



New Jersey Turnpike Authority



ANNUAL BUDGET 2018

Prepared by the Finance Department:
Donna Manuelli, Chief Financial Officer
Pamela Varga, Deputy Chief Financial Officer
Katherine Johnstone, Assistant Director of Finance

1 Turnpike Plaza
Woodbridge, NJ 07095

Table of Contents

| | |
|--|----|
| Transmittal Letter..... | 1 |
| Distinguished Budget Presentation Award..... | 2 |
| Vision Statement..... | 3 |
| Mission Statement..... | 3 |
| Core Values..... | 3 |
| Background..... | 4 |
| The Turnpike..... | 4 |
| The Parkway..... | 5 |
| Financial Policies Summary..... | 7 |
| Financial Management Principals and Guidelines..... | 7 |
| Debt Management Policy..... | 7 |
| Interest Rate Swap Management Plan..... | 8 |
| Investment Policy..... | 8 |
| Financial Plan..... | 9 |
| Financial Plan Key Highlights..... | 9 |
| Revenue..... | 9 |
| Operating Expenses..... | 9 |
| Net Debt Service..... | 9 |
| Maintenance Reserve Fund and the Special Project Reserve Fund..... | 9 |
| State Payments..... | 9 |
| The Strategic Plan..... | 11 |
| New Jersey Turnpike Authority 2017 Accomplishments and 2018 Goals..... | 13 |
| Safety..... | 13 |
| Financial Strength..... | 14 |
| Mobility..... | 15 |
| State of Good Repair..... | 16 |
| People..... | 17 |
| Key Financial Metrics..... | 18 |
| Toll Revenue as % of Operating Revenue..... | 18 |
| Operating Margin Ratio..... | 19 |
| Cost Recovery Ratio..... | 20 |
| Average Toll/Transaction – Turnpike..... | 21 |
| Average Toll/Transaction – Parkway..... | 21 |
| Toll Revenue/Lane Mile..... | 22 |
| Operating Cost/Lane Mile..... | 23 |
| Debt/Lane Mile..... | 23 |
| Executive Summary..... | 24 |
| Organization Chart..... | 31 |

| | |
|---|-----|
| Fund Structure | 32 |
| Description of Funds | 32 |
| Revenue Requirement..... | 33 |
| Basis of Budgeting..... | 34 |
| Budget Procedure..... | 35 |
| Summary of Major Revenues and Expenses | 36 |
| Sources of Revenue | 36 |
| Allocation of Revenue..... | 37 |
| Revenue | 38 |
| 2018 Revenue Budget..... | 38 |
| Key Assumptions: | 38 |
| Toll Statistics..... | 39 |
| Toll Transactions by Vehicle Type and Roadway | 39 |
| Toll Revenue by Vehicle Type and Roadway..... | 40 |
| 2018 Operating Budget | 41 |
| Budget by Functional Area | 43 |
| Budget by Expense Type | 44 |
| 2017 Operating Budget Summary by Line Item | 45 |
| Budgeted Full Time Employees..... | 46 |
| Department Budgets..... | 47 |
| Maintenance | 47 |
| Engineering..... | 52 |
| Toll Collection | 55 |
| Operations | 59 |
| State Police..... | 62 |
| Information Technology Services | 65 |
| Executive Offices | 72 |
| Law | 74 |
| Procurement and Materials Management | 77 |
| Human Resources and Office Services..... | 81 |
| Finance | 84 |
| Patron and Customer Services..... | 89 |
| Internal Audit..... | 91 |
| Capital and General Reserve Spending Budgets..... | 93 |
| Maintenance Reserve Fund | 96 |
| Special Project Reserve Fund | 99 |
| General Reserve Fund | 114 |
| Supplemental Capital Fund | 118 |
| Construction Fund | 126 |
| Capital Improvement Program..... | 126 |

| | |
|--|-----|
| Debt | 140 |
| Debt Limit..... | 140 |
| Bond Indebtedness..... | 141 |
| Aggregate Bond Debt Service Requirement | 142 |
| Debt Services Fund Budget..... | 144 |
| Debt Reserve Fund..... | 145 |
| Charges Fund Budget..... | 146 |
| Appendices | 147 |
| Appendix A: General Consulting Engineer’s Approval | 147 |
| Appendix B Financial Policies | 148 |
| Financial Management Principals and Guidelines | 148 |
| Debt Management Policy..... | 154 |
| Interest Rate Swap Management Plan..... | 165 |
| Investment Policy..... | 171 |
| Appendix C: Management Salaries | 176 |
| Appendix D: NJTA Non-Bargaining Salary Scale..... | 178 |
| Appendix E: Statistical Data | 182 |
| New Jersey State Highway System..... | 182 |
| New Jersey Turnpike Authority..... | 183 |
| New Jersey Turnpike | 183 |
| Garden State Parkway..... | 183 |
| Population..... | 184 |
| Employment..... | 185 |
| Economic Indicators | 187 |
| Weather | 189 |
| Glossary..... | 190 |
| Acronyms..... | 196 |

Table of Figures

| | |
|--|----|
| Figure 1: Great Egg Harbor Bridge Aerial View | 3 |
| Figure 2: NJTA Financial Plan | 10 |
| Figure 3: YTD Crashes per Vehicle Miles Traveled..... | 13 |
| Figure 4: YTD Fatalities per Vehicle Miles Traveled..... | 13 |
| Figure 5: Turnpike Authority's Credit Rating | 14 |
| Figure 6: Annual Commercial Transactions..... | 15 |
| Figure 7: LED Fixtures | 16 |
| Figure 8: Budgeted Headcount Totals | 17 |
| Figure 9: Toll Revenue as % of Operating Revenue | 18 |
| Figure 10: Toll Revenue as % of Operating Revenue Graph | 18 |
| Figure 11: Operating Margin Ratio..... | 19 |
| Figure 12: Operating Margin Ratio Graph..... | 19 |
| Figure 13: Cost Recovery Ratio | 20 |
| Figure 14: Cost Recovery Ratio Graph..... | 20 |
| Figure 15: Average Toll/ Transaction- Turnpike..... | 21 |
| Figure 16: Average Toll/ Transaction- Parkway..... | 21 |
| Figure 17: Average Toll/ Transaction- Turnpike/Parkway Graph..... | 21 |
| Figure 18: Toll Revenue/Lane Mile | 22 |
| Figure 19: Toll Revenue/Lane Mile Graph | 22 |
| Figure 20: Operating Cost/Lane Mile | 23 |
| Figure 21: Operating Cost per Lane Mile..... | 23 |
| Figure 22: Debt/Lane Mile | 23 |
| Figure 23: Debt/Lane Mile Graph..... | 23 |
| Figure 24: Annual Budget Revenue Summary (2016-2018)..... | 24 |
| Figure 25: Annual Budget Spending Summary (2016-2018)..... | 25 |
| Figure 26: Total Lane Miles and Operating Budget per Lane Mile (2012-2018) | 26 |
| Figure 27: Operating Expenses with Snow and Severe Weather (2012-2018)..... | 26 |
| Figure 28: Total Annual Revenue (2013-2018)..... | 27 |
| Figure 29: Authorized Headcount (2004-2018)..... | 29 |
| Figure 30: Snow and Severe Weather Expenses (2013-2018) | 29 |
| Figure 31: Organization Chart..... | 31 |
| Figure 32: Net Revenue Requirement (2016-2018) | 33 |
| Figure 33: 2018 Annual Budget Calendar..... | 35 |
| Figure 34: Sources of Revenue (2016-2018)..... | 36 |
| Figure 35: Sources of Revenue Percentages (2016-2018) | 36 |
| Figure 36: Sources of Revenue Graph (2016-2018) | 36 |
| Figure 37: Allocation of Revenue (2016-2018) | 37 |
| Figure 38: Allocation of Revenue Percentages (2016-2018)..... | 37 |
| Figure 39: Allocation of Revenue Graph (2016-2018) | 37 |
| Figure 40: Revenue Budget (2016-2018) | 38 |
| Figure 41: Revenue Fund Balance (2016-2018)..... | 38 |
| Figure 42: Toll Transactions by Vehicle Type and Roadway (2014-2018)..... | 39 |
| Figure 43: Total Toll Transactions (2014-2018)..... | 39 |
| Figure 44: Toll Transactions Percent Change (2014-2018)..... | 39 |
| Figure 45: Toll Revenue by Vehicle Type and Roadway (2014-2018) | 40 |
| Figure 46: Total Toll Revenue (2014-2018)..... | 40 |
| Figure 47: Toll Revenue Percent Change (2014-2018)..... | 40 |
| Figure 48: Operating Budget (2016-2018) | 41 |
| Figure 49: Budget by Functional Area (2016-2018)..... | 43 |
| Figure 50: Budget by Functional Area Percentages (2016-2018) | 43 |
| Figure 51: Budget by Expense Type (2015-2017) | 44 |
| Figure 52: Budget by Expense Type Percentages (2016-2018)..... | 44 |
| Figure 53: Operating Budget by Line Item (2016-2018) | 45 |
| Figure 54: Budgeted Full Time Employees (2016-2018) | 46 |

| | |
|---|-----|
| Figure 55: Maintenance Department Organization Chart | 47 |
| Figure 56: Maintenance Department Operating Budget (2016-2018) | 48 |
| Figure 57: Maintenance Department Headcount (2016-2018) | 51 |
| Figure 58: Engineering Department Organization Chart | 52 |
| Figure 59: Engineering Department Operating Budget (2016-2018) | 53 |
| Figure 60: Engineering Department Headcount (2016-2018) | 54 |
| Figure 61: Tolls Department Organization Chart | 55 |
| Figure 62: Tolls Department Operating Budget (2016-2018) | 56 |
| Figure 63: Tolls Department Headcount (2016-2018) | 58 |
| Figure 64: Operations Department Organization Chart | 59 |
| Figure 65: Operations Department Operating Budget (2016-2018) | 60 |
| Figure 66: Operations Department Headcount (2016-2018) | 61 |
| Figure 67: State Police Department Organization Chart | 62 |
| Figure 68: State Police Department Operating Budget (2016-2018) | 63 |
| Figure 69: State Police Department Headcount (2016-2018) | 64 |
| Figure 70: ITS Department Organization Chart | 65 |
| Figure 71: ITS Department Operating Budget (2016-2018) | 69 |
| Figure 72: ITS Department Headcount (2016-2018) | 71 |
| Figure 73: Executive Offices Department Organization Chart | 72 |
| Figure 74: Executive Offices Department Operating Budget (2016-2018) | 73 |
| Figure 75: Executive Offices Department Headcount (2016-2018) | 73 |
| Figure 76: Law Department Organization Chart | 74 |
| Figure 77: Law Department Operating Budget (2016-2018) | 75 |
| Figure 78: Law Department Headcount (2016-2018) | 76 |
| Figure 79: Procurement and Materials Management Department Organization Chart | 77 |
| Figure 80: Procurement and Materials Management Department Operating Budget (2016-2018) | 78 |
| Figure 81: Procurement and Materials Management Department Headcount (2016-2018) | 80 |
| Figure 82: Human Resources and Office Services Department Organization Chart | 81 |
| Figure 83: Human Resources and Office Services Department Operating Budget (2016-2018) | 82 |
| Figure 84: Human Resources and Office Services Department Headcount (2016-2018) | 83 |
| Figure 85: Finance Department Organization Chart | 84 |
| Figure 86: Finance Department Operating Budget (2016-2018) | 85 |
| Figure 87: Finance Department Headcount (2016-2018) | 88 |
| Figure 88: Patron and Customer Services Department Organization Chart | 89 |
| Figure 89: Patron and Customer Services Department Operating Budget (2016-2018) | 90 |
| Figure 90: Patron and Customer Services Department Headcount (2016-2018) | 90 |
| Figure 91: Internal Audit Department Organization Chart | 91 |
| Figure 92: Internal Audit Department Operating Budget (2016-2018) | 92 |
| Figure 93: Internal Audit Department Headcount (2016-2018) | 92 |
| Figure 94: Total Capital and General Reserve Funds Budget (2016-2018) | 94 |
| Figure 95: Total Capital and General Reserve Funds Percentages (2016-2018) | 94 |
| Figure 96: Capital Budget Spending and Funding (2016-2018) | 95 |
| Figure 97: Maintenance Reserve Fund Projects (2016-2018) | 96 |
| Figure 98: Maintenance Reserve Fund Budget Graph (2014-2018) | 96 |
| Figure 99: Maintenance Reserve Fund Balance (2016-2018) | 97 |
| Figure 100: Maintenance Reserve Fund 2018 Projects | 97 |
| Figure 101: Maintenance Reserve Fund Project Descriptions | 98 |
| Figure 102: Special Project Reserve Fund Budget (2016-2018) | 99 |
| Figure 103: Special Project Reserve Fund Budget Graph (2014-2018) | 99 |
| Figure 104: Special Project Reserve Fund Balance (2016-2018) | 99 |
| Figure 105: Special Project Reserve Fund Project | 100 |
| Figure 106: Special Project Reserve Fund Project Descriptions | 102 |
| Figure 107: General Reserve Fund Budget (2016-2018) | 114 |
| Figure 108: General Reserve Fund Budget Graph (2014-2018) | 114 |
| Figure 109: General Reserve Fund Balance (2016-2018) | 114 |
| Figure 110: General Reserve Fund Projects | 115 |
| Figure 111: General Reserve Fund Project Descriptions | 117 |

| | |
|--|-----|
| Figure 112: Supplemental Capital Fund Budget (2016-2018) | 118 |
| Figure 113: Supplemental Capital Fund Budget Graph (2014-2018) | 118 |
| Figure 114: Supplemental Capital Fund Projects | 119 |
| Figure 115: Supplemental Capital Fund Project Descriptions | 125 |
| Figure 116: Capital Improvement Program Projects Summary | 126 |
| Figure 117: Construction Fund Balance (2016-2018)..... | 126 |
| Figure 118: Map of Capital Improvement Program Active Projects..... | 127 |
| Figure 119: Capital Improvement Program Projects..... | 138 |
| Figure 120: Capital Improvement Program Project Spending By Year | 139 |
| Figure 121: Total Outstanding Bond..... | 140 |
| Figure 122: Bond Indebtedness..... | 141 |
| Figure 123: Aggregate Bond Debt Service Requirement | 142 |
| Figure 124: Aggregate Bond Debt Service Requirement Graph | 143 |
| Figure 125: Debt Service Fund Budget..... | 144 |
| Figure 126: Debt Service Fund Budget Graph (2014-2018)..... | 145 |
| Figure 127: Debt Service Fund Balance (2016-2018) | 145 |
| Figure 128: Debt Reserve Fund Balance (2016-2018)..... | 145 |
| Figure 129: Total Charges Fund Budget (2016-2018)..... | 146 |
| Figure 130: Total Charges Fund Budget Graph (2014-2018)..... | 146 |
| Figure 131: Charges Fund Balance (2016-2018) | 146 |
| Figure 132: Management Salaries | 177 |
| Figure 133: NJTA Non-Bargaining Salary Scale | 181 |
| Figure 134: Map of New Jersey State Highway System..... | 182 |
| Figure 135: New Jersey Population by County..... | 184 |
| Figure 136: New Jersey In/Out of State Employment by County | 185 |
| Figure 137: New Jersey Employment Totals (2012-2016) | 186 |
| Figure 138: New Jersey Employment by County..... | 187 |
| Figure 139: Annual Inflation Adjusted GDP Growth (2010-2016)..... | 187 |
| Figure 140: Average Annual Regular Gasoline Prices (2008-2017)..... | 188 |
| Figure 141: Statewide Average Snowfall by Season (2011-2017) | 189 |

Transmittal Letter

CHRIS CHRISTIE
GOVERNOR

KIM GUADAGNO
LIEUTENANT GOVERNOR

October 24, 2017

New Jersey Turnpike Authority

1 TURNPIKE PLAZA - P.O. BOX 5042 - WOODBRIDGE, NEW JERSEY 07095
TELEPHONE (732) 750-5300

RICHARD T. HAMMER, Chairman
RONALD GRAVINO, Vice Chairman
MICHAEL R. DuPONT, Treasurer
RAYMOND M. POCINO, Commissioner
ULISES E. DIAZ, Commissioner
JOHN D. MINELLA, Commissioner
RAPHAEL SALERMO, Commissioner
JOSEPH W. MROZEK, Executive Director

To: The Board of Commissioners of the New Jersey Turnpike Authority:

We are pleased to submit for your review the New Jersey Turnpike Authority's (the Authority's) 2018 Annual Budget. Section 710 of the Authority's Turnpike Revenue Bond Resolution requires the Board of Commissioners to adopt, on or before January 15th of each fiscal year, an Annual Budget for that year, and promptly file the Annual Budget with the Trustee, for inspection by the bondholders. The Annual Budget must include, at a minimum, appropriations for all anticipated Operating Expenses and Reserves therefor, and provisions for Maintenance Reserve Payments and Special Project Reserve Payments. The Annual Budget may set forth such additional material as the Authority may determine and shall contain a certificate of the Consulting Engineer approving such Annual Budget.

