strict confidence.
- 4. your comments will not affect me personally. I want to hear everything you have to say. [IF ASKED: Is EurekaFacts doing this research for a client? "Yes, EurekaFacts is doing the research on behalf of a consortium of clients. We are not able to reveal their organization names at this time."
- 5. The interview will take approximately 20 minutes to complete, and for this reason, we ask you to limit your answer(s) to no more than 2 minutes.

Do I have your permission to [audio/video] record our conversation? {If yes, continue} {If no, remind person that everything said will remain confidential; if still no, thank person for their time and ask if they could recommend someone else we can speak with.}

#### \*\*START RECORDING\*\* [Respondent ID, Date, and Time]

This is to confirm that the <respondent ID> approves of the recording, correct? Do you have any questions before we begin?

#### [Section 1 – Current Physical Plant]

- 1. To start, I would like some background on your organization's physical location. Can you briefly describe the physical location and accommodations around your office?
- 2. For how long has your organization been in its current physical location?

- 3. Does your organization own or lease the property?
- 4. Just briefly, what is the basis for your organization's choice of physical location? {If necessary, this typically includes local workforce quality, lease or purchase costs and state or local taxes, transportation alternatives and quality, local services and amenities, and more.}

#### Section 2 – Profile of Employee Function and Commute

- 5. Thank you. Now we're going to focus on the plans and policies regarding where employees work. What is the general operations plan for your company and how was it adapted to accommodate the COVID-19 pandemic?
- 6. What was the balance of employees who work onsite versus those who work from home, whether in full or in part, before March 2020?
- 7. What work-from-home policy (if any) did your organization adopt for employees to work remotely ('tele-work") during the pandemic?
  - *a.* Possible Probe: How long did this policy last/exist?
- 8. As of right now, what is the work-from-home policy for your office?
- 9. Approximately what percentage of your organization's employees have duties that make an inperson presence very important, or even essential?

Probe: How does that compare pre-pandemic versus a pandemic adaptive policy, if you do not view your organizations situation as in post-pandemic – something still evolving)?

- 10. Currently, what is the balance of employees who work onsite versus those who work from home, whether in full or in part? Please limit your answer to no more than 2 or 3 main job functions of employees.
  - a. Probe: Approximately what percentage of your organization's employees have a mixed work location where they spend some days or hours onsite and some working from home? How is this typically structured?
- 11. Thinking about the employees that are able to have a mixed work location or exclusively off-site work scenario, What affects the senior leaders' decisions to allow employees to work from home, whether in full or in part?
  - a. {If necessary: Due to variation in the job functions of your employees, are there considerations around, does this include your organization's productivity, an individual's productivity, smooth operations and coordination, technology constraints, job duties, the needs of your clients/customers?}

### Section 3 – Transit Modes and Business Travel

- 12. I am going to read a short list of travel modes and ask you to identify how frequently, if at all, you personally use each of them for getting to work. Would you say always, often, sometimes, rarely or never?
  Solo in private vehicle from home to work;
  Carpool or other pre-set group of riders from home or a pick-up location to work;
  Metrorail;
  Metrobus;
  Local bus system such as Fairfax Connector, Loudon County Transit, DASH, etc.;
  Virginia Railway Express;
  Paid ride sharing such as Uber, Lyft, etc.
- 13. Next, generally speaking, how frequently, if at all, do most your employees use each of following modes for getting to work. Would you say always, often, sometimes, rarely or never?
  Solo in private vehicle from home to work;
  Carpool or other pre-set group of riders from home or a pick-up location to work;
  Metrorail;
  Metrobus;
  Local bus system such as Fairfax Connector, Loudon County Transit, DASH, etc.;
  Virginia Railway Express;
  Paid ride sharing such as Uber, Lyft, etc.
- 14. For which, if any, of those seven transportation modes does your organization subsidize employees' costs? This can include subsidizing transit fares or ride sharing costs, free or discount parking, gasoline costs, EZ pass subsidy, or more. [If necessary: Again, those travel modes are Solo in private vehicle from home to work; Carpool or other pre-set group of riders from home or a pick-up location to work; Metrorail; Metrobus; Local bus system such as Fairfax Connector, Loudon County Transit, DASH, etc.; Virginia Railway Express; Paid ride sharing such as Uber, Lyft, etc.
  - a. Probes:
    - i. Have these subsidies changed pre- pandemic versus a pandemic adaptive policy?
    - ii. How impactful are the subsidies on employees' current commuting choices?
    - iii. Is there variation in your organization for who receives these types of benefits, and if so, how does that vary?

- 15. Now I want to discuss business travel at your company. Please describe the frequency and types of employees who are likely to travel for business?
  - a. Probes:
    - i. Is this travel local (DMV area), domestic (outside DMV), or international travel?
    - ii. How did they travel? Was it by car, bus, train, airplane?
- 16. How, if at all, has this changed because of the pandemic and how are you currently handling business travel for these employees? Is it happening at the same frequency? for business, and how will that compare pre- versus post-pandemic?

#### Section 4 - Onsite and Work-from-Home Technology

- 17. The next section is about technology for onsite and work from home employees. As the Covid-19 pandemic was unfolding in 2020, to what extent did your organization adapt or invest in technology equipment or infrastructure that supports employees working from home? Would you say it was minimal, some, or a great deal of investment? *{If necessary: this can include more machines, increased bandwidth and speed, stronger cyber security against data theft and malware, and more.}*
- 18. As you continue to manage your organization's pandemic response, what technology items and processes has your organization invested in that will be kept for onsite and work from home employees? And, what will that depend on?
- 19. Are there any other major business or organizational functions or events that have migrated from in-person to online?
  - a. [IF YES] Probe: How permanent of a change is anticipated for each of the functions?

#### Section 4 – Planning for the future

20. Continuing to think about future plans and organizational changes, is your organization planning on moving locations in the next year?[IF YES] Probe:

Does the company need more, or less, square footage?

How likely do you think your organization is to stay in the Washington metro area?

What will your organization most want in a new location?

21. How does your organization collect employee feedback about their jobs? Is it done through conversations, anecdotes, a suggestion box, etc., a more formal method such as focus groups or a survey, or a combination of these methods?

We are almost done now, just a couple questions to summarize our conversation, and then a quick wrap-up.

- 22. Thinking of all the recent workplace changes you described, which ones are more likely to be short term such as 1-6 months, mid-term such as approximately 1 year, or long-term such as more than 1 year, and what will it depend on?
- 23. As a summary, I am going to read a short list of categories where your organization has made changes or plans to make changes, and then ask you to describe your organization's level of commitment to each: Would you say very committed, somewhat committed, not too committed, not at all committed. First/Next/How about ...

Physical space(s); Transportation programs and incentives. Technology updates, upgrades, etc.; Business structure; Hiring personnel from with the Washington metro area; Hiring personnel from outside the Washington metro area;

#### Wrap Up Question

24. That is all of my questions. Is there anything else about any of this that you would like to add, or are there any questions that I should have asked but did not?

#### <u>Close</u>

Thank you very much for your time and insights. It was a great interview and I enjoyed speaking with you. Have a great {day/evening}.



# **Demographic Forecast Review**

FINAL REPORT December 6, 2021

# J. S. Lane Company

under contract to Stantec Consulting Services Inc.

1167 Harp Street Raleigh, NC, 27604 919.601.9098 jslanempo@gmail.com





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# Purpose

This report presents the assessment of demographic forecasts used by the Metropolitan Washington Council of Governments (MWCOG) and its partnering jurisdictions. These forecasts may be used by local governments and regulatory agencies to assess future potential capacity concerns for transportation facilities and services; emergency response personnel and infrastructure needs; student and classroom capacity; and future public utility demands. J.S. Lane Company was retained by Stantec Consulting Group, Inc. to conduct an independent assessment of MWCOG forecasts to support the development of a regional travel demand model.

The assessment was based on a review of current MWCOG's Round 9.1a forecast (9.1a) of population, employment, and household data and included interviews with local government and MWCOG staff. During this assessment, MWCOG introduced its Round 9.2 forecast (9.2), however this research included only a high-level comparison of the 9.1a forecasts against the 9.2 version. Statistical assessments were utilized to gain an understanding of the forecasting results, and the methodology described in the report entitled, "*Growth Trends to 2045: Cooperative Forecasting in Metropolitan Washingtori*". A summary of the information assessed, and detailed descriptions follow.

# Summary

Overall, reviews of the MWCOG forecasts, coupled with information gathered from MWCOG and local government staff, resulted in a high degree of confidence in the methodologies used and the results of the forecasts produced.

- Each local government generates an individual forecast that is sensitive to the nuances of its particular area. For example, the City of Alexandria is able to consider every parcel in a truly bottom-up fashion, due to its smaller size relative to the larger counties. Montgomery County's method is more derivative and top-down, but its lower growth rates suggest that this method is appropriate. Arlington County focuses on three higher-growth corridors which allows the development of unique occupancy and other factors well-suited to those higher-growth areas.
- Forecasts are conducted frequently, with updates tied to major U.S. Census releases. This frequency allows for emerging trends to be captured, and results in a higher likelihood that changes will be detected and included in subsequent efforts. Fairfax County, comprising a major portion of the primary study area used for this effort, updates its forecasts every year.
- 3. While the methodologies are generally very robust, a standing Cooperative Forecast Committee provides oversight to coordinate efforts among the reporting jurisdictions and review results and trends.
- 4. The regional model and local jurisdictional projections are required to be within three percent of each other for the new set of Cooperative Forecasts to be officially reconciled.
- 5. Confidence is higher in the first five years of each forecast since near-term horizon forecasts are informed by extensive coordination with local government staff that are aware of local developments and upcoming updates to jurisdictional plans. Longer-term horizon years often rely on trends and adopted plans, as well as physical or regulatory constraints implied by zoning.

# **Study Areas Considered**

While each transportation area zone (TAZ) in the MWCOG modeling regime may have trip ends that use any proposed facility between Leesburg and Washington, D.C., the Figure 1 shows the primary and secondary study areas (assumed to be 20 miles beyond the primary study area). Several counties, including portions of Arlington, Fairfax, Loudoun, and Montgomery County are suggested as having direct influences on the primary and / or secondary study areas shown.



# **Forecasting Methodology Overview**

The forecasting approach historically and currently taken by MWCOG is the mainstream practice for producing forecasts at the TAZ level. This practice consists of establishing control totals at a large geographic level, such as a county, while working with local government staff to produce microscale (TAZ or parcels aggregated to the TAZ level) forecasts. A calibration process occurs between this "top-down / bottom-up" approach to reconcile differences between the various forecasts to produce a final forecast when the aggregate of local forecasts fall within three percent of each control total. The MWCOG allows local governments to make minor adjustments annually to account for unexpected development-driven changes that were unforeseen in the last full forecast development cycle. A standing committee from the MWCOG and local governments reviews the forecasts, methods for each round, and related topics including development trends and data to produce the Cooperative Forecast.



Figure 2. Cooperative Forecast Top Down-Bottom Up Forecast

# **Observations on Methods and Statistics**

The following summary of observations, discussion of methods and statistical samplings support the validity of using the 9.1a results for the forecast when compared to the yet to be implemented 9.2 version.

- The Cooperative Data and Forecasting Subcommittee is a standing committee of the MWCOG which meets monthly to discuss specific forecast-related topics and attend presentations from developers. The regular meetings assure the continued validity of assumptions used in the models.
- The MWCOG uses Global Insights data for control totals. The Global Insights data uses a step-down model from states to counties that is updated quarterly. The county estimates are independent from the MWCOG control totals acting as an independent data validation check point.
- There are 24 jurisdictions within the modeled region. Jurisdictions outside the COG modeled region include Jefferson, Clark, Faulkner, Stafford, Spotsylvania, and King George Counties in Virginia, and Carrol, Anne Arundel, and Howard Counties in Maryland. Calvert and St. Mary's Counties work with MWCOG. Minor updates to local forecasts are not included in each MWCOG forecast update.
- 4. If a county does not provide new data to a particular round of forecasting updates, then its previous round forecast is used without adjustment. In the Round 9.2 ten jurisdictions elected to participate with new data.
- 5. The change in 10-year forecasts between 2015 to 2025 compared with the change between 2035 to 2045 was examined by TAZ. It was noted that TAZs in several counties possessed consistently low differences throughout the entire county between the first 10-year period and the last 10-year period in the Cooperative Forecast. This suggests that a more simplistic approach using a common growth factor was applied in these areas. This approach is in contrast to several hundred parcels that are examined individually in Arlington County in high growth corridors, producing highly unique spatial variations in TAZ-level forecasts. Both approaches are valid.
- 6. When considered side-by-side, the Model forecasts presented no difference with the Cooperative Forecast for households, population, and employment with few exceptions.
- 7. A statistical comparison of the 2015 through 2045 forecasts was conducted for three variables; households, population, and employment from Round 9.1a of the Cooperative Forecast. Households and population are heavily correlated, with those correlations reduced slightly with each successive forecast horizon period. Employment does not correlate with either population or households. For example, the correlation between 2015 and 2045 household forecasts is 0.88 while the correlation statistic between 2015 and 2025 is 0.95. The correlations between base or near-term years (e.g., 2015 or 2020) and "out" horizon years is very high, typically falling between 0.87 and 0.90 (a 1.00 would be a perfect correlation). This implies an extremely high reliance on existing conditions to forecast even long-term conditions nearly 25 years in the future.
- 8. In other cases, there are long sequences of TAZs that do not change in value from horizon year to horizon year. For example, TAZs 751 to 768 have no changes in Population or Households between 2045 and 2050, and some of these TAZs (e.g., 751 and 752) do not change in value from 2015 onward. These TAZs may be considered "built out" now and are not anticipated to change in future years. The Employment values in these same TAZs change modestly as well.

9. Figure 3 and Figure 4 illustrate comparisons of changes in employment and population by tenyear horizons. Some TAZs reflect a decrease in population or employment, a condition that is relatively rare. Increases in employment at the northwest end of the primary study are substantial in numbers of TAZs. In reviewing it affirms the reasonableness of using the Round 9.1a assumptions.



Figure 3. Changes in Employment, by Ten-Year Horizons.



Figure 4. Changes in Population, by Ten-Year Horizons.

# **Comparison of Recent Cooperative Forecasts and Alternative Forecasting Methods**

Although the Cooperative Forecasts are frequently updated by the MWCOG and member jurisdictions. There are additional forecasts that have been conducted for this planning region. Some forecasts, such as one prepared by Woods & Poole, are primarily county-focused and do not possess the level of granularity represented by the TAZ structure of the travel demand model-driven Cooperative Forecast. The following is a discussion of the most recent forecast Round of 9.2 compared to the adopted 9.1a forecasts analyzed in the preceding sections, as well as forecasts conducted by third parties.

## COMPARING ROUNDS 9.2 AND 9.1A OF THE COOPERATIVE FORECAST

Round 9.2 of the Cooperative Forecast was considered a minor update of Round 9.1a, with 10 jurisdictions submitting information to MWCOG. The remainder of the jurisdictions continued to use the 9.1a edition values for each TAZ in those jurisdictions.

Total population forecasts rose slightly (about 0.3 percent in total) across the major horizon years (2025, 2035, and 2045). Alexandria's forecast rose 10-13 percent for population and declined by 5-17 percent for employment (Table 1); Loudoun County has a similar pattern of increasing population forecasts and declining employment.

Jurisdiction	20	25 Population	20	35 Population	20	45 Population	202	5 Employment	203	5 Employment	204	5 Employment
Anne Arundel County	⇒>	2%	$\rightarrow$	2%	$\Rightarrow$	0%	->	0%	->	0%	₽>	0%
Arlington County	⇒>	0%	$\rightarrow$	0%	$\rightarrow$	-1%	Ŷ	7%	Ŷ	11%	Ŷ	7%
Calvert County	->>	0%	->>	0%	->>	0%	->	0%	->	0%	->	0%
Carroll County	->>	0%	$\rightarrow$	0%	$\rightarrow$	0%	$\rightarrow$	0%	$\rightarrow$	0%	->	0%
Charles County	->>	0%	->>	0%	=>	0%	->>	0%	->>	0%	->	0%
City of Alexandria	Ŷ	10%	Ŷ	13%	Ŷ	10%	->>	-5%		-11%		-17%
City of Fredericksburg	->>	0%	->>	0%	=>	0%	->>	0%	->>	0%	->	0%
Clarke County	->>	0%	->>	0%	=>	0%	=>	0%	->>	0%	=>	0%
District of Columbia	->>	0%	->>	0%	=>	0%	->>	0%	->>	0%	->	0%
Fairfax Co./Fairfax City/Falls Church	->>	0%	->>	-1%	=>	0%	=>	0%	->>	1%	=>	0%
Fauquier County	->>	0%	->>	0%	->>	0%	->>	0%	->>	0%	->	0%
Frederick County	->>	-2%	->>	0%	->>	1%	->>	0%	->>	0%	->>	0%
Howard County	->>	-3%	->	-1%	->	0%	->	0%	->	0%	->	0%
Jefferson County	->>	0%	->>	0%	->>	0%	->>	0%	->>	0%	->	0%
King George County	->>	0%	->>	0%	->>	0%	->	0%	->>	0%	->	0%
Loudoun County	->>	2%	Ŷ	6%	Ŷ	7%	=>	-7%	Ψ.	-9%		-12%
Montgomery County	->>	0%	->>	0%	=>	0%	->>	0%	->>	0%	->	0%
Prince George's County	->>	0%	->>	0%	->>	0%	->>	0%	->>	0%	->>	0%
PrinceWilliamCo/Manassas/Manassas	₽ε <del>≫</del>	0%	->>	0%	->	0%	->	0%	->>	0%	->	0%
Spotsylvania County	->>	0%	->>	0%	->	0%	->	0%	->>	0%	->	0%
St. Mary's County	->	1%	->>	0%	->	0%	Ŷ	5%	Ŷ	4%	Ŷ	4%
Stafford County	->>	0%	Þ	0%	-⇒	0%	÷	0%	÷	0%	->	0%

Table 1. Round 9.2 and Round 9.1a Change for major horizon years ((Rnd 9.2 - Rnd 9.1a) / Rnd 9.1a).

Variations between the two rounds of the Cooperative Forecast also exist. Figure 5 and Figure 6 on the following page show the population and employment variations, respectively, in the 2045 forecasts (Round 9.2 compared to Round 9.1a). Note that many TAZs are "gray," meaning that they didn't change or weren't part of that jurisdiction's submittal. Fairfax County had fewer changes than Prince William, Arlington, or Loudoun counties, and employment values exhibited fewer changes than population in the region.



