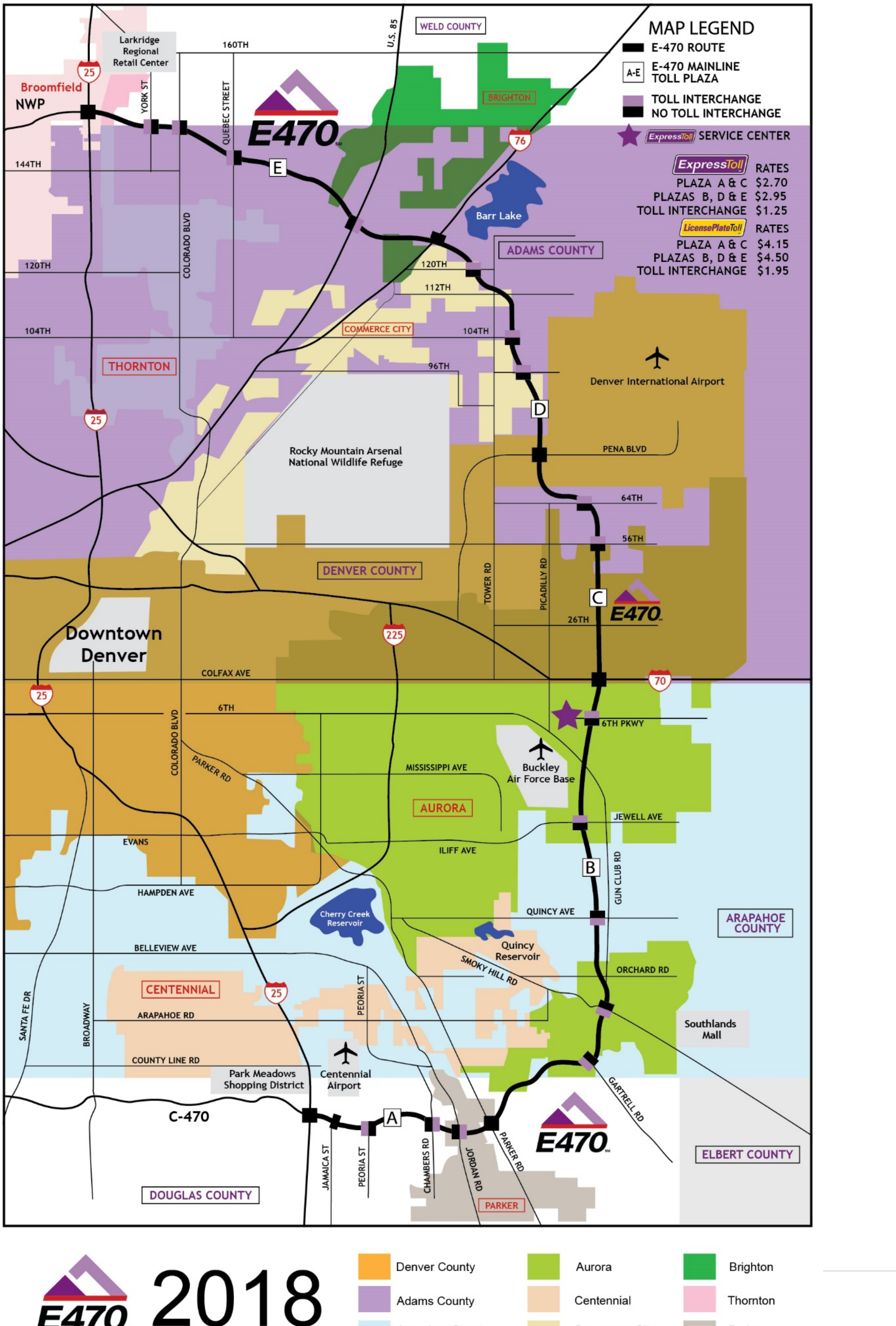
E470 Public Highway Authority

E-470 PUBLIC HIGHWAY AUTHORITY

2018 BASIC FINANCIAL STATEMENTS

DECEMBER 31, 2018 & 2017

(WITH INDEPENDENT AUDITORS' REPORT THEREON)



MAP LEGEND
E-470 ROUTE
A-E
E-470 MAINLINE TOLL PLAZA
TOLL INTERCHANGE
NO TOLL INTERCHANGE
ExpressToll SERVICE CENTER
ExpressToll RATES
PLAZA A & C $2.70
PLAZAS B, D & E $2.95
TOLL INTERCHANGE $1.25
LicensePlateToll RATES
PLAZA A & C $4.15
PLAZAS B, D & E $4.50
TOLL INTERCHANGE $1.95
E470
WELD COUNTY
BRIGHTON
ADAMS COUNTY
THORNTON
COMMERCE CITY
DENVER COUNTY
AURORA
ARAPAHOE COUNTY
CENTENNIAL
DOUGLAS COUNTY
PARKER
ELBERT COUNTY
Broomfield
NWP
Larkridge Regional Retail Center
160TH
144TH
120TH
112TH
104TH
96TH
PENA BLVD
64TH
56TH
26TH
COLFAX AVE
6TH
6TH PKWY
MISSISSIPPI AVE
JEWELL AVE
EVANS
ILIFF AVE
HAMPDEN AVE
QUINCY AVE
BELLEVIEW AVE
ORCHARD RD
ARAPAHOE RD
COUNTY LINE RD
C-470
U.S. 85
YORK ST
QUEBEC STREET
COLORADO BLVD
TOWER RD
PICADILLY RD
GUN CLUB RD
PARKER RD
SMOKY HILL RD
GARTRELL RD
SANTA FE DR
BROADWAY
PEORIA ST
JAMAICA ST
CHAMBERS RD
JORDAN RD
25
76
225
70
Barr Lake
Denver International Airport
Rocky Mountain Arsenal National Wildlife Refuge
Downtown Denver
Buckley Air Force Base
Cherry Creek Reservoir
Quincy Reservoir
Southlands Mall
Park Meadows Shopping District
Centennial Airport
A
B
C
D
E
2018
Denver County
Adams County
Arapahoe County
Aurora
Centennial
Commerce City
Brighton
Thornton
Parker

E-470 PUBLIC HIGHWAY AUTHORITY

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E-470 PUBLIC HIGHWAY AUTHORITY

Management's Discussion and Analysis

December 31, 2018 and 2017

(Unaudited)

The following is management's discussion and analysis of the financial performance and activity of the E-470 Public Highway Authority (the Authority or E-470) and is designed to provide an introduction and overview that may be used to interpret the basic financial statements as of and for the years ended December 31, 2018 and 2017. This discussion has been prepared by management covering complete data for a three-year period and should be read in conjunction with the basic financial statements and notes thereto, which immediately follow this section.

Authority Overview

E-470 is a toll road that forms a semicircular beltway along the eastern perimeter of the Denver metropolitan area. The 75 mile-per-hour toll road extends 47 miles from State Highway C-470 at I-25, to I-25 at Northwest Parkway, a toll road managed by a separate highway authority. The toll road travels through three counties and five municipalities and provides easy access to Denver International Airport.

The toll road has been financed, constructed, operated, and governed by the Authority, which is a body corporate and political subdivision of the State of Colorado, established in January 1988 with all the powers, duties, and privileges permitted by the Public Highway Authority Law of the State, part 5 of article 4 of title 43, Colorado Revised Statutes, as amended (Public Highway Act). Under the Public Highway Act, the Authority has the power without voter approval, unless limited by the contract creating such authority, to construct, finance, operate, or maintain beltways and other transportation improvements; take private property by condemnation; establish and collect tolls on any highway provided by the Authority; establish and collect a highway expansion fee from persons developing property within the boundaries of the Authority; and issue bonds and pledge its revenue to payment of bonds along with other powers as specified within the Public Highway Act.

The toll road was constructed and opened in segments from 1991 to 2003. Segment I of the toll road, I-25 South to Parker Road, was opened to traffic in June 1991. The northern portion of Segment II, 56th Avenue to 120th Avenue, and the southern portion of Segment III, Parker Road to Smoky Hill Road, opened to traffic in July 1998. In May 1999, the remaining portions of Segments II and III, Smoky Hill Road to 56th Avenue, were opened to link the already operational north and south sections of the E-470 toll road. Segment IV, the final segment of the E-470 toll road, was opened in two sections. The first, from 120th Avenue to U.S. Highway 85, opened in August 2002; the second, from U.S. Highway 85 to I-25 North, opened in January 2003. The four-lane toll road (with five miles consisting of six lanes) has been designed to accommodate future widening up to eight lanes and to allow for the addition of continuous recreation paths and future median mass transit.

The Authority consists of eight member jurisdictions, each of which has an elected official representative that sits on the Authority's board of directors as voting members (the board): Adams, Arapahoe, and Douglas counties, and the municipalities of Aurora, Brighton, Commerce City, Parker, and Thornton. The Authority also has nine nonvoting members including the cities of Arvada, Lone Tree, and Greeley, City and County of Broomfield, Weld County, Denver Regional Council of Governments (DRCOG), Regional Transportation District (RTD), Regional Air Quality Council (RAQC), and the Colorado Department of Transportation (CDOT). Appointments to the board are made annually for both voting and nonvoting members, and are made by the individual jurisdictions.

The Authority provides two options for toll payments – ExpressToll and License Plate Toll (LPT).

ExpressToll is a state-of-the-art electronic system that allows drivers to pass through mainline tolling points and ramps on any Colorado toll facility without stopping or slowing below the prevailing speed limit. ExpressToll customers paid 35% less in tolls on E-470 in 2018 compared to License Plate Toll customers due to a toll differential. ExpressToll currently operates with either the older Title 21 hardcase transponder, the windshield 6c sticker tag, or the newer switchable HOV transponder that allows tolls to be automatically deducted from a customer's prepaid account as the customer uses a toll facility.

LPT customers are all customers that do not have an ExpressToll account. LPT customers are generally billed on a monthly basis for all accumulated toll transactions through any tolling points (mainline and ramps) on any Colorado toll facility (except Northwest Parkway). Cameras photograph the front and rear license plates of all vehicles and, if the vehicle does not have an ExpressToll account, a statement (bill) is sent to the registered owner of the vehicle. No advance registration is required. LPT customers may also set up a managed account online to prepay tolls, leave a credit card on file, receive statements via email, or pay for tolls prior to a statement being generated.

The Authority provides various back office tolling services to the Northwest Parkway (NWP); High Performance Transportation Enterprise (HPTE), a division of CDOT; and HPTE's concessionaire, Plenary Roads Denver, LLC (Plenary) for their tolled facilities in Colorado. There are managed lane facilities on US-36, I-25 Central, I-70 Mountain Express Lane (MEXL), and I-25 North Segment 2. E-470's tolling back office, labeled and marketed with the ExpressToll+ logo, serves all customers on managed toll facilities (HOV and Express lanes), allowing customers to manage only one account and ensuring a seamless customer experience, regardless of which Colorado toll facility is used. The Authority has provided several other services to HPTE and Plenary, including, but not limited to, integrating and installing toll equipment, toll collection system enhancements and modifications, and system testing and go-live support. The Authority has been providing back office services to CDOT since 2006 and to the Northwest Parkway since 2004.

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2018 Financial Highlights

- Transactions on the E-470 toll road experienced growth of 5% from 83.2 million transactions in 2017 to 87.3 million transactions in 2018. This was the highest annual traffic on record and was the ninth straight year of traffic growth for the Authority. Traffic grew 4% from 80.0 million transactions in 2016 to 83.2 million transactions in 2017.
- Operating revenues increased 9.5% from 2017 to 2018 improving from $228.2 million to $249.9 million, the highest annual revenue on record. Operating revenues grew from $206.2 million to $228.2 million, or 11% from 2016 to 2017, respectively.
- Operating expenses, before depreciation, increased 4% from 2017 to 2018 from $50.6 million to $52.8 million. Operating expenses, before depreciation, increased 5% from 2016 to 2017 from $48.2 million to $50.6 million.
- Debt service coverage, a critical measurement of the Authority's annual operations, for fiscal year 2018 was 2.11 versus an original budgeted ratio of 1.94. Debt service coverage for fiscal year 2017 was 2.12 versus a budgeted 1.75 and was 1.91 versus a budgeted 1.60 in 2016.
- The Authority received rating upgrades from both S&P and Moody's to A and A2, respectively. The Authority received a rating affirmation of BBB+ from Fitch.
- During 2018, the Authority began design work on the significant multiyear widening project to expand E-470 from two lanes to three lanes in each direction from Quincy Avenue to I-70. Construction on this project is planned to begin in 2019 and be completed in 2020 with a total project cost of $98.3 million. The Capital Improvements Fund of the General Surplus account will fund all costs of the widening project along with the Authority's entire five-year capital budget program.
- The Authority's board of directors voted in April 2018 to discontinue collection of the $10 annual vehicle registration fee (VRF) assessed on certain areas within Adams, Arapahoe, and Douglas counties, as the VRF debt matured and was fully paid off on September 1, 2018. The fees were effectively discontinued as of August 1, 2018 in order to be fully eliminated prior to implementation of the new Colorado Department of Revenue system (DRIVES).
- E-470's back office toll collection system processed approximately 27.7 million and 24.1 million tolled transactions on other roadways in 2018 and 2017, respectively. There were no new toll facilities opened in 2018 for which E-470 provides back office services. Toll collection or system costs originally incurred by the Authority for services provided to other entities are charged to the applicable entity (CDOT, HPTE, Plenary, or NWP). Tolling services revenues to recover these costs in 2018 and 2017 totaled approximately $7.1 million and $4.9 million, respectively.
- The Authority's board of directors voted in November 2017 to adjust the Authority's future toll rate structure for the years 2018 to 2020 by modifying the LPT premium to over 50%, lowering toll rates at toll plaza C, and freezing the remaining ExpressToll rates at 2017 levels. The Authority conducted a toll rate study in 2017, and based on the results of the study, elected to modify the toll rates to incentivize customers to become ExpressToll customers, to recover the higher costs of processing LPT transactions, and to demonstrate appreciation to the existing ExpressToll customers by not raising tolls each year as with the previous toll rate policy. Based on a toll sensitivity analysis at toll plaza C, the board also elected to reduce the rates at toll plaza C to match the rates of toll plaza A. The forecasts with the new toll rate structure support the Authority's debt management plan to achieve level debt service in the near future and projected

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capital funding needs, and the toll rate structure is subject to annual board affirmation. The Authority's previous toll rate policy from 2010 to 2017 was an annual incremental increase of the ExpressToll rate equating to $0.25 over a three-year period, with the LPT toll rate recalculated at a 25% premium due to additional toll collection cost for LPT customers.

The 2018 ExpressToll rate for a two-axle vehicle was $2.70 at mainline toll plazas A and C and $2.95 at mainline toll plazas B, D, and E. ExpressToll rates increase incrementally at the mainline toll plazas if the vehicle has more than two axles. All ramp tolling points charged a rate of $1.25 (regardless of axle count) for ExpressToll accounts. The 2018 LPT toll rate for a two-axle vehicle was $4.15 at mainline toll plazas A and C and $4.50 at mainline toll plazas B, D, and E. LPT toll rates also increase incrementally at the mainline toll plazas if the vehicle has more than two axles. All ramp tolling points charged a rate of $1.95 (regardless of axles) for LPT accounts.

Summary of Operations

The Authority's operating revenues, which include toll revenues, other toll-related fees, and tolling services revenues, for 2018 were $249.9 million, a 9.5% increase over the $228.2 million in 2017. Toll revenues, net of related bad debts, were $233.1 million and $213.8 million of total operating revenues in 2018 and 2017, respectively. This increase is primarily due to increased overall toll transactions of 5% from 2017 and an incremental toll increase for LPT customers beginning on January 1, 2018 for all tolling points. Toll revenues, net of related bad debts, for fiscal year 2018 were $10.5 million above the $222.6 million 2018 operating budget. Traffic on E-470 during 2018 combined for 87.3 million transactions, with approximately 73% of the corresponding toll revenues coming from ExpressToll accounts. Operating revenues for 2017 were $228.2 million, an 11% increase over the $206.2 million in 2016. This increase is primarily due to increased overall toll transactions of 4% from 2016 and an incremental toll increase beginning on January 1, 2017 for all tolling points. Operating revenues for 2016 were $206.2 million, a 13% increase over 2015, which was also due to increased overall toll transactions and an incremental toll increase beginning on January 1, 2016.

Total operating expenses, before depreciation, for 2018 were $52.8 million, a 4% increase over the $50.6 million in 2017. The increase is primarily due to higher toll collection costs from the 5% increase in E-470 toll transaction volume in 2018, coupled with a 15% increase in tolled transactions incurred on other Colorado toll facilities. Costs incurred for other toll facilities are recovered and recorded as tolling services revenue. Costs such as call center and administrative law court labor, printing and postage on bills and notices, registered vehicle owner information retrieval, credit card fees, and law enforcement, offset by a decrease in image processing labor, accounted for $1.7 million of the overall $2.2 million increase from prior year. There were no other individually significant fluctuations. Total operating expenses, before depreciation, for 2017 were $50.6 million, a 5% increase over the $48.2 million in 2016. The increase is primarily due to higher toll collection costs from the 4% increase in E-470 toll transaction volume in 2017, coupled with a 31% increase in tolled transactions incurred on other Colorado toll facilities. Costs incurred for other toll facilities are recovered and recorded as tolling services revenue. Costs such as call center and administrative law court labor, image processing labor, printing and postage on bills and notices, registered vehicle owner information retrieval, credit card fees, toll rate study, software licensing, IT technical support services, and bridge rail replacement, offset by a decrease in E 470 pavement repairs, accounted for $2.1 million of the overall $2.4 million increase from prior year. There were no other individually significant fluctuations.

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Senior Revenue Bond principal and interest payments from the senior debt service fund during 2018 and 2017 were $101.7 million and $95.2 million, respectively, on the Series 1997, 2000, 2004, 2007, 2010, 2014, 2015, and 2017 bonds, and includes the interest rate swap differentials. In 2018 and 2017, approximately $1.5 million and $2.5 million in principal and interest was due and separately paid on the Series 2009 Vehicle Registration Fee (VRF) bonds, respectively. In 2018, all principal and interest was paid from the VRF Bonds Debt Service account which was funded from current year VRF revenues as specified in the Master and Supplemental Bond Resolutions (the Bond Resolutions). In 2017 approximately $1.4 million was funded from the restricted VRF account, and approximately $1.1 million was paid from the VRF Bonds Debt Service account which was funded from current year VRF revenues as specified in the Bond Resolutions. Debt service coverage for 2018 was 2.11, compared to 2.12 in 2017 and 1.91 in 2016. The Bond Resolutions require producing net revenues of at least 1.30 times the aggregate senior debt service due for the year.