The 2018 Annual Budget has been prepared in accordance with the Authority's mission to prudently manage the finances and operations of the New Jersey Turnpike Authority to provide its customers with a safe, efficient, innovative, and resilient toll road system, which facilitates mobility in New Jersey and the Northeast United States of America. To this end, the 2018 Annual Budget includes a more than 30% increase in funding to resurface the roadways and repair ageing bridge decks, as well as funding for roadway lighting and concrete barrier repairs and the start of the replacement of the more than 65 year-old hybrid changeable message signs on the New Jersey Turnpike.

In 2018, the Authority will complete and open to traffic the final phase of the Garden State Parkway widening to milepost 35. Increases in capacity over the past few years have generated increased revenue, but are also met with a resultant increase in both operational and maintenance expenditures for the Turnpike System. The 2018 Annual Budget provides the necessary funds to meet these expenditures and includes funding to support an increase in both roadway maintenance staff and New Jersey State Police assigned to patrol the roadways. Finally, the 2018 Budget includes funding to cover debt service payments on both existing debt and the potential issuance of up to \$525 million of Turnpike Revenue Bonds during 2018 to complete the funding for the \$7 Billion Capital Improvement Program.

The 2018 Annual Budget provides for the necessary personnel and expenditures to operate and maintain the New Jersey Turnpike and Garden State Parkway, two of the nation's busiest and safest toll roads. In addition, the 2018 Annual Budget provides bond covenant coverage in excess of that required by the Turnpike Revenue Bond Resolution and the Authority's Financial Management Principles and Guidelines, as well as meets all contractual payment obligations.

Joseph Mrozek
Executive Director

Donna Manuelli
Chief Financial Officer

Website address <http://www.njta.com>

Distinguished Budget Presentation Award

GOVERNMENT FINANCE OFFICERS ASSOCIATION

*Distinguished
Budget Presentation
Award*

PRESENTED TO

**New Jersey Turnpike Authority
New Jersey**

For the Fiscal Year Beginning

January 1, 2017

A handwritten signature in black ink, which appears to read "Jeffrey R. Emswiler". The signature is written in a cursive, flowing style.

Executive Director

The Government Finance Officers Association of the United States and Canada (GFOA) presented a Distinguished Budget Presentation Award to the **New Jersey Turnpike Authority, New Jersey** for its annual budget for the fiscal year beginning **January 1, 2017**. In order to receive the award, a governmental unit must publish a budget document that meets program criteria as a policy document, as an operations guide, as a financial plan, and as a communications device.

This award is valid for a period of one year only. We believe our current budget continues to conform to program requirements, and we are submitting it to GFOA to determine its eligibility for another award.

Vision Statement

To be the best toll road agency in the United States of America

Mission Statement

To prudently manage the finances and operations of the New Jersey Turnpike Authority to provide our customers with a safe, efficient, innovative, and resilient toll road system, which facilitates mobility in New Jersey and the Northeast United States of America.

Core Values

The Authority's core values are a commitment to:

Safety
Diversity
Innovation
Transparency
State of Good Repair
Customer Satisfaction
Resiliency & Sustainability
Long Term Financial Stability

The Great Egg Harbor Bridge on the Garden State Parkway



Figure 1: Great Egg Harbor Bridge Aerial View

Background

The New Jersey Turnpike Authority (the “Authority”) is a body corporate and politic of the State of New Jersey (the “State”) organized and existing by virtue of the New Jersey Turnpike Act of 1948, constituting Chapter 454 of the Laws of New Jersey of 1948, as amended and supplemented (the “Act”). Pursuant to the Act, the Authority has owned and operated the New Jersey Turnpike (the “Turnpike”) since the time the Turnpike opened for traffic in 1951. In July 2003, the New Jersey Highway Authority (the “Highway Authority”) was abolished and the Authority assumed all of the powers, rights, obligations, assets, debts, liabilities and statutory responsibilities and duties of the Highway Authority, including the ownership and operation of the Garden State Parkway (the “Parkway” and, together with the Turnpike, the “Turnpike System”). As a result, the assets and liabilities of the Authority and the Highway Authority and the ongoing operations, expenses and revenues of the Turnpike and the Parkway are now combined under the ownership and operation of the Authority.

The Turnpike

The Turnpike is a limited access toll road that serves as part of the I-95 corridor linking the major economic centers of the East Coast. Its connections to a major seaport in Newark and Elizabeth and a major airport in Newark make it an important route for both commercial and passenger vehicles. It also serves New Jersey commuters traveling to and from the major metropolitan areas surrounding Philadelphia and New York City and other employment centers in the State.

The Turnpike consists of a 122-mile mainline and two extensions. Originally, the mainline ran from Deepwater, Salem County, to US Route 46 in Ridgefield Park, Bergen County, a distance of approximately 117.5 miles. In 1992, the Authority acquired the 4.4-mile section of Interstate 95 extending from the northern terminus of the Turnpike mainline to Fort Lee, Bergen County, at the crossing of Route 9W (Fletcher Avenue), a short distance west of the George Washington Bridge toll plaza (the “I-95 Extension”). Approximately three miles west of this location lies a full directional interchange with Interstate 80, a significant traffic generator for the Turnpike. At the southern terminus, the Turnpike connects, via a short section of US Route 40, with the Delaware Memorial Bridge.

The Newark Bay-Hudson County extension, which opened in 1956, is a four-lane, 8.3-mile spur that extends from Interchange 14 on the mainline Turnpike, near Newark Liberty Airport, to the Holland Tunnel plaza in Jersey City, Hudson County. It includes a high-level bridge over Newark Bay. There are three interchanges on the extension: Interchange 14A (Bayonne), Interchange 14B (Jersey City), and Interchange 14C (Holland Tunnel).

The Pearl Harbor Memorial Turnpike extension, which opened in 1956, is a 6.6-mile, six-lane spur that connects the Turnpike to the Pennsylvania Turnpike. The extension begins at a junction with the mainline Turnpike at Interchange 6 (Mansfield, Burlington County) and ends at the Delaware River. The bridge across the Delaware River at that point was bonded and constructed jointly by the Authority and the Pennsylvania Turnpike Commission. A full interchange connecting the extension to Route 130 in Florence Township, New Jersey, was opened in 1999.

The Turnpike roadway is two lanes in each direction from Interchange 1 (Deepwater) to Interchange 4 (Camden-Philadelphia) and three lanes in each direction from Interchange 4 to Interchange 6 (Pennsylvania Turnpike).

From Interchange 6 to north of Interchange 14 (Newark), the Turnpike is configured as a “dual/dual” highway; it has two distinct sets of roadways in each direction, an inner roadway and an outer roadway. Under normal operating conditions, truck, bus, and passenger car traffic is permitted on the outer roadways, but only passenger car traffic is permitted on the inner roadways. Ramps at the interchanges enable traffic to enter or exit the Turnpike from any of the four roadways.

Vehicles are prevented from crossing back and forth between the inner and outer roadways by a median with a guardrail. Crossovers have been provided on those medians to allow access to emergency and maintenance vehicles and to provide for the detouring of traffic under police control if an accident should block one of the roadways. The northbound and southbound roadways are separated by a specially designed, crash-tested, heavy concrete barrier to prevent cross-over traffic. Grade-separated U-turn structures have been provided at appropriate locations so that police, maintenance, and other vehicles can change direction safely.

Between Interchanges 6 (Mansfield) and 11 (Woodbridge), there are 12 lanes total, three outer and three inner in each direction. And from Interchange 11 to Interchange 14 (Newark), there are 14 total lanes, four lanes in each direction on the outer roadways and three in each direction on the inner roadways.

North of Interchange 14, the inner and outer roadways of the Turnpike merge and divide through a complex configuration referred to as the "Southern Mixing Bowl" to follow two separate alignments, one west of the Hackensack River, the other, east of the Hackensack River. The Westerly Alignment is six lanes from north of the Southern Mixing Bowl to the NJ Route 3 crossing; it narrows to four lanes from north of this point to the point where it rejoins the Easterly Alignment just south of US Route 46. The Easterly Alignment is six lanes from the Southern Mixing Bowl to the confluence with the Westerly Alignment. North of northbound US Route 46, the roadway separates into dual express and local roadways leading to the George Washington Bridge.

A ground breaking ceremony was held in July 2009 for the construction of the Turnpike's Interchange 6 to 9 Widening Program. The Program widened the Turnpike from Interchange 6 (Mansfield Township, Burlington County) to Interchange 9 (East Brunswick Township, Middlesex County), a linear distance of 35 miles. The Program was designed to relieve heavy and recurring congestion on this section of the Turnpike, improve operational and maintenance performance, and provide for the increased demand for capacity in the future. The construction added 170 lane miles to the roadway by widening it from six to 12 lanes from two miles south of Interchange 6 to Interchange 8A (South Brunswick Township, Middlesex County), a distance of approximately 25 miles, and from 10 lanes to 12 lanes between Interchange 8A and Interchange 9, a distance of 10 miles. The Program created a dual/dual roadway between Interchange 6 and Interchange 8A and expanded the outer roadway in each direction between Interchange 8A and Interchange 9. The work included improvements at Interchange 7A and the construction of a new toll plaza at Interchange 8. The Program was completed in the fall of 2014 with the opening of the northbound lanes on October 26, 2014, and the southbound lanes on November 2, 2014 at an estimated cost of \$2.2 billion.

The Parkway

The Parkway is a 173-mile limited access toll road with connections in the south to Route 9 near Cape May, New Jersey, and in the north to the New York State Thruway at the New York-New Jersey border near Spring Valley, New York. The Parkway interchanges are numbered according to their distance from the southern terminus.

The northern section of the Parkway serves the metropolitan suburban areas in Bergen, Union, Essex, and Passaic Counties near Newark and New York City. In addition to being heavily used by commuters, the location of many businesses and industrial complexes in or near the Parkway corridor has resulted in significant local business traffic. The Parkway also is the principal highway route between metropolitan Newark-New York City and the New Jersey seashore. Heavy trucks are not allowed north of Interchange 105.

For approximately 135 miles, the Parkway is distinguished by a wide natural-area median separating northbound from southbound traffic. The purpose of the median is threefold: to prevent head-on collisions between traffic traveling in opposite directions, to prevent visual interference by opposing traffic, and to provide areas that allow extensive flexibility in road configuration. The wide natural-area median is a distinctive feature of the Parkway.

Three sections of the Parkway were constructed by NJDOT and maintained by that agency until June 30, 1987. On July 1, 1987, the Highway Authority took ownership of those sections together with all previous responsibilities and obligations. These sections total approximately 19 miles and include a 13-mile link between US Route 22 and US Route 9 in Union and Middlesex Counties, a two-mile link in Ocean County, and a four-mile link in Cape May County. These portions of the road are known collectively as the "State Sections." The term "Parkway" as used herein includes the State Sections. No tolls are charged on the State Sections.

The Parkway is four lanes (two in each direction) from Cape May to milepost 41, six lanes to milepost 91, eight lanes to milepost 102, 10 lanes to milepost 117, 12 lanes to milepost 127, 10 lanes to milepost 140, eight lanes to milepost 145, six lanes to milepost 168, and four lanes to the New York border.

The widening of the Parkway from milepost 63 in Stafford Township to milepost 80 in South Toms River opened in May 2011 was funded as part of the Capital Improvement Program. This widening program was designed to relieve heavy traffic congestion and to improve motorist safety by the addition of one new lane in both the northbound and southbound directions and full-width shoulders. In addition to the widening from milepost 63 to 80, the Parkway was widened from milepost 48 to 63. The widening to milepost 52 opened in the spring of 2014. The remaining widening of this section to milepost 48 was opened in May 2015 upon the completion of the rehabilitation of the Bass River Bridge. The final phase of the Parkway widening from milepost 35 to 48 is under construction. The third lane between milepost 42 and 48 was opened in June 2016. The remaining portion of the Parkway widening is projected to be completed in the spring of 2018.

Financial Policies Summary

The Authority has adopted four key financial policies that serve as the groundwork for how the Authority issues debt, makes investments, and manages its finances. Below is a brief description of these four policies. The policies were developed by staff in consultation with the Authority's Financial Advisors and approved by the Board of Commissioners. All financial policies are reviewed by the Authority's Chief Financial Officer no less than every two years. Any changes to the document will be presented to the Authority's Board of Commissioners for approval. The full versions of these policies are included in Appendix B of this document.

Financial Management Principals and Guidelines

The Financial Management Principles and Guidelines are intended to serve as a management tool to enable the Authority to communicate the Authority's commitment to a sound financial decision making process and affirm to investors and the credit rating agencies management's commitment to the long term financial viability of the Authority and repayment of its bonds. The Financial Management Principles and Guidelines are also intended to serve as guidance for management of the Authority with respect to:

- (i) the issuance and management of Authority debt in appropriate amounts and types with the goals of achieving the lowest possible costs of capital within prudent risk parameters and ensuring ongoing access to the capital markets; and
- (ii) compliance by the Authority with all provisions of its enabling legislation relating to bonds, notes or other obligations of the Authority, as well as all provisions of the Turnpike Revenue Bond Resolution.

Notably, in January 2017, The Authority's Board of Commissioners approved an amendment to the Financial Management Principles and Guidelines. This amendment increased the minimum General Reserve Fund targets from \$100 million as follows:

- \$125 million as of 12/31/17
- \$150 million as of 12/31/18
- \$175 million as of 12/31/19
- 10% of that year's budgeted annual revenue for 12/31/20 and each year there after.

Debt Management Policy

The Debt Management Policy is intended to serve as a management tool to enable the Authority to identify circumstances and transactions under which the Authority can issue and manage its bonds, notes and other obligations in the most efficient manner and provide for the full and timely repayment thereof. The policy is also intended to serve as guidance for management of the Authority with respect to:

- (i) the issuance and incurrence of Authority debt in appropriate amounts and types with the goals of achieving the lowest possible costs of capital within prudent risk parameters and ensuring ongoing access to the capital markets;
- (ii) compliance by the Authority with all provisions of its enabling legislation relating to bonds, notes or other obligations of the Authority, as well as all provisions of the Turnpike Revenue Bond Resolution (as hereinafter defined);
- (iii) preservation of financial flexibility to maintain appropriate resources and funding capacity for present and future capital needs;

(iv) management of interest rate risk exposure to promote the appropriate diversification within the debt portfolio to balance risk and liquidity and promote and maintain an acceptable balance between interest rate risk and the long-term cost of capital; and

(v) securing of highly qualified professional services firms to assist with debt issuance in an open and competitive process.

Interest Rate Swap Management Plan

The Interest Rate Swap Management Plan sets forth the manner of execution of interest rate swaps and related agreements, provides for security and payment provisions, and sets forth certain other provisions related to interest rate swap agreements between the Authority and qualified swap counterparties. The Interest Rate Swap Management Plan also outlines procedures to be followed to insure compliance with all applicable federal and state laws.

Investment Policy

The purpose of the Investment Policy is to define guidelines and operational factors governing the investment of all funds held by the Authority or its bond trustees. The Investment Policy is intended to show compliance with all provisions of the Authority's enabling legislation relating to the investment of funds of the Authority, as well as provisions of the Turnpike Revenue Bond Resolution.

Financial Plan

Financial Plan Key Highlights

The Authority's current financial plan includes projected revenues, expenses, deposits to reserve funds and financial covenant calculations through December 31, 2023. Key highlights of the plan are as follows:

Revenue

- Toll revenue is projected by the Authority's traffic engineering consultant, CDM Smith. CDM Smith prepared a Toll Revenue Forecast Study on May 1, 2014, and a Draw Down Letter on March 8, 2017 which revised short-term transaction and toll revenue forecasts. Toll revenue for 2018 – 2023 has come from the March 8, 2017 Draw Down Letter. System-wide toll revenue is expected to increase on average 1.3% over the forecast period.
- E-ZPass Fees are projected to increase by about 2.0% per year based on historical growth.
- Federal Subsidy for Series 2009F and 2010 Bonds (Build America Bonds) is projected to remain constant at current levels, which represents 32.6% of the interest payable on the bonds.
- Concession Revenue is projected to increase by about 1.3% per year based on historical growth.
- Other Revenue (investment, miscellaneous, Arts Center) is projected to decline by approximately \$9.0 million in 2018, as 2017 included several non-recurring settlement payments and a FEMA recovery from winter storm Jonas. After 2018, Other Revenue is expected to increase by about 0.6% per year based on historical growth.