Figure 5. Cooperative Forecast 2045 Population (Round 9.2 change from Round 9.1a)



Figure 6. Cooperative Forecast 2045 Employment (Round 9.2 change from Round 9.1a)

# COMPARISON OF COOPERATIVE FORECAST (9.1A) TO OTHER FORECASTING EFFORTS

This section reviews three independent forecasts to the Cooperative Forecast Round 9.1a for population (which is closely correlated with households) and employment. The forecasting methodology for the Cooperative Forecasts are considerably more "bottom-up" in nature and are derived from the inputs of local government staff familiar with the growth and development trends in their respective jurisdictions. The third-party forecasts are considered "desktop" exercises, based largely on past trends.

The Cooper Center provided population forecasts for several counties for 2020, 2030, and 2040;

Dulles Toll Road Comprehensive Traffic and Revenue Study 2018 Update (2018 DTR T&R Report) and Woods & Poole datasets were assessed for these years for population and employment data. All of these were compared with the Round 9.2 Cooperative Forecast jurisdictional summary data. The results of this comparison are shown in Figure 7. Although the forecasts are similar for all counties, Washington, D.C.,<sup>1</sup> and Alexandria City, the Woods & Poole data is consistently higher in the larger, higher growth areas such of Fairfax and Loudoun counties. This further supports the validity of using the Round 9.1a data for the analysis.

<sup>1</sup> Note that the Cooper Center dataset did not have data for some counties and Washington, D.C.









Figure 7. Comparison of 2020, 2030, and 2040 Population and Employment Forecasts.

demographic forecast review v.12.06.2021

# DULLES TOLL ROAD INVESTMENT-GRADE TRAFFIC AND REVENUE STUDY APPENDIX C: DEMAND MODEL DEVELOPMENT AND CALIBRATION

Appendix C describes the development and calibration of Stantec's toll diversion model that was used to develop the transaction and revenue estimates on the DTR. This includes refinement of the regional model, the development of the inputs for the toll diversion model, as well as the calibration and validation of the revised toll diversion model.

# C.1 REGIONAL MODEL DEMAND REFINEMENT

### C.1.1 Regional Model

The regional model used as the basis for the toll diversion model uses the Metropolitan Washington Council of Governments (MWCOG) Generation 2 Version 2.4 Travel Demand Model (the "Regional Model" for purposes of this study) which has been calibrated and validated to year-2014 conditions.

The regional roadway network of the Regional Model (shown in Figure C-1) was used to execute the four steps of the modeling process from trip generation, trip distribution through mode choice, and traffic assignment.





### Figure C-1 2019 Regional Model Roadway Network

## C.1.2 Regional Trip Preparation

Stantec segmented trips from the Regional Model by income group using the available information on trip distribution for each origin and destination pair. High-income and low-income trips were segmented to allow for distinct values of time. This additional segmentation permitted more granularity in forecasting T&R on the DTR.

The highway assignment process was modified to provide four time-of-day periods, as shown in Table C-1. These time periods were created to match the timing of the peak period tolling policies on the adjacent toll road corridor to the DTR, I-66 inside the Beltway.



Time Period	Time
AM	5:30 AM to 9:30 AM
MD	9:30 AM to 3:00 PM
PM	3:00 PM to 7:00 PM
NT	7:00 PM to 5:30 AM

### **Table C-1 Toll Diversion Model Time Periods**

# C.2 TOLL DIVERSION MODEL DEVELOPMENT

Stantec developed a customized toll diversion assignment process utilizing the data available from the Regional Model. The resulting toll diversion model was the forecasting platform to develop the final T&R estimates for the DTR.

Toll diversion equations were established for 25 unique trip purposes as a function of vehicle class, trip purpose, and income. Vehicle classes include single occupancy vehicles, high occupancy vehicles with 2 passengers, high occupancy vehicles with 3 or more passengers, and trucks. Trip purposes include homebased work (HBW), home-based shopping (HBS), home-based other (HBO), non-home work (NHW), and non-home other (NHO). For each trip purpose, income was stratified into low and high categories to provide more granularity in the modeling process.

The toll diversion process uses the following toll diversion logit equations as the basis for the forecasts:

Toll Share = 
$$1 / (1 + e^{U})$$

where:

Toll Share	= Probability of selecting a toll road
е	= Base of natural logarithm (In)
U <sub>(work)</sub>	= a * (TimeTR-TimeFR) + b *(Cost)/In(Inc) + CTR + CETC
U(nonwork)	= a * (TimeTR-TimeFR) + b *(Cost) + CTR + CETC
Time <sub>TR</sub>	= Toll road travel time in minutes
Time <sub>FR</sub>	= Non-toll road travel time in minutes
Cost	= Toll in dollars
Inc	= Annual income / 1000
C <sub>TR</sub>	= Constant for toll road bias
Cetc	= Constant for ETC bias
Alpha (a)	= Time coefficient
Beta (b)	= Cost coefficient



The value of time for each purpose was established to reflect household incomes. Table C-2 lists the coefficients for each trip purpose and composite values of time.

TRIP PURPOSE &	(ALPHA)	(BETA) Income		vот	VOT Share	COMPOSITE		
INCOME	TIME (min)	COST (\$)	Range Midpoint	(\$/HR)(1)	of Wage Rate	vот	VOT Share of Wage Rate	
HBW - Low	0.0624	0.3455	\$70,000	\$21.09	62.7%	\$28.61	47.4%	
HBW - High	0.0024	0.3091	\$184,000	\$35.28	39.9%		47.470	
HBS - Low	0.0481	0.3673	\$70,000	\$15.30	45.5%	\$22.05	36.5%	
HBS - High	0.0401	0.3000	\$184,000	\$28.04	31.7%	φzz.05	30.5%	
HBO - Low	0.0602	0.4182	\$70,000	\$16.80	49.9%	\$25.93	42.9%	
HBO - High	0.0002	0.3091	\$184,000	\$34.02	38.5%	φ20.95	42.970	
NHBW	0.05928	0.3800	\$125,630	\$23.69	39.2%	\$23.69	39.2%	
NHBO	0.0572	0.4397	\$125,630	\$19.74	32.7%	\$19.74	32.7%	

Table C-2 Toll Diversion Model Coefficients and Value of Time

For the 2019 calibration year, the model assumed two payment methods: E-ZPass and non-E-ZPass. The relevant truck toll rates were also applied.

The toll shares for HBW trips for low-and high-income levels at a \$4.75 mainline toll are shown in Figure C-2. The predicted toll shares were further reduced if the time difference between the tolled and non-tolled paths approached the minimum time savings value, resulting in a manual shift of the curve to zero when time savings is less than two minutes.



Figure C-2 Toll Diversion for Home Based Work (Auto) Trips by Income Group



# C.3 MODEL CALIBRATION

The objective of the model calibration was to ensure that the modeling process adequately replicates observed traffic volumes, observed speeds, observed toll targets for the DTR and other important toll and non-toll roadways in the region. The calibration was also structured to replicate the observed transactions on the DTR by pay points and payment method.

## C.3.1 Speed Calibration

Stantec used observed speed data from INRIX (a provider of location-based data analytics that utilizes GPS devices, smartphones, cameras, and other devices to collect travel time information) for corridors near the study region as the calibration dataset for the speed calibration. Speed data were collected for both directions during the four time-of-day periods. Table C-3 shows the results of the speed calibration in terms of observed and estimated travel time and speed by corridor and by time-of-day. The results indicated that the estimated speeds are within reasonable tolerance of observed data, with a level of consistency that is acceptable for the purposes of model calibration.

As part of the model calibration, the free flow speeds and link capacities were adopted from the MWCOG model and refined by facility type and area type (rural, urban, etc.) to ensure that the model adequately replicated both peak and off-peak speeds for the primary roadway facilities in the Dulles Corridor.

Facility	Dir	Observed				Model Estimated			
Facility	Dir	AM	MD	PM	NT	AM	MD	PM	NT
Dulles Toll Rd	WB	62	61	49	59	63	64	51	64
Dulles Toll Ru	EB	52	59	61	59	51	64	64	65
Dulles Greenway	WB	60	62	61	61	69	69	67	69
Dulles Greenway	EB	63	62	62	61	66	68	69	69
I-66	WB	59	55	28	58	59	56	48	50
	EB	35	48	55	60	53	55	56	58
VA-7	WB	41	38	30	45	41	37	28	46
VA-1	EB	35	37	37	45	32	35	37	35
US-50	WB	34	34	26	39	40	39	29	38
03-50	EB	30	31	28	37	36	37	37	38
119 15	NB	45	46	46	48	45	46	44	46
US-15	SB	48	47	45	50	44	46	42	47
VA-606	NB	25	30	31	37	33	36	36	39
VA-000	SB	30	29	23	37	38	36	30	37
VA-28	NB	55	58	51	58	61	63	63	65
VA-20	SB	56	56	38	57	63	64	60	65
VA-286	NB	38	39	40	47	36	37	36	33
VA-200	SB	45	42	36	47	38	37	32	37
VA-674	NB	30	31	30	34	28	33	31	35
VA-074	SB	31	30	26	34	33	34	28	35
VA-828	NB	25	25	23	29	35	35	28	35
V A-828	SB	24	23	22	28	31	34	33	36
AM: 5:30 AM to 9:30 AM									
Midday: 9:30 AM to 3:00 PM									

#### **Table C-3 Speed Calibration Summary**

Midday: 9:30 AM to 3:00 PM PM: 3:00 PM to 7:00 PM





# C.3.2 Aggregate Calibration by Facility Type and Area Type

After the calibration analysis of speeds was completed, traffic volumes within each corridor were performed. This process included the replication of traffic by screenline total and individual roadways by vehicle type. This analysis included the use of the Stantec trip table adjustment routine to ensure that the aggregate travel across each screenline replicated the observed traffic by vehicle type.

The aggregate calibration by facility type and area type was performed for both traffic volumes as well as vehicle miles traveled. The calibration dataset for traffic counts included VDOT 2019 AADT Traffic Maps (AADT = average annual daily trips), and 2019 transaction data by pay point for the DTR and the Dulles Greenway. Average trip length was also reviewed. The results, provided in Figure C-3, show a good fit to trip length as a function of number of trips. The green line represents the improvement from the modification of the trip table to conform to actual data.



#### Figure C-3 Average Trip Length

### C.3.3 Screenline and Major Roadway Mainline Calibration

A component of calibration adjusts the toll diversion model equations to replicate the observed traffic. The screenline and major roadway mainline calibration was performed to ensure that the aggregate demand within each corridor replicated observed traffic. A series of screenlines were developed within each of the toll road corridors (DTR and Dulles Greenway) to intersect each of the mainline toll plazas and parallel locations on the adjacent non-tolled roads. The calibration screenline locations are depicted in Figure C-4. Table C-4 lists the screenline calibration results for total daily traffic. Total traffic on each screenline was within acceptable tolerances of the total counts. The traffic on the toll road corridors adequately aligns with the observed counts as highlighted in green.

Table C-5 lists the major roadway calibration results for average weekday traffic across all segments with focus on calibration of the DTR, where model estimates are within 1 percent of actual traffic. In general, the calibration indicated that model estimates slightly lower travel on feeding facilities such as the Dulles Greenway, and slightly over assigns trips to the Access Highway, providing for a conservative forecast for



the DTR. The calibration process resulted in total traffic on each roadway within acceptable tolerances of the total counts.