Overview of Basic Financial Statements

The Authority only engages in business-type activities. These activities are intended to recover all related costs through user fee charges (tolls) to external customers for services provided. The Authority reports its business-type activities in a single enterprise fund, meaning that its activities are operated and reported like a private-sector business. The Authority’s basic financial statements include comparative statements of net position; statements of revenues, expenses, and changes in net position; and the statements of cash flows. Also included are the notes to the basic financial statements that provide more detailed information. These basic financial statements are prepared in accordance with accounting principles generally accepted in the United States of America as promulgated by the Governmental Accounting Standards Board (GASB).

The Authority’s net position comprises the following components:

- *Net investment in capital assets* – Consists of the Authority’s investment in capital assets (e.g., land, buildings, equipment, and infrastructure), net of accumulated depreciation, and deferred outflows of resources, reduced by the outstanding balances of bonds that are attributable to the acquisition, construction, or improvement of those assets. The Authority uses these capital assets to provide services to the public; consequently, these assets are not available for future spending.
- *Restricted for debt service* – Represents resources that are subject to external restrictions on how they may be used, and consists of restricted assets reduced by restricted liabilities whereby these restricted liabilities will generally be liquidated with the restricted assets reported.
- *Unrestricted* – Represents resources that may be used to meet the Authority’s ongoing obligations to the public and creditors, and are not included in the determination of net investment in capital assets or restricted for debt service components of net position.

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Financial Results and Analysis

Summary of Net Position

	2018	2017	2016
Current assets:			
Current unrestricted assets	$ 227,185,589	201,154,684	173,713,062
Current restricted assets	60,908,939	58,604,634	53,800,534
Total current assets	288,094,528	259,759,318	227,513,596
Noncurrent assets:			
Capital assets, net of accumulated depreciation	587,620,002	618,593,181	594,941,616
Other noncurrent assets	266,027,527	200,102,207	194,651,266
Total noncurrent assets	853,647,529	818,695,388	789,592,882
Total assets	1,141,742,057	1,078,454,706	1,017,106,478
Deferred outflows of resources	$ 68,823,204	78,298,009	88,443,295
Total assets and deferred outflows of resources	$ 1,210,565,261	1,156,752,715	1,105,549,773
Current liabilities:			
Current liabilities payable from unrestricted assets	$ 42,610,193	42,409,279	35,345,984
Current liabilities payable from restricted assets	98,888,765	92,487,793	85,673,375
Total current liabilities	141,498,958	134,897,072	121,019,359
Noncurrent liabilities	1,408,119,215	1,441,468,553	1,468,762,891
Total liabilities	1,549,618,173	1,576,365,625	1,589,782,250
Total net position	(339,052,912)	(419,612,910)	(484,232,477)
Total liabilities and net position	$ 1,210,565,261	1,156,752,715	1,105,549,773

The largest portion of the Authority's assets is noncurrent. Approximately 51% and 57% of the total assets are capital assets (e.g., infrastructure, buildings, equipment, and other), net of accumulated depreciation as of December 31, 2018 and 2017, respectively. The Authority uses these capital assets to provide services, and consequently, these assets are not available to liquidate liabilities or for other future spending. The acquisition of capital assets was primarily financed from revenue bond proceeds, with more recent capital assets financed with unrestricted funds. Noncurrent bonds payable was approximately 97% of total noncurrent liabilities in 2018 and 2017, respectively. Total current liabilities were $141.5 million and $134.9 million at the end of 2018 and 2017, respectively. Of the total current liabilities, $99.1 million (70%) and $92.7 million (69%) for 2018 and 2017, respectively, were current bonds payable, current notes payable, and related accrued interest payable. These liabilities are to be paid from current assets and the subsequent year's operating and nonoperating revenue as allowed under the Bond Resolutions.

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Capital Assets

Total capital assets (gross), including construction in progress, increased from $1,197 million in 2017 to $1,206 million in 2018. Accumulated depreciation reduced the year-end capital asset balances to $587.6 million in 2018 and $618.6 million in 2017. During 2018, the Authority expended approximately $10.6 million on capital projects and successfully completed capital projects totaling $10.5 million, which were closed from construction in progress to their respective capital asset accounts. The major projects completed include the remaining wrap-up work related to the multiyear widening project from Parker Road to Quincy Avenue, upgrades to fire sprinklers and computer room air conditioning units, and various enhancements to the Authority's toll collection system and technical environment. During 2017, the Authority expended approximately $62.7 million on capital projects and successfully completed capital projects totaling $87.4 million when including completed multiyear projects, which were closed from construction in progress to their respective capital asset accounts. The major projects completed include the remaining sections of the multiyear widening project, comprising one additional southbound lane from Quincy Avenue to Gartrell Road and one additional northbound lane from Parker Road to Quincy Avenue, a parking lot expansion at the Authority's headquarters building, new variable message signs, and various enhancements to the Authority's toll collection system and technical environment. During 2016, the Authority expended approximately $40.0 million on capital projects and successfully completed capital projects totaling $14.1 million, which were closed from construction in progress to their respective capital asset accounts. The major projects completed include a four-mile section of the widening project comprising one

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southbound lane from Gartrell Road to Parker Road, fiber upgrades, new variable message signs, and various enhancements to the Authority's toll collection system and technical environment.

Summary of Revenue, Expenses, and Changes in Net Position

		2018	2017	2016
Operating revenues	$	249,856,733	228,211,743	206,216,071
Operating expenses before depreciation		(52,765,319)	(50,592,826)	(48,229,024)
Depreciation		(41,395,965)	(37,831,366)	(36,298,284)
Operating income		155,695,449	139,787,551	121,688,763
Nonoperating revenues (expenses):				
Vehicle registration fees		5,310,264	10,510,715	10,275,305
Interest expenses		(92,788,811)	(96,378,233)	(95,196,983)
Investment revenues (expenses)		14,027,150	5,978,982	7,264,910
Other income		1,338,546	4,720,552	4,254,486
Total nonoperating expenses		(72,112,851)	(75,167,984)	(73,402,282)
Loss before intergovernmental expense		83,582,598	64,619,567	48,286,481
Intergovernmental expense		(3,022,600)	—	—
Change in net position		80,559,998	64,619,567	48,286,481
Net position, beginning of year		(419,612,910)	(484,232,477)	(532,518,958)
Net position, end of year	$	(339,052,912)	(419,612,910)	(484,232,477)

Operating revenues (which include tolls, other toll-related fees, and tolling services revenues) in 2018 and 2017 were $249.9 million and $228.2 million, respectively, an increase of 9.5% over 2017. Operating expenses before depreciation increased by $2.2 million to $52.8 million in 2018. Depreciation expense increased by $3.6 million to $41.4 million in 2018. Overall, operating income increased by $15.9 million from 2017 to $155.7 million. Total net nonoperating expenses decreased by $3.1 million to $72.1 million in 2018, which was attributed to changes in interest rates and the corresponding effect on the change in fair value of derivative instruments and investments of $4.6 million, an increase in interest earned on investments of $3.4 million, a decrease in interest expenses of $3.6 million, offset by a decrease in vehicle registration fees and other income of $8.5 million. The overall increase in net position was $80.6 million in 2018, which is $16.0 million more than the increase in net position of $64.6 million in 2017.

Operating revenues in 2017 and 2016 were $228.2 million and $206.2 million, respectively, an increase of 11% over 2016. Operating expenses before depreciation increased by $2.4 million to $50.6 million in 2017. Depreciation expense in 2017 remained consistent with 2016. Overall, operating income increased by $18.1 million from 2016 to $139.8 million. Total net nonoperating expenses increased by $1.8 million to $75.2 million in 2017, which was attributed to changes in interest rates and the corresponding effect on the

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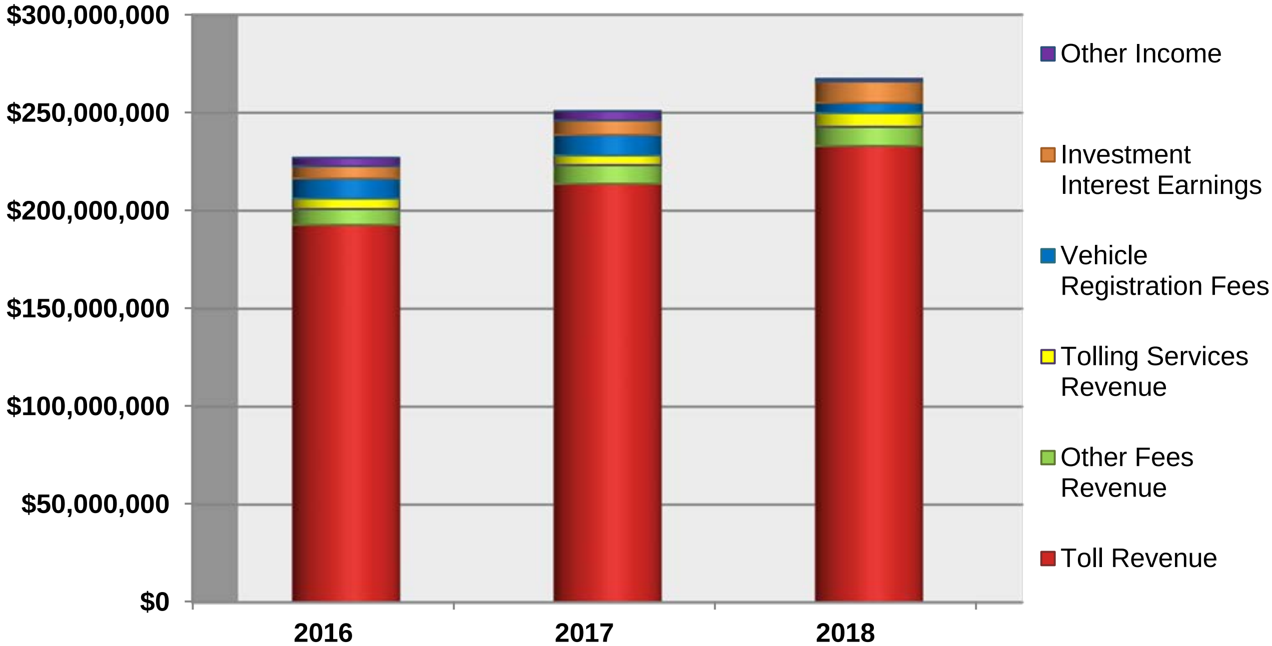
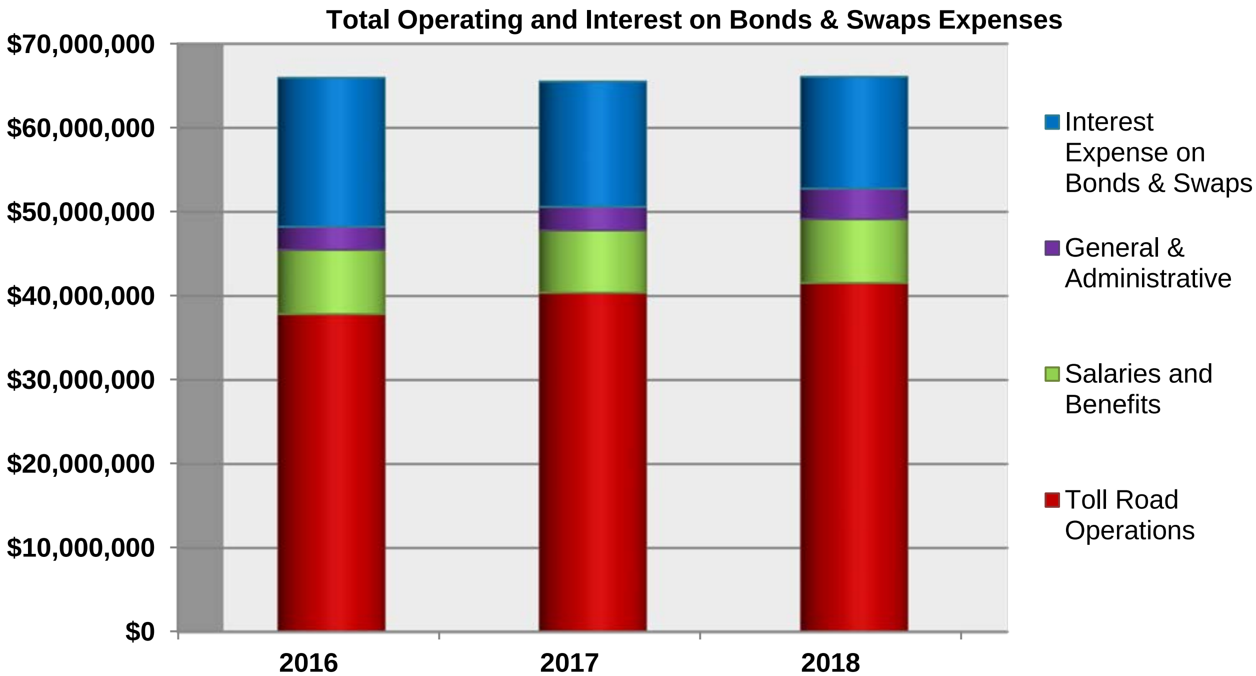
change in fair value of derivative instruments and investments of $2.4 million, an increase in interest expenses of $1.2 million, offset by an increase in investment income, vehicle registration fees, and other income of $1.8 million. The overall increase in net position was $64.6 million in 2017, which was $16.3 million more than the increase in net position of $48.3 million in 2016.

Total Operating and Nonoperating Revenues



Operating and nonoperating revenues included in the chart above for 2018, 2017, and 2016 were $267.3 million, $250.9 million, and $227.0 million, respectively.



Total operating expenses, before depreciation and including nonoperating interest expense on bonds and interest rate swaps for 2018 and 2017, were $66.1 million and $65.5 million, respectively. Toll road operations expenses increased by $1.1 million to $41.5 million in 2018 versus $40.4 million in 2017. The increase is primarily due to higher toll collection costs from the 5% increase in E-470 toll transaction volume in 2018, coupled with a 15% increase in tolled transactions incurred on other Colorado toll facilities. Costs incurred for other toll facilities are recovered and recorded as tolling services revenue. These increased costs include call center and administrative law court labor, printing and postage on bills and notices, registered vehicle owner information retrieval, credit card fees, and law enforcement, offset by a decrease in image processing labor. Nonoperating interest expenses on bonds and swaps decreased from $14.9 million in 2017 to $13.3 million in 2018 due primarily to interest savings resulting from scheduled principal payments made in September 2017 on various bond series.

Total operating expenses, before depreciation and including nonoperating interest expense on bonds and interest rate swaps for 2017 and 2016, were $65.5 million and $66.0 million, respectively. Toll road operations expenses increased by $2.6 million to $40.4 million in 2017 versus $37.8 million in 2016. The increase is primarily due to higher toll collection costs from the 4% increase in E-470 toll transaction volume in 2017, coupled with a 31% increase in tolled transactions incurred on other Colorado toll facilities. Costs incurred for other toll facilities are recovered and recorded as tolling services revenue. These increased costs include call center and administrative law court labor, image processing labor, printing and postage on bills and notices, registered vehicle owner information retrieval, credit card fees, toll rate study, software licensing, IT technical

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support services, and bridge rail replacement, offset by a decrease in E-470 pavement repairs. Nonoperating interest expenses on bonds and swaps decreased from $17.7 million in 2016 to $14.9 million in 2017 due primarily to interest savings resulting from the cash defeasance of approximately $11.2 million in principal for the 2006A bonds in September 2016, as well as interest savings resulting from scheduled principal payments on various bond series made in September 2016.

Debt Administration and Debt Service

In 2018, principal and interest paid on Senior Bond debt from restricted debt service totaling $101.7 million consisted of $44.8 million in Series 1997 bonds, $31.1 million in Series 2000 bonds, $12.8 million in Series 2007 bonds, $4.3 million in Series 2010 bonds, $2.0 million in Series 2015 bonds, $3.2 million in Series 2017 bonds, and $3.5 million on the two interest rate swaps settlement differential. The Authority also paid approximately $1.5 million on the Series 2009 VRF bonds from the VRF Bonds Debt Service account, which was funded from current year VRF revenues as specified in the Bond Resolutions.

In 2017, principal and interest paid on Senior Bond debt from restricted debt service totaling $95.2 million consisted of $44.8 million in Series 1997 bonds, $15.8 million in Series 2004 bonds, $21.3 million in Series 2007 bonds, $4.4 million in Series 2010 bonds, $0.3 million in Series 2014 bonds, $2.5 million in Series 2015 bonds, $1.8 million in Series 2017 bonds, and $4.3 million on the two interest rate swaps settlement differential. The Authority also paid approximately $2.5 million on the Series 2009 VRF bonds of which approximately $1.4 million was funded from the from the restricted VRF account and approximately $1.1 million was paid from the VRF Bonds Debt Service account, which was funded from current year VRF revenues as specified in the Bond Resolutions.

In 2016, principal and interest paid on Senior Bond debt from restricted debt service totaling $97.2 million consisted of $44.8 million in Series 1997 bonds, $8.2 million in Series 2004 bonds, $6.0 million in Series 2006 bonds, $24.1 million in Series 2007 bonds, $4.4 million in Series 2010 bonds, $1.1 million in Series 2014 bonds, $3.8 million in Series 2015 bonds, and $4.8 million on the interest rate swaps settlement differential. The Authority also paid approximately $2.5 million on the Series 2009 VRF bonds from the restricted VRF account and early defeased the remaining $11.2 million of 2006A bonds using unrestricted funds.

(C o n t i n u e d)

Bonds payable includes current interest bonds (CIB), capital appreciation bonds (CAB), VRF bonds, and LIBOR index bonds, consisting of both new issue and refunded bonds of the Authority.