Operating Expenses

- Operating Expenses are projected to increase by 1.9% per year from 2018 – 2023, primarily driven by projected pension and health benefit increases, and higher maintenance expenses to cover the increased roadway capacity.

Net Debt Service

- Projected Net Debt Service includes the expected final new money borrowing of \$525 million in 2018 to complete the funding of the \$7 Billion CIP at an assumed interest cost of 5%. Debt service also reflects the savings from the fixed rate bond refunding completed in 2017.

Maintenance Reserve Fund and the Special Project Reserve Fund

- Deposits to both the Maintenance Reserve Fund and the Special Project Reserve Fund are projected by the Authority's General Consulting Engineer, HNTB, as contained in their Consulting Engineer's Report dated September 8, 2017, and are consistent with the Authority's policy of maintaining its assets in a state of good repair.

State Payments

- TTF Payments, Feeder Road Maintenance Agreement, and State Transportation Projects Funding Agreement (2016-2021) payments are based on existing agreements between the Authority and the State of New Jersey. Payments under these agreements are payable from the General Reserve Fund and are subordinate to debt service payments to bondholders.

The Authority's Financial Plan through 2023 projects the Authority to be in compliance with its General Bond Resolution Financial covenants, which require debt service coverage of at least 1.20 times and total requirements coverage of at least 1.0 times. In addition, the Authority is projected to be in compliance with its Board approved policies that target debt service coverage of at least 1.40 times, total requirements coverage of 1.20 times, and a minimum unencumbered General Reserve Fund balance of \$125 million in 2017; \$150 million in 2018; \$175 million in 2019 and 10% of total annual revenue as of December 31, 2020 and each December 31st thereafter.

New Jersey Turnpike Authority

For 2018 Annual Budget

| Fiscal Year Ending 12/31 (000's omitted) | Actual 2015 | Actual 2016 | Actual/Est 2017 | Estimated 2018 | Estimated 2019 | Estimated 2020 | Estimated 2021 | Estimated 2022 | Estimated 2023 |
|--|------------------|------------------|--------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|
| Revenues | | | | | | | | | |
| Toll Revenue | | | | | | | | | |
| Turnpike | \$ 1,106,268 | \$ 1,144,558 | \$ 1,148,228 | \$ 1,147,158 | \$ 1,162,900 | \$ 1,183,799 | \$ 1,199,155 | \$ 1,217,841 | \$ 1,237,107 |
| Parkway | 416,865 | 426,104 | 428,200 | 432,009 | 436,957 | 443,033 | 446,470 | 451,059 | 455,695 |
| E-ZPass Fees | 56,262 | 62,579 | 61,988 | 63,800 | 65,076 | 66,378 | 67,705 | 69,059 | 70,440 |
| Federal Subsidy for Series 2009 F and Series 2010 A Bonds | 75,908 | 76,071 | 76,152 | 76,275 | 76,275 | 76,275 | 76,275 | 76,275 | 76,275 |
| Concession Revenue | 38,993 | 38,192 | 39,137 | 40,000 | 40,800 | 41,600 | 42,400 | 43,200 | 43,200 |
| Other Revenue | 28,002 | 40,311 | 37,491 | 28,533 | 28,709 | 28,872 | 29,031 | 29,200 | 29,200 |
| Total Revenues | 1,722,298 | 1,787,815 | 1,791,196 | 1,787,775 | 1,810,717 | 1,839,957 | 1,861,036 | 1,886,634 | 1,911,917 |
| Operating Expenses | (503,453) | (493,225) | (508,800) | (538,965) | (549,989) | (560,589) | (571,396) | (582,415) | (593,650) |
| Total Revenues Available for Debt Service | 1,218,845 | 1,294,590 | 1,282,396 | 1,248,810 | 1,260,728 | 1,279,368 | 1,289,640 | 1,304,219 | 1,318,267 |
| Future Debt Issuance | | | | 525,000 | | | | | |
| Net Debt Service | (661,426) | (773,078) | (818,867) | (809,406) | (839,536) | (850,207) | (869,588) | (868,111) | (872,734) |
| Total Revenues Available After Debt Service | 557,419 | 521,512 | 463,529 | 439,404 | 421,192 | 429,161 | 420,052 | 436,108 | 445,533 |
| Payments to Charges Fund | (535) | (94) | (15) | - | - | - | - | - | - |
| Cash Flow Available for Reserves | 556,884 | 521,418 | 463,374 | 439,404 | 421,192 | 429,161 | 420,052 | 436,108 | 445,533 |
| Maintenance Reserve Fund | (87,058) | (89,370) | (116,751) | (119,086) | (131,468) | (134,097) | (136,779) | (139,515) | (142,305) |
| Special Project Reserve Fund | (50,301) | (38,918) | (39,696) | (40,490) | (41,300) | (42,126) | (42,969) | (43,828) | (44,705) |
| Net Revenues Available for General Reserve Fund | 419,525 | 393,130 | 306,927 | 279,828 | 248,424 | 252,938 | 240,304 | 252,765 | 258,523 |
| TTF Payments | (22,000) | (22,000) | (22,000) | (22,000) | (22,000) | (22,000) | (22,000) | (22,000) | (22,000) |
| Feeder Road Maintenance Agreement | (8,001) | (8,000) | (6,500) | (4,500) | (3,500) | (2,500) | (2,500) | (2,500) | (2,500) |
| Prior and Existing State Transportation Funding Agreement | (324,000) | (264,000) | (204,000) | (166,500) | (129,000) | (129,000) | (64,500) | (129,000) | (129,000) |
| Assumed Amounts for Additional State Transfers | | | | | | | (64,500) | (129,000) | (129,000) |
| Supplemental Capital/General Reserve Spending | (68,332) | (43,017) | (63,983) | (192,572) | (75,000) | (75,000) | (75,000) | (75,000) | (75,000) |
| Transfer to Construction Fund Account | | | | | (25,000) | (25,000) | (25,000) | (25,000) | (25,000) |
| Net Annual General Reserve Fund Increase (Decrease) | (2,808) | 56,113 | 10,444 | (105,744) | (6,076) | (562) | (13,196) | (735) | 30,023 |
| Ending General Reserve Fund Balance | 243,198 | 331,093 | 341,537 | 235,792 | 229,717 | 229,155 | 215,959 | 215,224 | 245,247 |
| Debt Service Coverage Ratio | | | | | | | | | |
| Net Revenues / Debt Service | 184 | 167 | 157 | 154 | 150 | 150 | 148 | 150 | 151 |
| Net Revenues / Debt Service and Reserves | 153 | 144 | 131 | 129 | 125 | 125 | 123 | 124 | 124 |

Figure 2: NJTA Financial Plan

The Strategic Plan

The Authority's strategic planning process began in 2016. Through collaboration and expertise of a group of leaders in the fields of transportation planning and engineering, the Authority is in the final stages of adopting and implementing of the New Jersey Turnpike Authority strategic plan for the next ten years. The Strategic Plan, through its incorporation of the Authority's vision, mission, and core values, provides clear direction and measurable goals for 2018-2027.

The strategic planning process involves the following seven steps process to set goals for the future of the Authority:

- Step 1 – Create a vision for the Future
- Step 2 – Identify Risk
- Step 3 – Develop Preliminary Goals
- Step 4 – Finalize Goals
- Step 5 – Produce Strategic and Long Range Plans
- Step 6 – Adopt and Implement Capital Strategic Plan
- Step 7 – Monitor and Measure Success

The Strategic Plan includes performance measures for the key goals of the Authority as listed below:

Safety

Safety is one of the core values of New Jersey Turnpike Authority (Authority) and is a critical component of the agency's mission statement. Ensuring safety for both customers and the Authority workforce is a focus of every project and initiative undertaken by the agency.

Performance Measures have been established in each of these areas:

- Crashes and Fatalities
- Privacy/Data Security
- Emergency Management
- Toll Collection Personnel Incidents
- Maintenance and Contractor Personnel Incidents
- Service Area and Park & Ride Safety

Financial Strength

Maintaining a strong financial position to fund operations, maintenance, and capital improvements adequately and efficiently supports the Authority's mission and vision for providing transportation services to the region.

Performance Measures have been established in each of these areas:

- Credit Strength
- Cost Effective Operations
- Capital Funding Approach
- Reserve Funding
- Maximizing Revenue
- Capital Budget Performance
- Debt Capacity

Mobility

Customer satisfaction is a key best practice for any business, including the Authority. Maintaining and improving mobility for current and future customers on both the Turnpike and Parkway is critical to the organization's future success.

Performance Measures have been established in each of these areas:

- Vehicle Throughput
- Traffic Balancing
- Emerging Tolling and Vehicle Technologies
- Freight Mobility
- Multi Modal Connectivity through Regional Coordination

State of Good Repair

Maintaining a state of good repair can increase the useful life of Authority assets, resulting in cost savings over time and is vital in keeping traffic moving well. State of good repair cuts across all goals of the Authority's Strategic Plan.

Performance Measures have been established in each of these areas:

- Pavement Condition
- Pavement Markings
- Barrier and Guardrail
- Signage
- Lighting
- Drainage Systems
- Bridges
- Maintenance Equipment
- Right of Way
- Facilities
- Technology

People

The future success of the Authority depends on its ability to continue to serve and satisfy customers, which requires the agency to hire and retain a high quality workforce. Qualified, motivated individuals across all levels of the organization are key to continued success which includes recruiting, motivating and retaining employees.

Performance Measures have been established in each of these areas:

- Customer Experience
- Customer Satisfaction
- Understanding Future Staffing Needs
- Retention of high quality staff
- Succession Planning
- Attracting and Hiring Qualified Talent

In October 2017, the Authority completed the New Jersey Turnpike Authority 2018-2027 Strategic Plan and New Jersey Turnpike Authority Long Range Capital Plan. Once adopted by the Board of Commissioners, the Authority will begin to implement the plan in 2018.

New Jersey Turnpike Authority 2017 Accomplishments and 2018 Goals

As mentioned in the previous section, the Authority is in the final process of approving and implementing the Strategic Plan. The goals and achievements are based on the five Authority goals included in the Strategic Plan. The Strategic Plan outlines the performance measures that the Authority adheres to.

The summary below highlights major accomplishments in 2017 and goals for 2018 per selective Strategic Plan performance criteria as follows:

Safety

2017 Accomplishments

- Maintaining a state of good repair on the roadways has reduced crashes per vehicle miles traveled by 3%, and fatalities per vehicle miles traveled by 13%.

Selected Performance Measure: Crashes per vehicle miles traveled

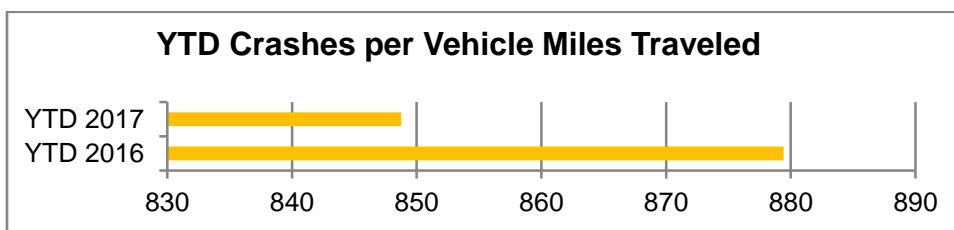


Figure 3: YTD Crashes per Vehicle Miles Traveled

Selected Performance Measure: Fatalities per vehicle miles traveled

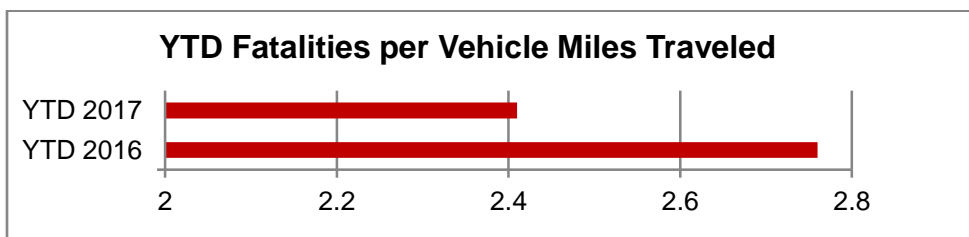


Figure 4: YTD Fatalities per Vehicle Miles Traveled

2018 Goals

- Focus on maintaining a state of good repair on the roadways, roadside safety design, and technologies to provide the best conditions for safe travel.
- Improve and maintain public outreach.
- Reduce the response times of emergency vehicles, as well as incident clearing time.

Financial Strength

2017 Accomplishments

- Completed refunding of variable rate debt to meet the mandatory tender dates on the bonds, eliminating roll-over risk on the variable rate bonds that were issued.
- Successfully funded the OPEB reserve with an additional \$17.5 million.
- Successfully issued \$600 million of new bonds to fund the \$7 Billion Capital Improvement Program (CIP) with a true interest cost below the budget of 5%.
- Completed a fixed rate bond refunding, achieving net present value savings of \$96 million, or 13.7%.

Selected Performance Measure: The Turnpike Authority's credit rating comparisons by Moody's, S&P, and Fitch

| New Jersey Turnpike Authority Bond Ratings | | |
|--|-------------------|-------------------|
| Credit Rating Agency | 2016 Bond Ratings | 2017 Bond Ratings |
| Moody's Investors Services Inc | A3 | A2 |
| S&P Global Ratings | A+ | A+ |
| Fitch Ratings | A | A |

| Moody's Investors Services Inc | S&P Global Ratings | Fitch Ratings | | |
|--------------------------------|--------------------|---------------|------------------|----------------------|
| Aaa | AAA | AAA | Investment Grade | Minimal Credit Risk |
| Aa1 | AA+ | AA+ | | Very Low Credit Risk |
| Aa2 | AA | AA | | |
| Aa3 | AA- | AA- | | |
| A1 | A+ | A+ | | Low Credit Risk |
| A2 | A | A | | |
| A3 | A- | A- | | Moderate Credit Risk |
| Baa1 | BBB+ | BBB+ | | |
| Baa2 | BBB | BBB | | |
| Baa3 | BBB- | BBB- | | |

Figure 5: Turnpike Authority's Credit Rating

The New Jersey Turnpike Authority's bond ratings demonstrate a strong capacity to meet the Authority's financial obligations, and represent a relatively low risk to investors.

2018 Goals

- Complete funding of necessary reserves in accordance with financial obligations and target dates.
- Issue new money bonds to ensure \$7 billion CIP has adequate funding to complete projects in a timely manner.
- Enhance on budget monitoring reports and implement additional performance measures to better represent overall financial health.
- Maximize enforcement initiatives of revenue collection for toll violations.

Mobility

2017 Accomplishments

- Completed interchange improvements to increase traffic safety, increase interchange capacity, and decrease travel times.
- Launched new Authority Website to provide patrons with roadway information.
- Completed implementation of information systems and software across both roadways to aid in traffic flow.

Selected Performance Measure: Annual commercial transactions

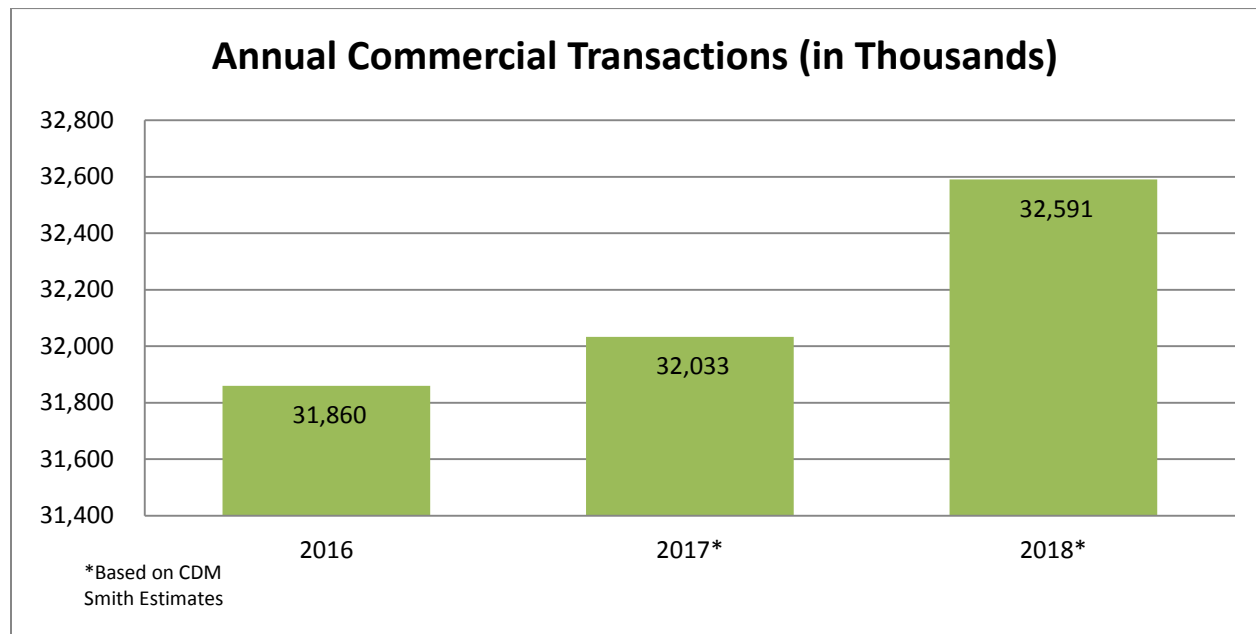


Figure 6: Annual Commercial Transactions

2018 Goals

- Expand the functionality of the Traffic Volume/ Traffic Count Application into a complete product to allow for enhanced traffic count data integration, management and reporting capabilities for the entire length of the Parkway.
- Continue to develop, plan, and increase capacity among roadway interchanges to allow for a more efficient traffic flow.
- Successfully finalize software configuration of High-Speed E-ZPass across both roadways to improve traffic flow.