1         Online Bridge Rd         W of Ausman Dr.         19,000         15,334         -466         -4%           3         Balls Hill Rd         N of Yates Cu.         -70.0         184.         -10.503         -20.504         -10.503         -20.504         -10.503         -20.504         -10.503         -20.514         -10.503         -20.514         -10.503         -20.514         -10.503         -20.514         -10.503         -20.514         -10.503         -20.514         -10.503         -20.514         -10.503         -20.514         -10.503         -20.514         -10.503         -20.514         -10.503         -20.514         -10.503         -20.514         -10.503         -20.514         -10.503         -20.514         -10.503         -20.514         -10.503         -20.514         -10.503         -10.513         -20.514         -10.513         -10.513         -20.514	Screenline	Number	Roadway	Cross street	Observed	Estimated	Difference	Percent Difference
3         Bills Hill Rd         Nof Yanse Ci.         NA         Image: Constraint of the local set		1				18,334	-666	
4         1467 Capital Betway         N of Ris 694         167,700         177,855         10,085         6%,           5         Spring Hite         S of Ris 694         6,500         60,710         4,830         45%,           6         Leeburg Pite         S of Ris 694         5,500         60,710         4,831         45%,           7         Trap,Ka         S of Roms Mill R1         3,00         5,146         1,346,         35%,           8         Debulk R4         S of Roms Mill R1         2,100         7,453         3381         15%,           9         South R4         S of Roms Main R2         2,000         18,037         1313         15%,           11         Reston Powy         N of New Domisson Powy         65,000         10,394         -10%,           13         Van Bures S         S of Herndon Prey         22,000         19,390         -2,691         -10%,           14         Centure/R4         S of Nicold         14,000         11,472         -3,553         -2,755,           15         Shigh R4         N of Systain R4         12,000         11,450         -1,031         -3,759         -1,031         -3,759         -1,031         -3,756         -1,031         -3,756 <td></td> <td></td> <td></td> <td></td> <td>39,000</td> <td></td> <td>-376</td> <td>-1%</td>					39,000		-376	-1%
5         Spring Hill Rd         S of Ranchood St.         5,100         8,283         3.163         82%           6         Leesburg Phes         S of Trombone C1         3,800         5,116         1,346         39%           7         Trap Rd         S of Trombone C1         3,800         5,116         1,346         39%           8         Beaulan Rd         S of Trombone C1         3,800         5,116         1,346         39%           9         Van Buern Nwy         S of Sex Norman Spaars N         9,000         10,307         1,911         1,911           12         Franta County Hewy         S of New Dommon Pray         6,000         19,309         2,2611         1,755           14         Centreville Rd         S of Vioridgate Dr         38,000         34,201         3,703         1,105           15         Sing Md         S of System Rd         12,000         14,429         2,528         -29%           16         Bearine Ridge Rd         N of System Rd         12,000         14,429         2,528         -29%           19         System Rd         S of Origitabaa Rd         12,000         14,421         -45,131         -4%           19         System Rd         S of Origitabaa					167 000		10.635	6%
6         Leesburg Pike         S of The 684         95.000         90.170         4.4830         -9%.           A         Trap Rd         S of Brown Mill Rd         -7.100         7.438         -3.36         -9%.           A         Hunter Mill Rd         S of Brown Mill Rd         -8.000         2.011         -24%.           -0         Fairs County Plewy         A of Biosmont Wag         -8.000         2.5481         -1.09           -1         Fairs County Plewy         A of Biosmont Wag         -8.000         2.5481         -1.0944         -1.0544           -1         Fairs County Plewy         A fire Mode Play         -8.000         12.2445         -3.0556         -2.25%.           -1         Controller Rd         S of Neo Soft         18.000         12.269         -1.037.         -7.04           -1         Sproot Rd         S of Neo Soft         12.200         12.299         -1.037.         -7.04         -0.05           -1         Beinont Exisp Rd         N of System Rd         12.200         11.299         -1.031.         -4.95.           -1         Magnity Rd         S of Pastody D         5.000         5.012         -4.01.04         -4.01.04         -4.01.04         -4.01.04         -4.01.04								
B         Beach Rd         S of brown Mill Rd         7.100         7.7.38         336         6%.           10         Writel AVR         S of basic Netwon Square N         20.001         15.027         -1.913         -1.05.           11         Regton Pay, many         S of basic Netwon Square N         20.000         15.027         -1.914         -1.95.           13         Tan Buren S'         S of Harotop Pay, Pay         20.000         15.309         -1.924         -1.95.           14         Carterwelle Rd         S of Harotop Pay, Pay         20.000         14.200         -2.274.         -3.65.66         -2.274.           15         Loudoun County Pawy         N of Net 64.3         3.000         12.214         -4.57.61         -1.75.           16         Loudoun County Pawy         N of Spcoin Rd         12.000         10.031         -96.           16         Betront Ridge Rd         N of Spcoin Rd         12.000         10.031         -96.           17         Claborne Pawy         N of Pacin Rd         12.000         10.031         -96.           18         Betront Ridge Rd         N of Spcoin Rd         12.000         4.002         -76.           18         Betront Ridge Rd         N of Spcoin Rd				S of Rte 694		50,170	-4,830	
B         Humer Mill Rd         S of Huming Creat Ln         6.000         10.331         2.001         2.403           A         10         Weigh Awa         S of Issax Network Sequent N         26.000         15.034         -1.015.           11         Restor Prevy         S of Nex Dominon Prevy         66.000         55.444         -1.055.           13         Van Brun S         S of Nex Dominon Prevy         66.000         12.246.         -1.055.           15         Salar, Rd         S of Nex Dominon Prevy         66.000         12.246.         -3.0559.         -1.255.           16         Salar, Rd         S of The soft         66.000         12.246.         -3.0559.         -2.256.           16         Salar, Rd         N of Secolar Rd         12.000         11.267.         -4.528.         -2.066.           16         Salar, Rd         N of Secolar Rd         12.000         11.267.         -4.267.         -4.268.           17         Glaborne Prevy         N of Resolar Rd         12.000         15.020         -4.012.         -7.66           18         Bernor Rdge Rd         N of Secolar Rd         12.000         15.021.         -4.66.         -7.66           19         FE Lazar         S of Olasor								
A         10         Weite Ave         S of base Netwon Square N         20.000         16.1087         -1.913         -1.95           12         Ration Newy         S of Mex Dominion Pawy         66.000         85.308         1398         17%           14         Reston Newy         S of Mexndon Newy         66.000         85.406         -1.0544         -1.67%           14         Centrevalle Rd         S of ViorAlgate Dr.         38.000         32.216         -3.709         -1.055           15         Southout Only Phay         S of ViorAlgate Dr.         38.000         32.216         -3.709         -1.051           17         Calaborne Phay         S of ViorAlgate Dr.         12.000         1.058         -1.031         -9%           18         Beyonin Rd Gap RJ         N of Systoin Rd         12.000         1.158         -4.817         -4%           19         Systoin Rd         S of Frazidary Dr         8.000         8.011         -1.031         -9%           10         Hargit Ryich Hay         E of Rb 2627         90.000         8.011         -4.817         -4.817           14         Hargit Ryich Hay         E of Rb 2627         90.000         8.011         -4.817         -4.817         -4.817 <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td>								
A         11         Reston Provy         N of Buemon Way         26:000         55:300         33:88         1%; 11:000           12         Fairtis Courty Provy         S of Memon Provy         20:000         55:400         10:504         -1:15%; 10:300           13         Van Buren St.         S of Memon Provy         22:000         19:300         -2:061         -1:25%; 10:300         -2:061         -1:25%; 10:300         -2:061         -2:061         -1:25%; 10:300         -2:061         -2:061         -1:25%; 10:300         -2:061         -2:05%; 10:300         -2:061         -2:05%; 10:300         -2:061         -2:05%; 10:300         -1:05%; 10:300         -2:061         -2:05%; 10:300         -2:061         -2:061         -2:061         -2:061         -2:061         -2:061         -2:061         -2:061         -2:061         -2:061         -2:061         -2:061         -2:061         -2:061         -2:061         -2:061<								
Barrias County Pixay         S of New Dominion Pixay         66,000         15,5,400         1-10,541         -112%           14         Centreville Rd         S of Vindigate Dr.         38,000         34,291         -3,705         -10%           15         Sully Rd         S of Vindigate Dr.         38,000         34,291         -3,705         -10%           16         Loudoun County Pixay         N of Rei 643         30,000         17,246         -3,755         -22%           17         Calaborne Pixay         N of Rei 643         30,000         11,123         -4,241         -4%           19         Synoin Rd         S of Costantal Blot         12,000         11,123         -4,817         -4%           19         Synoin Rd         S of Peabody Dr         5,000         5,013         4,012         7%           2         Rtar 12         S of Old Meadous Rd         61,000         65,012         4,014         -4%           4         International Dr         S of Lianolo Car         16,000         86,217         6,877         9%         6         88         11%         6,877         9%         6         88         11%         11%         11%         11%         11%         11%         11%	А							
14         Controville Rd         S of Rta 600         34,201         3.709         -10%           15         Suly Rd         S of Rta 600         16,400         127,446         -36,556         -22%           16         Loudoun County Pkwy         N of Rta 610         12,000         11,474         -5286         -22%           18         Bemont Ridge Rd         N of Sycolin Rd         12,000         11,244         -35,28         -28%           18         Bemont Ridge Rd         N of Sycolin Rd         12,000         11,247         -5,288         -28%           18         Bemont Ridge Rd         N of Sycolin Rd         16,000         16,164         41,144         -9%           2         Rd and Sycolin Rd         S of Calobary Dr         16,000         16,312         -37,179         52,284           4         International Dr         S of Calobary Dr         16,000         24,718         8,719         54%           4         International Dr         S of Calobary Dr         16,000         24,718         8,719         54%           5         Leestrup Pike         N of Spring Fill Rd         8,200         8,000         8,617         9%         6           6 <tdreatin and<="" td="">         S of Cal</tdreatin>								
15         Soly Rd         S of Re 606         164.000         127.445         -35.656         -22%, -22%, -22%           17         Cluborne Pkwy         S of Windmill Dr         20.000         14,742         -5.751         -17%, -258         -28%, -28%           18         Berion Ridge Rd         N of Sycolin Rd         12,000         10,969         -1.031         -9%, -9%, -9%           19         Sycolin Rd         S of Crosstral Bivd         12,000         11,259         -711         -6%, -711         -6%, -771         -6%, -778,500         715,466         -40.024         -4%, -4%, -4%, -4%,           2         Harig Kyrd Hwy         E of Rei AGC         16,000         24,711         -1%, -4%, -4%, -4%,         -7%, -4%, -4%, -4%, -4%,         -1%, -10,000         -47,19         8,711         -6%, -4%, -4%, -4%,         -5%, -5,224         -1%, -5%, -5,224         -5%, -5%, -5,224         -5%, -5%, -5,224         -5%, -5%, -5,224         -1%, -5%, -5,226         -3%, -5,226         -3%, -5,226         -3%, -5,226         -3%, -5,226         -3%, -5,226         -3%, -1%, -5,226         -3%, -5,226         -3%, -5,226         -3%, -5,226         -3%, -1%, -1%, -2,226         -3%, -1%, -1%, -2,226         -3%, -1%, -1%, -2,226         -3%, -1%, -1%, -2,226         -3%, -1%, -2,226         -3%, -1%, -1%, -2,226         -3%, -1%, -2,226 <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td>								
In         In         No         No         Part         Part         Part         Part           16         Loudoun Pervey         5 of Windmith Dr         20.000         14,742         -5.288         -289%           18         Beemont Ridge Rd         N of Sycolin Rd         12.000         11,298         -7411         -97%           19         Sycolin Rd         S of Crossstal Bibd         12.000         11,298         -7411         -97%           1         Magarity Rd         E of Ret 267         55.000         54,163         -44,817         -87%           1         Magarity Rd         S of Paelody Dr         8.000         8.011         11         0%           3         1-495 Capital Betway         N of Ret 23         162,000         159,736         -2,724         -1%           6         Leachurg New         N of Aurine Valley Dr         44.000         42,278         -16,22         -44,494           7         Sintrine Valley Dr         N of Sintrine Valley Dr         44.000         42,218         -45%           10         Centreville Rd         N of Sintrine Valley Dr         44.000         42,211         -14%           11         Ret 23         S of Dulea Kolde More Ave         44.0								
B         Beinom Kinge Rd         N of Sycolin Rd         12.000         11.942         5-288         -289%           19         Sycolin Rd         N of Sycolin Rd         12.000         11.259         -7.141         -69%           19         Sycolin Rd         S of Crossstali Bivd         12.000         11.259         -7.411         -69%           10         Maganiy Rd         S of Peabody Dr         8.000         6.011         11         10%           2         Rte 173         S of Old Meadows Rd         61.000         65.032         4.032         7%           4         International Dr         S of Loncoh Gr         166.000         62.732         -2.264         11%           4         International Dr         S of Loncoh Gr         160.000         62.977         6.977         69%           6         Beatain Rd         S of Campbell Rd         6.200         16.278         11.821         -27%           7         Surface Valley Dr         N of Spring Yulley Dr         24.000         12.631         -26%           9         FFX Comp Play         S of Calcot More Ave         4.600         14.636         -14.44         -3%           10         Contrave May         S of Calcot More Ave         <								
18         Bernort Ridge Rid         N of Sycolin Rid         12:000         11:299         -741         -9%, 200           19         Sycolin Rid         S of Crossstal Bivd         12:000         11:299         -741         -6%, 200           10         Harry Byrd Hwy         E of Ris 267         59:000         54:183         -4:417         -8%, 201           1         Magarity Rd         S of Paebadoy Dr         8:000         8:011         111         0%, 201           1         Harry Syrd         S of Paebadoy Dr         8:000         159:736         2:2244         -1%, 27%, 3         1:495; Capital Beltway         N of Ery Crophel Rid         60:00         24:719         8:77         6:97         6%, 6:0           6         Bestain Rey Dr         N of Spring Hill Rid         60:00         3:219         1:1521         227%           7         B. Reston Rwy         N of Spring Hill Rid         60:00         3:219         1:1521         2:78           8         Reston Pary         N of Spring Hill Rid         60:00         3:231         4:56:69         1:151           9         FFX Comp/Phay         N of Spring Hill Rid         60:00         3:231         4:56:69         1:151           10         Centrovile R								
20.         Harry Byrd Hwy.         E of Re 267         590,000         54,183         -4,817         -4,817           1         Magarity Rd         5 of Ol Meadows Rd         61,000         65,032         4,032         7%           3         I-482 Capital Beltway         N of Re 123         162,000         155,736         -2,264         -1%           4         International Dr         S of Licoch Cir         110,000         24,719         5,771         9%           5         Leesburg Pike         N of Spring Hill Rd         80,000         96,877         9%           6         Beucluk Rd         S of Campbell Rd         80,000         96,697         9%           7         Suntise Valley Dr         Roteon Valley Dr         19,000         19,526         526         3%           8         Reston Peway         S of Claude Valley Dr         44,000         42,378         -1,622         4%           10         Centro-Reway         N of Suntine Valley Dr         44,000         42,378         -1,622         4%           11         Re as S of Dulles Access Rd         94,000         37,066         3%         -1,625         4%         -1,625         4%         -1,625         -1,7%         -1,7%         -1,								
Total         Imaging Rd         S of Peabody Dr         776,500         775,466         94,034         9%,           2         Rie 123         S of Old Meadows Rd         61,000         65,032         4,032         7%,           4         International Dr         S of Lucoin Cir         162,000         195,736         -2,264         -1%,           4         International Dr         S of Lucoin Cir         162,000         195,736         -2,264         -1%,           5         Leesburg Pike         N of Spring Hill Rd         80,000         86,877         6,977         9%,           6         Beulah Rd         S of Campbell Rd         8,200         9,064         8644         11%,           7         Suntise Valley Dr         Rober Fichuo Pr         19,000         13,268         -1,422         -4%,           10         Centreville Rd         N of Suntise Valley Dr         38,000         30,079         -1,622         -4%,           11         Ritz 28         S of Dules Access Rd         94,000         32,231         -5,668         -1,44         -3%,           12         Old Ox Rd         N of Marry Mold Moora Acc         4,600         4,455         -1,44         -3%,           13								
Image in the stand set of the stan			Harry Byrd Hwy	E of Rte 267				
2         Ret 123         S of Od Meadows Rd         61,000         65,032         4,032         77%           4         International Dr         S of Lincoin Cir         116,000         124,719         54%           5         Leesburg Pike         N of Spring Yilli Rd         80,000         86,877         5,975         34%           6         Beulah Rd         S of Campbell Rd         8,000         9,664         8844         11%           7         Surinise Valley Dr         Rober Fichion Dr         19,000         13,226         526         3%           8         Reston Pkwy         N of Surinise Valley Dr         44,000         32,168         -11,683         -27%           9         FFX County Pkwy         S of Surinise Valley Dr         38,000         30,231         -5,669         -15%           11         Rite 28         S of Dulles Access Rd         94,000         30,766         3,666         -3%           12         Old CX Rd         N of Maret Valley Dr         38,000         30,271         -1,76         -1,77%           13         Moaretwee Newy         N of Vestals Gap Dr         15,000         13,895         -1,105         -1,77%           14         Clabor Rdga Pd         S of Strevee			Manarit Dd	C of Dooborts Do				
B								
4         International Dr         S of Lincoln Cir.         16,000         24,719         8,719         54%, 84,000           6         Beudal Rd         S of Campbell Rd         80,000         9,064         984.         11%, 15,000           7         Surise Valley Dr         Robart Fulton Dr         19,000         19,526         526.         3%, 3%, 15,222         4%, 44,000         32,169         -11,831         -27%, 44,000         42,378         -11,622         4%, 162           9         FFX County Plewy         S of Surise Valley Dr         44,000         42,378         -11,622         4%, 100           10         Centreville Rd         N of Surise Valley Dr         43,000         42,378         -11,622         4%, 11           11         Rto 2B         S of Surise Valley Dr         38,000         32,378         -11,622         4%, 144         13,000         19,024         -144%, 11           11         Norseview Pswy         S of Surise Nalley Dr         15,000         13,2815         -11,05         -7%, 144           13         Moreive Pswy         N of Vastals Gap Dr         15,000         13,2811         -2,729         -17%, 17%           14         Westilekis Bhd         E of Rite 77         16,000         12,2201							,	
6         Beulah Rd         S of Campbell Rd         8,200         9,064         884.         11%, 19,000           B         Reston Pkwy         N of Suntise Valley Dr         14,000         32,189         -11,831         -27%, 18,22           B         FFX County Pkwy         S of Suntise Valley Dr         34,000         32,189         -16,22         -4%, 10           10         Centroville Rd         N of Suntise Valley Dr         38,000         32,313         -5,669         -15%, 13,000           11         Rte 28         S of Dules Access Rd         94,000         30,079         -4,821         -14%, 144         -3%, 13           12         Old Ox Rd         N of mercure Cir         35,000         30,079         -4,821         -14%, 144         -3%, 14           15         Belmon Ridge Rd         S of Kirey NMI Rd         13,200         10,211         -2,729         -17%, 16           16         Sycelin Rd         S of Sirey NMI Rd         11,000         10,247         -2,253         -17%, 177           18         Berdins Rd         S of Sirey NMI Rd         11,000         12,243         -1,757         -7%, 7%           19         S Kng Si         N of Harry Byrd Hwy         24,000         33,485         -6,615				S of Lincoln Cir		24,719		
B         Sundise Valley Dr.         Robert Fution Dr.         19.000         19.286         526         3%.           B         Reston Phwy         N of Sundise Valley Dr.         44.000         42.218         -1.622         -4%.           9         FFX County Phwy         S of Sundise Valley Dr.         44.000         42.218         -1.622         -4%.           10         Centreville Rd         N of Sundise Valley Dr.         45.000         42.378         -1.622         -4%.           11         Rte 28         S of Dules Access Rd         94.000         97.066         3.066         -3%.           12         Old Ox Rd         N of mercure Cir         45.000         43.601         -1.421         -1.44%.           14         Cilabrone Phwy         N of Valers         16.000         13.271         -2.789         -1.7%.           16         Sportin Rd         S of Streve Mill Rd         11.000         12.684         -1.635         -7%.           18         King Bt         N of Hamy Byrd Hwy         24.000         12.243         -1.757         -7%.           19         String Bt         N of Hamy Byrd Hwy         24.000         32.433         -4.76.33.         -444.33.           18         Sking Bt								
B         Reston Pkay         N of Sunise Valley Dr.         44.000         32.169         -11.831         -27%           9         FFX County Pkay         S of Sunise Valley Dr.         38.000         42.378         -1.622         -4%           10         Centreville Rd         N of Sunise Valley Dr.         38.000         32.311         -5.669         -1.65%           11         Rte 28         S of Dules Access Rd         44.000         34.079         -4.921         -1.4%           13         Mooreview Pkay         N of Vestals Gap Dr.         15.000         13.285         -1.105         -7%           14         Celsore Pkay         N of Vestals Gap Dr.         15.000         13.285         -1.105         -7%           15         Belmont Ridge Rd         S of Streve MIR Rd         11.000         12.264         1.684         16%           16         Sycoin Rd         E of Restore MIR Rd         11.000         12.684         1.684         15%           17         Evergreen MIIs Rd         E of Anary Byd Hay         24.000         22.243         -1.775         -7%           18         Evergreen MIIs Rd         W of Ret 28         39.000         33.378         5.615         -1448           19								
9         FFX County Pkwy         S of Sunise Valley Dr         44,000         42,378         -1,622         -4%, 5669           10         Centreville Rd         N of Sunise Valley Dr         38,000         32,331         -5,669         -15%,           11         Rie 28         S of Dulles Access Rd         94,000         97,066         3,066         3%,           13         Moreview Pkwy         S of Claude More Ave         4,600         4,456         -1444         -3%,           14         Clabron Pkwy         N of Vastalis Gap Dr         15,000         13,286         -11,056         -7%,           16         Sycolic Rd         S of Rivel Mill Rd         13,000         10,747         -2,789         -17%,           17         Evergreen Mills Rd         E of Streve Mill Rd         11,000         12,844         1644         15%,           18         Evergreen Mills Rd         E of Arane Vay         24,000         22,431         -1,775         -7%,           1         Westhelds Blvd         S of Stonecroft Blvd         38,000         33,345         -5,615         -44%,           2         Willard Rd         W of Rate 28         71,000         66,4337         -7,063         -14%,           2         <								
B         10         Centreville Rd         N of Sunfise Valley Dr         38,000         32,31         -5,669         -15%           11         Rie 28         S of Dulles Access RM         44,000         97,066         3,066         3%           12         Old Ox Rd         N of mercure Cir         35,000         30,079         -4,921         -14%           13         Moreview Pkwy         S of Rue 267         15,000         13,885         -1,105         -7%           15         Belmont Ridge Rd         S of Rue 267         16,000         13,895         -1,105         -7%           16         Solin Rdi         S of Streve Mill Rd         11,000         12,844         1,644         15%           18         Evergreen Mills Rd         E of River Mill Rd         11,000         12,844         1,644         15%           19         S King St         N of Harry Byrd Hwy         24,000         22,423         -1,777         -7%           10         Westfields Blvd         S of Stonecrott Blvd         38,000         33,326         -5,615         -144%           3         Lee Jackson Memorial Hwy         W of Rie 28         71,000         68,524         -2,476         -3%           2         Wila								
B         11         Rite 28         S of Dulles Access Rd         94,000         97,066         30,066         3%           12         Old Or Rd         No foreview Prwy         S of Claude Moora Ave         4,600         4,466         -144         -3%           14         Claborne Prwy         N of Vestals Gap Dr         15,000         13,895         -1,105         -7%           15         Belmont Ridge Rd         S of Rite 267         16,000         13,211         -2,789         -17%           16         Sycolan Rd         S of Surver Mill Rd         11,000         12,844         1,844         15%           17         Evergreen Mills Rd         E of Rte 15         9,200         10,613         1,413         15%           18         Evergreen Mills Rd         S of Stonecroft Bivd         30,000         34,728         -3,727         -9%           1         Westfields Bivd         S of Stonecroft Bivd         30,000         34,728         -2,276         -2,276         -2,276         -2,9%           2         Wilard Rd         W of Rte 28         30,000         33,385         -5,615         -14%           3         Lee_Jackson Memorial Hwy         V Rte 28         30,000         3,522         -78	_							
13.         Mooreview Pkay         S of Claude Moore Ave         4.600         4.466         -1.144         -3%           14.         Claborne Pkwy         N of Vestals Gap Dr         15.000         13.895         -1.105         -7%           15.         Belmont Ridge Rd         S of Rie 267         16.000         13.895         -1.17%           16.         Sycolin Rd         S of Sinceroft III Rd         13.000         10.747         -2.253         -1.7%           17.         Evergreen Mills Rd         E of Rie 15         9.200         10.613         1.413         15%           18.         Evergreen Mills Rd         E of Rie 15         9.200         10.613         1.413         15%           19.         S King St         N of Harry Byrd Hwy         24.000         22.243         -7.063         -14%           1         Westfields Bivd         S of Stonecroft Bivd         33.000         33.935         -5.015         -14%           2         Willard Rd         W of Riz 28         73.000         68.524         -2.476         -3%           4         Dulies Greenway         E of Ariane Way         27.000         22.567         -4.433         -16%           5         Oid Ox Rd         E of Ariane Way </td <td>в</td> <td>11</td> <td></td> <td>S of Dulles Access Rd</td> <td></td> <td></td> <td></td> <td>3%</td>	в	11		S of Dulles Access Rd				3%
14.         Claiborne Pikoy         N of Vestals Gap Dr         15.000         13.895         -1.105         -7%.           15.         Belmon Ridge Rd         S of Ru 267         16,000         13.211         -27.89         -17%.           16.         Sycolin Rd         S of Guids Mill Rd         110,000         10,747         -2.253         -17%.           17.         Evergreen Mills Rd         E of Rie 15         9,200         10,613         1.413         15%.           18.         Evergreen Mills Rd         E of Rie 15         9,200         10,613         1.413         15%.           19.         S King St         N of Harz Byrd Hwy         24,000         22.243         -1,757         -7%.           2         Willard Rd         W of Rie 28         30,000         33,385         -5,615         -14%.           3         Lee Jackson Memorial Hwy         W of Rie 28         71,000         68,524         -2,476         -3%.           4         Dulles Orsenway         E of Ariane Way         43,459         44,850         2.161         5%.           5         Old Ox Rd         E of Ariane Way         27,000         65,081         -7,919         -11%.           8         Loudoun County Pikwy								
15.         Belmont Ridge Rd         S of Ris 287         16.000         10.211         -2.789         -1.7%           16         Sycolin Rd         S of Shreve Mill Rd         11,000         10.2471         -2.283         -1.7%           17         Evergreen Mills Rd         S of Shreve Mill Rd         11,000         12.684         1.664         15%           18         Evergreen Mills Rd         E of Ris 15         9.200         10.613         1.413         15%           19         S King St         N of Harry Byrd Hwy         24,000         22.243         -1.757         -7%           1         Westfields Bhd         S of Stonecroft Bhd         39,000         34,728         -3.272         -9%           2         Willard Rd         W of Rie 28         39,000         34,728         -3.272         -9%           3         Lee Jackson Memorial Hwy         W of Rie 28         39,000         34,728         -3.272         -9%           4         Duiles Greenway         E of Ariane Way         21,000         68,620         -2,161         5%           5         Did Ox Rd         E of Araine Way         27,000         22,567         -4,433         -16%           6         Mora Rd         W of Pa								