E-470 Revenue Bonds Outstanding Principal

	2018	2017
Series 1997 B Capital Appreciation	$ 287,937,434	315,932,538
Series 2000 B Capital Appreciation	455,968,493	458,464,890
Series 2004 A Capital Appreciation	161,484,709	153,106,052
Series 2004 B Capital Appreciation	155,174,007	146,717,612
Series 2006 B Capital Appreciation	105,315,920	100,170,529
Series 2007 A-1 Current Interest	—	3,025,000
Series 2007 B-1 Current Interest	—	3,025,000
Series 2007 C-1 Current Interest	—	3,025,000
Series 2007 D-1 Current Interest	—	3,060,000
Vehicle Registration Fee 2009 Current Interest	—	1,395,000
Series 2010 A Capital Appreciation	38,696,790	36,082,922
Series 2010 C Current Interest	81,655,000	81,655,000
Series 2015 A Current Interest	38,985,000	39,185,000
Series 2017 A LIBOR Notes	72,565,000	72,565,000
Series 2017 B LIBOR Notes	66,075,000	66,075,000
Premiums, net of discounts	852,730	2,000,830
Total	$ 1,464,710,083	1,485,485,373

The Authority actively manages its debt based on the current debt profile and market opportunities as they relate to the overall operating condition of the Authority. Below is a summary of the significant debt management activities in 2018 and 2017:

- In March 2017, the Authority refinanced approximately $138.6 million related to the Series 2007CD-2 and Series 2014A SIFMA Index Term Rate bonds of $66.1 million and $72.5 million, respectively. Both bond series were subject to optional redemption on or after March 1, 2017 with a mandatory tender and remarketing date of September 1, 2017, and the Authority exercised the early redemption option to take advantage of lower interest rates and debt service savings. The successful refunding resulted in the Series 2017A and 2017B LIBOR Index Term Rate bonds with no change to the principal amounts or maturities. The Series 2014A bonds of $72.5 million paid interest each month based on the previous months' final calculated SIFMA market pricing plus 118 basis points (1.18%), which was refunded with the new Series 2017A LIBOR Index bonds plus 90 basis points (0.90%) over a two-year term, saving the Authority over 0.28% in monthly interest costs. The Series 2007CD-2 bonds of $66.1 million paid interest each month based on the previous months' final calculated SIFMA market pricing plus 175 basis points (1.75%), which was refunded with the new Series 2017B LIBOR Index bonds plus 105 basis points (1.05%) over a four-year term, saving the Authority over 0.70% in monthly interest costs. The Authority switched from a SIFMA index to 67% of one-month LIBOR to match the associated index of the interest rate swaps and remove basis risk.

(Continued)

- The provisions of GASB Statement No. 53, *Accounting and Financial Reporting for Derivative Instruments*, are applicable to the Authority due to the two remaining 2007 pay-fixed interest rate swaps. The notional amounts on the two swaps in total correspond with specific maturities of the Series 2017 bonds. The swaps were determined to be investment derivatives as of December 31, 2018 and 2017 with a net liability fair value of $37.8 million and $43.5 million, respectively, and derivative instruments investment gain of $5.7 million in 2018 and $1.4 million in 2017. The Authority values the interest rate swap derivatives at fair value in accordance with GASB Statement No. 72, *Fair Value Measurement and Application.*

As of December 31, 2018, the Authority maintains underlying senior bonds ratings from Moody's, Standard and Poor's, and Fitch. Standard and Poor's and Moody's upgraded the Authority in 2018 in conjunction with their annual surveillance based on the continued financial strength, positive traffic and revenue trends, liquidity, and upcoming debt restructuring opportunities to achieve level annual debt service. Fitch reaffirmed its rating in 2018. All three rating agencies kept the Authority at a stable outlook at December 31, 2018.

Ratings and outlook as of December 31, 2018:

	Rating	Outlook
Rating agency:		
Moody's	A2	Stable
Standard and Poor's	A	Stable
Fitch	BBB+	Stable

Notes Payable

The Authority entered into an intergovernmental agreement with Douglas County in 2003 to receive contributed funds for costs of the Jamaica Road interchange ramp construction. Based on this agreement, the remaining contributed funds as of 2008 of $2.4 million are to be repaid in 10 equal payments (noninterest-bearing) beginning in 2011. The annual payment of $0.24 million is made from unrestricted funds.

	2018	2017	2016
Local member jurisdiction (Douglas County)	$ 481,538	722,308	963,077

Economic Factors

Estimates by the Authority's traffic and revenue consultant are shown against actual toll revenue, net of uncollectible amounts for the fiscal years ended 2018, 2017, and 2016. The Authority has engaged a traffic and revenue consultant to conduct investment-grade traffic and revenue studies and updated reviews over the years based on current economic conditions of surrounding areas and bond refunding transactions. The Authority conducted a toll rate study during 2017, which was finalized and published in January 2018. The 2018 study refined future traffic and revenue forecasts from the previous 2017 update letter by considering the new toll rate structure, actual historical growth, current economic conditions, future transportation forecasts, and development plans for the Authority, local jurisdictions, and the State in the surrounding area. The 2018 forecast figure below is from the toll rate report dated January 2018, while the 2017 forecast figure is from the

2017 update letter, and the 2016 forecast figure is from the previous 2014 full investment grade traffic and revenue study. The toll forecasts may differ from the Authority's budget, and only includes the toll revenue, net of estimated bad debts, and excludes the Authority's other toll-related fees that are included in operating revenues during the reporting period.

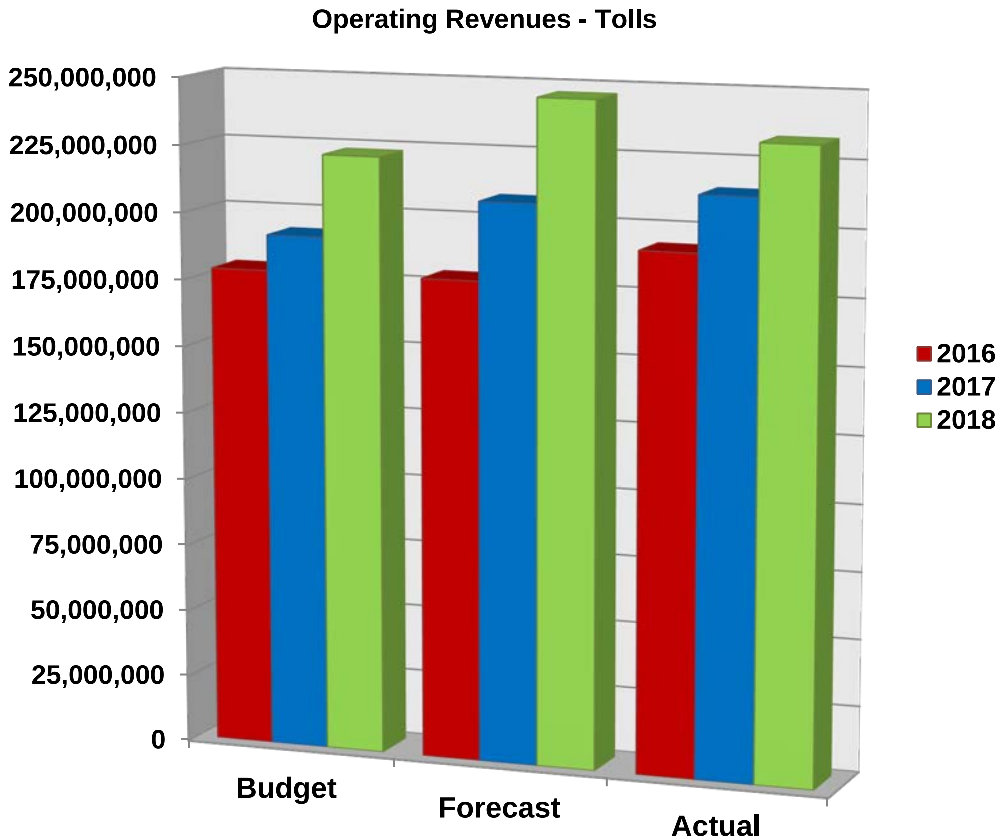
Transactions (Annual Total)

Year	ExpressToll	LPT	Total traffic	Forecast	Variance	Percentage variance
2018	64,198,257	23,140,543	87,338,800	90,836,000	(3,497,200)	(3.85)
2017	59,466,183	23,708,987	83,175,170	84,118,000	(942,830)	(1.12)
2016	55,348,253	24,626,982	79,975,235	73,637,000	6,338,235	8.61

Toll Revenues, Net (Annual Total)

Year	ExpressToll	LPT	Total toll revenue	Forecast	Variance	Percentage variance
2018	171,031,824	62,056,503	233,088,327	246,318,000	(13,229,673)	(5.37)
2017	159,127,687	54,637,962	213,765,649	207,935,000	5,830,649	2.80
2016	141,888,286	50,922,363	192,810,649	178,766,000	14,044,649	7.86

(Continued)



Budget Results

The Authority is required under state law and board resolutions to prepare an annual budget of operating and capital outlays as well as debt service due in the upcoming year. The annual budget is approved by the Authority's board of directors before the budget (calendar) year begins. Appropriations generally do not carry over to future periods, and overall net outlay overages, or budget amendments, require additional approval by the board. The original approved budget by the board is generally considered the final budget. The budget is recorded on the Authority's budget basis and conforms to the Bond Resolutions Revenue Covenant calculation. Refer to the Supplementary Information – Revenue Covenant section for reconciliation to the basic financial statements for operating balances and senior debt service due. Further, toll revenue amounts budgeted by management may differ from the traffic and revenue consultant's forecasts.

The following is a summary of the Authority's 2018 operating budget compared to the actual results, as well as the capital budget compared to the actual results as of and for the year ended December 31, 2018:

	2018 Budget	2018 Results	Variance	Percentage variance
Total revenue	$ 251,587,000	266,108,940	14,521,940	5.8 %
Total operating expenditures	(54,745,700)	(49,809,319)	4,936,381	(9.0)
Net revenue	196,841,300	216,299,621	19,458,321	9.9
Less VRF bonds debt service due	—	(1,464,750)	(1,464,750)	100.0
Senior debt service due	101,684,600	101,729,596	44,996	—
Debt service coverage ratio	1.94	2.11	0.17	8.8 %
Capital and renewal and replacement costs	$ 48,260,800	18,759,305	(29,501,495)	(61.1)%

During 2018, the original budget was the final approved budget and total budgeted operating revenues ended $14.5 million, or 6%, over budget. This is primarily due to net toll revenues and toll fees ending over budget by $10.5 million and $1.7 million, respectively, from the higher than budgeted traffic during the year, as the 2018 budget was based on the CDM Smith 2017 bring down letter, coupled with the new LPT toll rates implemented on January 1, 2018. Total operating expenses ended $4.9 million, or 9%, under budget, which is mainly attributable to lower than expected snow removal costs due to a drier than average winter and lower than budgeted customer service and image review labor costs. These final budget results led to a debt service coverage ratio of 2.11, which is over the original budgeted ratio of 1.94 for 2018.

Capital and renewal and replacement costs, which are excluded from the debt service coverage ratio as specified in the Bond Resolutions and fully paid from unrestricted funds, were $29.5 million, or 61%, under budget. This variance is due to overall capital projects coming in under budget for items, such as roadway and facility maintenance; technology upgrades and enhancements; and construction projects, such as interchange improvements and pavement resurfacing, where budgeted projects were either completed under budget or postponed until future years and will be grouped with larger projects to achieve economies of scale.

The following is a summary of the Authority's 2017 operating budget compared to the actual results, as well as the capital budget compared to the actual results as of and for the year ended December 31, 2017:

	2017 Budget	2017 Results	Variance	Percentage variance
Total revenue	$ 220,453,000	249,565,793	29,112,793	13.2 %
Total operating expenditures	(51,786,750)	(46,165,326)	5,621,424	(10.9)
Net revenue	168,666,250	203,400,467	34,734,217	20.6
Less VRF bonds debt service due	—	(1,066,228)	(1,066,228)	100.0
Senior debt service due	96,380,350	95,246,810	(1,133,540)	(1.2)
Debt service coverage ratio	1.75	2.12	0.37	21.1 %
Capital and renewal and replacement costs	$ 79,064,500	66,316,461	(12,748,039)	(16.1)%

During 2017, the original budget was the final approved budget and total budgeted operating revenues ended $29.1 million, or 13%, over budget. This is primarily due to net toll revenues and toll fees ending over budget by $21.7 million and $2.7 million, respectively, from the higher than budgeted traffic during the year. Total operating expenses ended $5.6 million, or 11%, under budget, which is mainly attributable to lower than expected snow removal costs due to a drier than average winter. These final budget results led to a debt service coverage ratio of 2.12, which is over the original budgeted ratio of 1.75 for 2017.

Capital and renewal and replacement costs, which are excluded from the debt service coverage ratio as specified in the Bond Resolutions and fully paid from unrestricted funds, were $12.7 million, or 16%, under budget. While the large road widening project finished on budget, this variance is due to other capital projects coming in under budget for items, such as roadway and facility maintenance, and technology upgrades and enhancements.

Reserves Management

Pursuant to the Bond Resolutions, the Authority is required to maintain reserve accounts, including the Senior Bonds Debt Service Reserve Fund and an Operating Reserve Fund. In addition, a General Surplus account is maintained in accordance with the Bond Resolutions. The General Surplus account is unrestricted and is currently divided into three subaccount funds for administrative purposes: the Senior Bonds Defeasance Fund, the Capital Improvements Fund, and the Rainy Day Fund. At December 31, 2018 and 2017, all required and restricted reserves were fully funded as specified by the Bond Resolutions.

Tolling Services Agreements

The Authority entered into a tolling services agreement with HPTE for tolled facilities on I-25 North and I-70 Mountain Express Lanes, a tolling services agreement with HPTE and its concessionaire, Plenary, for tolled facilities on US-36 and I-25 Central, as well as agreements with NWP and its underlying public highway authority to provide certain electronic toll collection back office services. Back office services occur after toll commencement on each toll facility and include major items, such as maintenance of the toll system and website, toll billing and collections, license plate image review, and provision of the customer service center. These agreements provide economies of scale for toll collection costs and seamless interoperability for customers on Colorado toll facilities, allowing them to maintain and manage one toll account. As part of the agreements, the Authority collects electronic tolls for the other tolling facilities and transfers the funds daily to NWP (ExpressToll only) and to HPTE/Plenary (ExpressToll and LPT) for transactions that occurred and were collected on their toll facilities. The tolls collected and remitted on behalf of other entities are not included in the basic financial statements of the Authority. Costs incurred are recovered by tolling services revenues charged to NWP, HPTE, and Plenary for their share of toll collection costs that are included in operating expenses on the statements of revenues, expenses, and changes in net position. These revenues totaled $7.1 million and $4.9 million in 2018 and 2017, respectively.

Future Management Plans

In 2018, the Authority began design work on the next projected segment for widening from two lanes to three lanes in each direction between Quincy Avenue and I-70. This multiyear project is planned to begin construction in 2019 and be completed in 2020 with a total project cost of $98.3 million to be funded from the Authority's Capital Improvements Fund of the General Surplus account. Other major projects planned in 2019 include various interchange improvements totaling $11 million with the largest portion involving improvements to the Quincy Avenue interchange as well as ramp traffic signal installations at Quincy Avenue and 120th Avenue.

Regarding toll rates, the Authority's board of directors voted in November 2018 to reaffirm 2019 toll rates in accordance with the toll rate policy adopted in 2017. The 2019 ExpressToll rate for a two-axle vehicle is $2.70 at mainline toll plazas A and C; $2.95 at mainline toll plazas B, D, and E; and $1.25 at all ramp tolling points, which remain flat with 2017 and 2018 rates. ExpressToll rates increase incrementally at the mainline toll plazas if the vehicle has more than two axles. The 2019 LPT toll rate for a two-axle vehicle is $4.30 at mainline toll plazas A and C; $4.65 at mainline toll plazas B, D, and E; and $2.05 at all ramp tolling points, which equate to a $0.15 increase at plazas and $0.10 increase at ramps. LPT toll rates also increase incrementally at the mainline toll plazas if the vehicle has more than two axles.

Regarding tolling services, the Authority will continue to provide back office services on other tolled facilities in the State of Colorado for NWP, HPTE, and Plenary. Other future toll facilities scheduled to become operational by HPTE in the next few years include C-470 from I-25 to Wadsworth Boulevard, and I-25 North Segment 3 extending the current managed lanes north from 120th Avenue to E-470/Northwest Parkway. The Authority plans to continue services under the separate agreements for these facilities, including integration and installation of toll equipment, toll collection system enhancements and modifications, system testing, analysis and go-live support, and will begin back office toll collection services when tolling commences.

Regarding debt management, the Authority had a $72.5 million refinancing opportunity related to the 2017A LIBOR Index Term Rate bonds, as this series was subject to optional early redemption on or after March 1, 2019 with a mandatory tender and remarketing date of September 1, 2019. The Authority exercised the early redemption option to take advantage of low interest rates and debt service savings. On March 7, 2019, The Authority successfully refunded the Series 2017A LIBOR Index Term Rate bonds with the Series 2019A LIBOR Index Term Rate bonds totaling approximately $72.5 million at par with no change to the principal amounts or maturities. The Series 2017A bonds of $72.5 million paid interest each month based on the previous period's final calculated LIBOR market pricing plus 90 basis points (0.90%), which was refunded with the new Series 2019A LIBOR Index bonds plus 42 basis points (0.42%) over a two and a half year term (term date of September 1, 2021), saving the Authority over 0.48% in monthly interest costs. In conjunction with the bond transaction in 2018, the Authority received rating affirmations from S&P (A with a positive outlook) and Moody's (A2 with a stable outlook). Fitch did not rate the transaction. Lastly, on February 27, 2019 and related to this transaction, the Authority removed the swap insurance on the two interest rate swaps that have been insured by MBIA – administered by National Public Finance Guarantee (NPFG) since 2007 and paid the swap counterparties a total of $974,000 to terminate the policies. This was done in part due to negotiations with NPFG and based on the insurer rights within the swap and bond documents and will benefit the Authority in the future with greater flexibility for any swap changes.

Contacting E-470's Financial Management

This financial report is designed to provide overview information to the Authority's bondholders, customers, and other interested parties. Should you have any questions about this report, contact the E-470 Public Highway Authority's Director of Finance at 22470 E. 6th Parkway, Suite 100, Aurora, Colorado 80018.

KPMG LLP
Suite 800
1225 17th Street
Denver, CO 80202-5598

Independent Auditors' Report

To the Board of Directors
E-470 Public Highway Authority

We have audited the accompanying financial statements of the business-type activities of the E-470 Public Highway Authority (the Authority), as of and for the years ended December 31, 2018 and 2017, and the related notes to the financial statements, which collectively comprise the Authority's basic financial statements as listed in the table of contents.

Management's Responsibility for the Financial Statements

Management is responsible for the preparation and fair presentation of these financial statements in accordance with U.S. generally accepted accounting principles; this includes the design, implementation, and maintenance of internal control relevant to the preparation and fair presentation of financial statements that are free from material misstatement, whether due to fraud or error.