State of Good Repair

2017 Accomplishments

- An overall total of 332 light emitting diode luminaires replaced high pressure sodium luminaires which is an 8% increase from previous year. This resulted in a 25% reduction of energy usage as well as an increase energy cost savings by 25%.
- Environmental impact: the LED fixtures have increased savings which are equivalent to CO2 emission of 103,480 lbs. of coal burning, or a 27% increase from previous year, as well as a reduction of 21 cars driven annually.
- Successfully repaired the Delaware River Turnpike Bridge following a seven week emergency closure, in conjunction with the Pennsylvania Turnpike Commission

Selected Performance Measure: LED luminaires efficiency measured by cost per kWh hours of operations. Environmental impact is measured by greenhouse emission of cars driven annually, as well as CO2 emissions of coal burned.

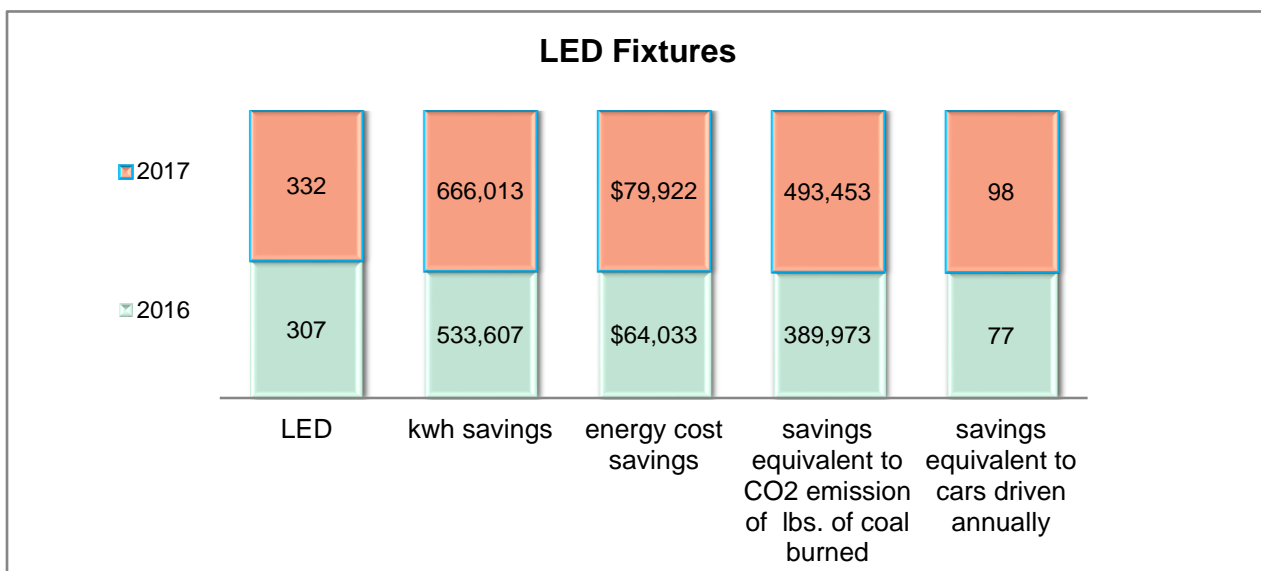


Figure 7: LED Fixtures

2018 Goals

- Continue updating roadway illumination levels while reducing energy usage through LED roadway lighting.
- Installing signage at Interchange 10 entry and Interchange 8A exit providing more efficiency at these plazas.
- Repair large drainage culverts, lighting and median barrier through the Maintenance Reserve Fund.
- Increase pavement resurfacing on the New Jersey Turnpike to bring the roadway to a state of good repair using a twelve year repaving cycle.

People

2017 Accomplishments

- HVAC System replacements now provide better working conditions for employees while creating Authority savings.
- Created and hired an Assistant Manager for the Traffic Operation Center.
- In the Operations Department, replaced and trained two key positions (Manager Traffic Operations and Traffic Engineer) with existing employees.
- As of the 3rd quarter 2017, ITS successfully filled 63% of all active vacancies.

Selected Performance Measure: Budgeted headcount shows an upward trend with 0.24% increase from 2016 to 2017, and an estimated 1.12% increase for 2018.

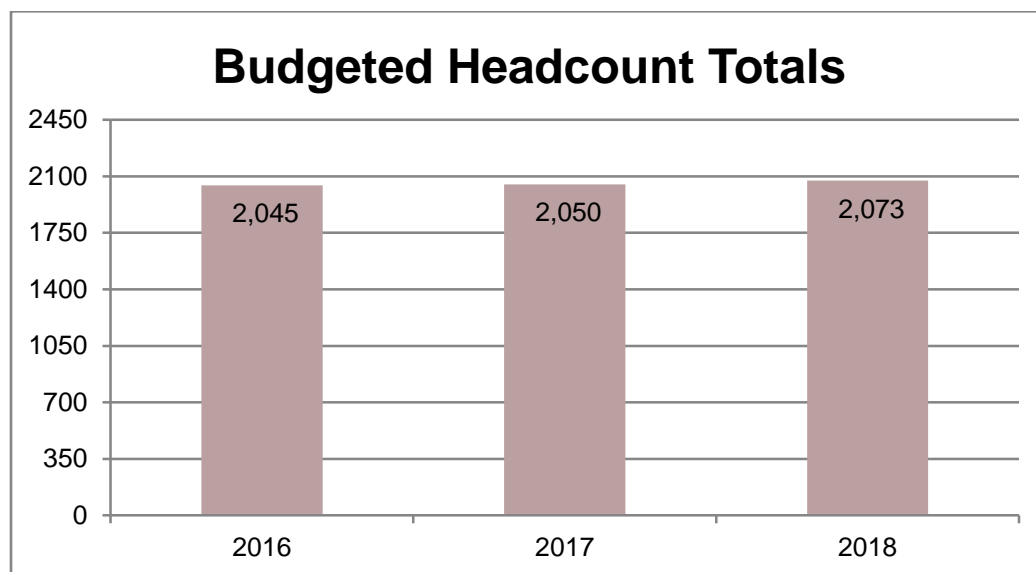


Figure 8: Budgeted Headcount Totals

2018 Goals

- Provide adequate training on new vehicles for the technicians, up-to-date diagnostic equipment for the department, as well as sufficient training on this equipment for the technicians.
- Implementation of a Plaza Supervisor training program on the Turnpike to more efficiently ready candidates for duty.
- Continuing the training of new Supervisors providing new materials to keep up with the industry standards.
- Continue to implement an active succession plan by positioning the next generation of ITS leaders in challenging and visible roles.

Key Financial Metrics

Toll Revenue as % of Operating Revenue

This ratio is calculated by dividing the Authority's toll revenue by the operating revenue. The ratio remains consistent over the period to depict that the primary component of the Authority's operating revenue is toll revenue.

| (\$'s in Thousands) | | <u>2016 Actual</u> | <u>2017 Budget</u> | <u>2018 Budget</u> |
|---------------------|--|--------------------|--------------------|--------------------|
| | Toll Revenue \$ | 1,570,662 | \$ 1,546,359 | \$ 1,579,167 |
| | Operating Revenue \$ | 1,688,726 | \$ 1,657,759 | \$ 1,693,098 |
| | Toll Revenue as a % of Operating Revenue | 93.0% | 93.3% | 93.3% |

Figure 9: Toll Revenue as % of Operating Revenue

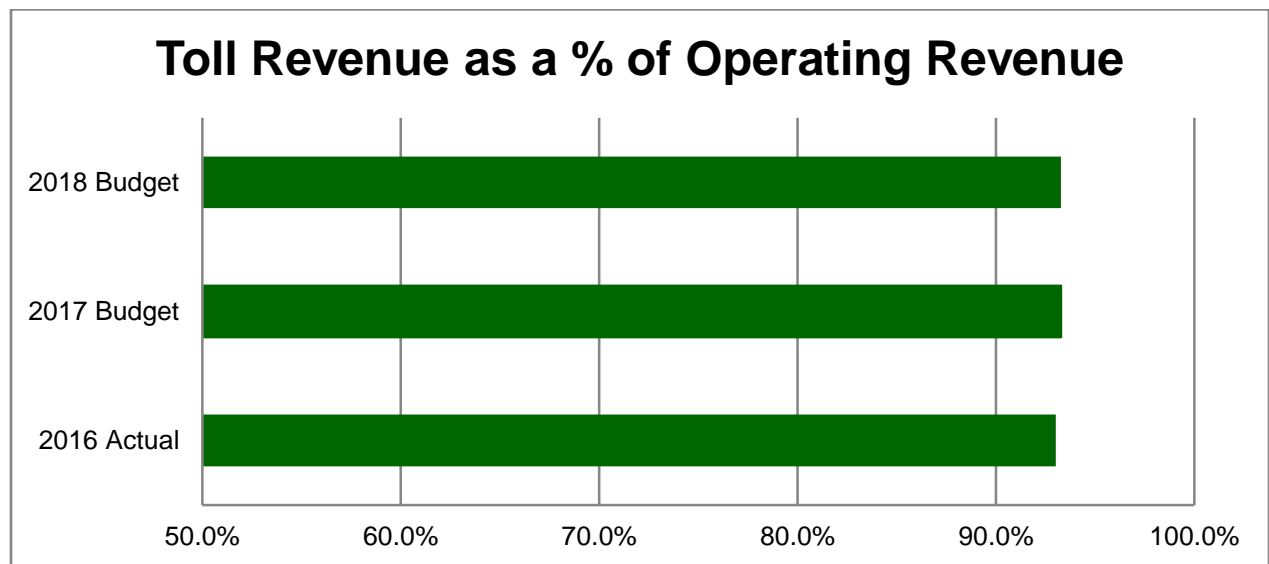


Figure 10: Toll Revenue as % of Operating Revenue Graph

Operating Margin Ratio

This ratio is calculated by dividing the budgeted operating income by the budgeted operating revenue. This ratio demonstrates the Authority's operating efficiency and capacity to pay for its operating expenses.

| (\$'s in Thousands) | <u>2016 Actual</u> | <u>2017 Budget</u> | <u>2018 Budget</u> |
|-----------------------------------|--------------------|--------------------|--------------------|
| Operating Revenue | \$ 1,688,726 | \$ 1,657,759 | \$ 1,693,098 |
| Operating Expenses - Revenue Fund | 493,225 | 528,762 | 539,594 |
| Operating Income | \$ 1,195,501 | \$ 1,128,997 | \$ 1,153,504 |
| Operating Margin Ratio | 70.8% | 68.1% | 68.1% |

Figure 11: Operating Margin Ratio

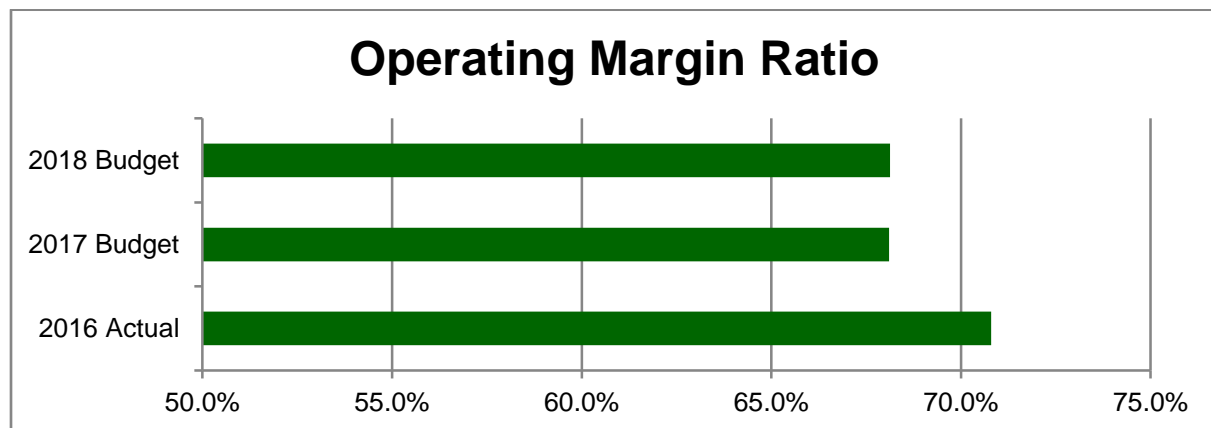


Figure 12: Operating Margin Ratio Graph

Cost Recovery Ratio

This ratio is calculated by dividing the operating revenue by the total operating expenses excluding depreciation. This ratio is a key indicator of the financial performance of the Authority. The Authority's ratio exceeds 100% which demonstrates that the Authority's operating revenue exceeds its operating expenses providing funds to cover debt service and other requirements.

| (\$'s in Thousands) | | <u>2016 Actual</u> | <u>2017 Budget</u> | <u>2018 Budget</u> |
|-----------------------------------|----|--------------------|--------------------|--------------------|
| Operating Revenue | \$ | 1,688,726 | \$ 1,657,759 | \$ 1,693,098 |
| Operating Expenses - Revenue Fund | \$ | 493,225 | \$ 528,762 | \$ 539,594 |
| Cost Recovery Ratio | | 342.4% | 313.5% | 313.8% |

Figure 13: Cost Recovery Ratio

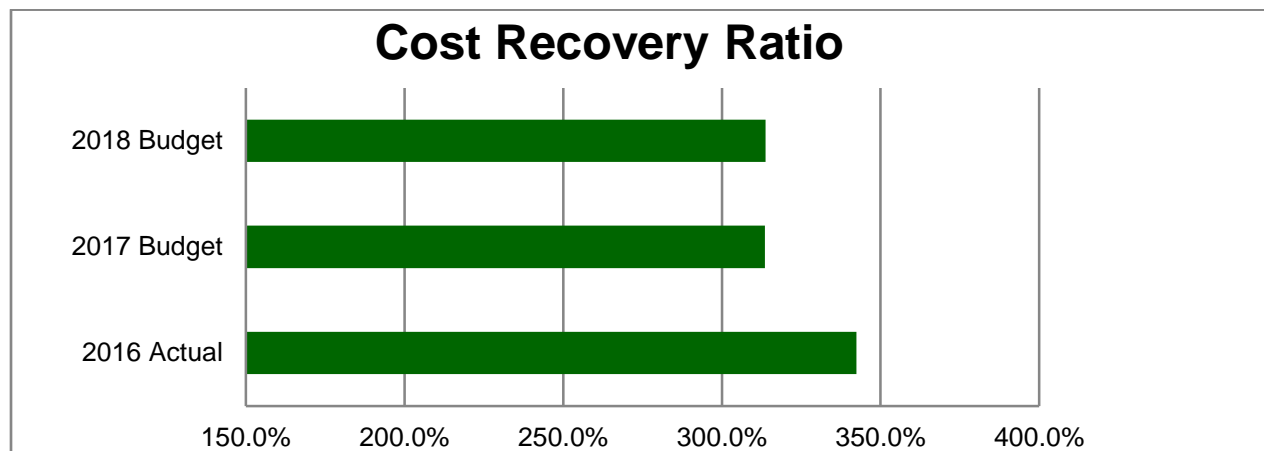


Figure 14: Cost Recovery Ratio Graph

Average Toll/Transaction – Turnpike

This ratio is calculated by dividing the toll revenue generated by the total number of toll transactions on the Turnpike.

| (In Thousands) | <u>2016 Actual</u> | <u>2017 Budget</u> | <u>2018 Budget</u> |
|---|--------------------|--------------------|--------------------|
| Toll Revenue - Turnpike | \$ 1,144,558 | \$ 1,124,302 | \$ 1,147,158 |
| Toll Transactions - Turnpike | 255,494 | 251,442 | 256,189 |
| Average Toll per Transaction - Turnpike | \$4.48 | \$4.47 | \$4.48 |