16         Sycolin Rd         S of Guick Mill Rd         113,000         10,747         -22,853         -17%           17         Evergreen Mills Rd         S of Shreve Mill Rd         11,000         12,684         1,684         15%           18         Evergreen Mills Rd         E of Rie 15         9,200         10,613         1,413         15%           19         S King St         N of Harzy Byrd Hwy         24,000         22,243         -1,757         -7%           1         Westfields Blvd         S of Stonecroft Blvd         38,000         33,326         -56,151         -14%           2         Willard Rd         W of Rte 28         71,000         68,524         -2,476         -3%           4         Duties Greenway         E of Ariane Way         27,000         22,667         -4,433         -16%           5         Did Cx Rd         E of Ariane Way         27,000         35,22         -78         -2%           7         Waxpool Rd         E of Pacific Blvd         3,600         35,22         -78         -2%           9         Harry Byrd Hwy         E of Loudoun County Pkwy         93,000         92,846         -155         0%           7         Waxpool Rd         E of Breachonc								
Instrument         Instrument         Instrument         Instrument         Instrument           18         Evergreen Mills Rd         E of Rte 15         9,200         10,613         1,413         15%           19         S King St         N of Harry Byrd Hwy         24,000         22,243         -1,757         -7%           Total         702,000         694,937         -7,063         -4%           2         Willard Rd         W of Rte 28         39,000         33,385         -5,615         -14%           3         Lee Jackson Memorial Hwy         W of Rte 28         71,000         66,524         -2,476         -3%           4         Dulles Greenway         E of Ariane Way         27,000         22,567         -4,433         -16%           6         Moran Rd         W of Pacific Bird         7,300         15,644         -15%           7         Waspool Rd         E of Pacific Bird         7,300         15,644         -15%           9         Harry Byrd Hwy         E of Loudoun County Pkwy         9,1000         15,848         -155         0%           9         Harry Byrd Hwy         E of Moranment Dr         121,000         19,848         -155         0%           9								
18         Evergreen Mills Rd         E of Rin 15         9.200         10.613         1.413         15%           19         S King St         N of Harry Byrd Hwy         224,000         22,243         -1,757         -7%           Total         -         702,000         694,937         -7,063         -1%           2         Willard Rd         W of Rte 28         39,000         33,365         -5.615         -14%           3         Lee Jackson Memorial Hwy         W of Rte 28         71,000         66,524         -2.476         -3%           4         Dulles Greenway         E of Ariane Way         43,459         45,620         2.161         5%           5         Old Ox Rd         E of Ariane Way         27,000         22,567         -4,433         -16%           6         Moran Rd         W of Pacific Bivd         3,600         3,522         -78         -2%           7         Waxpool Rd         E of Pacific Bivd         3,600         3,521         -7,919         -11%           8         Loudoun County Pkwy         S of Lioucester Pkwy         17,000         19,244         -5%           7         Waxpool Rd         E of Monumen Dr         121,000         158,919         31% </td <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td>								
Total         Total         T02,000         694,397         7,063         -1%           1         Westfields Blvd         S of Stoneordt Blvd         38,000         34,728         -3,272         -9%           2         Willard Rd         W of Rie 28         39,000         33,385         5,615         -14%           3         Lee Jackson Memorial Hwy         W of Rie 28         71,000         68,524         -2,476         -3%           4         Dulles Greenway         E of Ariane Way         43,459         45,620         2,161         5%           6         Moran Rd         W of Pacific Blvd         3,600         3,522         -78         -2%           7         Waapool Rd         E of Pacific Blvd         7,000         66,081         -7,919         -11%           8         Loudoun County Pkwy         S of Gloucester Pkwy         17,000         19,544         2,544         15%           9         Harry Byrd Hwy         E of Loudoun County Pkwy         93,000         90,276         4,724         -7%           3         Vale Rd         E of Monument Dr         121,000         158,919         37,919         31%           2         Lee Jackson Memorial Hwy         E of West Ox Rd         97				E of Rte 15	9,200		1,413	15%
Image: constraint of the state of			S King St	N of Harry Byrd Hwy				
2         Willard Rd         W of Rte 28         39,000         33,385         -5,615         -14%           3         Lee Jackson Memorial Hwy         W of Rte 28         71,000         68,524         -2,476         -3%           4         Dulles Greenway         E of Ariane Way         43,459         45,620         2,161         5%           5         Old Ox Rd         E of Ariane Way         27,000         22,567         -4,433         -16%           6         Moran Rd         W of Pacific Blvd         3,600         3,522         -78         -2%           7         Waxpool Rd         E of Pacific Blvd         7,000         65,081         -7,919         -11%           8         Loudoun County Pkwy         S of Gloucester Pkwy         17,000         19,544         2,544         15%           9         Harry Byrd Hwy         E of Loudoun County Pkwy         93,000         39,858,16         -19,243         -5%           1         I-66         E of Monument Dr         12,1000         158,616         -19,243         -5%           2         Lee Jackson Mernorial Hwy         E of West Ox Rd         97,000         90,276         -6,724         -7%           3         Vale Rd         E of Brec			Weetfielde Dhud	C of Oton a coeff Divid				
3         Lee Jackson Memorial Hwy         W of Rte 28         71,000         68,524         -2,476         -3%           4         Dulles Greenway         E of Ariane Way         43,459         46,820         2,161         5%           5         Old Ox Rd         E of Ariane Way         27,000         22,567         -4,433         -16%           6         Moran Rd         W of Pacific Blvd         3,600         3,522         -78         -2%           7         Waxpool Rd         E of Pacific Blvd         73,000         65,081         -7,919         -11%           8         Loudoun County Pkwy         E of Loudoun County Pkwy         93,000         92,845         -155         0%           9         Harry Byrd Hwy         E of Loudoun County Pkwy         93,000         92,845         -155         0%           1         I-66         E of Monument Dr         121,000         158,919         37,919         31%           2         Lee Jackson Memorial Hwy         E of West Ox Rd         97,000         90,276         -6,724         -7%           4         Bernett Rd         W of Steenplechase Dr         9,300         9,658         358         4%           5         Folkstone Dr         W of St								
4         Dules Greenway         E of Ariane Way         43,459         45,620         2,161         5%           5         Old Ox Rd         E of Ariane Way         27,000         22,567         -4,433        16%           6         Moran Rd         W of Pacific Blvd         3,600         3,522         -78         -2%           7         Waxpool Rd         E of Pacific Blvd         73,000         65,081         -7,919         -11%           8         Loudoun County Pkwy         S of Gloucester Pkwy         17,000         19,544         2,544         15%           9         Harry Byrd Hwy         E of Loudoun County Pkwy         93,000         92,845         -155         0%           7         Total         E         F of Monument Dr         121,000         18,816         -19,243         -5%           3         Vale Rd         E of Brecknock St         5,700         6,681         981         17%           4         Bennett Rd         W of Fort Lee St         NA         -         -         -           5         Folkstone Dr         W of Steeplechase Dr         9,300         9,658         358         4%           8         Reston Pkwy         S of South Lakes Dr         <								
C         6         Moran Rd         W of Pacific Blvd         3,600         3,522         -78         -2%           7         Waxpool Rd         E of Pacific Blvd         73,000         66,081         -7,919         -11%           8         Loudoun County Pkwy         S of Gloucester Pkwy         17,000         19,544         ,2544         15%           9         Harry Byrd Hwy         E of Loudoun County Pkwy         93,000         92,845         -155         0%           Total         -         405,059         385,816         -19,243         -5%           1         I-66         E of Monument Dr         121,000         158,919         37,919         31%           2         Lee Jackson Memorial Hwy         E of West Ox Rd         97,000         90,276         -6,724         -7%           3         Vale Rd         E of West Ox Rd         97,000         90,276         36,278         82%           4         Bernett Rd         W of Fort Lee St         NA         -         -         -           5         Folkstone Dr         W of Steeplechase Dr         9,300         9,658         358         4%           6         Fox Mill Rd         N of Sunset Hills Rd         29,000								
6         Moran Rd         Worl Pactic Blvd         3,800         3,522         -7.8         -2%           7         Waxpool Rd         E of Pacific Blvd         73,000         65,081         -7,919         -11%           8         Loudoun County Pkwy         S of Gloucester Pkwy         17,000         19,544         2,544         15%           9         Harry Byrd Hwy         E of Loudoun County Pkwy         93,000         92,845         -155         0%           1         I-66         E of Monument Dr         121,000         158,919         37,919         31%           2         Lee Jackson Memorial Hwy         E of Brecknock St         5,700         6,681         981         17%           4         Bennett Rd         W of Bennett Oaks PI         2,000         2,173         173         9%           5         Folkstone Dr         W of Steeplechase Dr         6,400         11,678         5,278         82%           7         Lawyers Rd         W of Steeplechase Dr         29,000         26,172         -2,828         -10%           8         Reston Pkwy         S of South Lakes Dr         29,000         26,873         3365         2%           10         Reston Pkwy         N of Voolts N	С							
8         Loudoun County Pkwy         S of Gloucester Pkwy         17,000         19,544         2,544         15%           9         Harry Byrd Hwy         E of Loudoun County Pkwy         93,000         92,845         -155         0%           Total         405,059         335,816         -19,243         -5%           1         I-66         E of Monument Dr         121,000         158,919         37,919         31%           2         Lee Jackson Memorial Hwy         E of West Ox Rd         97,000         90,276         -6,724         -7%           3         Vale Rd         E of Brecknock St         5,700         6,681         981         17%           4         Bennett Rd         W of BennettOaks PI         2,000         2,173         173         9%           5         Folkstone Dr         W of Steeplechase Dr         6,400         11,678         5,278         82%           7         Lawyers Rd         W of Steeplechase Dr         29,300         9,658         358         4%           9         Sunise Valley Dr         N of Cotls Neck Rd         18,000         18,395         396         2%           10         Reston Pkwy         S of Georgetown Pike         26,000         21,460 <td>0</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td>	0							
9         Harry Byrd Hwy         E of Loudoun County Pkwy         93,000         92,845         -155         0%           Total								
Total         405,059         385,816        19,243        5%           1         I-66         E of Monument Dr         121,000         158,919         37,919         31%           2         Lee Jackson Memorial Hwy         E of West Ox Rd         97,000         90,276         -6,724         -7%           3         Vale Rd         E of Brecknock St         5,700         6,681         981         117%           4         Bernnett Rd         W of FornLee St         NA								
2         Lee Jackson Memorial Hwy         E of West Ox Rd         97,000         90,276         -6,724         -7%           3         Vale Rd         E of Brecknock St         5,700         6,681         981         17%           4         Bennett Rd         W of Font Lee St         NA		Total						
3         Vale Rd         E of Brecknock St         5,700         6,681         981         17%           4         Bennett Rd         W of Bennett Oaks PI         2,000         2,173         173         9%           5         Folkstone Dr         W of Fort Lee St         NA		1		E of Monument Dr		158,919	37,919	31%
4         Bennett Rd         W of Bennett Oaks PI         2,000         2,173         173         9%           5         Folkstone Dr         W of For Lee St         NA         NA         NA           6         Fox Mill Rd         N of Steeplechase Dr         6,400         11,678         5,278         82%           7         Lawyers Rd         W of Steeplechase Dr         9,300         9,658         358         4%           8         Reston Pkwy         S of South Lakes Dr         29,000         26,172         -2,828         -10%           9         Sunrise Valley Dr         N of Stonsek Rd         18,000         128,995         395         2%           15         Dulles Toll Road         Reston Pkwy         N of Sunset Hills Rd         26,000         28,255         2,255         9%           11         Baron Cameron Ave         E of Reston Pkwy         26,000         14,667         -1,433         -9%           12         Reston Pkw         S of Wiehle Ave         16,000         14,567         -1,433         -9%           13         Leesburg Pike         S of Georgetown Pike         550,400 <b>585,273</b> 25,873         5%           Total         Mor Woodburn Rd         36,00								
5         Folkstone Dr         W of Fort Lee St         NA           6         Fox Mill Rd         N of Steeplechase Dr         6,400         11,678         5,278         82%           7         Lawyers Rd         W of Steeplechase Dr         9,300         9,658         358         4%           8         Reston Pkwy         S of South Lakes Dr         29,000         26,172         -2.828         -10%           9         Sunrise Valley Dr         N of Colts Neck Rd         18,000         18,395         2%           10         Reston Pkwy         N of Sunsetl Hills Rd         26,000         28,255         2,255         9%           11         Baron Cameron Ave         E of Reston Pkwy         26,000         24,460         -4,7540         -17%           12         Reston Pkwy         S of Georgetown Pike         16,000         14,567         -1,433         -9%           13         Leesburg Pike         S of Georgetown Pike         55,000         47,971         -7,029         -13%           14         Georgetown Pike         E of Falls Manors Ct         18,000         36,410         410         1%           2         Arlington Bivd         E of Gallows Rd         39,000         34,672         5,572<								
6         Fox Mill Rd         N of Steeplechase Dr         6,400         11,678         5,278         82%           7         Lawyers Rd         W of Steeplechase Dr         9,300         9,658         358         4%           7         Lawyers Rd         W of Steeplechase Dr         9,300         9,658         358         4%           9         Sunrise Valley Dr         N of Colts Neck Rd         18,000         18,395         395         2%           15         Dules Toll Road         Reston Pkwy         100,000         126,998         -3,002         -2%           10         Reston Pkwy         N of Colts Neck Rd         18,000         126,998         -3,002         -2%           11         Baron Cameron Ave         E of Reston Pkwy         26,000         22,460         -4,540         -17%           12         Reston Pkwy         S of Georgetown Pike         55,000         47,971         -7,029         -13%           13         Leesburg Pike         E of Falls Manors Ct         18,000         22,069         4,069         23%           14         Georgetown Pike         E of Gallows Rd         39,000         44,572         5,572         14%           2         Arlington Blvd         E o					2,000		173	3%
P         Lawyers Rd         W of Steeplechase Dr         9.300         9.658         358         4%           8         Reston Pkwy         S of South Lakes Dr         29.000         26,172         -2,828         -10%           9         Sunrise Valley Dr         N of Colts Neck Rd         18,000         18,395         395         2%           15         Dulles Toll Road         Reston Pkwy         N of Sunset Hills Rd         26,000         126,998         -3.002         -2%           10         Reston Pkwy         N of Sunset Hills Rd         26,000         28,255         2,255         9%           11         Baron Cameron Ave         E of Reston Pkwy         26,000         14,667         -1,433         -9%           12         Reston Pkw         S of Wiehle Ave         16,000         14,567         -1,433         -9%           13         Leesburg Pike         S of Georgetown Pike         55,000         47,971         -7,029         -13%           14         Georgetown Pike         E of Falls Manors Ct         18,000         22,069         4,069         23%           Total         N of Woodburn Rd         36,000         33,312         -5,572         14%           2         Artington Blvd					6,400		5,278	82%
9         Sunrise Valley Dr.         N of Colts Neck Rd         18,000         18,395         395         2%           15         Dulles Toll Road         Reston Pkwy         130,000         126,998         -3,002         -2%           10         Reston Pkwy         N of Sunset Hills Rd         26,000         28,255         2,255         9%           11         Baron Cameron Ave         E of Reston Pkwy         26,000         21,460         -4,540         -17%           12         Reston Pkwy         S of Wiehle Ave         16,000         14,567         -1,433         -9%           13         Leesburg Pike         S of Georgetown Pike         55,000         47,971         -7,029         -13%           14         Georgetown Pike         E of Falls Manors Ct         18,000         22,069         4,069         23%           Total		7	Lawyers Rd	W of Steeplechase Dr	9,300	9,658	358	4%
9         Sunrise Valley Dr.         N of Cofts Neck Rd         18,000         18,395         395         2%           15         Dulles Toll Road         Reston Pkwy         130,000         126,998         -3,002         -2%           10         Reston Pkwy         N of Sunset Hills Rd         26,000         28,255         2,255         9%           11         Baron Cameron Ave         E of Reston Pkwy         26,000         21,460         -4,540         -17%           12         Reston Pkwy         S of Wiehle Ave         16,000         14,656         -1,433         -9%           13         Leesburg Pike         S of Georgetown Pike         55,000         47,971         -7,029         -13%           14         Georgetown Pike         E of Falls Manors Ct         18,000         22,069         4,069         23%           1         Gallows Rd         N of Woodburn Rd         36,000         36,410         410         1%           2         Arlington Blvd         E of Gallows Rd         39,000         44,572         5,572         14%           3         Lee Hwy         E of Gallows Rd         34,000         33,312         -688         -2%           4         I-66         W of Gallows Rd <td>D</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td>	D							
10         Reston Pkwy         N of Sunset Hills Rd         26,000         28,255         2,255         9%           11         Baron Cameron Ave         E of Reston Pkwy         26,000         21,460         -4,540         -17%           12         Reston Pkwy         S of Wiehle Ave         16,000         14,657         -1,433         -9%           13         Leesburg Pike         S of Georgetown Pike         55,000         47,971         -7,029         -13%           14         Georgetown Pike         E of Falls Manors Ct         18,000         22,069         4,069         23%           Total          599,400         585,273         25,873         5%           1         Gallows Rd         N of Woodburn Rd         36,000         36,410         410         1%           2         Arlington Blvd         E of Gallows Rd         34,000         33,312         -688         -2%           4         I-66         W of Gallows Rd         162,000         109,217         7,217         4%           5         Leesburg Pike         E of Gallows Rd         86,000         70,341         -15,659         -18%           6         Chain Bridge Rd         E of International Dr         31,000	-							
Baron Cameron Ave         E of Reston Pkwy         26,000         21,460         -4,540         -17%           12         Reston Pkwy         S of Wiehle Ave         16,000         14,567         -1,433         -9%           13         Leesburg Pike         S of Gorgetown Pike         55,000         47,971         -7,029         -13%           14         Georgetown Pike         E of Falls Manors Ct         18,000         22,069         4,069         23%           Total         559,400         585,273         25,873         5%           2         Arlington Blvd         E of Gallows Rd         39,000         44,572         5,572         14%           3         Lee Hwy         E of Gallows Rd         34,000         33,312         -688         -2%           4         1-66         W of Gallows Rd         162,000         169,217         7,217         4%           5         Lee Blwy         E of Gallows Rd         86,000         70,341         -15,659         -18%           6         Chain Bridge Rd         E of International Dr         31,000         61,585         30,585         99%           10         Dulles Toll Road         1-495 Capital Beltway         132,000         127,623         -4								
12         Reston Pkwy         S of Wiehle Ave         16,000         14,567         -1,433         -9%           13         Leesburg Pike         S of Georgetown Pike         S of Georgetown Pike         56,000         47,971         -7,029         -13%           14         Georgetown Pike         E of Falls Manors C1         18,000         22,069         4,069         23%           Total         -         559,400         585,273         25,873         5%           1         Gallows Rd         N of Woodburn Rd         36,000         36,410         410         1%           2         Arlington Blvd         E of Gallows Rd         39,000         44,672         5,572         14%           3         Lee Hwy         E of Gallows Rd         39,000         33,312         -688         -2%           4         I-66         W of Gallows Rd         182,000         19,217         7,217         4%           5         Leesburg Pike         E of Gallows Rd         86,000         70,341         -15,659         -18%           6         Chain Bridge Rd         E of International Dr         31,000         61,585         30,585         99%           10         Dules Toll Road         I-495 Capital Beitway </td <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td>								
13         Leesburg Pike         S of Georgetown Pike         55,000         47,971         -7,029         -13%           14         Georgetown Pike         E of Falls Manors Ct         18,000         22,069         4,069         23%           Total         559,400         559,400         558,273         25,873         5%           1         Gallows Rd         N of Woodburn Rd         36,000         36,410         410         1%           2         Arrington Blvd         E of Gallows Rd         39,000         44,572         5,572         14%           3         Lee Hwy         E of Gallows Rd         34,000         33,312         -688         -2%           4         I-66         W of Gallows Rd         162,000         169,217         7,217         4%           5         Leesburg Pike         E of Gallows Rd         86,000         70,341         -15,659         -18%           6         Chain Bridge Rd         E of International Dr         70,000         61,858         30,585         99%           10         Dulles Toil Road         I-495 Capital Beltway         132,000         127,623         -4,377         -3%           7         Lewinswille Rd         E of Swinks Mill Rd         16,000								
Total         559,400         585,273         25,873         5%           1         Gallows Rd         N of Woodburn Rd         36,000         36,410         410         1%           2         Arrington Blvd         E of Gallows Rd         39,000         44,572         5,572         14%           3         Lee Hwy         E of Gallows Rd         39,000         43,512         -5688         -2%           4         I-66         W of Gallows Rd         162,000         169,217         7,217         4%           5         Leesburg Pike         E of Gallows Rd         86,000         70,341         -15,659         -18%           6         Chain Bridge Rd         E of International Dr         31,000         61,585         30,585         99%           10         Dulles Toll Road         I-495 Capital Beltway         132,000         127,623         -4,377         -3%           7         Lewinsville Rd         E of Swinks Mill Rd         16,000         21,740         5,740         36%           8         Old Dominion Dr         W of Swinks Mill Rd         8,800         19,666         10,866         123%           9         Georgetown Pike         E of Potomac River Rd         22,000         25,501<		13	Leesburg Pike					-13%
1         Gallows Rd         N of Woodburn Rd         36,000         36,410         410         1%           2         Arlington Blvd         E of Gallows Rd         39,000         44,572         5,572         14%           3         Lee Hwy         E of Gallows Rd         34,000         33,312         -688         -2%           4         I-66         W of Gallows Rd         162,000         169,217         7,217         4%           5         Leesburg Pike         E of Gallows Rd         86,000         70,341         -15,659         -18%           6         Chain Bridge Rd         E of International Dr         31,000         61,585         30,585         99%           10         Dulles Toll Road         I-495 Capital Beltway         132,000         127,623         -4,377         -3%           7         Lewinsville Rd         E of Swinks Mill Rd         16,000         21,740         5,740         36%           8         Old Dominion Dr         W of Swinks Mill Rd         8,800         19,666         10,866         123%           9         Georgetown Pike         E of Potomac River Rd         22,000         25,501         3,501         16%			Georgetown Pike	E of Falls Manors Ct				
2         Arlington Blvd         E of Gallows Rd         39,000         44,572         5,572         14%           3         Lee Hwy         E of Gallows Rd         34,000         33,312         -688         -2%           4         I+66         W of Gallows Rd         182,000         169,217         7,217         4%           5         Leesburg Pike         E of Gallows Rd         86,000         70,341         -15,659         -18%           6         Chain Bridge Rd         E of International Dr         31,000         61,585         30,585         99%           10         Dulles Toll Road         I+495 Capital Beltway         132,000         127,623         -4,377         -3%           7         Lewinsville Rd         E of Swinks Mill Rd         16,000         21,740         5,740         36%           8         Old Dominion Dr         W of Swinks Mill Rd         8,800         19,666         10,866         123%           9         Georgetown Pike         E of Polomac River Rd         22,000         25,501         3,501         16%			Callows Rd	N of Woodburn Rd				
3         Lee Hwy         E of Gallows Rd         34,000         33,312         -688         -2%           4         I-66         W of Gallows Rd         152,000         169,217         7,217         4%           5         Leesburg Pike         E of Gallows Rd         86,000         70,341         -15,659         -18%           6         Chain Bridge Rd         E of International Dr         31,000         61,585         30,585         99%           10         Dulles Toll Road         I-495 Capital Beltway         132,000         127,623         -4,377         -3%           7         Lewinsville Rd         E of Swinks Mill Rd         16,000         21,740         5,740         36%           8         Old Dominion Dr         W of Swinks Mill Rd         8,800         19,666         10,386         123%           9         Georgetown Pike         E of Potomac River Rd         22,000         25,501         3,501         16%								
4         1-66         W of Gallows Rd         162,000         169,217         7,217         4%           5         Leesburg Pike         E of Gallows Rd         86,000         70,341         -15,659         -18%           6         Chain Bridge Rd         E of International Dr         31,000         61,585         30,585         99%           10         Dulles Toll Road         I-495 Capital Beltway         132,000         127,623         -4,377         -3%           7         Lewinsville Rd         E of Swinks Mill Rd         16,000         21,740         5,740         36%           8         Old Dominion Dr         W of Swinks Mill Rd         8,800         19,666         10,866         123%           9         Georgetown Pike         E of Potomac River Rd         22,000         25,501         3,501         16%								
E         6         Chain Bridge Rd         E of International Dr         31,000         61,585         30,585         99%           10         Dulles Toll Road         I-495 Capital Betway         132,000         127,623         -4,377         -3%           7         Lewinsville Rd         E of Swinks Mill Rd         16,000         21,740         5,740         36%           8         Old Dominion Dr         W of Swinks Mill Rd         8,800         19,666         10,866         123%           9         Georgetown Pike         E of Potomac River Rd         22,000         25,501         3,501         16%			,	W of Gallows Rd				
10         Dulles Toll Road         I-495 Capital Beltway         132,000         127,623         -4,377         -3%           7         Lewinsville Rd         E of Swinks Mill Rd         16,000         21,740         5,740         36%           8         Old Dominion Dr         W of Swinks Mill Rd         8,800         19,666         10,866         123%           9         Georgetown Pike         E of Potomac River Rd         22,000         25,501         3,501         16%	_							
7         Lewinsville Rd         E of Swinks Mill Rd         16,000         21,740         5,740         36%           8         Old Dominion Dr         W of Swinks Mill Rd         8,800         19,666         10,866         123%           9         Georgetown Pike         E of Potomac River Rd         22,000         25,501         3,501         16%	E							
8         Old Dominion Dr         W of Swinks Mill Rd         8,800         19,666         10,866         123%           9         Georgetown Pike         E of Potomac River Rd         22,000         25,501         3,501         16%								
9 Georgetown Pike E of Potomac River Rd 22,000 25,501 3,501 16%								
		Total			566,800	609,967	43,167	8%