Auditors' Responsibility

Our responsibility is to express opinions on these financial statements based on our audit. We conducted our audit in accordance with auditing standards generally accepted in the United States of America. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the financial statements are free from material misstatement.

An audit involves performing procedures to obtain audit evidence about the amounts and disclosures in the financial statements. The procedures selected depend on the auditors' judgment, including the assessment of the risks of material misstatement of the financial statements, whether due to fraud or error. In making those risk assessments, the auditor considers internal control relevant to the entity's preparation and fair presentation of the financial statements in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the entity's internal control. Accordingly, we express no such opinion. An audit also includes evaluating the appropriateness of accounting policies used and the reasonableness of significant accounting estimates made by management, as well as evaluating the overall presentation of the financial statements.

We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our audit opinions.

Opinions

In our opinion, the financial statements referred to above present fairly, in all material respects, the respective financial position of the business-type activities of the E-470 Public Highway Authority, as of December 31, 2018 and 2017, and the respective changes in financial position and, where applicable, cash flows thereof for the year then ended in accordance with U.S. generally accepted accounting principles.

Other Matters

Required Supplementary Information

U.S. generally accepted accounting principles require that the management's discussion and analysis on pages 2–20 be presented to supplement the basic financial statements. Such information, although not a part of the basic financial statements, is required by the Governmental Accounting Standards Board who considers it to be an essential part of financial reporting for placing the basic financial statements in an appropriate operational, economic, or historical context. We have applied certain limited procedures to the required supplementary information in accordance with auditing standards generally accepted in the United States of America, which consisted of inquiries of management about the methods of preparing the information and comparing the information for consistency with management's responses to our inquiries, the basic financial statements, and other knowledge we obtained during our audit of the basic financial statements. We do not express an opinion or provide any assurance on the information because the limited procedures do not provide us with sufficient evidence to express an opinion or provide any assurance.

Supplementary and Other Information

Our audit was conducted for the purpose of forming opinions on the financial statements that collectively comprise the Authority's basic financial statements. The accompanying supplementary information relating to the revenue covenant is presented for purposes of additional analysis and is not a required part of the basic financial statements. The accompanying supplementary information relating to the revenue covenant has not been subjected to the auditing procedures applied in the audit of the basic financial statements, and accordingly, we do not express an opinion or provide any assurance on it.

KPMG LLP

Denver, Colorado
April 19, 2019

E-470 PUBLIC HIGHWAY AUTHORITY

Basic Financial Statements

December 31, 2018 and 2017

E-470 PUBLIC HIGHWAY AUTHORITY

Statements of Net Position

December 31, 2018 and 2017

Assets		2018	2017
Current unrestricted assets:			
Cash and cash equivalents	$	70,926,380	64,621,093
Investments		124,199,058	100,481,020
Cash and cash equivalents limited for construction		—	3,207,700
Accrued interest receivable		2,742,180	2,040,168
Accounts receivable, net of allowance for uncollectibles		28,852,021	30,514,403
Notes receivable		178,500	—
Prepaid expenses and other current assets		287,450	290,300
Total current unrestricted assets		227,185,589	201,154,684
Current restricted assets:			
Cash and cash equivalents for debt service		41,628,218	38,149,082
Investments for debt service		19,216,774	20,056,732
Accrued interest receivable		63,947	97,426
Cash and cash equivalents for construction		—	301,394
Total current restricted assets		60,908,939	58,604,634
Total current assets		288,094,528	259,759,318
Noncurrent assets:			
Unrestricted investments		155,707,939	89,045,099
Restricted investments for debt service		96,460,831	97,907,852
Prepaid bond costs and other noncurrent assets		12,037,257	13,149,256
Notes receivable		1,821,500	—
Capital assets, net of accumulated depreciation		587,620,002	618,593,181
Total noncurrent assets		853,647,529	818,695,388
Total assets		1,141,742,057	1,078,454,706
Deferred outflows of resources:			
Loss on refundings of debt		68,823,204	78,298,009
Total assets and deferred outflows of resources	$	1,210,565,261	1,156,752,715

(Continued)

E-470 PUBLIC HIGHWAY AUTHORITY

Statements of Net Position

December 31, 2018 and 2017

Liabilities		2018	2017
Current liabilities payable from unrestricted assets:			
Accounts payable and accrued expenses	$	7,958,177	10,943,927
Unearned toll revenue		34,165,336	27,709,007
Notes payable		240,769	240,769
Intergovernmental liability		—	3,207,700
Derivative instruments – interest rate swaps		245,911	307,876
Total current liabilities payable from unrestricted assets		42,610,193	42,409,279
Current liabilities payable from restricted assets:			
Bonds payable (including accumulated accretion on capital appreciation bonds of $54,021,868 in 2018 and $51,206,639 in 2017)		96,295,000	89,630,000
Accrued interest payable		2,593,765	2,857,793
Total current liabilities payable from restricted assets		98,888,765	92,487,793
Total current liabilities		141,498,958	134,897,072
Noncurrent liabilities:			
Bonds payable (including accumulated accretion on capital appreciation bonds of $690,553,952 in 2018 and $674,573,010 in 2017)		1,368,415,083	1,395,855,373
Notes payable		240,769	481,539
Other restricted noncurrent liabilities		1,878,651	1,896,206
Derivative instruments – interest rate swaps		37,584,712	43,235,435
Total noncurrent liabilities		1,408,119,215	1,441,468,553
Total liabilities		1,549,618,173	1,576,365,625
Net position:			
Net investment in capital assets		43,136,596	43,757,482
Restricted for debt service		3,603,554	3,242,173
Unrestricted deficit		(385,793,062)	(466,612,565)
Total net position		(339,052,912)	(419,612,910)
Commitments and contingencies (notes 9, 10, 13, 14, 15, and 16)			
Total liabilities and net position	$	1,210,565,261	1,156,752,715

See accompanying notes to basic financial statements.

E-470 PUBLIC HIGHWAY AUTHORITY

Statements of Revenues, Expenses, and Changes in Net Position

Years ended December 31, 2018 and 2017

	2018	2017
Operating revenues:		
Tolls	$ 233,088,327	213,765,649
Other fees	9,696,174	9,506,913
Tolling services	7,072,232	4,939,181
Total operating revenues	249,856,733	228,211,743
Operating expenses:		
Toll road operations	41,541,170	40,379,073
Salaries and benefits	7,596,234	7,422,115
General and administrative	3,627,915	2,791,638
Total operating expenses before depreciation	52,765,319	50,592,826
Depreciation	41,395,965	37,831,366
Total operating expenses	94,161,284	88,424,192
Operating income	155,695,449	139,787,551
Nonoperating revenue (expenses):		
Vehicle registration fees	5,310,264	10,510,715
Interest expenses:		
Interest on bonds and interest rate swaps	(13,300,319)	(14,915,978)
Accretion on capital appreciation bonds	(70,002,810)	(69,021,223)
Other bond amortization expenses	(9,485,682)	(12,441,032)
Investment revenues (expenses):		
Interest earned on investments	10,816,457	7,416,945
Net change in the fair value of investments	(2,501,995)	(2,866,347)
Net change in the fair value of derivative instruments	5,712,688	1,428,384
Other income	1,338,546	4,720,552
Total nonoperating expenses	(72,112,851)	(75,167,984)
Income before intergovernmental expense	83,582,598	64,619,567
Intergovernmental expense	(3,022,600)	—
Change in net position	80,559,998	64,619,567
Net position, beginning of year	(419,612,910)	(484,232,477)
Net position, end of year	$ (339,052,912)	(419,612,910)

See accompanying notes to basic financial statements.

E-470 PUBLIC HIGHWAY AUTHORITY

Statements of Cash Flows

Years ended December 31, 2018 and 2017

		2018	2017
Cash flows from operating activities:			
Receipts of authority vehicle tolls and toll fees	$	246,161,277	226,467,590
Receipts from third parties for tolling services		6,989,561	4,959,766
Payments to employees		(7,622,646)	(7,597,492)
Payments to suppliers		(48,109,316)	(43,259,693)
Net cash provided by operating activities		197,418,876	180,570,171
Cash flows from capital and related financing activities:			
Payment of other noncurrent liabilities		—	(354,823)
Payment of notes payable		(240,770)	(240,769)
Purchase and construction of capital assets		(10,538,482)	(62,257,662)
Receipts from third parties for capital assets		—	760,457
Proceeds from sale of capital assets		6,500	1,503,365
Interest paid		(13,564,347)	(15,636,559)
Principal payments on bonds		(89,630,000)	(82,095,000)
Payment of cash from bond proceeds to refund related bond series		—	(138,640,000)
Proceeds from refunded bond series		—	138,640,000
Payment of bond issuance costs for related bond series		(46,978)	(1,376,470)
Net cash used in capital and related financing activities		(114,014,077)	(159,697,461)
Cash flows from noncapital financing activities:			
Receipts of vehicle registration fees		6,077,579	10,927,072
Receipts of non-Authority third party vehicle tolls and toll fees		49,039,324	40,612,061
Remittance to third parties for non-Authority vehicle tolls and toll fees		(49,114,564)	(40,415,636)
Purchases of equipment and support services for third parties		(268,438)	(1,152,751)
Receipts from third parties for equipment and support services		185,232	1,149,956
Other receipts and disbursements		5,837,211	(853,235)
Payment of other noncapital intergovernmental obligations		(6,230,300)	—
Net cash provided by noncapital financing activities		5,526,044	10,267,467
Cash flows from investing activities:			
Proceeds from sales of investments		173,201,161	114,460,326
Purchases of investments		(262,844,217)	(164,741,060)
Interest received		8,987,542	6,664,665
Loan disbursements		(2,000,000)	—
Net cash used in investing activities		(82,655,514)	(43,616,069)
Net increase (decrease) in cash and cash equivalents		6,275,329	(12,475,892)
Cash and cash equivalents, beginning of year		106,279,269	118,755,161
Cash and cash equivalents, end of year	$	112,554,598	106,279,269
Reconciliation of cash and cash equivalents to the statements of net position:			
Cash and cash equivalents – current – unrestricted	$	70,926,380	67,828,793
Cash and cash equivalents – current – restricted for debt service		41,628,218	38,149,082
Cash and cash equivalents – current – restricted for construction		—	301,394
Cash and cash equivalents, end of year	$	112,554,598	106,279,269

See accompanying notes to basic financial statements.

E-470 PUBLIC HIGHWAY AUTHORITY

Statements of Cash Flows

Years ended December 31, 2018 and 2017

		2018	2017
Reconciliation of operating income to net cash provided by operating activities:			
Operating income	$	155,695,449	139,787,551
Adjustments to reconcile operating income to net cash provided by operating activities:			
Depreciation		41,395,965	37,831,366
Changes in assets and liabilities:			
Accounts receivable, net (tolls, late fees, and tolling services)		(3,221,207)	(576,827)
Prepaid expenses and other current assets		2,850	(199,701)
Accounts payable and accrued expenses		(2,968,946)	(65,038)
Unearned toll revenue		6,514,765	3,792,820
Net cash provided by operating activities	$	197,418,876	180,570,171
Noncash transactions:			
Interest expense recorded due to bond accretion	$	70,002,810	69,021,223
Interest expense recorded due to amortization of deferred outflows of resources		9,474,805	10,145,286
Interest expense recorded due to amortization of prepaid bond costs and other assets		1,158,977	2,155,192
Interest expense recorded due to amortization of net bond premiums		1,148,100	1,235,915
Increase in fair value of derivative instruments – interest rate swaps		5,712,688	1,428,384
Investment loss recorded due to amortization of investment premiums (discounts)		(952,838)	(284,274)
Investment (loss) income recorded due to amortization of other restricted noncurrent liabilities		(189,989)	207,544
Decrease in fair value of investments		(2,501,995)	(2,866,347)
Net (loss) gain on disposal of capital assets		(109,196)	728,634
Increase in other restricted noncurrent liabilities		207,544	79,038

See accompanying notes to basic financial statements.

(1) Financial Reporting Entity

The E-470 Authority (the First Authority) is a separate legal entity, created in February 1985, by an intergovernmental agreement among Adams County, Arapahoe County, Douglas County, and the City of Aurora. The purpose of the agreement was to plan, design, and construct the E-470 Highway (the Project). The First Authority did not have the power to incur debt; therefore, Arapahoe County (the County) issued bonds to finance the Project.

In January 1988, the E-470 Public Highway Authority (the Authority) was created by the original members of the First Authority pursuant to Colorado Revised Statutes Title 43, Article 4, Part 5. The Town of Parker, City of Thornton, City of Brighton, and City of Commerce City became participants in the Authority in 1989, 1990, 1991, and 1995, respectively. In February 1989, all rights, privileges, obligations, and liabilities of the First Authority were assigned to the Authority. In the event the Authority is ever dissolved, all rights, privileges, obligations, and liabilities will transfer back to the First Authority. As required by accounting principles generally accepted in the United States of America, the accompanying basic financial statements present the Authority and its component unit, an entity for which the Authority is considered to be financially accountable, as discussed below. The blended component unit, although a legally separate entity, is, in substance, part of the Authority's operations, and therefore, data from this component unit is combined with data of the primary government.

The First Authority is a blended component unit of the Authority; however, it currently has no assets, liabilities, or operations.

In an opinion dated May 15, 1995, the Colorado Supreme Court held that the County had relinquished any control it had over the 1986 Bonds and the alignment of the Project in February 1989 when it executed the Delegation and Substitution Agreement and amendments to the Establishing Contract to that effect. Therefore, the Authority is not a component unit of the County.

Intergovernmental Agreements with Arapahoe County, Colorado

Since its creation, the First Authority was not legally empowered to issue debt; therefore, the County authorized issuance of $722,010,000 of Capital Improvement Trust Fund Highway Revenue Bonds Series 1986A-M. The ultimate objective of this issuance was to remit the proceeds to the Authority for the construction of the Project. In the contract establishing the Authority, the County assigned to the Authority all of the County's rights and privileges with respect to the bonds, and the Authority assumed all of the County's obligations with respect to the bonds. The proceeds of the bond issue were invested and held in trust for the benefit of the owners of the bonds (until the releases, as described below). The bonds were generally remarketed every six months.

In February 1989, the Authority released from escrow the Series D bonds in the amount of $63,260,000 to complete construction on the first phase of the toll road (Segment I). In consideration of the obligations assumed by the Authority and to assist the Project, the County granted to the Authority all the County's rights to the excess investment earnings for all bond series. In addition, the Authority agreed to pay all bond administration costs with no financial obligation to the County.

At the August 31, 1995 remarketing of the bonds, the funds remaining were released from escrow to finance the costs associated with the design, acquisition of property, and construction of Segments II and III of the Project. Any bonds that were not remarketed were redeemed on August 31, 1995.

Due to the interrelationship between the County and the Authority in this financing arrangement, all the transactions incurred by the County relating to this financing are included in the accompanying basic financial statements as if they were incurred by the Authority.

Tolling Services Agreements

The Authority provides various services to the Northwest Parkway (NWP); High Performance Transportation Enterprise (HPTE), a division of Colorado Department of Transportation (CDOT); and HPTE's concessionaire, Plenary Roads Denver, LLC (Plenary), including, but not limited to, integrating and installing toll equipment, toll collection system enhancements and modifications, system testing and go-live support, and back office toll collection services. E-470's tolling back office process allows customers to have a single account to manage and ensures a seamless customer experience regardless of which Colorado tolled facility is used. Toll collection or system costs originally incurred by the Authority for services provided to other entities are charged to the applicable entity (CDOT, HPTE, Plenary, or NWP).

(2) Summary of Significant Accounting Policies

(a) Basis of Accounting

The operations of the Authority are accounted for as an enterprise fund. Enterprise funds are accounted for on the flow of economic resources measurement focus and use the accrual basis of accounting. Under this method, revenue is recorded when earned, and expenses are recorded at the time liabilities are incurred. Enterprise funds are used to account for those operations for which the pricing policies of the entity establish fees and charges designed to recover its costs, including capital costs, such as depreciation and debt service. The basis of accounting also incorporates Governmental Accounting Standards Board (GASB) Statement No. 62, *Codification of Accounting and Financial Reporting Guidance Contained in Pre-November 30, 1989 FASB and AICPA Pronouncements*.

(b) Use of Estimates

The preparation of financial statements in accordance with accounting principles generally accepted in the United States of America involves the use of management's estimates. These estimates are based upon management's best judgments, after considering past and current events and assumptions about future events. Actual results could differ from those estimates.

(c) Cash and Cash Equivalents

The Authority considers all highly liquid instruments purchased with an original maturity of three months or less to be cash equivalents, which may include authorized money market mutual funds, local government investment pools, commercial paper, or repurchase agreements. Cash and cash equivalents may be restricted by the Trustee under the Master and Supplemental Bond Resolutions (Bond Resolutions) or other externally imposed restrictions. The basic financial statements include statements of cash flows showing cash and cash equivalents provided by and used in operating, noncapital and capital financing, and investing activities.

(d) Investments

The Authority invests its funds in accordance with the Authority's Bond Resolutions and Colorado statutes (CRS 24-75-601). The Authority's authorized investments may consist of U.S. government agency securities, U.S. Treasury securities, commercial paper, municipal bonds, and an investment agreement. Investments may be restricted by the Trustee under the Bond Resolutions. Investments are reported in the financial statements at fair value, with the exception of the following assets, which are recorded using a cost-based measure in accordance with GASB Statement No. 31, *Accounting and Financial Reporting for Certain Investments and for External Investment Pools,* and GASB Statement No. 72, *Fair Value Measurement and Application*:

- Money market investments that have a remaining maturity at time of purchase of one year or less. These money market accounts are held with Securities and Exchange Commission registered investment companies under Rule 2a-7 of the Investment Company Act of 1940, as amended, and are reported at amortized cost.
- Nonparticipating investment agreement with Societe Generale, as it cannot be traded and its value is not affected by market interest rate changes.

(e) Accounts Receivable

Accounts receivable represents amounts due for customer tolls (License Plate Toll (LPT) and ExpressToll) and any assessed late fees, net of the estimated uncollectible toll and fee receivables, vehicle registration fees (VRF) collected by specific counties and not yet remitted to the Authority, and other miscellaneous receivables from third parties. The Authority accrues the related revenue when earned. An allowance for estimated uncollectible toll receivables is recognized to reduce the gross amount of receivables to its net realizable value. The allowance for customer tolls is estimated based on historical collection information by revenue type. No allowance is recorded for VRF receivables as the amounts are fully collectible and timely remitted.