Figure 15: Average Toll/ Transaction- Turnpike

Average Toll/Transaction – Parkway

This ratio is calculated by dividing the toll revenue generated divided by the total number of toll transactions on the Turnpike.

| (In Thousands) | <u>2016 Actual</u> | <u>2017 Budget</u> | <u>2018 Budget</u> |
|--|--------------------|--------------------|--------------------|
| Toll Revenue - Parkway | \$ 426,105 | \$ 422,057 | \$ 432,009 |
| Toll Transactions - Parkway | 389,609 | 382,710 | 394,661 |
| Average Toll per Transaction - Parkway | \$1.09 | \$1.10 | \$1.09 |

Figure 16: Average Toll/ Transaction- Parkway

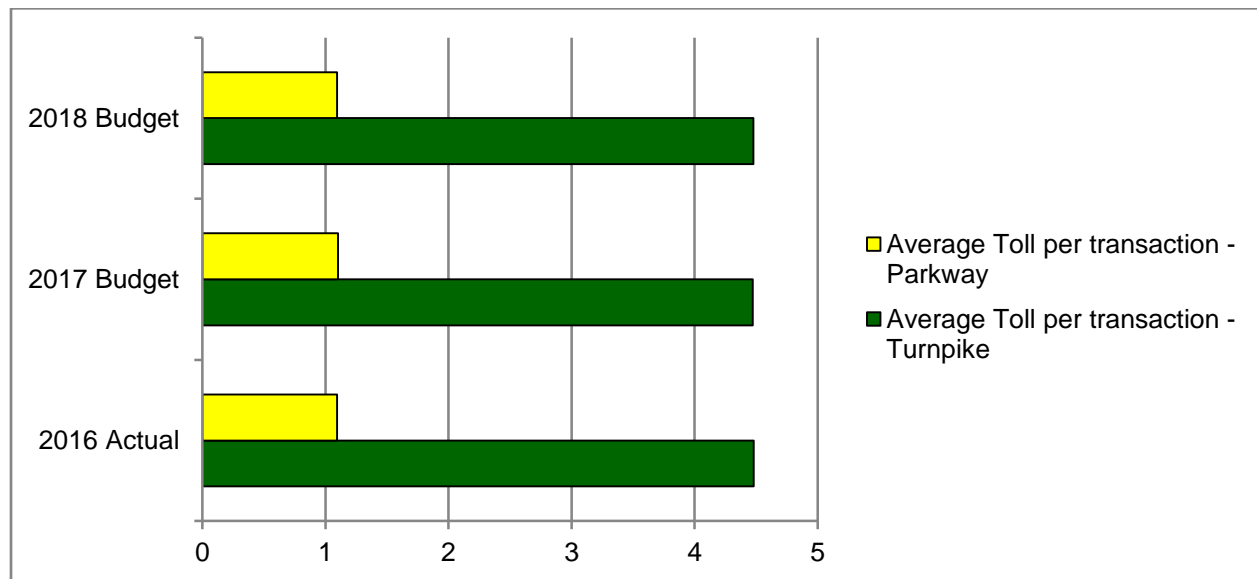


Figure 17: Average Toll/ Transaction- Turnpike/Parkway Graph

Toll Revenue/Lane Mile

This ratio shows the toll revenue generated per lane mile for both roadways. This can be used to analyze the operating expenses per lane mile and the operating revenue per lane mile. Toll revenue per lane mile will increase with an increase in traffic, assuming there are no additional lane miles.

| | <u>2016 Actual</u> | <u>2017 Budget*</u> | <u>2018 Budget*</u> |
|-----------------------------------|--------------------|---------------------|---------------------|
| Toll Revenue - Turnpike | \$1,144,558,000 | \$1,124,302,000 | \$1,147,158,000 |
| Toll Revenue - Parkway | 426,105,000 | 422,057,000 | 432,009,000 |
| Toll Revenue - Authority | 1,570,663,000 | 1,546,359,000 | 1,579,167,000 |
| Lane Miles - Turnpike | 1,819 | 2,418 | 2,428 |
| Lane Miles - Parkway | 1,778 | 2,028 | 2,038 |
| Lane Miles - Authority | 3,597 | 4,446 | 4,466 |
| Revenue per Lane Mile - Turnpike | \$629,000 | \$465,000 | \$472,000 |
| Revenue per Lane Mile - Parkway | \$240,000 | \$208,000 | \$212,000 |
| Revenue per Lane Mile - Authority | \$437,000 | \$348,000 | \$354,000 |

*2017 and 2018 include toll plaza lane miles

Figure 18: Toll Revenue/Lane Mile

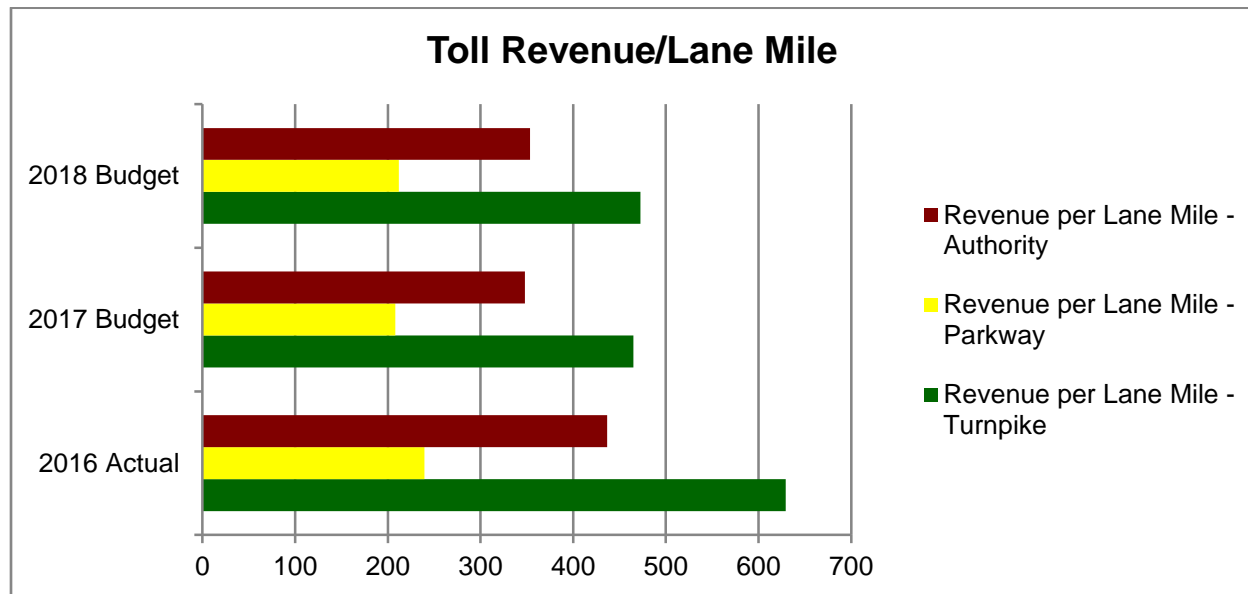


Figure 19: Toll Revenue/Lane Mile Graph

Operating Cost/Lane Mile

This ratio indicates the operating expenses incurred per lane mile on both the roadways. This ratio can be used in comparison with the toll revenue per lane mile to analyze the Authority's spending efficiency.

| | <u>2016 Actual</u> | <u>2017 Budget*</u> | <u>2018 Budget*</u> |
|--|--------------------|---------------------|---------------------|
| Operating Expenses - Revenue Fund | \$493,225,000 | \$528,762,000 | \$538,965,000 |
| Lane Miles - Turnpike | 1,819 | 2,418 | 2,428 |
| Lane Miles - Parkway | 1,778 | 2,028 | 2,038 |
| Lane Miles - Authority | 3,597 | 4,446 | 4,466 |
| Operating cost per Lane Mile - Authority | \$137,000 | \$119,000 | \$121,000 |

***2017 and 2018 include toll plaza lane miles**

Figure 20: Operating Cost/Lane Mile

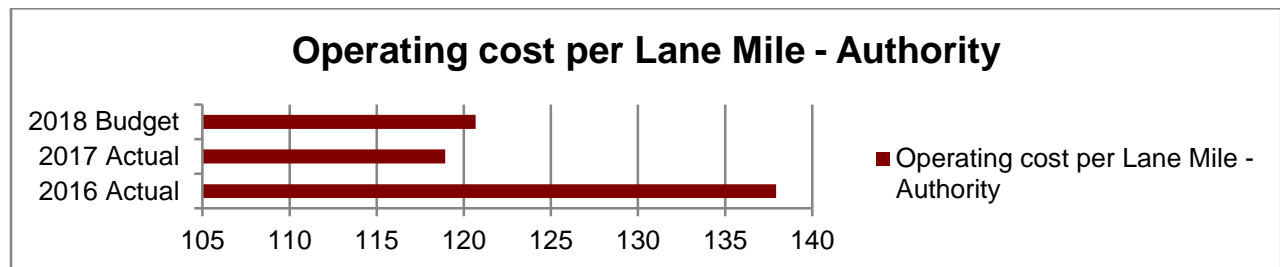


Figure 21: Operating Cost per Lane Mile

Debt/Lane Mile

This ratio shows the Authority's bond indebtedness per lane mile.

| | <u>2016 Actual</u> | <u>2017 Budget*</u> | <u>2018 Budget*</u> |
|--------------------------------|--------------------|---------------------|---------------------|
| Bond Indebtedness, net | \$11,251,163,000 | \$12,118,590,000 | \$12,136,715,000 |
| Lane Miles - Turnpike | 1,819 | 2,418 | 2,428 |
| Lane Miles - Parkway | 1,757 | 2,028 | 2,038 |
| Lane Miles - Authority | 3,576 | 4,446 | 4,466 |
| Debt per Lane Mile - Authority | \$3,146,000 | \$2,726,000 | \$2,718,000 |

***2017 and 2018 include toll plaza lane miles**

Figure 22: Debt/Lane Mile

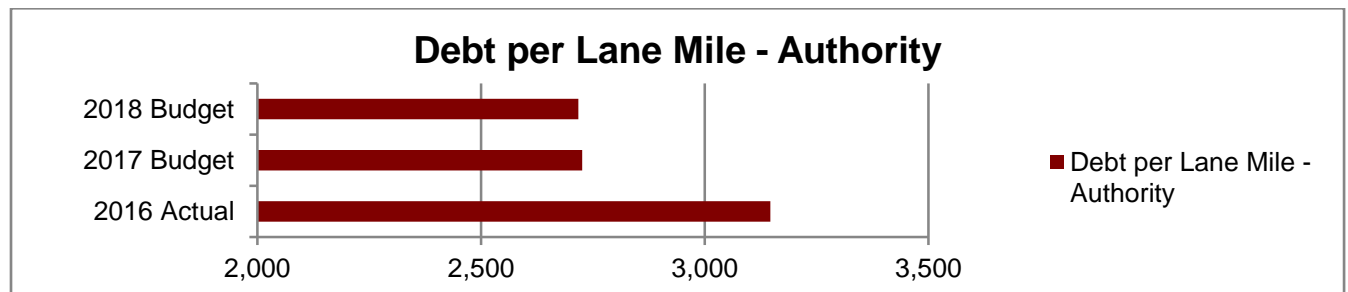


Figure 23: Debt/Lane Mile Graph

Executive Summary

The Authority operates two well-established highways, one of which serves as a critical link along the I-95/Northeast Corridor and both of which allow for north-south travel in New Jersey. The roads serve a densely populated and extremely wealthy region. Most of the traffic is non-discretionary and the demand for the roads has proven to be inelastic.

In July 2003, the New Jersey Turnpike Authority and New Jersey Highway Authority were consolidated. Combining two major agencies -- each of which was operating a premier toll road, the New Jersey Turnpike and the Garden State Parkway -- into a single agency was no small order. But more than thirteen years later, the singular agency continues to be recognized as a first-class agency among peer public agencies in the transportation and tolling industries.

The Authority's \$7 billion CIP, which started in 2009, is nearly 94% complete, and with the opening of the Turnpike Interchange 6 to 9 widening and the widening of the Parkway between mileposts 42 and 80, has added about 246 lane miles to the roadway system, an increase of nearly 8%. The 2018 Annual Budget is driven by the added operations and maintenance expenses generated by this additional capacity and the Authority's commitment to maintaining its assets in a state of good repair. Traffic and revenue is forecasted to increase in 2018 on both roadways due to normal growth and stable economic conditions. The toll revenue budget is based upon projections from a Drawdown Letter by CDM Smith dated March 6, 2017 updating projections from a study originally prepared in early 2014. Operating expense growth continues to be controlled similar to 2017, as the 2018 Operating Expense Budget will increase by less than 2%. The 2018 Annual Budget includes over \$336 million for Maintenance Reserve, Special Project Reserve and Supplemental Capital Projects, the highest these combined budgets have been since 2005. This being said, expected revenues are anticipated to be sufficient to meet the requirements of the Bond Resolution and all board adopted financial policies without the need for a toll increase.

A summary of the 2018 Annual Budget is as follows:

REVENUE

| | <u>2016 Actual</u> | <u>2017 Budget</u> | <u>2018 Budget</u> |
|---------------|-------------------------|-------------------------|-------------------------|
| Toll Revenue | \$ 1,570,662,000 | \$ 1,546,359,000 | \$ 1,579,167,000 |
| Other Revenue | 217,153,000 | 202,822,000 | 208,608,000 |
| Total | <u>\$ 1,787,815,000</u> | <u>\$ 1,749,181,000</u> | <u>\$ 1,787,775,000</u> |

Figure 24: Annual Budget Revenue Summary (2016-2018)

SIGNIFICANT REVENUE HIGHLIGHTS:

- Toll Revenue on the New Jersey Turnpike is expected to increase 2% compared to the 2017 budget and on the Garden State Parkway by 2.4% primarily reflecting normal growth due to the stable economic conditions and gas prices. This growth is expected despite the reopening of the Pulaski Skyway in 2018 and the return of traffic from the New Jersey Turnpike to the free route. In 2017, year-to-date toll revenue has exceeded budget and when adjusting for actual results, the 2018 budget represents a 0.9% increase.
- E-ZPass fees are expected to increase by \$4.6 million or 7.8% as compared to the 2017 budget due to higher administrative fees from enhanced collection efforts and an increase in monthly membership fees from a continued increase in the number of New Jersey E-ZPass account

holders. In 2017, year-to-date fees have exceeded budget and when adjusting for actual results, the 2018 budget represents a 1.5% increase.

- Interest income is expected to increase by \$3 million or 25% due to the continued expected rise in short term interest rates. Interest income has been conservatively budgeted in 2018 as 2017 year-to-date actual income is about 30% over budget.
- Miscellaneous revenue is expected to decrease by about \$2.9 million as less surplus property sales are expected in 2018.