### Table C-4 Screenline Comparison



Facility	Observed	Estimated	Difference		
Facility	Observed	from Model	Absolute	Percent	
Dulles Toll Road	50,969	50,480	-489	-1.0%	
Dulles Greenway	20,611	18,286	-2,325	-11.3%	
Aiport Access Highway	15,000	16,895	1,895	12.6%	
I-66	61,216	59,265	-1,951	-3.2%	
VA 7	60,111	57,307	-2,804	-4.7%	
US 50	45,813	44,165	-1,649	-3.6%	
US 15	15,833	14,765	-1,068	-6.7%	
VA 28	123,222	112,447	-10,775	-8.7%	
VA 286	61,333	56,396	-4,938	-8.1%	

### Table C-5 Major Roadway Comparison, Average Weekday Demand Across All Segments



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# **APPENDIX E**

# FORM OF BOND COUNSEL OPINION FOR THE SERIES 2022 BONDS

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### **APPENDIX E**

#### FORM OF BOND COUNSEL OPINION FOR THE SERIES 2022 BONDS

#### Date of Delivery

Metropolitan Washington Airports Authority 1 Aviation Circle Washington, DC 20001

> \$418,640,000<sup>\*</sup> Dulles Toll Road Second Senior Lien Revenue Refunding Bonds, Series 2022A (Dulles Metrorail and Capital Improvement Projects)

> > and

\$321,175,000<sup>\*</sup> Dulles Toll Road Second Senior Lien Revenue Refunding Bonds, Series 2022B (Dulles Metrorail and Capital Improvement Projects) (Federally Taxable)

Ladies and Gentlemen:

We have acted as bond counsel to the Metropolitan Washington Airports Authority (the "Airports Authority") in connection with the issuance of \$418,640,000<sup>\*</sup> Dulles Toll Road Second Senior Lien Revenue Refunding Bonds, Series 2022A (Dulles Metrorail and Capital Improvement Projects) (the "Series 2022A Bonds") and \$321,175,000<sup>\*</sup> Dulles Toll Road Second Senior Lien Revenue Refunding Bonds, Series 2022B (Dulles Metrorail and Capital Improvement Projects) (the "Series 2022B Bonds" and together with the Series 2022A Bonds, the "Series 2022 Bonds").

The Series 2022 Bonds are being issued pursuant to the Va. Code Ann. § 5.1-152 et seq. (2001) (codifying Chapter 598 of the Acts of Virginia General Assembly of 1985, as amended) and the District of Columbia Regional Airports Authority Act of 1985, as amended, codified at D.C. Official Code Ann. § 9-901 et seq. (2001) (collectively, the "Acts"), the Metropolitan Washington Airports Act of 1986 (Title VI of Public Law 99-500 as re-enacted in Public Law 99-951, effective October 18, 1986, as amended) codified at 49 U.S.C. § 49101 et seq. (the "Federal Act"), Resolution No. 19-22 adopted by the Board of Directors of the Airports Authority on December 15, 2021 (the "Resolution") and pursuant to a Master Indenture of Trust, dated as of August 1, 2009 (the "Master Indenture"), as supplemented by the Thirteenth Supplemental Indenture of Trust, dated as of February 1, 2022 (the "Thirteenth Supplemental Indenture" and, together with the Master Indenture, the "Indenture"), each by and between the Airports Authority and Manufacturers and Traders Trust Company, as the trustee (the "Trustee"). Capitalized terms not otherwise defined herein shall have the meanings set forth in the Indenture.

The Internal Revenue Code of 1986 (the "Code") sets forth certain requirements that must be met subsequent to the issuance and delivery of the Series 2022A Bonds for interest thereon to be and remain excluded from gross income for federal income tax purposes. Pursuant to the Indenture and the Tax Certificate as to Arbitrage and the Provisions of Sections 103 and 141-150 of the Code (the "Tax Certificate"), the Airports Authority has covenanted to comply with the applicable requirements of the Code in order to maintain the exclusion of the interest on the Series 2022A Bonds from gross income for federal income tax purposes pursuant to Section 103 of the Code. In addition, the Airports Authority has made

<sup>\*</sup> Preliminary, subject to change.

certain representations and certifications in the Indenture and the Tax Certificate. We have not independently verified the accuracy of those certifications and representations.

In rendering the opinion in paragraph 3 hereof, we have relied upon and assumed the material accuracy of the representations, statements of intention and reasonable expectation and certifications of fact contained in the Tax Certificate with respect to matters affecting the exclusion of interest on the Series 2022A Bonds from gross income for federal income tax purposes pursuant to Section 103 of the Code and compliance by the Airports Authority with procedures and covenants set forth in the Tax Certificate as to such tax matters.

We have reviewed the Resolution, the Indenture, the Tax Certificate, the Acts, the Federal Act, certificates of the Airports Authority and others, and such other documents, opinions and matters to the extent we deemed necessary to render the opinions set forth herein. We have also reviewed one of said Series 2022 Bonds as executed and, in our opinion, the form of said Series 2022 Bonds and their execution are regular and proper.

Based on and subject to the foregoing, we are of the opinion that:

1. The Series 2022 Bonds constitute the valid and binding special limited obligations of the Airports Authority, enforceable in accordance with their terms and the terms of the Indenture, secured by the Trust Estate.

2. Each of the Master Indenture and the Thirteenth Supplemental Indenture has been duly executed and delivered by, and constitutes the valid and binding obligation of, the Airports Authority, enforceable in accordance with their terms. The Indenture creates a valid pledge, to secure the payment of the principal of and interest on all Bonds (as defined in the Master Indenture), including the Series 2022 Bonds, of the Toll Road Revenues and any other amounts (including proceeds of the sale of the Bonds) held by the Trustee in any fund or account established pursuant to the Indenture, except the Operation and Maintenance Fund, the Extraordinary Maintenance and Repair Reserve Fund, the Arbitrage Rebate Fund, the Renewal and Replacement Reserve Fund, the Capital Improvements Fund, the Metrorail Project Fund, the Latent Defects Reserve Fund, the Transit Operations Fund and the Remaining Toll Road Revenue Fund, subject to the provisions of the Indenture permitting the application thereof for the purposes and on the terms and conditions set forth therein.

3. Under existing law, assuming compliance with the tax covenants described herein and the accuracy of the aforementioned representations and certifications, interest on the Series 2022A Bonds is excluded from gross income for federal income tax purposes under Section 103 of the Code and we are also of the opinion that such interest is not treated as a preference item in calculating the alternative minimum tax imposed under the Code.

4. Interest on the Series 2022B Bonds is not excluded from gross income for federal income tax purposes.

5. Under existing law, interest on the Series 2022 Bonds is exempt from income taxation by the Commonwealth of Virginia and is exempt from all taxation of the District of Columbia, except estate, inheritance and gift taxes.

The opinions expressed in paragraphs 1 and 2 above are subject to applicable bankruptcy, insolvency, reorganization, moratorium and other laws heretofore or hereafter enacted affecting creditors'

rights and are subject to the application of principles of equity relating to or affecting the enforcement of contractual obligations, whether such enforcement is considered in a proceeding in equity or at law.

Except as stated in paragraphs 3, 4 and 5 above, we express no opinion as to any other federal, state, local or foreign tax consequences related to the ownership or disposition of, or the accrual or receipt of interest on, the Series 2022 Bonds. We express no opinion regarding the federal, state, local or foreign tax law consequences of any action hereafter taken or not taken in reliance upon an opinion of other counsel with respect to the Series 2022 Bonds.

This opinion is rendered solely with regard to the matters expressly opined on above and does not consider or extend to any documents, agreements, representations or other material of any kind not specifically opined on above. No other opinions are intended nor should they be inferred. This opinion is issued under existing laws as of the date hereof, and we assume no obligation to update, revise or supplement this opinion to reflect any future actions, facts or circumstances that may hereafter come to our attention, or any changes in law, or in interpretations thereof, that may hereafter occur, or for any reason whatsoever.

Very truly yours,

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## **APPENDIX F**

# DESCRIPTION OF BOOK-ENTRY ONLY SYSTEM AND GLOBAL CLEARANCE PROCEDURES

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#### **APPENDIX F**

#### DESCRIPTION OF BOOK-ENTRY ONLY SYSTEM AND GLOBAL CLEARANCE PROCEDURES

#### **DTC'S BOOK ENTRY SYSTEM**

The Depository Trust Company ("DTC"), New York, New York, will act as securities depository for the Series 2022 Bonds. The Series 2022 Bonds will be issued as fully-registered securities registered in the name of Cede & Co. (DTC's partnership nominee) or such other name as may be requested by an authorized representative of DTC. One fully registered Series 2022 Bond will be issued for each maturity of the Series 2022 Bonds, each in the aggregate principal amount of such maturity, and will be deposited with DTC.

DTC, the world's largest securities depository, is a limited-purpose trust company organized under the New York Banking Law, a "banking organization" within the meaning of the New York Banking Law, a member of the Federal Reserve System, a "clearing corporation" within the meaning of the New York Uniform Commercial Code, and a "clearing agency" registered pursuant to the provisions of Section 17A of the Securities Exchange Act of 1934. DTC holds and provides asset servicing for over 3.5 million issues of U.S. and non-U.S. equity issues, corporate and municipal debt issues, and money market instruments (from over 100 countries) that DTC's participants ("Direct Participants") deposit with DTC. DTC also facilitates the post-trade settlement among Direct Participants of sales and other securities transactions in deposited securities through electronic computerized book-entry transfers and pledges between Direct Participants' accounts. This eliminates the need for physical movement of securities certificates. Direct Participants include both U.S. and non-U.S. securities brokers and dealers, banks, trust companies, clearing corporations, and certain other organizations. DTC is a wholly-owned subsidiary of The Depository Trust & Clearing Corporation ("DTCC"). DTCC is the holding company for DTC, National Securities Clearing Corporation and Fixed Income Clearing Corporation, all of which are registered clearing agencies. DTCC is owned by the users of its regulated subsidiaries. Access to the DTC system is also available to others such as both U.S. and non-U.S. securities brokers and dealers, banks, trust companies, and clearing corporations that clear through or maintain a custodial relationship with a Direct Participant, either directly or indirectly ("Indirect Participants"). DTC has a Standard & Poor's rating of: AA+. The DTC Rules applicable to its Participants are on file with the Securities and Exchange Commission. More information about DTC can be found at www.dtcc.com.

Purchases of Series 2022 Bonds under the DTC system must be made by or through Direct Participants, which will receive a credit for the Series 2022 Bonds on DTC's records. The ownership interest of each actual purchaser of each Series 2022 Bond ("Beneficial Owner") is in turn to be recorded on the Direct and Indirect Participants' records. Beneficial Owners will not receive written confirmation from DTC of their purchase. Beneficial Owners are, however, expected to receive written confirmations providing details of the transaction, as well as periodic statements of their holdings, from the Direct or Indirect Participant through which the Beneficial Owner entered into the transaction. Transfers of ownership interests in the Series 2022 Bonds are to be accomplished by entries made on the books of Direct and Indirect Participants acting on behalf of Beneficial Owners. Beneficial Owners will not receive certificates representing their ownership interest in the Series 2022 Bonds, except in the event that use of the book-entry-only system for Series 2022 Bonds is discontinued.