(f) Capital Assets

Capital assets have an estimated useful life in excess of one year and an initial cost greater than $5,000 for software, fixtures, and equipment; $50,000 for land improvements; $100,000 for buildings; and $500,000 for infrastructure (roadway, bridges, and ramps).

Capital assets are recorded at historical cost. Costs include not only purchase price or construction cost, but also ancillary charges necessary to place the asset in its intended location and condition for use. Ancillary charges include, but are not limited to, costs, such as freight and transportation charges, site preparation expenditures, professional fees, and legal expenses directly attributable to asset acquisition. Donations of capital assets represent facilities, or cash payments for facilities, received from property owners, governmental agencies, and customers. Donated capital assets are recorded at estimated fair value at the date of transfer.

Capital assets are depreciated using the straight-line method over their estimated useful lives. Those capital assets subject to depreciation have the following useful lives:

Assets	Years
Software	3
Fixtures and equipment	5–10
Land and building improvements	20
Buildings	40
Infrastructure	30

Ongoing construction costs associated with the Authority's toll road are capitalized as construction in progress (CIP). As construction is not yet complete, depreciation is not recorded on these CIP costs. The Authority capitalizes interest on these assets under construction for interest costs on the tax-exempt debt used to finance the assets (if applicable), reduced by interest earned from investments acquired with the tax-exempt debt proceeds. No capitalized interest was recorded as of December 31, 2018 or 2017.

(g) Prepaid Bond Costs and Premiums and Discounts

Prepaid bond costs and other noncurrent assets as well as bond premiums and discounts are deferred and amortized as a component of interest expense – other bond amortization expenses using the effective-interest method over the life of the related bonds.

(h) Deferred Outflows of Resources

Deferred outflows of resources represent a consumption of net assets that applies to a future period and will not be recognized as an outflow of resources (expense) until that time. The deferral balances are from losses on refundings of debt that are amortized as a component of interest expense – other bond amortization expenses using the straight-line method over the remaining life of the old (refunded) debt or the life of the new debt, whichever is shorter.

(i) Revenue and Expenses

The Authority's statements of revenue, expenses, and changes in net position distinguish between operating and nonoperating revenue and expenses. Operating revenues consist of vehicle tolls and other toll-related fees assessed (late fees, civil penalties, or other fines and fees) associated with the operation of the Authority's toll road, net of estimated bad debts. The Authority recognizes toll operating revenues when earned. Advance payments received for toll operating revenues are deferred as unearned toll revenue on the statements of net position and are recognized as revenue as the customers use the Authority's toll road. Advance payments used as customers drive on non-Authority facilities in Colorado are remitted to the appropriate agency and are not recognized as revenue on the Authority's statements of revenues, expenses, and changes in net position. Operating revenues also include revenues for providing tolling services to other entities, and is recognized as an exchange transaction. Any amounts collected and remitted to external entities for tolls incurred on other tolled facilities are not included in the basic financial statements of the Authority. Operating expenses include costs incurred to provide for maintenance and administration of the toll road.

Nonoperating revenue and expenses consist of vehicle registration fees, interest expense, investment revenues, including interest earned on investments and change in derivative instruments, and other miscellaneous revenues and expenses. Vehicle registration fees are assessed by specified local counties and remitted to the Authority on a monthly basis net of related administrative costs; however, collection of these fees was discontinued as of August 1, 2018.

(j) Net Position Amounts

Net position amounts reported in the Authority's statements of net position consist of three categories: net investment in capital assets; restricted for debt service; and unrestricted. The Authority's board of directors, along with any state statutes, has official authorization to assign funds for a specific purpose. Net investment in capital assets consists of the Authority's investment in capital assets (e.g., land, buildings, equipment, and infrastructure), net of accumulated depreciation, and deferred outflows of resources, reduced by the outstanding balances of bonds that are attributable to the acquisition, construction, or improvement of those assets. Restricted for debt service represents resources that are subject to external restrictions on how they may be used, and consists of restricted assets reduced by restricted liabilities where the restricted liability will generally be liquidated with the restricted assets reported. Unrestricted net position represents resources that may be used to meet the Authority's ongoing obligations to the public and creditors and are not included in the determination of net investment in capital assets or restricted for debt service components of net position. This balance includes any noncurrent accreted portions of revenue bonds payable. These net position amounts are available to fund any obligation of the Authority. When an expense is incurred for purposes for which both restricted and unrestricted net position is available, the Authority generally uses unrestricted funds first, then restricted as needed.

As of December 31, 2018 and 2017, the Authority had a total net deficit of approximately $339.1 million and $419.6 million, respectively. The Authority primarily plans to fund this net deficit with increased annual growth in toll operations revenues and other nonoperating revenues.

(k) Income Taxes

The income derived by the Authority is exempt from federal income tax under the provisions of Internal Revenue Code Section 115 and as a governmental entity that is not a college or university, the Authority is not subject to any unrelated business income tax under Internal Revenue Code Section 511. Accordingly, no provision for the payment or refund of income taxes has been made in the accompanying basic financial statements.

(3) Fair Value Measurements

The Authority categorizes its fair value measurements within the fair value hierarchy established by generally accepted accounting principles. Under GASB Statement No. 72, fair value is defined as the price that would be received to sell an asset or paid to transfer a liability in an orderly transaction between market participants at the measurement date. GASB Statement No. 72 establishes a hierarchy of three levels of inputs that may be used to measure fair value:

- Level 1 – quoted prices (unadjusted) in active markets for identical assets or liabilities, accessible at the measurement date. Observable markets include exchanges markets, dealer markets, brokered markets, and principal-to-principal markets.

- Level 2 – inputs other than quoted prices included within Level 1 that are observable for an asset or liability, either directly or indirectly. Level 2 inputs include quoted prices for similar assets or liabilities in active markets; quoted prices for identical or similar assets or liabilities in inactive markets; or other inputs that are observable or can be corroborated by observable market data for substantially the full term of the assets or liabilities, such as interest rates and yield curves observable at commonly quoted intervals, implied volatilities, credit spreads, and market-corroborated inputs.
- Level 3 – unobservable inputs for an asset or liability.

Investments

Where quoted market prices for identical assets are available in an active market, securities are classified within Level 1 of the hierarchy. If quoted market prices for identical assets are not available, then fair values are estimated by using quoted prices of securities with similar characteristics or independent asset pricing services and pricing models, the inputs of which are market-based or independently sourced market parameters, including, but not limited to, yield curves, interest rates, reported trades of comparable securities, spreads off benchmark yields, and issuer spreads. Such securities are classified in Level 2 of the valuation hierarchy. In certain cases where Level 1 or Level 2 inputs are not available, securities would be classified within Level 3 of the hierarchy. The Authority has no Level 3 securities as of December 31, 2018 or 2017, respectively.

Interest Rate Swap Agreements

The fair values are based on the notional amounts outstanding and estimated using forward-looking interest rate curves (swap reference rate), discounted future cash flows, and credit spreads that are observable or can be corroborated by observable market data and, therefore, are classified within Level 2 of the hierarchy.

The Authority has the following recurring fair value measurements as of December 31, 2018:

		Fair value measurement using		
	Total 2018	**Quoted prices in active markets for identical assets (Level 1)**	**Significant other observable inputs (Level 2)**	**Significant unobservable inputs (Level 3)**
Investment type:				
U.S. government agency	$ 261,814,785	—	261,814,785	—
U.S. Treasury securities	100,685,788	—	100,685,788	—
Commercial paper	24,612,756	—	24,612,756	—
Total investments measured at fair value	387,113,329	$ —	387,113,329	—
Cash Equivalents (CE) and investments measured at cost:				
Money market mutual funds	92,822,109			
Investment agreement	8,471,273			
Total CE and investments measured at cost	101,293,382			
Total CE and investments held by the authority	$ 488,406,711			
Liability type:				
Derivative instruments – interest rate swaps	$ (37,830,623)	—	(37,830,623)	—
Total liabilities measured at fair value	$ (37,830,623)	—	(37,830,623)	—

(C o n t i n u e d)

The Authority has the following recurring fair value measurements as of December 31, 2017:

		Fair value measurement using		
	Total 2017	Quoted prices in active markets for identical assets (Level 1)	Significant other observable inputs (Level 2)	Significant unobservable inputs (Level 3)
Investment type:				
U.S. government agency	$ 198,918,464	—	198,918,464	—
U.S. Treasury securities	84,868,674	—	84,868,674	—
Commercial paper	15,232,292	—	15,232,292	—
Total investments measured at fair value	299,019,430	$ —	299,019,430	—
Cash Equivalents (CE) and investments measured at cost:				
Money market mutual funds	87,997,352			
Investment agreement	8,471,273			
Total CE and investments measured at cost	96,468,625			
Total CE and investments held by the authority	$ 395,488,055			
Liability type:				
Derivative instruments – interest rate swaps	$ (43,543,311)	—	(43,543,311)	—
Total liabilities measured at fair value	$ (43,543,311)	—	(43,543,311)	—

(C o n t i n u e d)

(4) Cash, Cash Equivalents, and Investments

The Colorado Public Deposit Protection Act (PDPA) requires that all units of local government deposit cash in eligible public depositories. Eligibility is determined by state regulators. Amounts on deposit in excess of federal insurance levels (currently, $250,000 by the Federal Deposit Insurance Corporation (FDIC)) must be collateralized. The eligible collateral is specified by the PDPA. The PDPA allows the institution to create a single collateral pool for all public funds, and the pool is to be maintained by another institution or held in trust for all the uninsured public deposits as a group. The State Regulatory Commission for banks and savings and loan associations is required by statute to monitor the naming of eligible depositories and reporting of the uninsured deposits and assets maintained in the collateral pools. At December 31, 2018 and 2017, the Authority's cash deposits had a book balance of $19.7 million and $18.3 million, respectively, and a corresponding bank balance of $19.8 million and $18.3 million, respectively. The difference between the book and bank balances is due to outstanding checks and deposits not yet processed by the banks.

As of December 31, 2018 and 2017, the Authority's book balances are classified as follows:

	2018		
	Deposits	**Cash equivalents and investments**	**Total**
Restricted cash and cash equivalents by trustee under the Bond Resolutions	$ —	41,628,218	41,628,218
Unrestricted cash and cash equivalents – undesignated	19,732,489	51,193,891	70,926,380
Restricted investments by trustee under the Bond Resolutions	—	115,677,605	115,677,605
Unrestricted investments – undesignated	—	279,906,997	279,906,997
	$ 19,732,489	488,406,711	508,139,200

	2017		
	Deposits	**Cash equivalents and investments**	**Total**
Restricted cash and cash equivalents by trustee under the Bond Resolutions	$ —	38,149,082	38,149,082
Restricted cash and cash equivalents for construction	—	301,394	301,394
Unrestricted cash and cash equivalents – undesignated	18,281,917	49,546,876	67,828,793
Restricted investments by trustee under the Bond Resolutions	—	117,964,584	117,964,584
Unrestricted investments – undesignated	—	189,526,119	189,526,119
	$ 18,281,917	395,488,055	413,769,972

The following is a summary of the Authority's cash equivalents and investments by type at December 31, 2018 and 2017, at fair value, including the money market mutual funds and investment agreement using a cost-based measurement:

	2018	**2017**
U.S. government agency	$ 261,814,785	198,918,464
U.S. Treasury securities	100,685,788	84,868,674
Money market mutual funds	92,822,109	87,997,352
Commercial paper	24,612,756	15,232,292
Investment agreement	8,471,273	8,471,273
	$ 488,406,711	395,488,055

(C o n t i n u e d)

(a) Credit Risk

Credit risk is the risk that an issuer or other counterparty to an investment will not fulfill its obligations. The Authority's policies regarding credit risk comply with Colorado statutes (CRS 24-75-601, as amended) and the Bond Resolutions. Colorado statutes specify the following investment instruments that meet defined rating and risk criteria in which local government entities may invest:

- Obligations of the United States and certain U.S. government agency securities
- Bonds of certain government entities
- Bankers' acceptances of certain banks
- Commercial paper with a certain rating
- Repurchase agreements
- Certain money market mutual funds
- Local government investment pools
- Certain investment agreements

The Authority may invest or deposit any funds in the manner provided by law for political subdivisions of the state. In addition, the Authority may direct a corporate trustee, which holds funds of the Authority, to invest or deposit such funds in investments or deposits other than those specified by law for political subdivisions of the state if the board of directors determines, by resolution, that (1) such investment or deposit meets the standard established in the Colorado Revised Statutes; (2) the income is at least comparable to income available on investments or deposits specified by law for political subdivisions of the state; and (3) such investments will assist the Authority in the financing, construction, maintenance, or operation of public highways.

The following is a summary of the Authority's cash equivalents and investments at December 31, 2018 with credit ratings based on the Standard & Poor's and Moody's ratings scales:

	2018	
	Fair value	**Rating**
U.S. government agency:		
Federal Farm Credit Banks (FFCB)	$ 51,783,848	AA+/Aaa
Federal Home Loan Banks (FHLB)	71,636,097	AA+/Aaa
Federal Home Loan Mortgage Corporation (FHLMC)	38,102,636	AA+/Aaa
Federal National Mortgage Association (FNMA)	46,233,211	AA+/Aaa
International Bank for Reconstruction and Development	46,112,458	AAA/Aaa
Student Loan Marketing Association Discount Note	7,946,535	Not rated/Aaa
Total U.S. government agency	261,814,785	
U.S. Treasury securities:		
U.S. Treasury notes	100,685,788	Not applicable
Money market mutual funds:		
Federated Government Obligations Fund	74,327,278	AAAm/Aaa-mf
PFM Funds Government Select Series	18,494,831	AAAm/Not rated
Total money market mutual funds	92,822,109	
Investment agreement:		
Societe Generale	8,471,273	A/A2
Commercial paper:		
American Honda Finance Corporation	3,727,722	A-1/P-1
JP Morgan Securities LLC	4,846,680	A-1/P-1
MUFG Bank Ltd/NY	4,795,850	A-1/P-1
Rabobank Nederland NV NY	4,844,673	A-1/P-1
Toyota Motor Credit Corporation	6,397,831	A-1+/P-1
Total commercial paper	24,612,756	
Total cash equivalents and investments	$ 488,406,711	

U.S. Treasury notes are guaranteed by the U.S. federal government and are, therefore, not subject to credit risk.

The following is a summary of the Authority's cash equivalents and investments at December 31, 2017 with credit ratings based on the Standard & Poor's and Moody's ratings scales:

	2017	
	Fair value	**Rating**
U.S. government agency:		
Federal Farm Credit Banks (FFCB)	$ 26,670,319	AA+/Aaa
Federal Home Loan Banks (FHLB)	45,974,481	AA+/Aaa
Federal Home Loan Mortgage Corporation (FHLMC)	25,531,304	AA+/Aaa
Federal National Mortgage Association (FNMA)	44,525,398	AA+/Aaa
International Bank for Reconstruction and Development	48,423,874	AAA/Aaa
Student Loan Marketing Association Discount Note	7,793,088	Not rated/Aaa
Total U.S. government agency	198,918,464	
U.S. Treasury securities:		
U.S. Treasury notes	84,868,674	Not applicable
Money market mutual funds:		
Federated Government Obligations Fund	72,960,315	AAAm/Aaa-mf
First American Government Obligations Fund	301,394	AAAm/Aaa-mf
PFM Funds Government Select Series – Colorado Investors Class Shares (CSIP)	14,735,643	AAAm/Not rated
Total money market mutual funds	87,997,352	
Investment agreement:		
Societe Generale	8,471,273	A/A2
Commercial paper:		
Bank of Tokyo Mitsubishi NY	4,046,970	A-1/P-1
GE Capital Treasury LLC	4,365,634	A-1/P-1
Rabobank Nederland NV NY	1,982,889	A-1/P-1
Toyota Motor Credit Corporation	4,836,799	A-1+/P-1
Total commercial paper	15,232,292	
Total cash equivalents and investments	$ 395,488,055	

U.S. Treasury notes are guaranteed by the U.S. federal government and are, therefore, not subject to credit risk.

(b) Interest Rate Risk

Interest rate risk is the risk that an investment's value will change due to change in the level of interest rates. The Authority currently employs one professional investment management firm to manage its investments. The funds are all "laddered" so that investments do not mature all at once and are in compliance with the Colorado statutes and Bond Resolutions. Additionally, 83% and 78% of the cash equivalents and investments have maturities of three years or less at December 31, 2018 and 2017, respectively.

As of December 31, 2018, the Authority held the following cash equivalents and investments:

	Fair value	Less than one year	Between one and two years	Between two and three years	Greater than three years
U.S. government agency	$ 261,814,785	71,117,952	86,371,254	34,072,304	70,253,275
U.S. Treasury securities	100,685,788	47,685,124	40,634,157	8,139,594	4,226,913
Investment agreement	8,471,273	—	—	—	8,471,273
Commercial paper	24,612,756	24,612,756	—	—	—
Total investments	395,584,602	143,415,832	127,005,411	42,211,898	82,951,461
Money market mutual funds	92,822,109	92,822,109	—	—	—
Total cash equivalents and investments	$ 488,406,711	236,237,941	127,005,411	42,211,898	82,951,461

Because the money market mutual funds have a weighted average maturity less than three months as of December 31, 2018, the funds are presented as cash equivalents with maturities of less than one year.

As of December 31, 2017, the Authority held the following cash equivalents and investments:

	Fair value	Less than one year	Between one and two years	Between two and three years	Greater than three years
U.S. government agency	$ 198,918,464	58,270,384	54,624,299	12,970,835	73,052,946
U.S. Treasury securities	84,868,674	47,035,076	18,558,143	15,112,612	4,162,843
Investment agreement	8,471,273	—	—	—	8,471,273
Commercial paper	15,232,292	15,232,292	—	—	
Total investments	307,490,703	120,537,752	73,182,442	28,083,447	85,687,062
Money market mutual funds	87,997,352	87,997,352	—	—	—
Total cash equivalents and investments	$ 395,488,055	208,535,104	73,182,442	28,083,447	85,687,062

Because the money market mutual funds have a weighted average maturity less than three months as of December 31, 2017, the funds are presented as cash equivalents with maturities of less than one year.

(c) Custodial Credit Risk

For an investment, custodial credit risk is the risk that, in the event of the failure of the counterparty, the Authority will not be able to recover the value of its investment or collateral securities that are in the possession of an outside party. The Authority has no custodial credit risk as all securities are registered in the name of the Authority and held by a third-party safekeeping agent. Investments in money market mutual funds are not exposed to custodial credit risk because their existence is not evidenced by securities that exist in physical or book entry form.