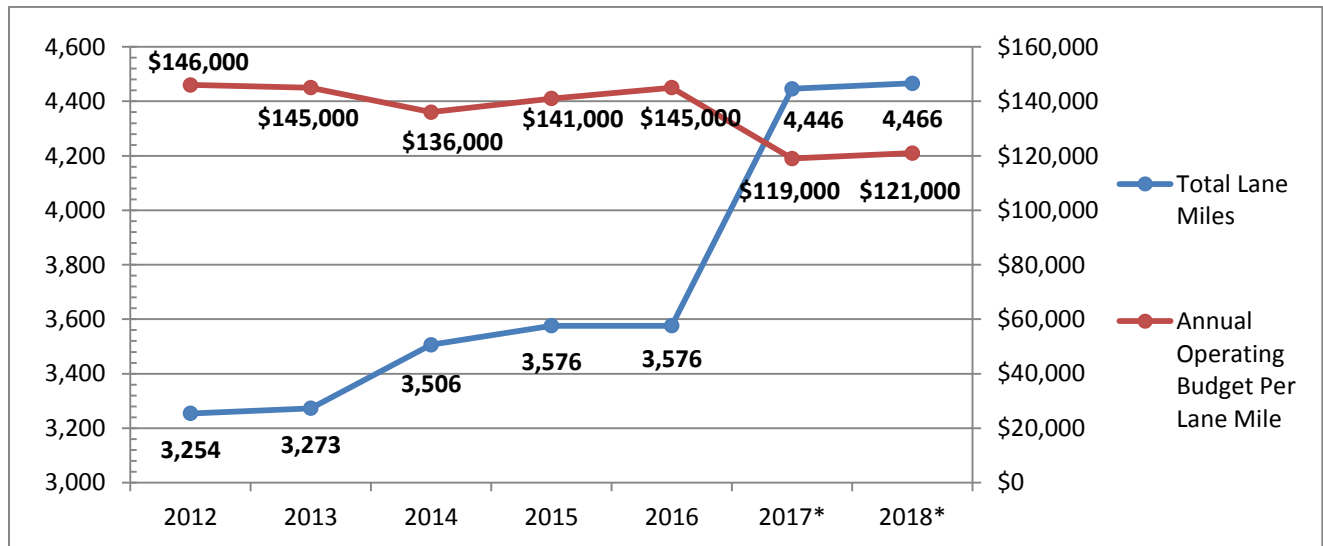
| SPENDING | <u>2016 Actual</u> | <u>2017 Budget</u> | <u>2018 Budget</u> |
|--------------------------|---------------------------|---------------------------|---------------------------|
| Operating Expenses | \$ 493,225,000 | \$ 528,762,000 | \$ 538,965,000 |
| Debt Service and Charges | 847,028,000 | 846,426,000 | 809,406,000 |
| Maintenance Reserve | 73,276,000 | 132,500,000 | 134,247,000 |
| Special Project Reserve | 28,231,000 | 48,439,000 | 61,155,000 |
| General Reserve | 322,343,000 | 286,595,000 | 244,945,000 |
| Supplemental Capital | 14,674,000 | 81,905,000 | 140,627,000 |

Figure 25: Annual Budget Spending Summary (2016-2018)

SIGNIFICANT SPENDING HIGHLIGHTS/CHALLENGES

- The 2018 Operating Expense Budget is \$538.9 million, or an increase of only 1.9%, and is driven by the increased volumes of traffic on the roadways, an increase in capacity from the lane miles added as part of the \$7 billion CIP and the need to maintain assets in a state of good repair. The budget also provides funding for the Authority's continued commitment to improving safety for its patrons. In addition, the budget includes anticipated cost increases in pension and employee health benefits as well as expected increases in property and general liability insurance premiums.
- The 2018 Operating Expense Budget provides \$38.1 million for snow and severe weather costs, which represents the budget level that has been maintained for the past three years. The number and severity of weather events is unpredictable, and could put pressure on the Operating Expense Budget. In addition, the budget includes assumptions on pension payments, health benefit costs and E-ZPass transaction and credit card processing fees, all of which are highly variable. Changes from the current budget assumptions in any of these areas could put pressure on the 2018 Operating Expense Budget.
- The 2018 Debt Service Budget is decreasing by over \$37 million to more than \$809 million, or nearly 4.4%, as compared to the 2017 Debt Service Budget. Debt service is decreasing primarily due to a reduction in principal payments on existing bonds in 2018. By the end of 2018, it is expected that the Authority will have over \$12 billion of debt outstanding. Debt Service represents 42% of total spending and is the largest spending component of the Authority's 2018 Annual Budget.
- The 2018 Maintenance Reserve Fund Budget is increasing by \$1.7 million, or 1%. The \$134.2 million spending budget will fund a necessary increase of approximately 40% in lane miles resurfaced in 2018 as compared to 2017 when including the \$31 million for roadway resurfacing which will be funded through the Supplemental Capital Fund Budget.

As mentioned, the Authority has increased roadway capacity in the past few years. The chart below indicates that the Authority continues to maintain safe and efficient roadways while controlling operating expense growth. Before inclusion of toll plaza lane miles in the calculation in 2017, the Authority's operating cost per lane mile was essentially flat between 2012 and 2016 at around \$145,000. With the added toll plaza lane miles, 2017 and 2018 costs are essentially flat at around \$121,000 per lane mile.



*2017 and 2018 include toll plaza lane miles

Figure 26: Total Lane Miles and Operating Budget per Lane Mile (2012-2018)

When excluding the budget for costs associated with snow removal and severe weather, the 2018 budget for all other operating expenses of \$500,861,900 is less than \$35,100,000 higher than the 2012 budget for all other operating expenses of \$466,000,000, an increase of only 7.5% over the six year period. This increase averages to only 1.3% per year, and is a result of the Authority's success in controlling its operating expenses.

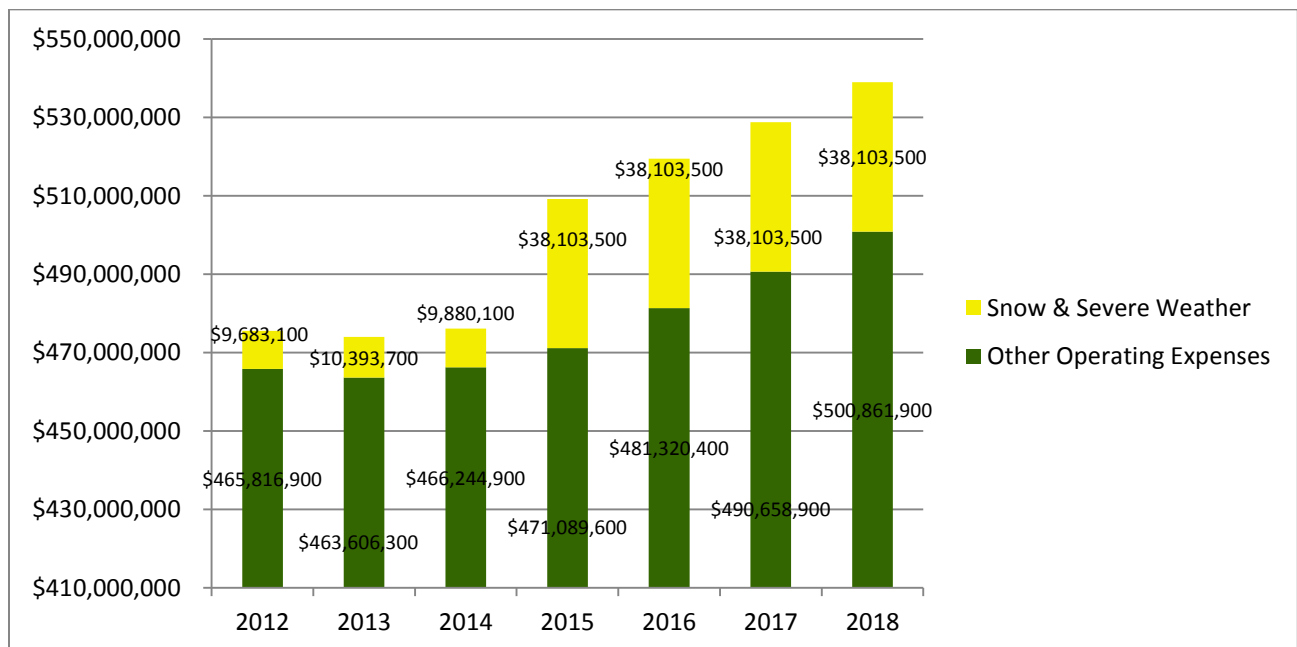


Figure 27: Operating Expenses with Snow and Severe Weather (2012-2018)

REVENUE BUDGET

Total revenue in 2018 is budgeted at \$1,787,775,000, a 2.2% increase from 2017 budgeted revenues, driven primarily by a forecasted increase in toll revenue. Total revenue trends are shown below.

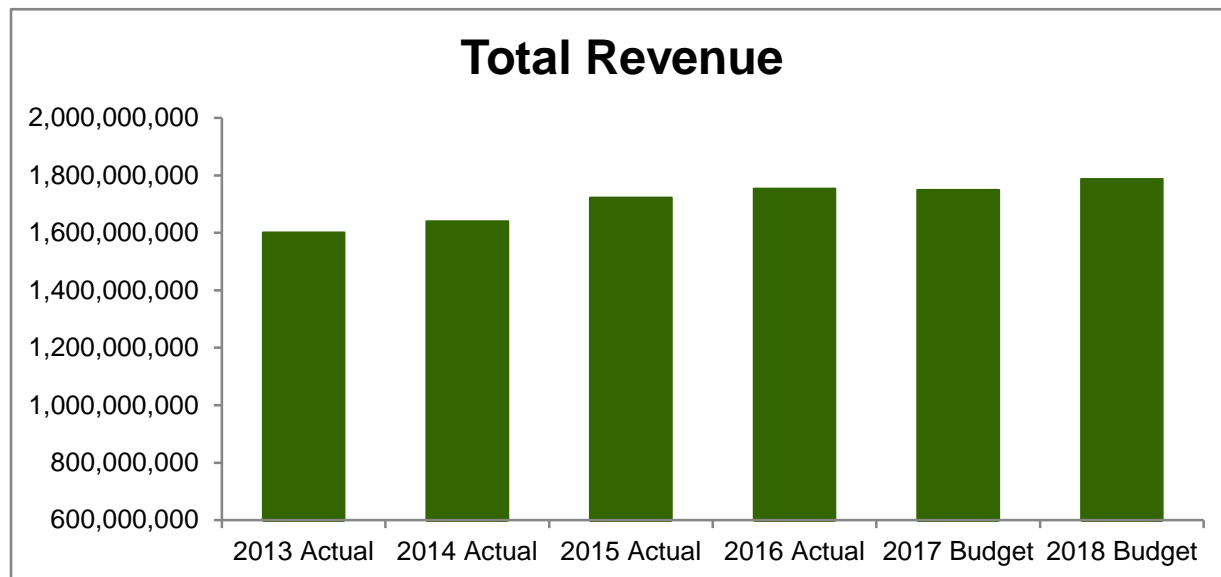


Figure 28: Total Annual Revenue (2013-2018)

Toll revenue comprises 88.3% of total revenue. Toll revenue in 2018 is budgeted at \$1,579,167,000, which represents an increase of 2.1% compared to the 2017 budget. Turnpike toll revenue is expected to increase 2.0% and Parkway toll revenue is expected to increase by 2.4% primarily due to normal growth resulting from stable economic conditions and low gasoline prices that are anticipated to continue through 2018. Traffic and revenue forecasts are contained in the March 2017 Drawdown Letter by CDM Smith, the Authority’s Traffic Engineering Consultant. It should be noted that the Authority has exceeded its 2017 toll revenue budget through September 2017. The current forecasts used for the 2018 budget were completed after the 2017 budget was adopted and included adjustments for actual experience. The increase in the 2018 budget as compared to the 2017 budget includes normal growth of about 1.3%, with the remainder reflecting the higher actual growth when compared to the prior forecast.

OPERATING EXPENSE BUDGET

The 2018 Operating Expense Budget of \$538,965,000 is increasing by \$10,203,000, or 1.9%, compared to the 2017 Operating Expense Budget. Key cost factors in the 2018 Operating Expense Budget are as follows:

- Increased State Police costs of \$5 million due to anticipated additional 17 troopers assigned to the roadways as well as higher wages and pension costs for existing troopers.
- Increased salaries & wages of approximately \$3.4 million reflecting the addition of 23 new positions and fully funding vacant positions which were prorated in 2017.
- Increased pension costs of \$2.8 million based upon estimated billing from New Jersey PERS.
- Increase health benefit costs of \$3.4 million based upon estimated usage and medical and prescription inflation rates.
- Increased roadway maintenance costs of \$2.3 million for necessary work on both the roadways and facilities.
- Increased insurance costs of \$1 million due to expected premium increase for general liability and property insurance.

The proposed 2018 Operating Expense Budget is increasing by only \$10,203,000. This modest increase was achieved because the Authority is expected to achieve savings as compared to the 2017 Budget from the new E-ZPass Customer Service Center contract, which became effective on February 1, 2017.

After eleven consecutive years of decline following the merger of the New Jersey Turnpike Authority and New Jersey Highway Authority, authorized headcount is once again increasing since the low in 2014 due to the need to add maintenance personnel to handle the increased roadway capacity.

Authorized headcount since 2004 is shown below:

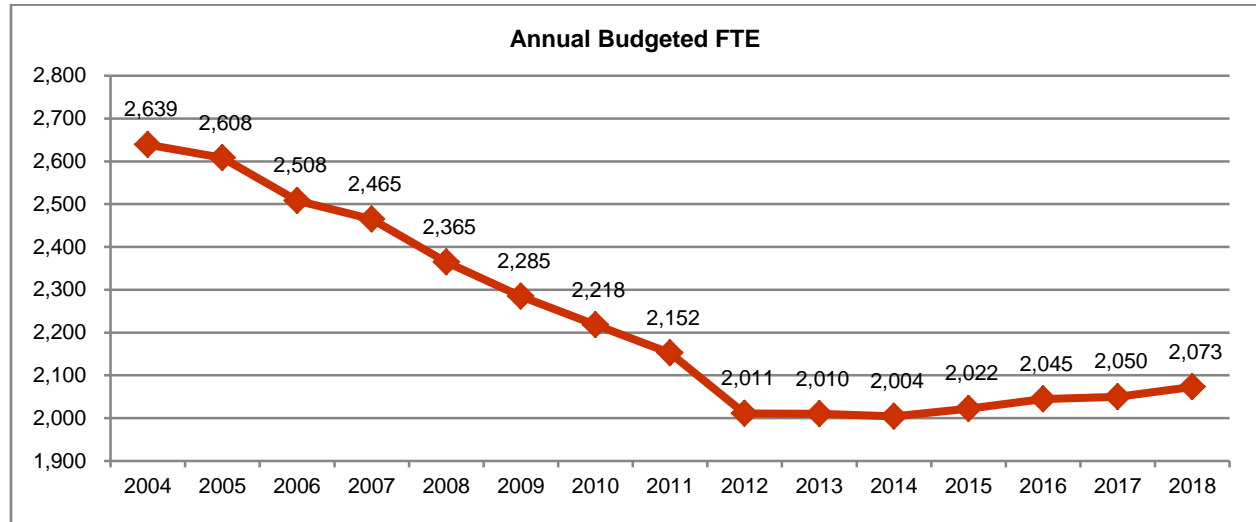


Figure 29: Authorized Headcount (2004-2018)

Snow and severe weather costs are budgeted based upon the highest amount either budgeted or actual over the previous five years. The snow and severe weather budget is remaining at the same level in 2018 as 2017, based upon the high spending levels of 2014 and 2015.

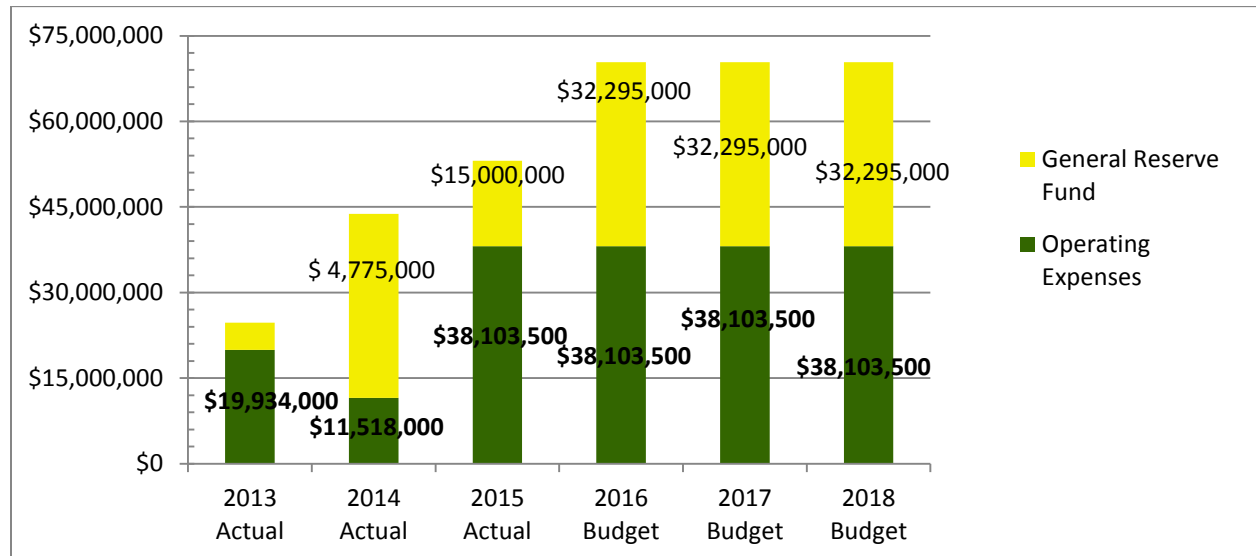


Figure 30: Snow and Severe Weather Expenses (2013-2018)

DEBT SERVICE BUDGET

Total Debt Service in 2018 is budgeted at \$809,410,000, which is a \$37,052,000 decrease from the 2017 Debt Service Budget. Debt service is decreasing primarily due to lower principal payments, savings from bond refunding's completed in 2017 and a change in the assumed issuance date for the final \$525 million new money bonds to complete the funding of the \$7 Billion CIP. By the end of 2018, the Authority is expected to have \$12.1 billion of debt outstanding. Debt Service spending currently equals 42% of the total spending included in the 2018 Annual Budget.

CHARGES BUDGET

The Series 2000B-G Bonds were refunded in October 2017, therefore eliminating the remarketing fees, which were the only remaining fees paid through this fund.