To facilitate subsequent transfers, all Series 2022 Bonds deposited by Direct Participants with DTC are registered in the name of DTC's partnership nominee, Cede & Co. or such other name as may be requested by an authorized representative of DTC. The deposit of Series 2022 Bonds with DTC and their

registration in the name of Cede & Co. or such other DTC nominee do not effect any change in beneficial ownership. DTC has no knowledge of the actual Beneficial Owners of the Series 2022 Bonds; DTC's records reflect only the identity of the Direct Participants to whose account such Series 2022 Bonds are credited, which may or may not be the Beneficial Owners. The Direct and Indirect Participants will remain responsible for keeping account of their holdings on behalf of their customers.

Conveyance of notices and other communications by DTC to Direct Participants, by Direct Participants to Indirect Participants, and by Direct Participants and Indirect Participants to Beneficial Owners will be governed by arrangements among them, subject to any statutory or regulatory requirements as may be in effect from time to time. Beneficial Owners of the Series 2022 Bonds may wish to take certain steps to augment the transmission to them of notices of significant events with respect to the Series 2022 Bonds, such as redemptions, tenders, defaults, and proposed amendments to the Series 2022 Bonds. For example, Beneficial Owners of Series 2022 Bonds may wish to ascertain that the nominee holding the Series 2022 Bonds for their benefit has agreed to obtain and transmit notices to Beneficial Owners. In the alternative, Beneficial Owners may wish to provide their names and addresses to the registrar and request that copies of notices be provided directly to them.

Redemption notices will be sent to DTC. If less than all of the Series 2022 Bonds are being redeemed, DTC's practice is to determine by lot the amount of the interest of each Direct Participant in such issue to be redeemed.

Neither DTC nor Cede & Co. (nor any other DTC nominee) will consent or vote with respect to Series 2022 Bonds unless authorized by a Direct Participant in accordance with DTC's MMI Procedures. Under its usual procedures, DTC mails an Omnibus Proxy to the Airports Authority as soon as possible after the Record Date. The Omnibus Proxy assigns Cede & Co.'s consenting or voting rights to those Direct Participants to whose accounts the Series 2022 Bonds are credited on the Record Date (identified in a listing attached to the Omnibus Proxy).

Principal and interest payments on the Series 2022 Bonds will be made to Cede & Co., or such other nominee as may be requested by an authorized representative of DTC. DTC's practice is to credit Direct Participants' accounts, upon DTC's receipt of funds and corresponding detail information from the Airports Authority on the payable date in accordance with their respective holdings shown on DTC's records. Payments by Participants to Beneficial Owners will be governed by standing instructions and customary practices, as is the case with securities held for the accounts of customers in bearer form or registered in "street name," and will be the responsibility of such Participant and not of DTC, the Trustee or the Airports Authority, subject to any statutory or regulatory requirements as may be in effect from time to time. Payment of principal and interest payments to Cede & Co. (or such other nominee as may be requested by an authorized representative of DTC) is the responsibility of the Airports Authority or the Trustee, disbursement of such payments to Direct Participants will be the responsibility of DTC, and disbursement of such payments to the Beneficial Owners will be the responsibility of Direct and Indirect Participants.

DTC may discontinue providing its services as depository with respect to the Series 2022 Bonds at any time, by giving notice to the Airports Authority or the Trustee. Under such circumstances, in the event that a successor securities depository is not obtained, Series 2022 Bond certificates are required to be printed and delivered.

The Airports Authority may decide to discontinue use of the system of Book-Entry-Only transfers through DTC (or a successor securities depository). In that event, Series 2022 Bond certificates will be printed and delivered to DTC.

THE ABOVE INFORMATION CONCERNING DTC AND DTC'S BOOK-ENTRY-ONLY SYSTEM HAS BEEN OBTAINED FROM SOURCES THAT THE AIRPORTS AUTHORITY BELIEVES TO BE RELIABLE, BUT THE AIRPORTS AUTHORITY TAKES NO RESPONSIBILITY FOR THE ACCURACY THEREOF. NEITHER THE AIRPORTS AUTHORITY NOR THE TRUSTEE WILL HAVE ANY RESPONSIBILITY OR OBLIGATION TO PARTICIPANTS OR THE PERSONS FOR WHOM THEY ACT AS NOMINEES OR BENEFICIAL OWNERS WITH RESPECT TO DTC'S RECORD KEEPING, PAYMENTS BY DTC OR PARTICIPANTS, NOTICES TO BE DELIVERED BY DTC, OR ANY OTHER ACTION TAKEN BY DTC AS REGISTERED OWNER OF THE SERIES 2022 BONDS.

#### **GLOBAL CLEARANCE PROCEDURES**

The information set forth below is subject to any change in or reinterpretation of the rules, regulations and procedures of DTC, Euroclear Bank S.A./N.V. as operator of the Euroclear System ("Euroclear") or Clearstream Banking, S.A. ("Clearstream") (DTC, Euroclear and Clearstream together, the "Clearing Systems") currently in effect. The information in this section concerning the Clearing Systems has been obtained from sources believed to be reliable, but neither the Airports Authority nor the Underwriters take any responsibility as to the accuracy, completeness or adequacy of the information in this section or as to the absence of material adverse changes in such information subsequent to the date of this Official Statement. Investors wishing to use the facilities of any of the Clearing Systems for the Series 2022 Bonds are advised to confirm the continued applicability of the rules, regulations and procedures of the relevant Clearing System. The Airports Authority and the Underwriters will not have any responsibility or liability for any aspect of the records relating to, or payments made on account of, beneficial ownership interests in the Series 2022 Bonds held through the facilities of any Clearing System or for maintaining, supervising or reviewing any records relating to such beneficial ownership interests.

*Euroclear and Clearstream.* Euroclear and Clearstream each hold securities for their customers and facilitate the clearance and settlement of securities transactions by electronic book-entry transfer between their respective account holders. Euroclear and Clearstream provide various services including safekeeping, administration, clearance and settlement of internationally traded securities and securities lending and borrowing. Euroclear and Clearstream also deal with domestic securities markets in several countries through established depositary and custodial relationships. Euroclear and Clearstream have established an electronic bridge between their two systems across which their respective participants may settle trades with each other.

Euroclear and Clearstream customers are worldwide financial institutions, including underwriters, securities brokers and dealers, banks, trust companies and clearing corporations. Indirect access to Euroclear and Clearstream is available to other institutions that clear through or maintain a custodial relationship with an account holder of either system, either directly or indirectly.

#### **Clearing and Settlement Procedures**

*General.* The Series 2022 Bonds sold in offshore transactions will be initially issued to investors through the book-entry facilities of DTC, or Clearstream and Euroclear in Europe if the investors are participants in those systems, or indirectly through organizations that are participants in the systems. For any of such Series 2022 Bonds, the record holder will be DTC's nominee. Clearstream and Euroclear will hold omnibus positions on behalf of their participants through customers' securities accounts in Clearstream's and Euroclear's names on the books of their respective depositories.

The depositories, in turn, will hold positions in customers' securities accounts in the depositories' names on the books of DTC. Because of time zone differences, the securities account of a Clearstream or

Euroclear participant as a result of a transaction with a participant, other than a depository holding on behalf of Clearstream or Euroclear, will be credited during the securities settlement processing day, which must be a business day for Clearstream or Euroclear, as the case may be, immediately following the DTC settlement date. These credits or any transactions in the securities settled during the processing will be reported to the relevant Euroclear participant or Clearstream participant on that business day. Cash received in Clearstream or Euroclear as a result of sales of securities by or through a Clearstream participant or Euroclear participant to a DTC Participant, other than the depository for Clearstream or Euroclear, will be received with value on the DTC settlement date but will be available in the relevant Clearstream or Euroclear cash account only as of the business day following settlement in DTC.

Transfers between participants will occur in accordance with DTC rules. Transfers between Clearstream participants or Euroclear participants will occur in accordance with their respective rules and operating procedures. Cross-market transfers between persons holding directly or indirectly through DTC, on the one hand, and directly or indirectly through Clearstream participants or Euroclear participants, on the other, will be effected in DTC in accordance with DTC rules on behalf of the relevant European international clearing system by the relevant depositories; however, cross-market transactions will require delivery of instructions to the relevant European international clearing system by the counterparty in the system in accordance with its rules and procedures and within its established deadlines in European time. The relevant European international clearing system will, if the transaction meets its settlement requirements, deliver instructions to its depository to take action to effect final settlement on its behalf by delivering or receiving securities in DTC, and making or receiving payment in accordance with normal procedures for same day funds settlement applicable to DTC. Clearstream participants or Euroclear participants or Euroclear participants may not deliver instructions directly to the depositories.

The Airports Authority and the Underwriters will not impose any fees in respect of holding the Series 2022 Bonds; however, holders of book-entry interests in the Series 2022 Bonds may incur fees normally payable in respect of the maintenance and operation of accounts in the Clearing Systems.

*Initial Settlement*. Interests in the Series 2022 Bonds will be in uncertified book-entry form. Purchasers electing to hold book-entry interests in the Series 2022 Bonds through Euroclear and Clearstream accounts will follow the settlement procedures applicable to conventional Eurobonds. Book-entry interests in the Series 2022 Bonds will be credited to Euroclear and Clearstream participants' securities clearance accounts on the business day following the date of delivery of the Series 2022 Bonds against payment (value as on the date of delivery of the Series 2022 Bonds). DTC participants acting on behalf of purchasers electing to hold book-entry interests in the Series 2022 Bonds through DTC will follow the delivery practices applicable to securities eligible for DTC's Same Day Funds Settlement system. DTC participants' securities accounts will be credited with book-entry interests in the Series 2022 Bonds following confirmation of receipt of payment to the Airports Authority on the date of delivery of the Series 2022 Bonds.

*Secondary Market Trading*. Secondary market trades in the Series 2022 Bonds will be settled by transfer of title to book-entry interests in the Clearing Systems. Title to such book-entry interests will pass by registration of the transfer within the records of Euroclear, Clearstream or DTC, as the case may be, in accordance with their respective procedures. Book-entry interests in the Series 2022 Bonds may be transferred within Euroclear and within Clearstream and between Euroclear and Clearstream in accordance with procedures established for these purposes by Euroclear and Clearstream. Book-entry interests in the Series 2022 Bonds may be transferred within DTC in accordance with procedures established for this purpose by DTC. Transfer of book-entry interests in the Series 2022 Bonds between Euroclear or Clearstream and DTC may be effected in accordance with procedures established for this purpose by Euroclear, Clearstream and DTC.

*Special Timing Considerations*. Investors should be aware that investors will only be able to make and receive deliveries, payments and other communications involving the Series 2022 Bonds through Euroclear or Clearstream on days when those systems are open for business. In addition, because of timezone differences, there may be complications with completing transactions involving Clearstream and/or Euroclear on the same business day as in the United States. U.S. investors who wish to transfer their interests in the Series 2022 Bonds, or to receive or make a payment or delivery of Series 2022 Bonds, on a particular day, may find that the transactions will not be performed until the next business day in Luxembourg if Clearstream is used, or Brussels if Euroclear is used.

*Clearing Information*. The Airports Authority and the Underwriters expect that the Series 2022 Bonds will be accepted for clearance through the facilities of Euroclear and Clearstream. The international securities identification number, common code and CUSIP number for the Series 2022 Bonds are set out on the cover page of this Official Statement.

*General.* None of Euroclear, Clearstream or DTC is under any obligation to perform or continue to perform the procedures referred to above, and such procedures may be discontinued at any time.

None of the Airports Authority, the Underwriters or any of their agents will have any responsibility for the performance by Euroclear, Clearstream or DTC or their respective direct or indirect participants or account holders of their respective obligations under the rules and procedures governing their operations or the arrangements referred to above. [THIS PAGE INTENTIONALLY LEFT BLANK]

## **APPENDIX G**

## FORM OF AMENDED AND RESTATED CONTINUING DISCLOSURE AGREEMENT

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#### **APPENDIX G**

#### FORM OF AMENDED AND RESTATED CONTINUING DISCLOSURE AGREEMENT

This Amended and Restated Continuing Disclosure Agreement (the "**Disclosure Agreement**"), dated as of February \_\_\_, 2022, is executed and delivered by the Metropolitan Washington Airports Authority (the "**Issuer**") and Digital Assurance Certification, L.L.C., as exclusive Disclosure Dissemination Agent (the "**Disclosure Dissemination Agent**" or "**DAC**"), and amends and restates the Continuing Disclosure Agreement dated as of August 1, 2009 executed and delivered by the Issuer and the Disclosure Dissemination Agent, as amended by the Amended and Restated Continuing Disclosure Agreement dated as of July 10, 2019 (collectively, the "**Prior Agreement**"), for the benefit of the Holders (hereinafter defined) of the Bonds (hereinafter defined) and in order to assist the Issuer in processing certain continuing disclosure with respect to the Bonds in accordance with Rule 15c2-12 of the United States Securities and Exchange Commission under the Securities Exchange Act of 1934, as the same may be amended from time to time (the "**Rule**") and the laws of the Commonwealth of Virginia (the "**Commonwealth**").

The services provided under this Disclosure Agreement solely relate to the execution of instructions received from the Issuer through use of the DAC system and do not constitute "advice" within the meaning of the Dodd-Frank Wall Street Reform and Consumer Protection Act (the "Act"). DAC will not provide any advice or recommendation to the Issuer or anyone on the Issuer's behalf regarding the "issuance of municipal securities" or any "municipal financial product" as defined in the Act and nothing in this Disclosure Agreement shall be interpreted to the contrary. DAC is not a "Municipal Advisor" as such term is defined in Section 15B of the Securities Exchange Act of 1934, as amended, and related rules.

SECTION 1. <u>Definitions</u>. Capitalized terms not otherwise defined in this Disclosure Agreement shall have the meaning assigned in the Rule or, to the extent not in conflict with the Rule, in the Official Statement (hereinafter defined). The capitalized terms shall have the following meanings:

"Annual Filing Date" means the date, set in Sections 2(a) and 2(f) hereof, by which the Annual Report is to be filed with the MSRB.

"Annual Financial Information" has the meaning set forth in Section 3(a) hereof.

"Annual Report" means an Annual Report containing Annual Financial Information described in and consistent with Section 3 of this Disclosure Agreement.

"Audited Financial Statements" means the annual financial statements of the Issuer for the prior fiscal year, certified by an independent auditor as prepared in accordance with generally accepted accounting principles.

"**Bonds**" means all of the bonds with respect to which the Prior Agreement applies and the bonds as listed on the attached **Exhibit A**, with the 9-digit CUSIP numbers relating thereto, as supplemented from time to time by the Issuer.

"Certification" means a written certification of compliance signed by the Disclosure Representative stating that the Annual Report, Audited Financial Statements, Notice Event notice, Failure to File Event notice, Voluntary Event Disclosure or Voluntary Financial Disclosure delivered to the Disclosure Dissemination Agent is the Annual Report, Audited Financial Statements, Notice Event notice, Failure to File Event notice, Voluntary Event Disclosure or Voluntary Financial Disclosure required to be submitted to the MSRB under this Disclosure Agreement. A Certification shall accompany each such document submitted to the Disclosure Dissemination Agent by the Issuer and include the full name of the Bonds and the 9-digit CUSIP numbers for all Bonds to which the document applies.

"**Disclosure Dissemination Agent**" means Digital Assurance Certification, L.L.C, acting in its capacity as Disclosure Dissemination Agent hereunder, or any successor Disclosure Dissemination Agent designated in writing by the Issuer pursuant to Section 9 hereof.

"**Disclosure Representative**" means the Chief Financial Officer of the Issuer or his or her designee, or such other person as the Issuer shall designate in writing to the Disclosure Dissemination Agent from time to time as the person responsible for providing Information to the Disclosure Dissemination Agent.

**"Failure to File Event**" means the Issuer's failure to file an Annual Report on or before the Annual Filing Date.

"**Financial obligation**" as used in this Disclosure Agreement is defined in the Rule as (i) a debt obligation; (ii) derivative instrument entered into in connection with, or pledged as a security or a source of payment for, an existing or planned debt obligation; or (iii) guarantee of (i) or (ii). The term "financial obligation" shall not include municipal securities as to which a final official statement has been provided to the MSRB consistent with the Rule.

"Force Majeure Event" means: (i) acts of God, war, or terrorist action; (ii) failure or shut-down of the Electronic Municipal Market Access system maintained by the MSRB; or (iii) to the extent beyond the Disclosure Dissemination Agent's reasonable control, interruptions in telecommunications or utilities services, failure, malfunction or error of any telecommunications, computer or other electrical, mechanical or technological application, service or system, computer virus, interruptions in Internet service or telephone service (including due to a virus, electrical delivery problem or similar occurrence) that affect Internet users generally, or in the local area in which the Disclosure Dissemination Agent or the MSRB is located, or acts of any government, regulatory or any other competent authority the effect of which is to prohibit the Disclosure Dissemination Agent from performance of its obligations under this Disclosure Agreement.

"Holder" means any person (a) having the power, directly or indirectly, to vote or consent with respect to, or to dispose of ownership of, any Bonds (including persons holding Bonds through nominees, depositories or other intermediaries) or (b) treated as the owner of any Bonds for federal income tax purposes.

"**Information**" means, collectively, the Annual Reports, the Audited Financial Statements, the Notice Event notices, the Failure to File Event notices, the Voluntary Event Disclosures and the Voluntary Financial Disclosures.

"**MSRB**" means the Municipal Securities Rulemaking Board, or any successor thereto, established pursuant to Section 15B(b)(1) of the Securities Exchange Act of 1934.

"Notice Event" means any of the events enumerated in paragraph (b)(5)(i)(C) of the Rule and listed in Section 4(a) of this Disclosure Agreement.

"Obligated Person" means any person, including the Issuer, who is either generally or through an enterprise, fund, or account of such person committed by contract or other arrangement to support

payment of all, or part of the obligations on the Bonds (other than providers of municipal bond insurance, letters of credit, or other liquidity facilities), as shown on **Exhibit A**.

"Official Statement" means that Official Statement prepared by the Issuer in connection with the Bonds, as listed in Exhibit A.

"Trustee" means the institution, if any, identified as such in the document under which the Bonds were issued.

"Voluntary Event Disclosure" means information of the category specified in any of subsections (e)(vi)(1) through (e)(vi)(10) of Section 2 of this Disclosure Agreement that is accompanied by a Certification of the Disclosure Representative containing the information prescribed by Section 7(a) of this Disclosure Agreement.