(d) Concentration of Credit Risk

The Authority does not have a limit on the amount that may be invested in any one issuer. As of December 31, 2018 and 2017, approximately 54% and 50%, respectively, of the Authority's cash equivalents and investments are in U.S. government agency investments that are not fully backed by the full faith and credit of the federal government. The investments include FFCB, FHLB, FHLMC, FNMA, International Bank for Reconstruction and Development, and Student Loan Marketing Association investments.

(e) Restricted Funds

The Authority maintains restricted accounts and funds as required per the Bond Resolutions or other externally imposed restrictions. Cash and cash equivalents and investments as of December 31, 2018 and 2017 are restricted as follows:

	2018	**2017**
Senior Bonds Debt Service Reserve Fund	$ 95,271,932	98,160,448
Senior Bonds Debt Service Account	37,715,513	33,983,140
Trust Revenue Fund	14,410,992	13,649,904
Operating Reserve Fund	9,907,386	8,854,841
VRF Bonds Debt Service Account	—	1,465,333
Other restricted accounts	—	301,394
	$ 157,305,823	156,415,060

The restricted funds and accounts have been established in accordance with the Bond Resolutions or other externally imposed restrictions. The Authority maintains other restricted accounts that do not have any funding requirements and thus have a $0 balance as of December 31, 2018 and 2017 and are not shown above. The Bond Resolutions provide, among other provisions, that certain accounting procedures be followed and certain funds and accounts be established to provide bondholders a degree of security against certain contingencies. Brief descriptions of these funds and accounts are as follows:

Senior Bonds Debt *Service Reserve Fund* – Pursuant to the Bond Resolutions, a Senior Bonds Debt Service Reserve Fund was established solely for the benefit of the holders of the Senior Bonds in the event amounts on deposit in the Senior Bonds Debt Service Account are insufficient to make required payments. As of December 31, 2018 and 2017, the Senior Bonds Debt Service Reserve Fund requirement was $118.0 million, and the account was fully funded at December 31, 2018 and 2017 with balances of $120.3 million and $123.2 million, respectively. The change in year-end balances is due to fair value fluctuations. These balances include cash and cash equivalents and investments of $95.3 million and $98.2 million at December 31, 2018 and 2017, respectively, combined with the $25 million available under a reserve fund surety bond provided by MBIA – administered by National Public Finance Guarantee (NPFG). Within the fund, the Authority holds numerous long-term investment securities, one of which is an investment agreement with Societe Generale. Under the agreement, among other provisions, Societe Generale pays the Authority 6.61% of the investment principal amount on a semiannual basis and must post collateral at a specified amount if their long-term unsecured credit rating is reduced below AA– by Standard and Poor's (S&P) or Aa3 by Moody's. Societe Generale was rated A by S&P and A2 by Moody's at December 31, 2018 and 2017, respectively, and thus has posted collateral in accordance with the agreement. The Authority may terminate the agreement at any time; however, Societe Generale may not terminate the agreement until final maturity in 2026.

Senior Bonds Debt Service Account – Pursuant to the Bond Resolutions, the Senior Bonds Debt Service account is funded from current year revenues in an amount equal to the aggregate senior bond debt service payable during the current fiscal year, including the monthly cash settlements paid on the Authority's interest rate swaps and London Interbank Offered Rate (LIBOR) Index Term Rate bonds. Other senior bond series' interest due is paid semiannually by the Trustee on March 1 and September 1, with outstanding senior bonds payable principal (including any accretion) due on September 1 for the applicable bond series.

Trust Revenue Fund – Except as otherwise provided in the Bond Resolutions, all revenues will be delivered to the Trustee immediately upon receipt by the Authority and will be deposited by the Trustee in the Trust Revenue Fund to be used by the Authority for the purposes of funding any other restricted accounts (including the Senior Bond Debt Service Account) and current year operating expenses. The Master Bond Resolutions allow the Authority to move surplus funds from the Trust Revenue Fund to the General Surplus account (or subaccounts therein) on a monthly basis, but also must maintain a retained balance within the Trust Revenue Fund at month-end equal to one-half of the aggregate amount required to be transferred to the Senior Bonds Debt Service Account during such month. The required retained balance was $4.6 million as of December 31, 2018 and $4.3 million as of December 31, 2017, and was fully funded.

VRF Restricted Accounts – In 2011, the Authority transferred $13.5 million from the General Surplus account to a separate, Authority-controlled account, which is restricted per the bond resolutions and has been approved by the board of directors. The Authority paid all debt service due prior to 2017 from this account, and the account had a residual amount to pay a portion of the debt service due in 2017. The escrow agreement governing this account expired in February 2017; therefore, all remaining debt service on the VRF bonds in 2017 and 2018 was paid from the VRF Bonds Debt Service account, which was funded from current year VRF revenues in accordance with the Bond Resolutions. Payments on the VRF bonds debt service were paid semiannually by the Trustee on March 1 and September 1 from the VRF Bonds Debt Service account, and the bonds matured on September 1, 2018.

Operating Reserve Fund – Under the provisions of the Bond Resolutions, the Operating Reserve Fund is required to be maintained in an amount equal to one-sixth of annual budgeted operating expenses, as determined by the Authority. As of December 31, 2018 and 2017, $9.9 million and $8.9 million, respectively, were on deposit in the Operating Reserve Fund, which exceeded the required balance of $9.1 million and $8.6 million, respectively, during these periods.

Rebate Fund – Moneys will be deposited into the Rebate Fund pursuant to the Bond Resolutions and used solely for the purpose of paying amounts due to the United States of America pursuant to the Internal Revenue Code and arbitrage rebate regulations issued by the Internal Revenue Service (IRS). Funds within the Rebate Fund are only required when an arbitrage rebate liability is due. If the amount in the Rebate Fund is in excess of the amount required to be deposited based on the assessed arbitrage rebate liability, such excess will be transferred to the Authority.

(f) Unrestricted Funds

The General Surplus account is unrestricted and is currently divided into three subaccounts for administrative purposes: the Senior Bond Defeasance Fund, the Capital Improvements Fund, and the Rainy Day Fund. These unrestricted funds are available to fund any allowable obligations of the Authority; however, the Bond Resolutions include a requirement that the General Surplus account not be reduced below $20.0 million unless the Authority’s bond issuer, MBIA – administered by NPFG, provides written consent to such a distribution below this level. As of December 31, 2018 and 2017, the Authority held $350.8 million and $257.4 million, respectively, in total unrestricted funds, including cash and cash equivalents and investments. Approximately $310.8 million and $219.8 million were within the General Surplus accounts as of December 31, 2018 and 2017, respectively, which have specific purposes such as fully funding the Authority’s future capital budget and bond defeasances.

(g) Investment Income

Investment income’s interest earned on investments consists of restricted and unrestricted investment earnings, any associated premium or discounts, and any realized gains or losses on the investments. Also, included in total investment income is the change in the fair value of investments as of the end of the reporting period. The Authority recognized total investment gain of $8.3 million in 2018 and total investment gain of $4.6 million in 2017, excluding the net change in fair value of derivative instruments. Restricted interest earned on investments was $0.5 million in 2018 and $0.2 million in 2017 and is restricted by the Bond Resolutions or by other externally imposed restrictions. Unrestricted investment income may be earned within restricted investment accounts as long as those accounts are fully funded by year-end as required by the Bond Resolutions.

(Continued)

(5) Accounts Receivable

The following is a summary of accounts and tolls receivable balances and related allowance as of December 31, 2018 and 2017:

		2018	2017
Tolls receivable (billed)	$	26,952,714	23,149,441
Unbilled toll revenue		4,235,230	2,816,380
Accrued toll revenue – transactions still processing		4,196,557	4,054,099
Late fee receivable		1,767,451	1,634,144
Accounts receivable		1,440,964	5,484,421
Vehicle registration fees receivable		—	767,315
Total accounts receivable		38,592,916	37,905,800
Allowance for uncollectible tolls receivable		(9,121,050)	(6,819,283)
Allowance for uncollectible late fee receivable		(619,845)	(572,114)
Total accounts receivable, net of allowance for uncollectibles	$	28,852,021	30,514,403

With LPT tolls receivable, there are three stages accrued within the basic financial statements: accrued toll revenue (transactions in process for billing); unbilled toll revenue (transactions assigned to a customer account and are waiting to be billed); and tolls receivable (transactions that have been billed to a customer and are awaiting payment). Customers are generally billed each month for all toll activity incurred during the previous month and have 30 days to pay. If the first bill is unpaid, customers will be sent a second and third bill with a $5 late fee assessed on the second bill only and have an additional 60 days to pay the outstanding tolls and fee. If still unpaid, the tolls may be remitted to a collection law firm where additional collection fees including civil penalties and adjudication fees may be assessed with a possible hold being placed on the customer’s vehicle registration. ExpressToll customers with unpaid tolls may also be remitted to the collection law firm for collections where fees are assessed. Further, tolls charged to customers for LPT versus ExpressToll vary based on the approved two-tiered toll rates, which were effective beginning January 1, 2018. Based on the outstanding tolls and related late fees in fiscal years 2018 and 2017, the Authority has approximately $9.7 million and $7.4 million, respectively, in outstanding tolls and late fee receivables at year-end that are not expected to be collected within the next fiscal year.

Vehicle registration fees are collected by Adams, Arapahoe, and Douglas counties on behalf of the Authority based on enabling legislation. Until August 1, 2018, each county collected $10 when each citizen’s car within specific address boundaries was registered annually, and withheld 5% ($0.50) per transaction as an administrative fee with the net amount remitted to the Authority. There is no amount accrued as accounts receivable at December 31, 2018, as the fees were discontinued effective August 1, 2018. The amount accrued as accounts receivable and included within the basic financial statements as of December 31, 2017 equals what had been collected by the counties for the previous month but not yet remitted to the Authority.

(6) Notes Receivable

The following is an analysis of changes in notes receivable for the year ended December 31, 2018:

		Balance at January 1, 2018	Additions	Reductions	Balance at December 31, 2018	Due within one year
Other intergovernmental agreements	$	—	2,000,000	—	2,000,000	178,500

The Authority entered into an intergovernmental agreement in 2015 with the City of Aurora (the City) regarding the extension of 6th Avenue from its present terminus in an eastward direction from Buckley Air Force Base to East 6th Parkway and E-470. This extension will establish a more direct route of travel, thereby filling a gap in the regional roadway network. In addition, the forecasted traffic and revenue on E-470 indicates that the 6th Avenue Parkway extension would provide future revenue increases for the Authority. In consideration of the potential future revenue impacts, the Authority agreed to contribute $4.0 million toward the cost of construction in the form of a $2.0 million contribution and a $2.0 million loan, both of which were disbursed to the City on August 9, 2018 from the Capital Improvements Fund. The $2.0 million contribution is presented as an intergovernmental expense in 2018. The loan has a 10-year term beginning on August 9, 2018, the date the Authority’s proceeds were disbursed to the City, and bears interest at a rate of 2.5% per annum.

(7) Capital Assets

A summary of changes in capital assets for the year ended December 31, 2018 is as follows:

	Balance at January 1, 2018	Increases	Decreases	Transfers	Balance at December 31, 2018
Capital assets not being depreciated:					
Land	$ 110,538,228	—	—	—	110,538,228
Construction in progress	2,331,813	10,631,690	(93,207)	(10,505,550)	2,364,746
Total capital assets not being depreciated	112,870,041	10,631,690	(93,207)	(10,505,550)	112,902,974
Depreciable capital assets:					
Infrastructure	993,406,281	1,207,305	(348,000)	—	994,265,586
Buildings	24,238,282	298,424	—	—	24,536,706
Equipment	35,023,803	2,218,747	(710,111)	—	36,532,439
Software, fixtures, improvements, and other assets	31,567,733	6,781,074	(353,381)	—	37,995,426
Total depreciable capital assets	1,084,236,099	10,505,550	(1,411,492)	—	1,093,330,157
Less accumulated depreciation for:					
Infrastructure	(520,218,490)	(33,038,845)	237,946	—	(553,019,389)
Buildings	(10,327,537)	(810,290)	—	—	(11,137,827)
Equipment	(26,033,269)	(2,809,356)	704,468	—	(28,138,157)
Software, fixtures, improvements, and other assets	(21,933,663)	(4,737,474)	353,381	—	(26,317,756)
Total accumulated depreciation	(578,512,959)	(41,395,965)	1,295,795	—	(618,613,129)
Depreciable capital assets, net	505,723,140	(30,890,415)	(115,697)	—	474,717,028
Total capital assets, net	$ 618,593,181	(20,258,725)	(208,904)	(10,505,550)	587,620,002

A summary of changes in capital assets for the year ended December 31, 2017 is as follows:

	Balance at January 1, 2017	Increases	Decreases	Transfers	Balance at December 31, 2017
Capital assets not being depreciated:					
Land	$ 110,853,803	—	(315,575)	—	110,538,228
Construction in progress	27,456,228	62,691,460	(433,798)	(87,382,077)	2,331,813
Total capital assets not being depreciated	138,310,031	62,691,460	(749,373)	(87,382,077)	112,870,041
Depreciable capital assets:					
Infrastructure	918,564,245	76,140,206	(1,298,170)	—	993,406,281
Buildings	23,549,392	688,890	—	—	24,238,282
Equipment	32,815,598	2,955,533	(747,328)	—	35,023,803
Software, fixtures, improvements, and other assets	23,970,285	7,597,448	—	—	31,567,733
Total depreciable capital assets	998,899,520	87,382,077	(2,045,498)	—	1,084,236,099
Less accumulated depreciation for:					
Infrastructure	(489,845,392)	(31,212,386)	839,288	—	(520,218,490)
Buildings	(9,534,922)	(792,615)	—	—	(10,327,537)
Equipment	(23,993,995)	(2,786,328)	747,054	—	(26,033,269)
Software, fixtures, improvements, and other assets	(18,893,626)	(3,040,037)	—	—	(21,933,663)
Total accumulated depreciation	(542,267,935)	(37,831,366)	1,586,342	—	(578,512,959)
Depreciable capital assets, net	456,631,585	49,550,711	(459,156)	—	505,723,140
Total capital assets, net	$ 594,941,616	112,242,171	(1,208,529)	(87,382,077)	618,593,181

(C o n t i n u e d)

(8) Deferred Outflows of Resources

The deferred outflows of resources represent the remaining unamortized deferral balances from losses on refundings of debt. The balances of $68.8 million and $78.3 million as of December 31, 2018 and 2017, respectively, are included within the net investment in capital assets component of net position.

A summary of deferred outflows of resources as of December 31, 2018 and 2017 is as follows:

		2018	2017
Deferred refunding 1997	$	15,313,987	17,314,971
Deferred refunding 2004		18,728,600	19,819,586
Deferred refunding 2006		5,367,125	5,689,153
Deferred refunding 2007		—	1,227,788
Deferred refunding 2008		10,434,935	11,312,481
Deferred refunding 2010		8,429,161	9,530,547
Deferred refunding 2015		3,303,600	5,212,583
Deferred refunding 2017		7,245,796	8,190,900
	$	68,823,204	78,298,009

(9) Bonds Payable

Bonds payable include current interest bonds (CIB), capital appreciation bonds (CAB), VRF bonds, and LIBOR index bonds, consisting of both new issue and refunded bonds of the Authority. The Authority is committed to repay the bonds and related interest from its revenues and allowable restricted investments. Interest rates on outstanding current interest bonds (including the VRF bonds) at December 31, 2018 ranged from 2.25% to 5.375%. The average outstanding coupon (interest) rate on all outstanding current interest bonds was 4.2% and 4.4% for the years ended December 31, 2018 and 2017, respectively. Yields on outstanding capital appreciation bonds at December 31, 2018 and 2017 ranged from 5.06% to 7.13%. The average outstanding yield rate on all outstanding capital appreciation bonds was 5.89% and 5.88% for the years ended December 31, 2018 and 2017, respectively. Most bond series' interest due is paid semiannually on March 1 and September 1, with outstanding principal due on September 1 for the applicable bond series. Only the Series 2017 LIBOR index term rate bonds accrue and pay interest monthly based on the variable 67% of one month LIBOR index plus 90 basis points (bps), or 0.90% on the 2017A bonds, and 105 basis points, or 1.05% on the 2017B bonds.

The Bond Resolutions require that the Authority maintain a Revenue Covenant (also referred to as the debt service coverage ratio) of at least 1.30 times the aggregate debt service due for the year. For the years ended December 31, 2018 and 2017, the Authority exceeded the required debt service coverage ratio of 1.30. Refer to the Supplementary Information – Revenue Covenant section for the 2018 debt service coverage calculation and reconciliation to the basic financial statements for operating balances and senior debt service due.

(C o n t i n u e d)

The following is a summary of the bonds payable by bond series and type as of December 31, 2018:

Bonds outstanding	Original principal amount	Refunded series (if applicable)	Current maturity dates (1)	Current interest rate/yield ranges	Annual principal maturity due ranges
Series 1997 B CAB	$ 342,217,730	1986 Bonds	2019 – 2026	5.47% – 5.52%	$ 44,795,000 – 44,800,000
Series 2000 B CAB	252,848,750	—	2019 – 2033	6.18% – 6.35%	33,100,000 – 104,200,000
Series 2004 A CAB	76,484,624	2000 B CAB *	2027 – 2036	5.33% – 5.46%	78,425,000 – 78,500,000
Series 2004 B CAB	70,705,810	2000 B CAB *	2027 – 2036	5.60% – 5.72%	23,300,000 – 49,075,000
Series 2006 B CAB	56,932,723	2000 A CIB	2035 – 2039	5.06% – 5.08%	60,000,000 – 70,720,000
Series 2010 A CAB	21,834,746	1997B CAB *	2035 – 2041	7.08% – 7.13%	7,860,000 – 52,385,000
Series 2010 C CIB	81,655,000	2007A2–D2 *	2025 – 2026	5.25% – 5.375%	24,180,000 – 57,475,000
Series 2015 A CIB	41,550,000	2007 A1–D1 *	2019 – 2020	2.25% – 5.00%	18,395,000 – 20,590,000
Series 2017 A LIBOR	72,565,000	2014 A	2026 – 2039	67% LIBOR + 90 bps	13,515,000 – 22,250,000
Series 2017 B LIBOR	66,075,000	2007 CD-2	2026 – 2039	67% LIBOR + 105 bps	5,115,000 – 22,210,000

(1) The current maturity dates include a range, but does not indicate that there are maturities every year within the range.