MAINTENANCE RESERVE FUND BUDGET

The total 2018 spending budget for the Maintenance Reserve Fund is \$134,250,000, representing an increase of \$1,750,000, or 1%, from 2017 budgeted levels. In 2018, the budget includes new funding for roadway lighting repairs and increased funding for drainage structure and concrete barrier repairs. The 2018 Maintenance Reserve Fund Budget is based upon repair cycle best practices as determined by the Authority's General Consulting Engineer.

SPECIAL PROJECT RESERVE FUND BUDGET

The total 2018 spending budget for the Special Project Reserve Fund is \$61,155,000, representing an increase of \$12,716,000 from 2017 budgeted levels. Major projects budgeted for 2018 include major fleet augmentation, which replaces rolling stock with a value of \$50,000 or higher on a rotating basis, bridge and structure inspections, the pavement management system, and updated toll canopy signs. The budget also includes funding for underground storage tank replacement.

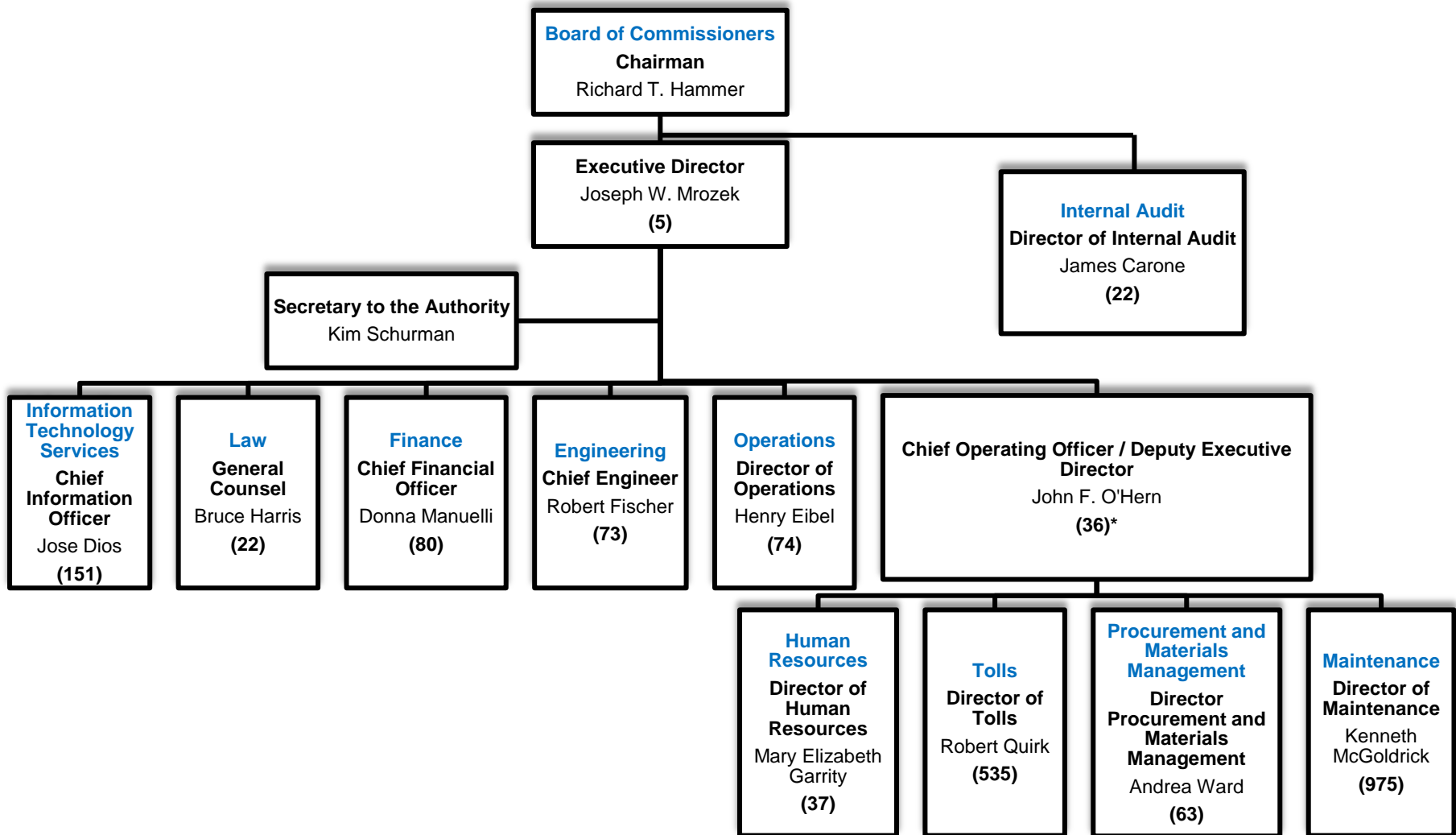
GENERAL RESERVE FUND (INCLUDING SUPPLEMENTAL CAPITAL) BUDGET

The total 2018 spending budget for the General Reserve Fund, which includes Supplemental Capital, is \$385,572,000, which is an increase of \$17,072,000 from the 2017 budget primarily due to an increase in spending for Supplemental Capital projects. Funding is included in 2018 for additional resurfacing on the Garden State Parkway, reconstruction of the Westerly Hackensack River Bridge Piers on the Turnpike, and replacement of aging hybrid changeable message signs. The increase in the Supplemental Capital budget is partially offset by a decrease in the amount of payments due under the State Transportation Projects Funding Agreement (2016-2021) which provides for a payment of \$204,000,000 in calendar year 2017, and is a reduction from payment levels required under the prior agreement.

SUMMARY

The 2018 Annual Budget provides the necessary funds to operate and maintain the additional capacity created by the Turnpike and Parkway widening projects. In addition, funds are provided to meet all debt service obligations to bondholders and all contractual payment obligations. The 2018 Annual Budget indicates that the Authority will exceed all required debt coverage covenants contained in its Bond Resolution, as well as exceed all targets established in its Guidelines, including maintaining minimum unencumbered General Reserve Fund balance in excess of \$150 million, without the need for a toll increase.

Organization Chart



Departmental full-time employee count is shown in parenthesis.

* The 11 full-time employees in the Patron & Customer Services Department, the 7 full-time employees in the State Police department and the 18 full time employees in the Automotive section of the Maintenance Department report directly to the COO/DED.

Figure 31: Organization Chart

Fund Structure

Description of Funds

For financial statement purposes, the Authority's activities are accounted for using the flow of economic resources measurement focus and the accrual basis of accounting. All assets, liabilities, net position, revenues and expenses are accounted for as an enterprise fund with revenue recorded when earned and expenses recorded at the time liabilities are incurred. NCGAS 1 defines the purpose of enterprise funds as, "to account for operations (a) that are financed and operated in a manner similar to private business enterprises – where the intent of the governing body is that the costs (expenses, including depreciation) of providing goods or services to the general public on a continuing basis be financed or recovered primarily through users charges; or (b) where the governing body has decided that periodic determination of revenues earned, expenses incurred, and/or net income is appropriate for capital maintenance, public policy, management control, accountability, or other purposes."

However, the Authority's Bond Resolution established the following funds, and the activities of the funds are reported in schedules included in the Authority's financial statements.

Revenue Fund – is the general operating fund of the Authority. The fund is used to account for all pledged revenues and operating expenses. Pledged Revenue includes, among other things, all tolls, revenues, fees, rents, charges and other income and receipts derived from the operation of the Turnpike System. Operating expenses are for operation, maintenance, repairs, ordinary replacement and ordinary reconstruction of the Turnpike System and ordinary acquisition of equipment for the Turnpike System.

Debt Service Fund - accumulates the amounts required for payment of interest, maturing principal amounts and sinking fund installments on all outstanding bonds and for amounts due and payable under Interest Rate Swap Agreements.

Debt Reserve Fund – holds an amount equal to the greatest amount of interest accruing on all outstanding bonds in any calendar year.

Charges Fund – used to pay fees for any variable rate bond liquidity agreement, remarketing fees and tender agent fees.

Maintenance Reserve Fund – used to pay for the cost of major resurfacing, replacement or reconstruction of the Turnpike System and major or extraordinary repairs, renewals or replacements of the Turnpike System necessary to restore or prevent physical damage to the Turnpike System, for the safe and efficient operation of the Turnpike System or to prevent loss of Pledged Revenues.

Special Project Reserve Fund – used to pay for any major resurfacing, renewals or replacements of the Turnpike System and for studies, surveys, estimates and investigations.

General Reserve Fund – used to make payments under any agreements with the State of New Jersey or for any other corporate purpose. For budgeting purposes only, the Authority has established a "Supplemental Capital Fund" within the General Reserve Fund that is used to fund short to medium term projects not financed through bond proceeds. The Supplemental Capital Fund is not a legal fund, is not recognized under the Bond Resolution, and its activity is reported as General Reserve Fund activity in the Authority's financial statements.

[Flow of Funds table referenced on page 152](#)

Revenue Requirement

The Revenue Requirement under section 713(b) of the Bond Resolution states that in each calendar year Net Revenues shall at least equal the Net Revenue Requirement for such year. Under Section 101 of the Bond Resolution, Net Revenues are defined as "... for any calendar year or other period of time, the Pledged Revenues during such year or period less the amounts of the Operating Expenses for such year or period." The Net Revenue Requirement is defined as, "an amount equal to the greater of:

(i) The Sum of the Aggregate Debt Service, Maintenance Reserve Payments, Special Project Reserve Payments, and payments, if any, to the Charges Fund for such period; or

(ii) 1.20 times the Aggregate Debt Service for such period (excluding, for purposes of clause (ii) only, any payment due and payable by the Authority under a Qualified Swap upon an early termination thereof)."

On or before December 1 in each year, the Authority will review its financial condition in order to estimate whether the Net Revenues for such year and for the next succeeding year will be sufficient to comply with the toll covenant. The required calculations are shown below.

| Net Revenue Requirement (in Thousands) | | | |
|--|--------------------|--------------------------|-----------------------|
| | <u>2016 Actual</u> | <u>2017 Est./ Actual</u> | <u>2018 Projected</u> |
| (i) Revenues | \$ 1,787,815 | \$ 1,791,196 | \$ 1,787,775 |
| Operating Expenses | <u>493,225</u> | <u>508,800</u> | <u>538,965</u> |
| Net Revenues | 1,294,590 | 1,282,396 | 1,248,810 |
| Debt Service Requirements | 773,078 | 818,867 | 809,406 |
| Charges Fund | 94 | 155 | - |
| Maintenance Reserve Payments | 89,370 | 116,751 | 119,086 |
| Special Project Reserve Payments | <u>38,918</u> | <u>39,696</u> | <u>40,490</u> |
| Total Requirements | <u>\$ 901,460</u> | <u>\$ 975,469</u> | <u>\$ 968,982</u> |
| Excess Revenues | \$ 393,130 | \$ 306,927 | \$ 279,828 |
| <hr/> | | | |
| (ii) Net Revenues | \$ 1,294,590 | \$ 1,282,396 | \$ 1,248,810 |
| 1.2 Times Debt Service | <u>927,694</u> | <u>982,640</u> | <u>971,287</u> |
| Excess Revenues | \$ 366,896 | \$ 299,756 | \$ 277,523 |
| Debt Service Coverage | 1.67 | 1.57 | 1.54 |

Figure 32: Net Revenue Requirement (2016-2018)

Based on the above review, Net Revenues for 2017 and 2018 will be sufficient to meet the Net Revenue Requirement.

Basis of Budgeting

The Authority's Annual Budget provides the basis for expenditures during the year. The Authority operates on a calendar-year basis. No fewer than 40 days before the end of the year, the Authority must submit a Preliminary Budget of operating expenses and reserves to the Trustee as required by the Resolution. The budget is subject to the Trustee's examination, and the Authority is required to comply with all reasonable requests from the Trustee for classifications and clarifications. The Resolution also specifies that each Annual Budget must include funding for operating expenses and reserves and provisions for deposits to the Maintenance Reserve Fund and the Special Project Reserve Fund. The Preliminary Budget and the Annual Budget may provide additional information, as the Authority may determine, and each shall contain a certificate of the Consulting Engineer approving the Preliminary Budget and the Annual Budget, as the case may be.

The Annual Budget must be adopted by the Commissioners of the Authority by January 15th of each fiscal year and made a part of the Authority's minutes. In the event that the Authority does not adopt an Annual Budget by January 15th of the fiscal year or the Governor vetoes the adopted budget, the preceding year's budget remains in effect until such adoption and approval. The minutes of all meetings are subject to a 10-day review and veto period by the Governor of the State of New Jersey prior to final approval. The adoption and approval of the Annual Budget does not in itself authorize any specific expenditure. Specific expenditures must be submitted, adopted and approved under the Authority's adopted procedure and must be consistent with the statutory, contractual and other commitments of the Authority, including agreements with the holders of its obligations, including bonds. Adoption and approval of the Annual Budget does not limit or preclude the Authority from submitting an amended budget to the Commissioners for adoption. Copies of the Annual Budget and all amendments must be filed promptly with the Trustee. If at any time the Annual Budget and amendments thereto exceed the Preliminary Budget by 10% or more, the Authority must file a detailed report with the Trustee, stating specifically the reason for the increase, and hold a public hearing thereon.

Although the Authority is restricted from expending funds in excess of the Annual Budget allocation for operating expenses (other than through amendment to the Annual Budget), the Authority may allocate additional funds for operating expenses if such funds are obtained from sources other than Pledged Revenues.

The Authority's Annual Budget is prepared on the accrual basis of accounting, accordingly revenues are recognized in the accounting period they are earned and become measurable and expenses are recognized in the accounting period in which the liability is incurred, contrary to the cash basis in which revenues are reported on the income statement when the cash is received and expenses are recognized when the cash is paid. This is consistent with the Authority's audited year-end financial statements, with the exception of the following non-cash items which are not budgeted:

- Depreciation and Amortization
- Accretion
- Change in Fair Market Value of Investments
- GASB 53 Interest Rate Swap Adjustments
- OPEB Annual Required Contribution (except for current pay retiree benefits and reserves for OPEB which are budgeted)
- Uncompensated Absences
- GASB 48 Pollution Remediation Liability Reserve

According to the Authority's capitalization policy, the cost to construct, acquire or replace an existing asset (or otherwise prolong the useful life of an existing asset) is capitalized. The capitalization threshold is \$50,000 and includes equipment valued over \$50,000 or any purchase related to a capital project whose project value exceeds \$50,000. Based on this policy, there are no capitalized assets included in the Operating Budget. The Maintenance Reserve Fund, Special Project Reserve Fund and General Reserve Fund (including the Supplemental Capital Fund within the General Reserve Fund) may contain

capitalized projects. The budget for each fund groups projects into expense projects and capitalized projects in accordance with the Authority's capitalization policy.

It should be noted that the Authority's financial statements are presented as an enterprise fund with the activity of the Bond Resolution Funds shown on schedules to the financial statements. The Authority's Annual Budget is prepared based upon the Bond Resolution Funds.

In addition to the Annual Budget required by the Resolution, NJSA 27:23-3.2 requires the Authority to submit, before the close of each of its fiscal years, a complete and detailed report of its operating and capital construction budget. The report must include receipts and disbursements or revenue and expense, for the prior fiscal year and estimated amounts for the current and succeeding fiscal year.

Budget Procedure

The Annual Budget process begins in August of each year with a review of the Authority's financial projections, current results compared to budget, and a preliminary estimated budget for the next calendar year. The review is completed by the Authority's Chief Financial Officer, the Deputy Chief Financial Officer, Assistant Director of Finance, Chief Operating Officer/Deputy Executive Director and the Executive Director. Based on this review, the Authority's strategic directives, financial policies and bond covenants, overall and specific departmental guidelines for the upcoming budget year are established. The Finance Department, through its Chief Financial Officer or Deputy Chief Financial Officer, communicates the budget guidelines to each department, as well as a call for capital projects. Departments must submit a detailed operating budget with spending justification, departmental organization, accomplishments for the current year, and goals for the next year. Departments must also submit all capital project requests, including total costs by year and justifications for each project. Based on these requests, a detailed preliminary operating and capital budget is prepared by the Finance Department, and approved by the Chief Operating Officer/Deputy Executive Director, the Executive Director, and the Authority's General Engineering Consultant. The budgets are then reviewed with the Authority's Commissioners at committee meetings. Once approved by the board committees, the Annual Budget, consisting of budgets for Revenue, Operating Expenses, Debt Service, Charges, Maintenance Reserve Fund, Special Project Reserve Fund, Supplemental Capital and the General Reserve Fund, is presented to the Board of Commissioners in public session for adoption at the October Board of Commissioners meeting.