"Voluntary Financial Disclosure" means information of the category specified in any of subsections (e)(vii)(1) through (e)(vii)(9) of Section 2 of this Disclosure Agreement that is accompanied by a Certification of the Disclosure Representative containing the information prescribed by Section 7(b) of this Disclosure Agreement.

## SECTION 2. Provision of Annual Reports.

(a) The Issuer shall provide, annually, an electronic copy of the Annual Report and Certification to the Disclosure Dissemination Agent, together with a copy for the Trustee, not later than the Annual Filing Date. Promptly upon receipt of an electronic copy of the Annual Report and the Certification, the Disclosure Dissemination Agent shall provide an Annual Report to the MSRB not later than the 31<sup>st</sup> day of May following the end of each fiscal year of the Issuer, commencing with the fiscal year ending December 31, 2021. Such date and each anniversary thereof is the Annual Filing Date. The Annual Report may be submitted as a single document or as separate documents comprising a package, and may cross-reference other information as provided in Section 3 of this Disclosure Agreement.

(b) If on the fifteenth  $(15^{th})$  day prior to the Annual Filing Date, the Disclosure Dissemination Agent has not received a copy of the Annual Report and Certification, the Disclosure Dissemination Agent shall contact the Disclosure Representative by telephone and in writing (which may be by e-mail) to remind the Issuer of its undertaking to provide the Annual Report pursuant to Section 2(a). Upon such reminder, the Disclosure Representative shall either (i) provide the Disclosure Dissemination Agent with an electronic copy of the Annual Report and the Certification no later than two (2) business days prior to the Annual Filing Date, or (ii) instruct the Disclosure Dissemination Agent in writing that the Issuer will not be able to file the Annual Report within the time required under this Disclosure Agreement, state the date by which the Annual Report for such year will be provided and instruct the Disclosure Dissemination Agent to immediately send a Failure to File Event notice to the MSRB in substantially the form attached as **Exhibit B**, which may be accompanied by a cover sheet completed by the Disclosure Dissemination Agent in the form set forth in **Exhibit C-1**.

(c) If the Disclosure Dissemination Agent has not received an Annual Report and Certification by 10:00 a.m. Eastern time on Annual Filing Date (or, if such Annual Filing Date falls on a Saturday, Sunday or holiday, then the first business day thereafter) for the Annual Report, a Failure to File Event shall have occurred and the Issuer irrevocably directs the Disclosure Dissemination Agent to immediately send a Failure to File Event notice to the MSRB in substantially the form attached as **Exhibit B** without reference to the anticipated filing date for the Annual Report, which may be accompanied by a cover sheet completed by the Disclosure Dissemination Agent in the form set forth in **Exhibit C-1**. (d) If Audited Financial Statements of the Issuer are prepared but not available prior to the Annual Filing Date, the Issuer shall, when the Audited Financial Statements are available, provide at such time an electronic copy to the Disclosure Dissemination Agent, accompanied by a Certification, together with a copy for the Trustee, if any, for filing with the MSRB.

- (e) The Disclosure Dissemination Agent shall:
  - (i) verify the filing specifications of the MSRB each year prior to the Annual Filing Date;
  - (ii) upon receipt, promptly file each Annual Report received under Sections 2(a) and 2(b) hereof with the MSRB;
  - (iii) upon receipt, promptly file each Audited Financial Statement received under Section 2(d) hereof with the MSRB;
  - (iv) upon receipt, promptly file the text of each Notice Event received under Sections 4(a) and 4(b)(ii) hereof with the MSRB, identifying the Notice Event as instructed by the Issuer pursuant to Section 4(a) or 4(b)(ii) hereof (being any of the categories set forth below) when filing pursuant to Section 4(c) of this Disclosure Agreement:
    - 1. "Principal and interest payment delinquencies;"
    - 2. "Non-Payment related defaults, if material;"
    - 3. "Unscheduled draws on debt service reserves reflecting financial difficulties;"
    - 4. "Unscheduled draws on credit enhancements reflecting financial difficulties;"
    - 5. "Substitution of credit or liquidity providers, or their failure to perform;"
    - 6. "Adverse tax opinions, IRS notices or events affecting the tax status of the security;"
    - 7. "Modifications to rights of securities holders, if material;"
    - 8. "Bond calls, if material, and tender offers;
    - 9. "Defeasances;"
    - 10. "Release, substitution, or sale of property securing repayment of the securities, if material;"
    - 11. "Rating changes;"
    - 12. "Bankruptcy, insolvency, receivership or similar event of the Issuer;"
    - 13. "Merger, consolidation, or acquisition of the Issuer, if material;"

- 14. "Appointment of a successor or additional trustee, or the change of name of a trustee, if material;"
- 15. "Incurrence of a financial obligation of the Issuer, if material, or agreement to covenants, events of default, remedies, priority rights, or other similar terms of a financial obligation of the Issuer, any of which affect security holders, if material;" and
- 16. "Default, event of acceleration, termination event, modification of terms, or other similar events under the terms of a financial obligation of the Issuer, any of which reflect financial difficulties."
- (v) upon receipt (or irrevocable direction pursuant to Section 2(c) of this Disclosure Agreement, as applicable), promptly file a completed copy of **Exhibit B** to this Disclosure Agreement with the MSRB, identifying the filing as "Failure to provide annual financial information as required" when filing pursuant to Section 2(b)(ii) or Section 2(c) of this Disclosure Agreement;
- (vi) upon receipt, promptly file the text of each Voluntary Event Disclosure received under Section 7(a) hereof with the MSRB, identifying the Voluntary Event Disclosure as instructed by the Issuer pursuant to Section 7(a) (being any of the categories set forth below) when filing pursuant to Section 7(a) of this Disclosure Agreement:
  - 1. "amendment to continuing disclosure undertaking;"
  - 2. "change in obligated person;"
  - 3. "notice to investors pursuant to bond documents;"
  - 4. "certain communications from the Internal Revenue Service;" other than those communications included in the Rule;
  - 5. "secondary market purchases;"
  - 6. "bid for auction rate or other securities;"
  - 7. "capital or other financing plan;"
  - 8. "litigation/enforcement action;"
  - 9. "change of tender agent, remarketing agent, or other on-going party;" and
  - 10. "other event-based disclosures."
- (vii) upon receipt, promptly file the text of each Voluntary Financial Disclosure received under Section 7(b) hereof with the MSRB, identifying the Voluntary Financial Disclosure as instructed by the Issuer pursuant to Section 7(b) (being any of the categories set forth below) when filing pursuant to Section 7(b) of this Disclosure Agreement:
  - 1. "quarterly/monthly financial information;"

- 2. "Timing of annual disclosure (120 days);"
- 3. "change in fiscal year/timing of annual disclosure;"
- 4. "change in accounting standard;"
- 5. "interim/additional financial information/operating data;"
- 6. "budget;"
- 7. "investment/debt/financial policy;"
- 8. "information provided to rating agency, credit/liquidity provider or other third party;"
- 9. "consultant reports;" and
- 10. "other financial/operating data."
- (viii) provide the Issuer evidence of the filings of each of the above when made, which shall be by means of the DAC system, for so long as DAC is the Disclosure Dissemination Agent under this Disclosure Agreement.

(f) The Issuer may adjust the Annual Filing Date upon change of its fiscal year by providing written notice of such change and the new Annual Filing Date to the Disclosure Dissemination Agent, Trustee (if any) and the MSRB, provided that the period between the existing Annual Filing Date and new Annual Filing Date shall not exceed one year.

(g) Anything in this Disclosure Agreement to the contrary notwithstanding, any Information received by the Disclosure Dissemination Agent before 6:00 p.m. Eastern time on any business day that it is required to file with the MSRB pursuant to the terms of this Disclosure Agreement and that is accompanied by a Certification and all other information required by the terms of this Disclosure Agreement will be filed by the Disclosure Dissemination Agent with the MSRB no later than 11:59 p.m. Eastern time on the same business day; provided, however, the Disclosure Dissemination Agent shall have no liability for any delay in filing with the MSRB if such delay is caused by a Force Majeure Event provided that the Disclosure Dissemination Agent uses reasonable efforts to make any such filing as soon as possible.

SECTION 3. Content of Annual Reports.

(a) Each Annual Report shall contain financial information or operating data with respect to the Issuer and the Dulles Toll Road of the types set forth in the Official Statement under the headings for each issue of Bonds described in **Exhibit A** ("Annual Financial Information").

(b) Audited Financial Statements as described in the Official Statement will be included in the Annual Report. If audited financial statements are not available, then unaudited financial statements, prepared in accordance with GAAP as described in the Official Statement will be included in the Annual Report. In such event, Audited Financial Statements (if any) will be provided pursuant to Section 2(d).

Any or all of the items listed above may be included by specific reference from other documents, including official statements of debt issues with respect to which the Issuer is an "obligated person" (as defined by the Rule), which have been previously filed with the Securities and Exchange Commission or

available on the MSRB Internet Website. If the document incorporated by reference is a final official statement, it must be available from the MSRB. The Issuer will clearly identify each such document so incorporated by reference.

If the Annual Financial Information contains modified operating data or financial information different from the Annual Financial Information agreed to in the continuing disclosure undertaking related to the Bonds, the Issuer is required to explain, in narrative form, the reasons for the modification and the impact of the change in the type of operating data or financial information being provided.

## SECTION 4. <u>Reporting of Notice Events</u>.

(a) The occurrence of any of the following events with respect to the Bonds constitutes a Notice Event:

- (1) Principal and interest payment delinquencies;
- (2) Non-payment related defaults, if material;
- (3) Unscheduled draws on debt service reserves reflecting financial difficulties;
- (4) Unscheduled draws on credit enhancements reflecting financial difficulties;
- (5) Substitution of credit or liquidity providers, or their failure to perform;
- (6) Adverse tax opinions, the issuance by the Internal Revenue Service of proposed or final determinations of taxability, Notices of Proposed Issue (IRS Form 5701-TEB) or other material notices or determinations with respect to the tax status of the Bonds, or other material events affecting the tax status of the Bonds;
- (7) Modifications to rights of Bond holders, if material;
- (8) Bond calls, if material, and tender offers;
- (9) Defeasances;
- (10) Release, substitution, or sale of property securing repayment of the Bonds, if material;
- (11) Rating changes;
- (12) Bankruptcy, insolvency, receivership or similar event of the Issuer;

**Note to subsection (a)(12) of this Section 4:** For the purposes of the event described in subsection (a)(12) of this Section 4, the event is considered to occur when any of the following occur: the appointment of a receiver, fiscal agent or similar officer for the Issuer in a proceeding under the U.S. Bankruptcy Code or in any other proceeding under state or federal law in which a court or governmental authority has assumed jurisdiction over substantially all of the assets or business of the Issuer, or if such jurisdiction has been assumed by leaving the existing governing body and officials or officers in possession but subject to the supervision and orders of a court or governmental authority, or the entry of an order confirming a plan of reorganization, arrangement or liquidation by a court or governmental

authority having supervision or jurisdiction over substantially all of the assets or business of the Issuer.

- (13) The consummation of a merger, consolidation, or acquisition involving an Issuer or the sale of all or substantially all of the assets of the Issuer, other than in the ordinary course of business, the entry into a definitive agreement to undertake such an action or the termination of a definitive agreement relating to any such actions, other than pursuant to its terms, if material;
- (14) Appointment of a successor or additional trustee or the change of name of a trustee, if material;
- (15) Incurrence of a financial obligation of the Issuer, if material, or agreement to covenants, events of default, remedies, priority rights, or other similar terms of a financial obligation of an Issuer, any of which affect security holders, if material; and
- (16) Default, event of acceleration, termination event, modification of terms, or other similar events under the terms of a financial obligation of the Issuer, any of which reflect financial difficulties.

The Issuer shall, in a timely manner not later than nine (9) business days after its occurrence, notify the Disclosure Dissemination Agent in writing of the occurrence of a Notice Event. Such notice shall instruct the Disclosure Dissemination Agent to report the occurrence pursuant to subsection (c) and shall be accompanied by a Certification. Such notice or Certification shall identify the Notice Event that has occurred (which shall be any of the categories set forth in Section 2(e)(iv) of this Disclosure Agreement), include the text of the disclosure that the Issuer desires to make, contain the written authorization of the Issuer for the Disclosure Dissemination Agent to disseminate such information, and identify the date the Issuer desires for the Disclosure Dissemination Agent to disseminate the information (provided that such date is not later than the tenth business day after the occurrence of the Notice Event).

(b) The Disclosure Dissemination Agent is under no obligation to notify the Issuer or the Disclosure Representative of an event that may constitute a Notice Event. In the event the Disclosure Dissemination Agent so notifies the Disclosure Representative, the Disclosure Representative will within two business days of receipt of such notice (but in any event not later than the tenth business day after the occurrence of the Notice Event, if the Issuer determines that a Notice Event has occurred), instruct the Disclosure Dissemination Agent that either (i) a Notice Event has not occurred and no filing is to be made or (ii) a Notice Event has occurred and the Disclosure Dissemination Agent is to report the occurrence pursuant to subsection (c) of this Section 4, together with a Certification. Such Certification shall identify the Notice Event that has occurred (which shall be any of the categories set forth in Section 2(e)(iv) of this Disclosure Agreement), include the text of the disclosure that the Issuer desires to make, contain the written authorization of the Issuer for the Disclosure Dissemination Agent to disseminate such information, and identify the date the Issuer desires for the Disclosure Dissemination Agent to disseminate the information (provided that such date is not later than the tenth business day after the occurrence of the Notice Event).

(c) If the Disclosure Dissemination Agent has been instructed by the Issuer as prescribed in subsection (a) or (b)(ii) of this Section 4 to report the occurrence of a Notice Event, the Disclosure Dissemination Agent shall promptly file a notice of such occurrence with MSRB in accordance with Section 2 (e)(iv) hereof. This notice may be filed with a cover sheet completed by the Disclosure Dissemination Agent in the form set forth in **Exhibit C-1**.

SECTION 5. <u>CUSIP Numbers</u>. The Issuer will provide the Dissemination Agent with the CUSIP numbers for (i) new bonds at such time as they are issued or become subject to the Rule and (ii) any Bonds to which new CUSIP numbers are assigned in substitution for the CUSIP numbers previously assigned to such Bonds.

SECTION 6. <u>Additional Disclosure Obligations</u>. The Issuer acknowledges and understands that other state and federal laws, including but not limited to the Securities Act of 1933 and Rule 10b-5 promulgated under the Securities Exchange Act of 1934, may apply to the Issuer, and that the duties and responsibilities of the Disclosure Dissemination Agent under this Disclosure Agreement do not extend to providing legal advice regarding such laws. The Issuer acknowledges and understands that the duties of the Disclosure Dissemination Agent relate exclusively to execution of the mechanical tasks of disseminating information as described in this Disclosure Agreement.

#### SECTION 7. Voluntary Filing.

(a) The Issuer may instruct the Disclosure Dissemination Agent to file a Voluntary Event Disclosure with the MSRB from time to time pursuant to a Certification of the Disclosure Representative. Such Certification shall identify the Voluntary Event Disclosure (which shall be any of the categories set forth in Section 2(e)(vi) of this Disclosure Agreement), include the text of the disclosure that the Issuer desires to make, contain the written authorization of the Issuer for the Disclosure Dissemination Agent to disseminate such information, and identify the date the Issuer desires for the Disclosure Dissemination Agent to disseminate the information. If the Disclosure Dissemination Agent by the Issuer as prescribed in this Section 7(a) to file a Voluntary Event Disclosure with the MSRB in accordance with Section 2(e)(vi) hereof. This notice may be filed with a cover sheet completed by the Disclosure Dissemination Agent in the form set forth in **Exhibit C-2**.

(b) The Issuer may instruct the Disclosure Dissemination Agent to file a Voluntary Financial Disclosure with the MSRB from time to time pursuant to a Certification of the Disclosure Representative. Such Certification shall identify the Voluntary Financial Disclosure (which shall be any of the categories set forth in Section 2(e)(vii) of this Disclosure Agreement), include the text of the disclosure that the Issuer desires to make, contain the written authorization of the Issuer for the Disclosure Dissemination Agent to disseminate such information, and identify the date the Issuer desires for the Disclosure Dissemination Agent to disseminate by the Issuer as prescribed in this Section 7(b) hereof to file a Voluntary Financial Disclosure, the Disclosure Dissemination Agent shall promptly file such Voluntary Financial Disclosure with the MSRB in accordance with Section 2(e)(vii) hereof. This notice may be filed with a cover sheet completed by the Disclosure Dissemination Agent in the form set forth in **Exhibit C-3**.

(c) The parties hereto acknowledge that the Issuer is not obligated pursuant to the terms of this Disclosure Agreement to file any Voluntary Event Disclosure pursuant to Section 7(a) hereof or any Voluntary Financial Disclosure pursuant to Section 7(b) hereof.

(d) Nothing in this Disclosure Agreement shall be deemed to prevent the Issuer from disseminating any other information through the Disclosure Dissemination Agent using the means of dissemination set forth in this Disclosure Agreement or including any other information in any Annual Report, Audited Financial Statements, Notice Event

notice, Failure to File Event notice, Voluntary Event Disclosure or Voluntary Financial Disclosure, in addition to that required by this Disclosure Agreement. If the Issuer chooses to include any information in any Annual Report, Audited Financial Statements, Notice Event notice, Failure to File Event notice, Voluntary Event Disclosure or Voluntary Financial Disclosure in addition to that which is specifically required by this Disclosure Agreement to update such information or include it in any future Annual Report, Audited Financial Statements, Notice Event notice, Failure to File Event notice, Voluntary Event Disclosure or Voluntary Financial Statements, Notice Event notice, Failure to File Event notice, Voluntary Event Disclosure or Voluntary Financial Statements, Notice Event notice, Failure to File Event notice, Voluntary Event Disclosure or Voluntary Financial Disclosure.

SECTION 8. <u>Termination of Reporting Obligation</u>. The obligations of the Issuer and the Disclosure Dissemination Agent under this Disclosure Agreement shall terminate with respect to the Bonds upon the legal defeasance, prior redemption or payment in full of all of the Bonds, when the Issuer is no longer an obligated person with respect to the Bonds, or upon delivery by the Disclosure Representative to the Disclosure Dissemination Agent of an opinion of counsel expert in federal securities laws to the effect that continuing disclosure is no longer required.

SECTION 9. <u>Disclosure Dissemination Agent</u>. The Issuer has appointed Digital Assurance Certification, L.L.C. as exclusive Disclosure Dissemination Agent under this Disclosure Agreement. The Issuer may, upon thirty days written notice to the Disclosure Dissemination Agent and the Trustee, replace or appoint a successor Disclosure Dissemination Agent. Upon termination of DAC's services as Disclosure Dissemination Agent, whether by notice of the Issuer or DAC, the Issuer agrees to appoint a successor Disclosure Dissemination Agent or, alternately, agrees to assume all responsibilities of Disclosure Dissemination Agent under this Disclosure Agreement for the benefit of the Holders of the Bonds. Notwithstanding any replacement or appointment of a successor, the Issuer shall remain liable to the Disclosure Dissemination Agent. The Disclosure Dissemination Agent may resign at any time by providing thirty days' prior written notice to the Issuer.