* The refunded bonds were partially refunded by the new series bonds.

Series 2017 Bonds – On March 1, 2017, the Authority refunded the Series 2014A SIFMA Index Term Rate bonds with the Series 2017A LIBOR Index Term Rate bonds totaling approximately $72.5 million at par, and refunded the Series 2007CD-2 SIFMA Index Term Rate bonds with the Series 2017B LIBOR Index Term Rate bonds totaling approximately $66.1 million at par. The Series 2014A and 2007CD-2 refunded bonds were both subject to optional early redemption on or after March 1, 2017 with a mandatory tender and remarketing date of September 1, 2017. The Authority exercised the early redemption option on both series to take advantage of low interest rates and debt service savings. The Series 2014A SIFMA Index Term Rate bonds of $72.5 million paid interest each month based on the previous months' final calculated SIFMA market pricing plus 118 basis points (1.18%), which was refunded with the new Series 2017A LIBOR Index Term Rate bonds plus 90 basis points (0.90%) over a two-year term, saving the Authority over 0.28% in monthly interest costs. The Series 2007CD-2 SIFMA Index Term Rate bonds of $66.1 million paid interest each month based on the previous months' final calculated SIFMA market pricing plus 175 basis points (1.75%), which was refunded with the new Series 2017B LIBOR Index Term Rate bonds plus 105 basis points (1.05%) over a four-year term, saving the Authority over 0.70% in monthly interest costs. The proceeds totaling $138.6 million were used to defease the outstanding Series 2014A and 2007CD-2 SIFMA bonds, and the related liability for those bonds were removed from the Authority's statements of net position. The Authority used funds from the General Surplus account (Senior Bond Defeasance Fund) to pay all related underwriting fees and other issuance costs totaling approximately $1.4 million.

The principal portions of the Series 2017A bonds are payable in September 2026 and September 2037 to September 2039 with amounts ranging between $13.5 million and $22.3 million. The principal portions of the Series 2017B bonds are payable in September 2026 and September 2037 to September 2039 with amounts ranging between $5.1 million and $22.2 million. These principal amounts due did not change from the refunded bonds principal debt service requirements. The Series 2017A bonds are subject to an optional redemption on or after March 1, 2019 with a mandatory tender and remarketing date of September 1, 2019, and the 2017B bonds are subject to an optional redemption on or after March 1, 2021 with a mandatory tender and remarketing date of September 1, 2021. If the bonds are not converted (or refunded) by the mandatory redemption date, the bonds will reset to a failed remarketing rate during the first 90 days at the greater of a) applicable LIBOR index rate plus 4.50% or b) 7.50%; thereafter the failed remarketing rate is 10% based on the Bond Resolutions.

The refunding resulted in a difference between the reacquisition price and the net carrying amount of the old debt of $4.9 million in the prior year for the 2017A bonds and $4.0 million for the 2017B bonds. These differences, reported in the accompanying basic financial statements as a component of deferred outflows of resources within the 2017 deferred refunding balance, are being amortized as a component of interest expense over the shorter life of the old (including previous refunded debt) and the new debt, which is 2026. The refunding resulted in a net present value economic gain of $1.2 million for the 2017A bonds and $4.6 million for the 2017B bonds, and the refunding reduces debt service payments in the years 2017 to and including 2039 by a total of $11.5 million. Further, the Authority switched from a SIFMA index to 67% of one-month LIBOR to match the associated index of the interest rate swaps and remove basis risk (note 10).

The following is an analysis of changes in bonds payable and associated bond premiums and discounts for the year ended December 31, 2018:

	Balance at January 1, 2018	Additions	Reductions	Balance at December 31, 2018	Due within one year
Series 1997B CAB (Principal)	$ 104,712,695	—	14,415,744	90,296,951	13,658,176
Series 1997B CAB (Accretion)	211,219,843	16,804,897	30,384,256	197,640,484	31,141,824
Series 2000B CAB (Principal)	154,024,296	—	10,277,617	143,746,679	10,219,956
Series 2000B CAB (Accretion)	304,440,594	28,603,603	20,822,383	312,221,814	22,880,044
Series 2004A CAB (Principal)	76,484,624	—	—	76,484,624	—
Series 2004A CAB (Accretion)	76,621,428	8,378,657	—	85,000,085	—
Series 2004B CAB (Principal)	70,705,810	—	—	70,705,810	—
Series 2004B CAB (Accretion)	76,011,802	8,456,395	—	84,468,197	—
Premium Series 2004	418,672	—	22,980	395,692	—
Series 2006B CAB (Principal)	56,932,723	—	—	56,932,723	—
Series 2006B CAB (Accretion)	43,237,806	5,145,392	—	48,383,198	—
Series 2007 A-1 CIB	3,025,000	—	3,025,000	—	—
Series 2007 B-1 CIB	3,025,000	—	3,025,000	—	—
Series 2007 C-1 CIB	3,025,000	—	3,025,000	—	—
Series 2007 D-1 CIB	3,060,000	—	3,060,000	—	—
Series VRF 2009 CIB	1,395,000	—	1,395,000	—	—
Series 2010A CAB (Principal)	21,834,746	—	—	21,834,746	—
Series 2010A CAB (Accretion)	14,248,176	2,613,866	—	16,862,042	—
Series 2010C CIB	81,655,000	—	—	81,655,000	—
Discount 2010C CIB	(171,149)	22,217	—	(148,932)	—
Series 2015A CIB	39,185,000	—	200,000	38,985,000	18,395,000
Premium 2015A CIB	1,753,307	—	1,147,337	605,970	—
Series 2017A LIBOR Notes	72,565,000	—	—	72,565,000	—
Series 2017B LIBOR Notes	66,075,000	—	—	66,075,000	—
Total	$ 1,485,485,373	70,025,027	90,800,317	1,464,710,083	96,295,000

The following is an analysis of changes in bonds payable and associated bond premiums and discounts for the year ended December 31, 2017:

		Balance at January 1, 2017	Additions	Reductions	Balance at December 31, 2017	Due within one year
Series 1997B CAB (Principal)	$	119,985,550	—	15,272,855	104,712,695	14,415,744
Series 1997B CAB (Accretion)		222,477,500	18,264,488	29,522,145	211,219,843	30,384,256
Series 2000B CAB (Principal)		154,024,296	—	—	154,024,296	10,277,617
Series 2000B CAB (Accretion)		276,954,838	27,485,756	—	304,440,594	20,822,383
Series 2004A CAB (Principal)		76,484,624	—	—	76,484,624	—
Series 2004A CAB (Accretion)		68,677,432	7,943,996	—	76,621,428	—
Series 2004B CAB (Principal)		70,705,810	—	—	70,705,810	—
Series 2004B CAB (Accretion)		68,016,223	7,995,579	—	76,011,802	—
Series 2004C Converted CIB	*	15,000,000	—	15,000,000	—	—
Premium Series 2004		440,430	—	21,758	418,672	—
Series 2006B CAB (Principal)		56,932,723	—	—	56,932,723	—
Series 2006B CAB (Accretion)		38,343,723	4,894,083	—	43,237,806	—
Series 2007 A-1 CIB		7,850,000	—	4,825,000	3,025,000	3,025,000
Series 2007 B-1 CIB		7,850,000	—	4,825,000	3,025,000	3,025,000
Series 2007 C-1 CIB		7,850,000	—	4,825,000	3,025,000	3,025,000
Series 2007 D-1 CIB		7,855,000	—	4,795,000	3,060,000	3,060,000
Series 2007 CD-2 SIFMA Notes		66,075,000	—	66,075,000	—	—
Premium 2007 A1-D1 CIB		73,694	—	73,694	—	—
Discount 2007 A1-D1 CIB		(2,086)	2,086	—	—	—
Series VRF 2009 CIB		3,695,000	—	2,300,000	1,395,000	1,395,000
Premium VRF 2009 CIB		11,543	—	11,543	—	—
Series 2010A CAB (Principal)		21,834,746	—	—	21,834,746	—
Series 2010A CAB (Accretion)		11,810,855	2,437,321	—	14,248,176	—
Series 2010C CIB		81,655,000	—	—	81,655,000	—
Discount 2010C CIB		(193,366)	22,217	—	(171,149)	—
Series 2014A SIFMA Notes		72,565,000	—	72,565,000	—	—
Series 2015A CIB		39,915,000	—	730,000	39,185,000	200,000
Premium 2015A CIB		2,906,530	—	1,153,223	1,753,307	—
Series 2017A LIBOR Notes		—	72,565,000	—	72,565,000	—
Series 2017B LIBOR Notes		—	66,075,000	—	66,075,000	—
Total	$	1,499,795,065	207,685,526	221,995,218	1,485,485,373	89,630,000

* The 2004C CAB bonds were converted to CIB bonds on September 1, 2011.

At December 31, 2018, scheduled payments for bonds payable over the next five years and thereafter are as follows:

		Principal	Swap and debt interest	Total
Year(s) ending December 31:				
2019	$	96,295,000	12,855,160	109,150,160
2020		101,590,000	12,147,127	113,737,127
2021		82,495,000	11,232,255	93,727,255
2022		84,200,000	11,290,731	95,490,731
2023		85,895,000	11,290,731	97,185,731
2024 – 2028		579,215,000	44,243,308	623,458,308
2029 – 2033		637,500,000	29,518,750	667,018,750
2034 – 2038		580,555,000	27,132,278	607,687,278
2039 – 2041		227,810,000	1,732,103	229,542,103
		2,475,555,000	161,442,443	2,636,997,443
Add premiums, net of discounts		852,730	—	852,730
Total scheduled payments		2,476,407,730	161,442,443	2,637,850,173
Less future years' accretion		(1,011,697,647)	—	(1,011,697,647)
Total bonds payable	$	1,464,710,083	161,442,443	1,626,152,526

Included in the above principal payment schedule is $1.0 billion of expected future year interest accretion on the Senior CAB 1997B bond series, Senior CAB 2000B bond series, Senior CAB 2004A and 2004B bonds series, Senior 2006B bond series, and the Senior 2010A bond series.

(10) Derivative Instruments

The Authority has two outstanding interest rate swap agreements that are considered investment derivatives under GASB Statement No. 53, *Accounting and Financial Reporting for Derivative Instruments*, as of December 31, 2018 and 2017.

As a means to hedge its borrowing costs, when compared against fixed-rate bonds at the time of issuance of the Series 2007 auction-rate bonds in June 2007, the Authority originally entered into separate pay-fixed, receive-floating LIBOR interest rate swap agreements with Morgan Stanley (MS-1) and JP Morgan (JP-1) (formerly known as Bear Stearns). The intention of these two pay-fixed swaps was to effectively change the Authority's variable interest rate on the Series 2007 auction-rate bonds to a synthetic fixed rate of 3.832% until final maturity of the bonds in September 2039. The swaps and related Series 2007 bonds have since gone through a series of remarketings, refundings, and partial swap terminations since 2007 and are now associated only with the remaining 2017A and 2017B LIBOR Index Term Rate Bonds.

The 2007 pay-fixed MS-1 and JP-1 swaps have outstanding notional amounts from 2026 to 2039 related to the outstanding Series 2017A and 2017B bond maturities. The Authority pays variable interest on each month based on the previous months' final 67% of LIBOR index rate plus 90 basis points (0.90%) for the Series 2017A bonds, and pays 105 basis points (1.05%) for the Series 2017B bonds. These spreads plus the MS-1 and JP-1 pay-fixed interest rate of 3.832% leads to a synthetic interest rate of 4.732% and 4.882% on the outstanding Series 2017A and 2017B bonds, respectively, during the term-rate period, where the Authority has removed the basis risk (both the bonds and swaps are 67% of LIBOR based). However, the relationship between both the Series 2017A and 2017B bonds and the two swaps did not meet the requirements of a hedging derivative instrument; therefore, the related swap fair values are recorded as investment derivatives as of December 31, 2018 and 2017.

During 2018 and 2017, the Authority recognized, on the accrual basis, swap settlements on the 2007 pay-fixed swaps (MS-1 and JP-1) of $3.4 million and $4.3 million, respectively.

The following table provides a summary of the Authority's investment derivative interest rate swaps as of December 31, 2018 and 2017:

Swap	Counterparty	Effective date	Maturity date	Terms	Original notional amount	2018 and 2017 notional amount
JP-1	JP Morgan	June 14, 2007	September 1, 2039	Pay 3.832%; receive 67% one-month LIBOR	$ 155,252,500	69,320,000
MS-1	Morgan Stanley	June 14, 2007	September 1, 2039	Pay 3.832%; receive 67% one-month LIBOR	155,252,500	69,320,000
				Total notional amounts for pay-fixed swaps	$ 310,505,000	138,640,000

The Authority values the interest rate swap derivatives at fair value in accordance with generally accepted accounting principles (note 3) and has subscribed to an independent monitoring service to assist in the review of the monthly cash flows and fair market valuations.

The fair values of derivative instruments outstanding at December 31, 2018, classified by type, and changes in fair value of such derivative instruments for the year then ended, as reported in the basic financial statements, are as follows:

	2018 Changes in fair value		Fair value at December 31, 2018	
	Classification	**Amount**	**Classification**	**Amount**
Investment derivative instruments:				
JP-1 Pay-fixed interest rate swap	Derivative gain	$ 2,851,894	Derivative instruments	$ (18,919,208)
MS-1 Pay-fixed interest rate swap	Derivative gain	2,860,794	Derivative instruments	(18,911,415)
	Investment revenues: Derivative gain	$ 5,712,688	Derivative instruments	$ (37,830,623)

The fair values of derivative instruments outstanding at December 31, 2017, classified by type, and changes in fair value of such derivative instruments for the year then ended, as reported in the basic financial statements, are as follows:

	2017 Changes in fair value		Fair value at December 31, 2017	
	Classification	**Amount**	**Classification**	**Amount**
Investment derivative instruments:				
JP-1 Pay-fixed interest rate swap	Derivative gain	$ 714,214	Derivative instruments	$ (21,771,102)
MS-1 Pay-fixed interest rate swap	Derivative gain	714,170	Derivative instruments	(21,772,209)
	Investment revenues: Derivative gain	$ 1,428,384	Derivative instruments	$ (43,543,311)

(a) Credit Risk

Credit risk can be measured by actual market value exposure or theoretical exposure. When the fair value of any swap has a positive fair market value, the Authority is exposed to the actual risk that the counterparty will not fulfill its obligations. As of December 31, 2018 and 2017, the Authority did not have credit risk as the fair value on the two remaining swaps are liabilities to the Authority.

Under the current swap agreements, JP Morgan Chase Bank, N.A. is required to maintain credit quality ratings of “Aa3” by Moody’s or “AA–” by S&P, while Morgan Stanley Capital Services Inc. is required to maintain credit quality ratings of at least two of the following ratings, which is a “Baa2” from Moody’s, “BBB” from S&P, and “BBB” from Fitch. As of December 31, 2018, the swap counterparties had the following ratings from Moody’s, S&P, and Fitch:

Counterparty	Moody’s	S&P	Fitch
JP Morgan	Aa2	A+	AA
Morgan Stanley	A3	BBB+	A

Due to ratings adjustments with both swap counterparties over the past several years, the Authority entered into a separate credit support annex agreement with Morgan Stanley in 2010 during the time of the 2010 tender transaction, and entered into a credit support annex agreement with JP Morgan in 2013 due to their S&P rating downgrade to A+. Under these agreements, the Authority can require the counterparty to post collateral at any time when the aggregate fair market value of the Morgan Stanley swaps or the separate JP Morgan swap is an asset to the Authority; however, these counterparty rating downgrades did not trigger a termination event. The Authority monitors its fair market value and the ratings on its counterparties regularly to determine if credit risk is a concern. The Authority has not calculated theoretical credit exposure on its swaps. There is no master netting agreement between the Authority and either counterparty.

(b) Interest Rate Risk

Interest rate risk exists if the investment derivative exposes the Authority to interest rate risk. Each of the investment derivatives exposes the Authority to interest rate risk because changes in interest rates will affect the fair market value of each of the investment derivatives. As variable LIBOR rates increase or decrease, the amount of each net settlement changes resulting in potentially dramatic changes in fair market value from period to period.

The following table shows the impact of a 25 basis point (0.25%) increase and decrease in related rates in a parallel yield curve shift for each outstanding investment derivative as of December 31, 2018:

		Fair value at December 31, 2018	Interest rates up 25 basis points	Interest rates down 25 basis points
JP-1 Receive-variable (LIBOR) swap	$	(18,919,208)	(17,009,936)	(20,906,249)
MS-1 Receive-variable (LIBOR) swap		(18,911,415)	(17,002,113)	(20,898,470)
	$	(37,830,623)	(34,012,049)	(41,804,719)

The following table shows the impact of a 25 basis point (0.25%) increase and decrease in related rates in a parallel yield curve shift for each outstanding investment derivative as of December 31, 2017:

		Fair value at December 31, 2017	Interest rates up 25 basis points	Interest rates down 25 basis points
JP-1 Receive-variable (LIBOR) swap	$	(21,771,102)	(18,127,804)	(25,573,139)
MS-1 Receive-variable (LIBOR) swap		(21,772,209)	(18,128,834)	(25,574,308)
	$	(43,543,311)	(36,256,638)	(51,147,447)

(c) Foreign Currency Risk

All of the interest rate swaps are denominated in U.S. dollars; therefore, the Authority is not exposed to foreign currency risk.

(d) Contingent Features

The Authority or counterparty may terminate the swap if the other party fails to perform under the terms of the swap contract or any credit support annex agreement. In such cases, the Authority may owe or be due a termination payment depending on the fair market value of the interest rate swap at that time. The termination payment due to the counterparty or from the counterparty may not be equal to the fair market value. A termination of any interest rate swap may automatically occur due to cross default, bankruptcy, merger, and other defined events found in the swap agreements. Termination risk is a contingent feature of the investment derivatives and is described below. The Authority is not required to post collateral under its swap agreements.