SECTION 10. <u>Remedies in Event of Default</u>. In the event of a failure of the Issuer or the Disclosure Dissemination Agent to comply with any provision of this Disclosure Agreement, the Holders' rights to enforce the provisions of this Agreement shall be limited solely to a right, by action in mandamus or for specific performance, to compel performance of the parties' obligation under this Disclosure Agreement. Any failure by a party to perform in accordance with this Disclosure Agreement shall not constitute a default on the Bonds or under any other document relating to the Bonds, and all rights and remedies shall be limited to those expressly stated herein.

## SECTION 11. Duties, Immunities and Liabilities of Disclosure Dissemination Agent.

(a) The Disclosure Dissemination Agent shall have only such duties as are specifically set forth in this Disclosure Agreement. The Disclosure Dissemination Agent's obligation to deliver the information at the times and with the contents described herein shall be limited to the extent the Issuer has provided such information to the Disclosure Dissemination Agent as required by this Disclosure Agreement. The Disclosure Dissemination Agent shall have no duty with respect to the content of any disclosures or notice made pursuant to the terms hereof. The Disclosure Dissemination Agent shall have no duty or obligation to review or verify any Information or any other information, disclosures or notices provided to it by the Issuer and shall not be deemed to be acting in any fiduciary capacity for the Issuer, the Holders of the Bonds or any other party. The Disclosure Dissemination Agent shall have no responsibility for the Issuer's failure to report to the Disclosure Dissemination Agent a Notice Event or a duty to determine the materiality thereof. The Disclosure Dissemination Agent shall have no responsibility for failing to determine, whether the Issuer has complied with this Disclosure Agreement. The Disclosure Dissemination Agent may conclusively rely upon Certifications of the Issuer at all times.

The obligations of the Issuer under this Section shall survive resignation or removal of the Disclosure Dissemination Agent and defeasance, redemption or payment of the Bonds.

(b) The Disclosure Dissemination Agent may, from time to time, consult with legal counsel (either in-house or external) of its own choosing in the event of any disagreement or controversy, or question or doubt as to the construction of any of the provisions hereof or its respective duties hereunder, and shall not incur any liability and shall be fully protected in acting in good faith upon the advice of such legal counsel. The reasonable fees and expenses of such counsel shall be payable by the Issuer.

(c) All documents, reports, notices, statements, information and other materials provided to the MSRB under this Agreement shall be provided in an electronic format and accompanied by identifying information as prescribed by the MSRB.

SECTION 12. <u>Amendment; Waiver</u>. Notwithstanding any other provision of this Disclosure Agreement, the Issuer and the Disclosure Dissemination Agent may amend this Disclosure Agreement and any provision of this Disclosure Agreement may be waived, if such amendment or waiver is supported by an opinion of counsel expert in federal securities laws acceptable to both the Issuer and the Disclosure Dissemination Agent to the effect that such amendment or waiver does not materially impair the interests of Holders of the Bonds and would not, in and of itself, cause the undertakings herein to violate the Rule if such amendment or waiver had been effective on the date hereof but taking into account any subsequent change in or official interpretation of the Rule; provided neither the Issuer or the Disclosure Dissemination Agent shall be obligated to agree to any amendment modifying their respective duties or obligations without their consent thereto.

Notwithstanding the preceding paragraph, the Disclosure Dissemination Agent shall have the right to adopt amendments to this Disclosure Agreement necessary to comply with modifications to and interpretations of the provisions of the Rule as announced by the Securities and Exchange Commission from time to time by giving not less than 20 days written notice of the intent to do so together with a copy of the proposed amendment to the Issuer. No such amendment shall become effective if the Issuer shall, within 10 days following the giving of such notice, send a notice to the Disclosure Dissemination Agent in writing that it objects to such amendment.

SECTION 13. <u>Beneficiaries</u>. This Disclosure Agreement shall inure solely to the benefit of the Issuer, the Trustee, if any, for the Bonds, the Disclosure Dissemination Agent, the underwriter, and the Holders from time to time of the Bonds, and shall create no rights in any other person or entity.

SECTION 14. <u>Governing Law</u>. This Disclosure Agreement shall be governed by the laws of the Commonwealth (other than with respect to conflicts of laws).

SECTION 15. <u>Counterparts</u>. This Disclosure Agreement may be executed in several counterparts, each of which shall be an original and all of which shall constitute but one and the same instrument.

[Remainder of page intentionally left blank.]

The Disclosure Dissemination Agent and the Issuer have caused this Continuing Disclosure Agreement to be executed, on the date first written above, by their respective officers duly authorized.

DIGITAL ASSURANCE CERTIFICATION, L.L.C., as Disclosure Dissemination Agent

By: \_\_\_\_\_

METROPOLITAN WASHINGTON AIRPORTS AUTHORITY, as Issuer

By: \_\_\_\_\_

## EXHIBIT A

#### NAME AND CUSIP NUMBERS OF BONDS

Name of Issuer:	Metropolitan Washington Airports Authority
Obligated Person(s):	None
Name of Bond Issue:	Dulles Toll Road Second Senior Lien Revenue Refunding Bonds, Series
	2022A (Dulles Metrorail and Capital Improvement Projects) and Dulles
	Toll Road Second Senior Lien Revenue Refunding Bonds, Series 2022B
	(Dulles Metrorail and Capital Improvement Projects) (Federally Taxable)
Date of Issuance:	February , 2022
Date of Official Statement:	January, 2022
Underwriters:	Wells Fargo Bank, National Association, as representative of the
	Underwriters listed on the cover of the Official Statement
CLICID N. 1	

CUSIP Numbers:

### **Content of Annual Reports:**

Each Annual Report shall contain financial information or operating data with respect to the Issuer and the Dulles Toll Road ("Annual Financial Information") of the types set forth in the Official Statement under the following captions and in the following appendices: "COLLECTION OF THE TOLL ROAD REVENUES – Current Toll Rates" and "– Historical Traffic Transactions and Toll Road Revenues," "THE AIRPORTS AUTHORITY – Financial Information for Dulles Corridor Enterprise Fund" and in Appendix D to the Official Statement (Dulles Toll Road Investment-Grade Traffic and Revenue Study, dated December 6, 2021), but only to the extent that the information of the type presented in Appendix D is prepared for public distribution.

Annual Financial Information may include information set forth in Audited Financial Statements and may be provided by delivery of the Issuer's annual report containing such Audited Financial Statements or in any other format deemed convenient by the Issuer.

## EXHIBIT B

## NOTICE TO MSRB OF FAILURE TO FILE ANNUAL REPORT

Issuer:

Obligated Person:

Name(s) of Bond Issue(s):

Date(s) of Issuance:

NOTICE IS HEREBY GIVEN that the Issuer has not provided an Annual Report with respect to the above-named Bonds as required by the Disclosure Agreement between the Issuer and Digital Assurance Certification, L.L.C., as Disclosure Dissemination Agent. The Issuer has notified the Disclosure Dissemination Agent that it anticipates that the Annual Report will be filed by \_\_\_\_\_\_, 20\_\_.

Dated: \_\_\_\_\_

Digital Assurance Certification, L.L.C., as Disclosure Dissemination Agent, on behalf of the Issuer

## **EXHIBIT C-1**

## **EVENT NOTICE COVER SHEET**

This cover sheet and accompanying "event notice" may be sent to the MSRB, pursuant to Securities and Exchange Commission Rule 15c2-12(b)(5)(i)(C) and (D).

Issuer's and/or Other Obligated Person's Name: Metropolitan Washington Airports Authority

Issuer's Six-Digit CUSIP Number:

or Nine-Digit CUSIP Number(s) of the bonds to which this event notice relates:

Number of pages attached:

Description of Notice Events (Check One):

- 1.\_\_\_\_\_"Principal and interest payment delinquencies;"
- 2. \_\_\_\_ "Non-Payment related defaults, if material;"
- 3. ""Unscheduled draws on debt service reserves reflecting financial difficulties;"
- 4. \_\_\_\_\_"Unscheduled draws on credit enhancements reflecting financial difficulties;"
- 5. \_\_\_\_\_ "Substitution of credit or liquidity providers, or their failure to perform;"
- 6. "Adverse tax opinions, IRS notices or events affecting the tax status of the security;"
- 7. ""Modifications to rights of securities holders, if material;"
- 8.\_\_\_\_\_"Bond calls, if material;" Tender offers;
- 9. ""Defeasances;"
- 10.\_\_\_\_\_ "Release, substitution, or sale of property securing repayment of the securities, if material;"
- 11.\_\_\_\_\_"Rating changes;"
- 12. \_\_\_\_\_ "Bankruptcy, insolvency, receivership or similar event of the obligated person;"
- 13. \_\_\_\_ "Merger, consolidation, or acquisition of the obligated person, if material;"
- 14. \_\_\_\_\_ "Appointment of a successor or additional trustee, or the change of name of a trustee, if material;"
- 15. <u>"Incurrence of a financial obligation of the obligated person, if material, or agreement to covenants,</u> events of default, remedies, priority rights, or other similar terms of a financial obligation of the obligated person, any of which affect security holders, if material;" and
- 16.\_\_\_\_\_"Default, event of acceleration, termination event, modification of terms, or other similar events under the terms of a financial obligation of the obligated person, any of which reflect financial difficulties."

Failure to provide annual financial information as required.

I hereby represent that I am authorized by the issuer or its agent to distribute this information publicly:

Signature:

Name:

Title:

Digital Assurance Certification, L.L.C. 315 E. Robinson Street, Suite 300 Orlando, FL 32801 407-515-1100

Date:

## **EXHIBIT C-2**

## **VOLUNTARY EVENT DISCLOSURE COVER SHEET**

This cover sheet and accompanying "voluntary event disclosure" may be sent to the MSRB, pursuant to the Amended and Restated Continuing Disclosure Agreement dated as of February , 2022, between the Issuer and DAC.

Issuer's and/or Other Obligated Person's Name: Metropolitan Washington Airports Authority

Issuer's Six-Digit CUSIP Number:

or Nine-Digit CUSIP Number(s) of the bonds to which this notice relates:

Number of pages attached:

Description of Voluntary Event Disclosure (Check One):

- 1. "amendment to continuing disclosure undertaking;"
- 2. \_\_\_\_\_ "change in obligated person;"
- 3.\_\_\_\_\_"notice to investors pursuant to bond documents;"
- anotice to investors pursuant to bond documents;
  "certain communications from the Internal Revenue Service;"
  "secondary market purchases;"
  "bid for auction rate or other securities;"
  "capital or other financing plan;"

- 8. \_\_\_\_\_ "litigation/enforcement action;"
- 9.
- 10.\_\_\_\_\_"other event-based disclosures."

I hereby represent that I am authorized by the issuer or its agent to distribute this information publicly: Signature:

Name:

Title:

Digital Assurance Certification, L.L.C. 315 E. Robinson Street Suite 300 Orlando, FL 32801 407-515-1100

Date:

## **EXHIBIT C-3**

#### **VOLUNTARY FINANCIAL DISCLOSURE COVER SHEET**

This cover sheet and accompanying "voluntary financial disclosure" may be sent to the MSRB, pursuant to the Amended and Restated Continuing Disclosure Agreement dated as of February , 2022, between the Issuer and DAC.

Issuer's and/or Other Obligated Person's Name: Metropolitan Washington Airports Authority

Issuer's Six-Digit CUSIP Number:

or Nine-Digit CUSIP Number(s) of the bonds to which this notice relates:

Number of pages attached:

Description of Voluntary Financial Disclosure (Check One):

\_\_\_\_\_\_"quarterly/monthly financial information;"
\_\_\_\_\_"change in fiscal year/timing of annual disclosure;" 2.

"change in accounting standard;" 3.

4.\_\_\_\_\_"interim/additional financial information/operating data;"

\_\_\_\_"budget;" 5.

6. "investment/debt/financial policy;"

7. \_\_\_\_\_ "information provided to rating agency, credit/liquidity provider or other third party;"

"consultant reports;" and 8.

"other financial/operating data." 9.

I hereby represent that I am authorized by the issuer or its agent to distribute this information publicly:

Signature:

Name:

Title:

Digital Assurance Certification, L.L.C. 315 E. Robinson Street Suite 300 Orlando, FL 32801 407-515-1100

Date:

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## **APPENDIX H**

FORM OF BOND INSURANCE POLICY

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# MUNICIPAL BOND INSURANCE POLICY

**ISSUER:** 

BONDS: \$ in aggregate principal amount of



ASSURED GUARANTY MUNICIPAL CORP. ("AGM"), for consideration received, hereby UNCONDITIONALLY AND IRREVOCABLY agrees to pay to the trustee (the "Trustee") or paying agent (the "Paying Agent") (as set forth in the documentation providing for the issuance of and securing the Bonds) for the Bonds, for the benefit of the Owners or, at the election of AGM, directly to each Owner, subject only to the terms of this Policy (which includes each endorsement hereto), that portion of the principal of and interest on the Bonds that shall become Due for Payment but shall be unpaid by reason of Nonpayment by the Issuer.

On the later of the day on which such principal and interest becomes Due for Payment or the Business Day next following the Business Day on which AGM shall have received Notice of Nonpayment, AGM will disburse to or for the benefit of each Owner of a Bond the face amount of principal of and interest on the Bond that is then Due for Payment but is then unpaid by reason of Nonpayment by the Issuer, but only upon receipt by AGM, in a form reasonably satisfactory to it, of (a) evidence of the Owner's right to receive payment of the principal or interest then Due for Payment and (b) evidence, including any appropriate instruments of assignment, that all of the Owner's rights with respect to payment of such principal or interest that is Due for Payment shall thereupon vest in AGM. A Notice of Nonpayment will be deemed received on a given Business Day if it is received prior to 1:00 p.m. (New York time) on such Business Day; otherwise, it will be deemed received on the next Business Day. If any Notice of Nonpayment received by AGM is incomplete, it shall be deemed not to have been received by AGM for purposes of the preceding sentence and AGM shall promptly so advise the Trustee, Paying Agent or Owner, as appropriate, who may submit an amended Notice of Nonpayment. Upon disbursement in respect of payment of principal of or interest on the Bond, any appurtenant coupon to the Bond or right to receive for payment of principal of or interest on the Bond, any apputenant coupon to the rights of the Owner's right to receive payments under the Bond, to the extent of any payment by AGM hereunder. Payment by AGM to the Trustee or Paying Agent for the benefit of the Owner's right to receive payment sund the Bond; to the extent of any payment by AGM hereunder. Payment by AGM to the Trustee or Paying Agent for the benefit of the Owner's shall, to the extent thereof, discharge the obligation of AGM under this Policy.

Except to the extent expressly modified by an endorsement hereto, the following terms shall have the meanings specified for all purposes of this Policy. "Business Day" means any day other than (a) a Saturday or Sunday or (b) a day on which banking institutions in the State of New York or the Insurer's Fiscal Agent are authorized or required by law or executive order to remain closed. "Due for Payment" means (a) when referring to the principal of a Bond, payable on the stated maturity date thereof or the date on which the same shall have been duly called for mandatory sinking fund redemption and does not refer to any earlier date on which payment is due by reason of call for redemption (other than by mandatory sinking fund redemption), acceleration or other advancement of maturity unless AGM shall elect, in its sole discretion, to pay such principal due upon such acceleration together with any accrued interest to the date of acceleration and (b) when referring to interest on a Bond, payable on the stated date for payment of interest. "Nonpayment" means, in respect of a Bond, the failure of the Issuer to have provided sufficient funds to the Trustee or, if there is no Trustee, to the Paying Agent for payment in full of all principal and interest that is Due for Payment on such Bond. "Nonpayment" shall also include, in respect of a Bond, any payment of principal or interest that is Due for Payment made to an Owner by or on behalf of the Issuer which has recovered from been such Owner pursuant to the

Page 2 of 2 Policy No. -N

United States Bankruptcy Code by a trustee in bankruptcy in accordance with a final, nonappealable order of a court having competent jurisdiction. "Notice" means telephonic or telecopied notice, subsequently confirmed in a signed writing, or written notice by registered or certified mail, from an Owner, the Trustee or the Paying Agent to AGM which notice shall specify (a) the person or entity making the claim, (b) the Policy Number, (c) the claimed amount and (d) the date such claimed amount became Due for Payment. "Owner" means, in respect of a Bond, the person or entity who, at the time of Nonpayment, is entitled under the terms of such Bond to payment thereof, except that "Owner" shall not include the Issuer or any person or entity whose direct or indirect obligation constitutes the underlying security for the Bonds.

AGM may appoint a fiscal agent (the "Insurer's Fiscal Agent") for purposes of this Policy by giving written notice to the Trustee and the Paying Agent specifying the name and notice address of the Insurer's Fiscal Agent. From and after the date of receipt of such notice by the Trustee and the Paying Agent, (a) copies of all notices required to be delivered to AGM pursuant to this Policy shall be simultaneously delivered to the Insurer's Fiscal Agent and to AGM and shall not be deemed received until received by both and (b) all payments required to be made by AGM under this Policy may be made directly by AGM or by the Insurer's Fiscal Agent on behalf of AGM. The Insurer's Fiscal Agent is the agent of AGM only and the Insurer's Fiscal Agent shall in no event be liable to any Owner for any act of the Insurer's Fiscal Agent or any failure of AGM to deposit or cause to be deposited sufficient funds to make payments due under this Policy.

To the fullest extent permitted by applicable law, AGM agrees not to assert, and hereby waives, only for the benefit of each Owner, all rights (whether by counterclaim, setoff or otherwise) and defenses (including, without limitation, the defense of fraud), whether acquired by subrogation, assignment or otherwise, to the extent that such rights and defenses may be available to AGM to avoid payment of its obligations under this Policy in accordance with the express provisions of this Policy.

This Policy sets forth in full the undertaking of AGM, and shall not be modified, altered or affected by any other agreement or instrument, including any modification or amendment thereto. Except to the extent expressly modified by an endorsement hereto, (a) any premium paid in respect of this Policy is nonrefundable for any reason whatsoever, including payment, or provision being made for payment, of the Bonds prior to maturity and (b) this Policy may not be canceled or revoked. THIS POLICY IS NOT COVERED BY THE PROPERTY/CASUALTY INSURANCE SECURITY FUND SPECIFIED IN ARTICLE 76 OF THE NEW YORK INSURANCE LAW.

In witness whereof, ASSURED GUARANTY MUNICIPAL CORP. has caused this Policy to be executed on its behalf by its Authorized Officer.



ASSURED GUARANTY MUNICIPAL CORP.

By \_

Authorized Officer

A subsidiary of Assured Guaranty Municipal Holdings Inc. 1633 Broadway, New York, N.Y. 10019 (212) 974-0100

Form 500NY (5/90)







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