Termination Risk: The 2007 LIBOR interest rate swap agreements (JP-1 and MS-1) expire on September 1, 2039. Both swap agreements are subject to early termination by the parties in certain specified events. These events include events of default; a failure by the swap insurer (MBIA – administered by NPFG), to maintain specified financial strength, claims paying ability, or equivalent ratings; and other ratings of the Authority and swap counterparty falling below the specified ratings in the swap agreements. No additional early automatic termination events were triggered as of December 31, 2018 and 2017. NPFG's financial strength and claims paying ability rating was reaffirmed and then subsequently withdrawn by S&P in December 2017 and was downgraded by Moody's to Ba3 in January 2018; however, their rating does not cause automatic termination and settlement of the swaps alone. The Authority's underlying senior bond rating would have to go below BBB– by S&P or Baa3 by Moody's to cause a termination event. As of December 31, 2018 and 2017, the Authority's underlying senior bond rating was A and A-, respectively, by S&P and A2 and A3, respectively, by Moody's. If the swap agreements had an unscheduled ending, any associated termination payments would not impact the Authority's asset/liability strategy as the Authority holds approximately $350.8 million and $257.4 million in total unrestricted funds at December 31, 2018 and 2017, respectively. In addition, the Authority has the ability to exercise, at its sole discretion, early termination of the swap agreements at a mutually agreed-upon price for any reason.

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Further, in August 2011, in conjunction with the issuance of the Series 2011 bonds, 2014 bonds, and continuing with the 2017 bonds, the Authority and the swap insurer, NPFG, entered into an amendment to the original swap insurance agreements to insert a provision stating that if, at any time during the remaining term of the 2007 pay-fixed swaps, the estimated settlement amount based on the swap fair value report is equal to or less than a liability balance of $2.0 million, the Authority may be notified by NPFG to terminate the swap or may seek to cancel swap insurance coverage under the original 2007 and 2008 swap policies. As of December 31, 2018 and 2017, the negative fair value (liability balance) of the specific swap notional amounts related to the Series 2017A bonds was greater than the $2.0 million threshold and did not trigger a possible termination event during either period.

(11) Notes Payable

The following is an analysis of changes in notes payable for the years ended December 31, 2018 and 2017:

	Balance at January 1, 2018	Additions	Reductions	Balance at December 31, 2018	Due within one year
Other intergovernmental agreements	$ 722,308	—	240,770	481,538	240,769

	Balance at January 1, 2017	Additions	Reductions	Balance at December 31, 2017	Due within one year
Other intergovernmental agreements	$ 963,077	—	240,769	722,308	240,769

The Authority entered into an intergovernmental agreement with Douglas County in 2003 to receive contributed funds for costs of the Jamaica Road interchange ramp construction. Based on this agreement, the remaining contributed funds of $2.4 million as of 2008 are to be repaid in 10 equal payments (noninterest-bearing) beginning in 2011. The annual payment of $0.2 million is made from unrestricted funds.

(12) Other Restricted Noncurrent Liabilities

Other restricted noncurrent liabilities includes the remaining unamortized balance of the 1997 forward delivery agreement and any arbitrage rebate liability to the Authority, if applicable. The following is an analysis of changes in the unamortized balance of the 1997 forward delivery agreement for the years ended December 31, 2018 and 2017:

	Balance at January 1, 2018	Additions	Reductions	Balance at December 31, 2018
$	1,793,527	—	207,544	1,585,983

	Balance at January 1, 2017	Additions	Reductions	Balance at December 31, 2017
$	2,001,071	—	207,544	1,793,527

Under the Bond Resolutions, the Authority is required to make scheduled payments with respect to 1997 Senior Bonds by depositing certain moneys into the Senior Bonds Debt Service Account held by the Trustee. The Authority has deemed the reinvestment of these funds for a period prior to the required payment date to be desirable. To facilitate the reinvestment, the Authority entered into a Debt Service Forward Delivery Agreement in December 1997 with U.S. Bank National Association and Lehman Brothers Special Financing Inc. (LBSF). Under the terms of the original agreement in 1997, LBSF agreed to pay a facility fee of $11.3 million for the opportunity to use the funds to invest in qualified securities. The agreement provides for the appropriate amounts to be available as needed for scheduled debt service payments.

During 2007, 2008, and 2010, the Authority refunded, tendered, and redeemed a portion of the Series 1997A, 1997B, and 1997C bonds, respectively. By entering into these transactions on the Series 1997 bonds, the Authority no longer had a requirement to deposit interest and principal into the Senior Bonds Debt Service Account in the amount that was originally agreed upon when entering into the Debt Service Forward Delivery Agreement with LBSF. Partial termination payments were made to LBSF in 2007 ($6.5 million), 2008 ($0.3 million), and 2010 ($0.2 million). Due to bankruptcy of LBSF, the Authority entered into a novation agreement in 2013 to transfer the forward delivery agreement from LBSF to Deutsche Bank. No terms of the original agreement were changed, and the Authority did not incur any expenses from the novation. The remaining balance of the 1997 forward delivery agreement is being amortized over the life of the outstanding 1997 bonds, which reach final maturity in September 2026.

The Internal Revenue Code and arbitrage rebate regulations issued by the IRS require rebate to the federal government of excess investment earnings on tax-exempt debt proceeds if the yield on those earnings exceeds the effective yield on the related tax-exempt debt issued. Excess earnings must be rebated every five years or upon maturity of the debt, whichever is earlier. The Authority has an assessed arbitrage rebate liability of $0.3 million as of December 31, 2018 and $0.1 million as of December 31, 2017. There were no amounts due or paid in 2018. A rebate of $0.4 million related to the 2014A bonds was due and paid in 2017.

(13) Commitments and Contingencies

(a) Tax, Spending, and Debt Limitations

In November 1992, the voters of Colorado approved Amendment 1, referred to as the Taxpayers Bill of Rights (TABOR), which added a new Section 20 to Article X of the Colorado Constitution. TABOR contains tax, spending, revenue, and debt limitations that apply to the State of Colorado and all local governments. Enterprises, defined as government-owned businesses authorized to issue revenue bonds and receiving less than 10% of annual revenue in grants from all state and local governments combined, are excluded from the provisions of TABOR. The Authority's operations qualify for this exclusion.

(b) Risk Management

The Authority is exposed to various risks of loss related to torts; theft of, damage to, and destruction of assets; errors or omissions; injuries to employees; and natural disasters. The Authority maintains commercial insurance for most risks of loss. Claims, expenses, and liabilities are reported when it is probable that a loss has occurred and the amount of that loss can be reasonably estimated. At December 31, 2018 and 2017, no amounts have been recorded for pending or future claims. Further, claims have not exceeded insurance limits for each of the past three years.

(c) Solar Equipment

The Authority entered into a solar power purchase agreement in July 2011 with Renewable Social Benefit Funds (RSBF), L3C, which provided RSBF the right to install solar power–generating facilities within the Authority's 16-mile Xcel Energy corridor. Generating facilities were installed at 18 ramp locations and 4 building locations within this corridor (Authority headquarters, toll plazas B and C, and the central maintenance facility) for an estimated generating capacity of 707 kilowatts. RSBF is responsible for all installation, operation and maintenance, and other associated costs of the entire generating system for a 20-year period. The solar power–generating facilities were fully operational in early 2012. However, the Authority has the right and option, but not the obligation, to purchase the generating system in its entirety on the anniversary of the sixth year of full operation at a mutually agreed-upon fair market value of the solar equipment. If the option is exercised by the Authority, the generating assets will be transferred to the Authority and all responsibilities and aspects of the solar power purchase agreement will be terminated. The Authority did not exercise this option.

(d) Intergovernmental Agreement with City of Aurora for 6th Avenue Parkway Extension

The Authority entered into an intergovernmental agreement (IGA) in 2015 with the City of Aurora regarding the extension of 6th Avenue from its present terminus in an eastward direction from Buckley Air Force Base to East 6th Parkway and E-470. This extension will establish a more direct route of travel, thereby filling a gap in the regional roadway network. In addition, the forecasted traffic and revenue on E-470 indicates that the 6th Avenue Parkway extension would provide future revenue increases for the Authority. In consideration of the potential future revenue impacts, the Authority agreed to contribute $4.0 million toward the cost of construction in the form of a $2.0 million contribution and a $2.0 million loan, which has a 10-year term beginning on August 9, 2018, the date the Authority's proceeds were disbursed to the City, and bears interest at a rate of 2.5% per annum. Both components of the Authority's contribution were conditioned upon all other funds being appropriated by the City of Aurora or otherwise irrevocably committed to the City of Aurora by third parties. The $2.0 million loan is presented as notes receivable on the statement of revenues, expenses, and changes in net position as of December 31, 2018. The $2.0 million contribution is presented as an intergovernmental expense and reflected as a special item on the statement of revenues, expenses, and changes in net position for the year ended December 31, 2018 due to its infrequent nature. As the conditional provisions of the IGA had not yet been satisfied by the City of Aurora and the timing of disbursement was unknown as of December 31, 2017, no accrual was made in the financial statements for the year ended December 31, 2017.

(14) Intergovernmental Liability – Ramp Financing

The Authority entered into an intergovernmental agreement in 1995 with the City of Commerce City regarding coordination of road improvements and operations. At that time, the Authority was seeking funding for design and construction of Segments II and III and entered into numerous agreements with local jurisdictions. The agreement with Commerce City included a provision for the Authority to fully finance and construct the west ramps of the Tower Road/Pena Boulevard interchange based on a mutually agreed-upon design if the west ramps had not been constructed by January 1, 2012. As of this date, only the southwest ramp has been designed or constructed, and all other provisions in the agreement have been satisfied. In April 2014, the Authority's board of directors and Commerce City approved a new intergovernmental agreement regarding funding of the Tower Road/Pena Boulevard Interchange, and the board of directors approved the 2014 capital budget, including the outlay of $3.2 million to relieve the Authority of this infrequent obligation. After various project delays, the capital outlay became probable in 2018; therefore, the Authority accrued the liability as a current intergovernmental liability on the statement of net position as of December 31, 2017, which corresponds with the cash and cash equivalent limited for construction. Further, in February 2018, the Authority and Commerce City amended the 2014 IGA to add an additional $1.0 million in ramp funding to the liability, which was fully funded in 2018. The related intergovernmental expense of $1.0 million is reflected as a special item on the statement of revenues, expenses, and changes in net position for the year ended December 31, 2018 due to its infrequent nature, while the original $3.2 million was recognized in this manner on the statement of revenues, expenses, and changes in net position for the year ended December 31, 2013 when the original liability was established. Commerce City began construction on the project in January 2018, and the ramp opened to traffic in October 2018. In accordance with the provisions of the IGA, the Authority disbursed the full $4.2 million during 2018, which reduced the liability to $0 as of December 31, 2018.

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(15) Litigation

The Authority is from time to time involved in various legal proceedings characterized as normally incidental to the business of the Authority. Management does not believe that the outcome of any legal proceedings will have a materially adverse impact on the financial position or results of operations of the Authority.

(16) Retirement Plans

In lieu of Social Security, the Authority contributes 6.2% of all compensation for regular employees to a retirement plan, up to the maximum Federal Insurance Contributions Act (FICA) base level of $128,400 in 2018 and $127,200 in 2017, for a maximum contribution of $7,961 for 2018 and $7,886 for 2017. Plan members are also required to contribute 6.2% of their annual covered salary. The plan is a defined-contribution plan administered by International City/County Management Association (ICMA) Retirement Corporation. Plan provisions and contribution requirements are established by and can be amended by the Authority's board of directors. The Authority and its employees each contributed $0.3 million to this plan in 2018 and $0.4 million in 2017. Employees are immediately vested.

In addition, the Authority contributes to a 401(a) Retirement Plan covering 10% of all compensation for regular employees. Employees are not allowed to make contributions to the plan. The plan is a defined-contribution plan administered by ICMA Retirement Corporation. Plan provisions and contribution requirements are established by and can be amended by the Authority's board of directors. Employees are 50% vested at the date of hire and 100% vested after one year of service. The Authority also matches employee contributions to the available 457 deferred compensation retirement plan up to $2,500 per employee per year, and these employer contributions are deposited into the 401(a) Retirement Plan due to the IRS annual deferral limit for 457 plans. The Authority contributed $0.7 million to this plan in 2018 and $0.6 million in 2017.

(17) Subsequent Event

On March 7, 2019, The Authority successfully refunded the Series 2017A LIBOR Index Term Rate bonds with the Series 2019A LIBOR Index Term Rate bonds totaling approximately $72.5 million at par with no change to the principal amounts or maturities. The Series 2017A bonds were subject to optional early redemption on or after March 1, 2019 with a mandatory tender and remarketing date of September 1, 2019. The Authority exercised the early redemption option to take advantage of low interest rates and debt service savings. The Series 2017A bonds of $72.5 million paid interest each month based on the previous period's final calculated LIBOR market pricing plus 90 basis points (0.90%), which was refunded with the new Series 2019A LIBOR Index bonds plus 42 basis points (0.42%) over a two and a half year term (term date of September 1, 2021), saving the Authority over 0.48% in monthly interest costs. The principal portions of the Series 2019A bonds are payable in September 2026 and September 2037 to September 2039 with amounts ranging between $15.5 million to $22.3 million, and now have a 12-month optional early redemption period and step up provision to a maximum rate of 9.00% if not refunded by September 1, 2021. The Authority retained the 67% of one-month LIBOR convention on the bonds to match the associated index of the interest rate swaps and eliminate basis risk. In conjunction with the bond transaction in 2018, the Authority received rating affirmations from S&P (A with a positive outlook) and Moody's (A2 with a stable outlook). Fitch did not rate this transaction. Lastly, on February 27, 2019 and

(Continued)

related to this transaction, the Authority removed the swap insurance on the two interest rate swaps that have been insured by NPFG since 2007 and paid the swap counterparties a total of $974,000 to terminate the policies. This was done in part due to negotiations with NPFG and based on the insurer rights within the swap and bond documents and will benefit the Authority in the future with greater flexibility for any swap changes.

E-470 PUBLIC HIGHWAY AUTHORITY

Supplementary Information – Revenue Covenant

Year ended December 31, 2018

(Unaudited)

Section 7.18 of the Master and Supplemental Bond Resolutions (Bond Resolutions), titled "Revenue Covenant," requires that there shall be sufficient revenues (as defined) collected, after the provision for the payment of operating expenses (as defined), to produce net income at least 1.30 times the aggregate senior debt service due for the year. For purposes of this provision, revenues, and aggregate senior debt service in a fiscal year were to be reduced by the aggregate debt service due and paid from the Vehicle Registration Fees (VRF) Debt Service Fund in such fiscal year on the 2009 VRF Series Bonds, unless paid for from the General Surplus account. The year ended December 31, 2002 was the first fiscal year the revenue covenant was applicable, and such covenant is applicable to all subsequent years through the payment of the Senior Bonds.

For the year ended December 31, 2018, the Authority exceeded the required debt service coverage ratio reporting an actual ratio of 2.11. Below is the calculation for the year ended December 31, 2018:

Revenue:		
Operating revenues	$	249,856,733
Vehicle registration fees		5,310,264
Unrestricted investment income		9,302,756
Other income		1,639,187
Total revenue		266,108,940
Less operating expenses before depreciation, net of renewal and replacement expenses		(49,809,319)
Net revenue		216,299,621
Less vehicle registration fee bonds aggregate debt service due		(1,464,750)
Net income available for senior debt service	$	214,834,871
Aggregate senior debt service due during the year	$	101,729,596
Senior debt service coverage ratio		2.11

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E-470 PUBLIC HIGHWAY AUTHORITY

Supplementary Information – Revenue Covenant

Year ended December 31, 2018

(Unaudited)

The following is a summary description of key terminology of terms identified in the Bond Resolutions. Please refer to the Bond Resolutions for a complete description and additional clarification of the below terms.

Revenue: As defined by the Bond Resolutions, revenue comprises amounts received by the Authority from fees, tolls, rates, and charges for the privilege of traveling on the E-470 toll road. Revenues also include all other amounts derived from or in respect of the ownership or operation of the toll road, which constitute revenues in accordance with generally accepted accounting principles, including accrued toll revenues. Revenues also include vehicle registration fees and other amounts derived from the E-470 toll road, as defined in the Bond Resolutions. Revenues do not include investment income that is externally restricted by credit agreements for purposes other than senior debt service. Revenues also do not include investment income that is noncash in nature, such as unrealized gains (losses), premiums, and discounts.

The following is a reconciliation of investment income reported in the audited basic financial statements of the Authority for the year ended December 31, 2018 to unrestricted investment income available for senior debt service:

Interest earned on investments per the basic financial statements	$	10,816,457
Less:		
Restricted investment income		(548,847)
Unamortized investment discount		(964,854)
Unrestricted investment income	$	9,302,756

The following is a reconciliation of other income reported in the audited basic financial statements of the Authority for the year ended December 31, 2018 to other income available for senior debt service:

Other income per the basic financial statements	$	1,338,546
Less:		
Loss on disposal of capital assets		109,197
Increase in arbitrage rebate		189,990
Add:		
Other nonoperating expenses		1,454
Other income	$	1,639,187

Operating Expense: As defined by the Bond Resolutions, operating expenses are amounts expended for the operation, maintenance, repair, and any other current expenses or obligations required to be paid by the Authority directly attributable to the operation of the E-470 toll road. Operating expenses do not include depreciation expense, interest for debt service, or expenses associated with the renewal and replacement accounts established under the Bond Resolutions. Per the Bond Resolutions, renewal and replacement expenses are to be funded after senior debt service.

E-470 PUBLIC HIGHWAY AUTHORITY

Supplementary Information – Revenue Covenant

Year ended December 31, 2018

(Unaudited)

The following is a reconciliation of operating expenses before depreciation expense reported in the audited basic financial statements of the Authority for the year ended December 31, 2018 to operating expenses before depreciation expense, net of nonoperating fund expenses, included in the revenue covenant calculation:

Operating expenses before depreciation and interest per the audited basic financial statements	$	52,765,319
Less renewal and replacement expenses		(2,956,000)
Operating expenses before depreciation expense, net of nonoperating fund expenses	$	49,809,319

VRF Bonds Aggregate Debt Service: VRF bonds aggregate debt service is the aggregate debt service due and paid from the VRF Debt Service Fund for the year ended December 31, 2018 on the 2009 VRF Series Bonds. The Authority paid approximately $1.5 million from the VRF Debt Service Fund, which was funded from current year VRF revenues as specified in the Bond Resolutions.

Aggregate Senior Debt Service Due: For the year ended December 31, 2018, aggregate senior debt service due is all principal and interest paid on outstanding senior bonds (cash basis), which includes Senior Bond Series 1997B, 2000B, 2007A-1, 2007B-1, 2007C-1, 2007D-1, 2010C, 2015A, 2017A, and 2017B, as well as the paid settlement differential on the Authority's interest rate swaps during the year.

Senior Debt Service Coverage Ratio: Senior debt service coverage ratio is the ratio of net income available for senior debt service to aggregate debt service due during the fiscal year.