A summary of the 2018 Annual Budget calendar is as follows:

| Action | Date |
|--|---------------------|
| 2018 Annual Budget Preparation Kickoff | 8/1/2017 |
| Executive Budget Planning Meeting | 8/7/2017 |
| Distribution of Operating & Capital Budget Documents to Departments | Week of 8/14/2017 |
| Individual Department Budget Meetings | Week of 8/14/2017 |
| Response from Departments for Operating Budget & Capital Budget | 9/6/17 and 9/8/17 |
| Executive Budget Review Meeting | Week of 10/2/2017 |
| Budget Presentation at Board Committee Meeting | 10/10/2017 |
| Budget Approved at Meeting of Board of Commissioners | 10/24/2017 |
| Governor's 10-day veto period expires without Governor exercising said power | (estimated) 11/7/17 |

Figure 33: 2018 Annual Budget Calendar

Summary of Major Revenues and Expenses

Sources of Revenue

(in Thousands)

| | <u>2016 Actual</u> | <u>2017 Budget</u> | <u>2018 Budget</u> | <u>\$ Change from 2017 Budget</u> | <u>% Change from 2017 Budget</u> |
|---------------------------|---------------------|---------------------|---------------------|---------------------------------------|--------------------------------------|
| Toll Revenue | | | | | |
| Turnpike | \$ 1,144,558 | \$ 1,124,302 | \$ 1,147,158 | \$ 22,856 | 2.0% |
| Parkway | 426,104 | 422,057 | 432,009 | 9,952 | 2.4% |
| Total Toll Revenue | 1,570,662 | \$ 1,546,359 | 1,579,167 | 32,808 | 2.1% |
| Other Operating Revenue | 124,641 | 111,400 | 113,931 | 2,531 | 2.3% |
| Non-Operating Revenue | 92,512 | 91,422 | 94,677 | 3,255 | 3.6% |
| Total Revenues | \$ 1,787,815 | \$ 1,749,181 | \$ 1,787,775 | \$ 38,594 | 2.2% |

Figure 34: Sources of Revenue (2016-2018)

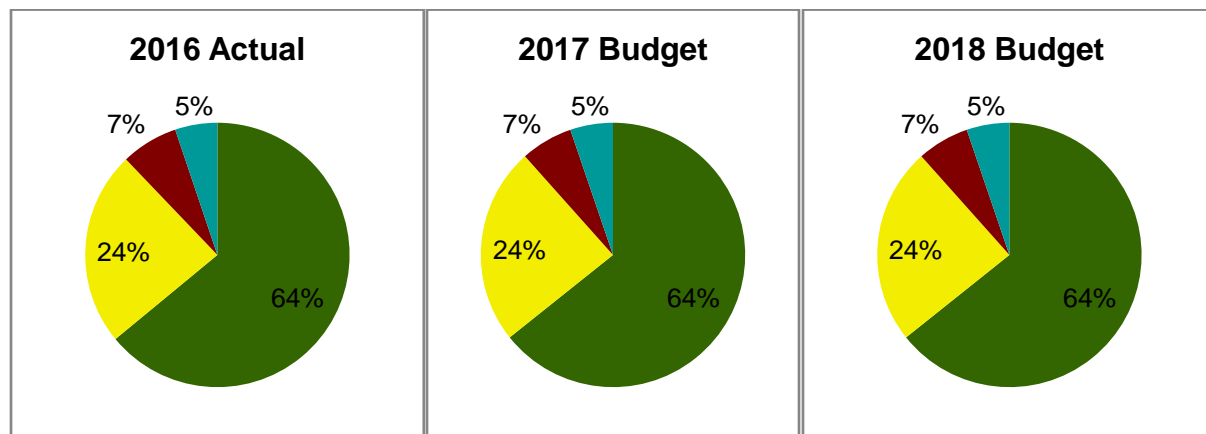


Figure 35: Sources of Revenue Percentages (2016-2018)

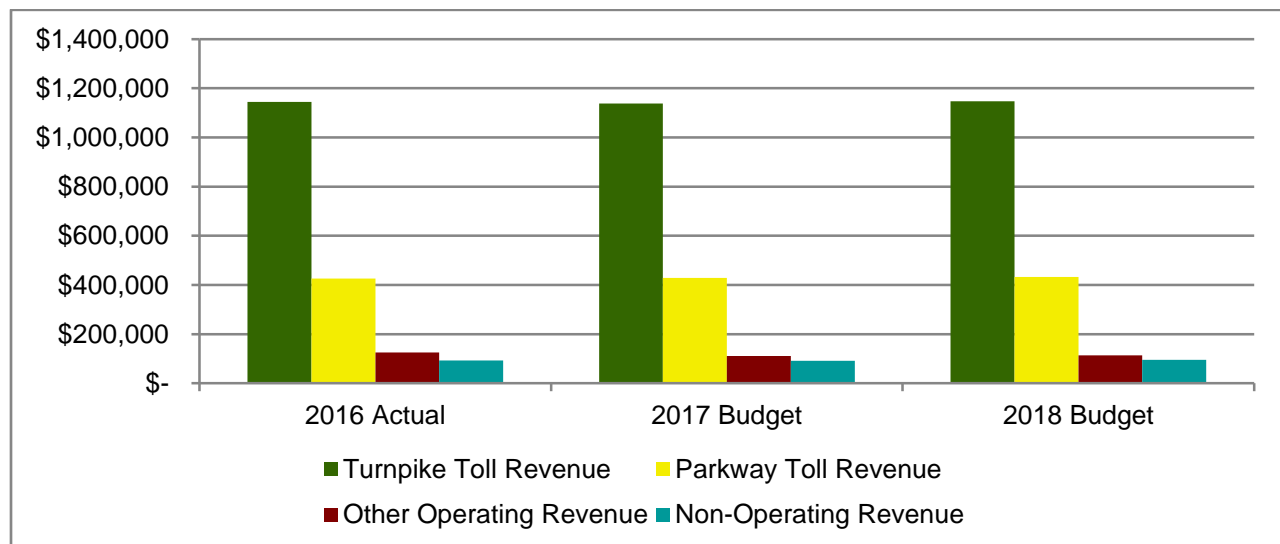


Figure 36: Sources of Revenue Graph (2016-2018)

Allocation of Revenue

(in Thousands)

| | <u>2016 Actual</u> | <u>2017 Budget</u> | <u>2018 Budget</u> | <u>\$ Change from 2017 Budget</u> | <u>% Change from 2017 Budget</u> |
|------------------------------------|---------------------|---------------------|---------------------|---------------------------------------|--------------------------------------|
| Operating Expenses | \$ 493,225 | \$ 528,762 | \$ 538,965 | \$ 10,203 | 1.9% |
| Transfers to: | | | | | |
| Debt Service & Charges | 773,172 | 846,615 | 809,406 | (37,209) | -4.4% |
| Maintenance Reserve Fund | 89,370 | 116,751 | 119,086 | 2,335 | 2.0% |
| Special Project Reserve Fund | 38,918 | 39,696 | 40,490 | 794 | 2.0% |
| General Reserve Fund | 393,130 | 217,357 | 279,828 | 62,471 | 28.7% |
| Total Allocation of Revenue | \$ 1,787,815 | \$ 1,749,181 | \$ 1,787,775 | \$ 38,594 | 2.2% |

Figure 37: Allocation of Revenue (2016-2018)

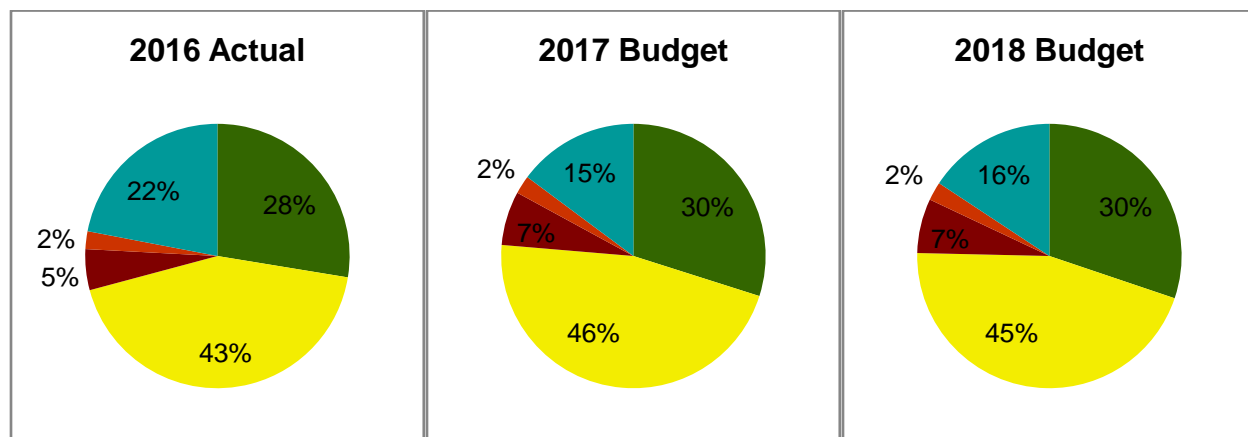


Figure 38: Allocation of Revenue Percentages (2016-2018)

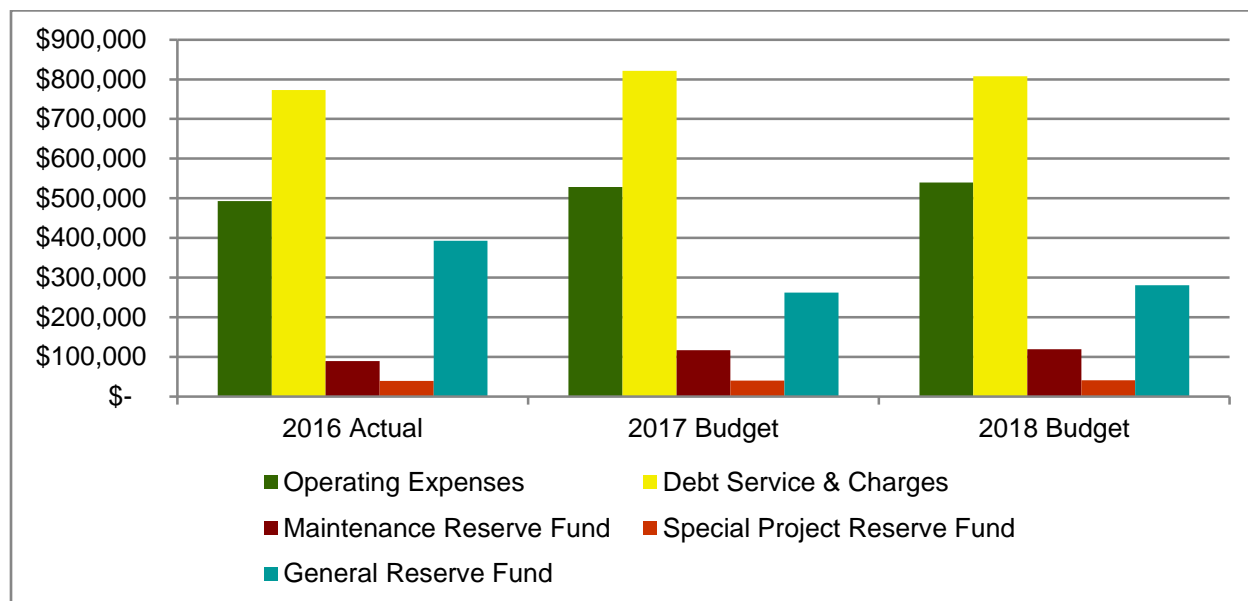


Figure 39: Allocation of Revenue Graph (2016-2018)

Revenue

2018 Revenue Budget

(in Thousand's)

| | <u>2016 Actual</u> | <u>2017 Budget</u> | <u>2018 Budget</u> | <u>\$ Change from 2017 Budget</u> | <u>% Change from 2017 Budget</u> |
|--|----------------------------|----------------------------|----------------------------|---------------------------------------|--------------------------------------|
| Operating Revenue | | | | | |
| Turnpike Toll Revenue | \$ 1,144,558 | \$ 1,124,302 | \$ 1,147,158 | \$ 22,856 | 2.0% |
| Parkway Toll Revenue | 426,104 | 422,057 | 432,009 | 9,952 | 2.4% |
| E-ZPass Fees | 62,579 | 59,200 | 63,800 | 4,600 | 7.8% |
| Concessions | 38,192 | 39,200 | 40,000 | 800 | 2.0% |
| Miscellaneous | <u>23,870</u> | <u>13,000</u> | <u>10,131</u> | <u>(2,869)</u> | <u>-22.1%</u> |
| Total Operating Revenue | 1,695,303 | 1,657,759 | 1,693,098 | 35,339 | 2.1% |
| Non-Operating Revenue | | | | | |
| Federal Subsidy for Build America Bond | 76,071 | 76,030 | 76,275 | 245 | 0.3% |
| Interest Income | 12,362 | 11,990 | 15,000 | 3,010 | 25.1% |
| Arts Center Revenues | <u>4,079</u> | <u>3,402</u> | <u>3,402</u> | <u>-</u> | <u>0.0%</u> |
| Total Non-Operating Revenue | 92,512 | 91,422 | 94,677 | 3,255 | 3.6% |
| Total Revenues | <u>\$ 1,787,815</u> | <u>\$ 1,749,181</u> | <u>\$ 1,787,775</u> | <u>\$ 38,594</u> | <u>2.2%</u> |

Figure 40: Revenue Budget (2016-2018)

Key Assumptions:

- Toll Revenue on the New Jersey Turnpike is expected to increase by 2.0% in 2018 compared to the 2017 Budget, as a result of low fuel prices, and stable economic conditions. Garden State Parkway toll revenue is expected to increase by 2.4% compared to the 2017 Budget, reflecting normal growth due to the stable economic conditions and continued low gas prices.
- E-ZPass Fees are expected to increase due to an increase in administrative fees collected from toll violators due to enhanced collection efforts, and to a lesser extent an increase in monthly membership fees due to continued growth in the customer base.
- Concession revenue is expected to increase due to continued increases in food and gasoline sales on both roadways.
- Interest income is expected to increase due to higher yields on investments due to an increase in short term interest rates and higher invested balances.

| Revenue Fund Balance | | | | | |
|-----------------------------|------------------|-----------------------|------------------|---------------------|---------------------|
| | 2016 | 2017 | 2018 | 2017 to 2018 | 2017 to 2018 |
| | Actual | Est. / Actuals | Budget | \$ Change | % Change |
| Beginning Balance | \$ 84,658 | \$ 52,876 | \$ 52,876 | \$ - | |
| Revenues | 1,787,815 | 1,791,196 | 1,787,775 | (3,421) | |
| Expenses | (493,225) | (508,800) | (538,965) | (30,165) | |
| Transfers to Funds | (1,326,372) | (1,282,396) | (1,248,810) | 33,586 | |
| Ending Balance | \$ 52,876 | \$ 52,876 | \$ 52,876 | \$ - | 0.0% |

Figure 41: Revenue Fund Balance (2016-2018)

Toll Statistics

Toll Transactions by Vehicle Type and Roadway

Toll Transactions (in Thousands):

| | <u>2014</u> | <u>2015</u> | <u>2016</u> | <u>2017*</u> | <u>2018**</u> |
|---|--------------------|--------------------|--------------------|---------------------|----------------------|
| New Jersey Turnpike Passenger Vehicles | 202,347 | 215,359 | 222,755 | 218,984 | 223,598 |
| New Jersey Turnpike Commercial Vehicles | 29,896 | 31,238 | 31,713 | 32,458 | 32,591 |
| Total New Jersey Turnpike | 232,243 | 246,597 | 254,468 | 251,442 | 256,189 |
| Garden State Parkway Toll Transactions | 370,349 | 379,284 | 387,588 | 382,710 | 394,661 |
| Total Turnpike System Transactions | <u>602,592</u> | <u>625,881</u> | <u>642,056</u> | <u>634,152</u> | <u>650,850</u> |
| Toll Transactions Growth Rate | <u>2014</u> | <u>2015</u> | <u>2016</u> | <u>2017*</u> | <u>2018**</u> |
| New Jersey Turnpike Passenger Toll Revenue | 3.7% | 6.4% | 3.4% | -1.7% | 2.1% |
| New Jersey Turnpike Commercial Toll Revenue | 2.1% | 4.5% | 1.5% | 2.3% | 0.4% |
| Total New Jersey Turnpike Toll Revenue | 3.5% | 6.2% | 3.2% | -1.2% | 1.9% |
| Garden State Parkway Toll Revenue | 0.4% | 2.4% | 2.2% | -1.3% | 3.1% |
| Total Turnpike System Toll Revenue | <u>1.5%</u> | <u>3.9%</u> | <u>2.6%</u> | <u>-1.2%</u> | <u>2.6%</u> |

Figure 42: Toll Transactions by Vehicle Type and Roadway (2014-2018)

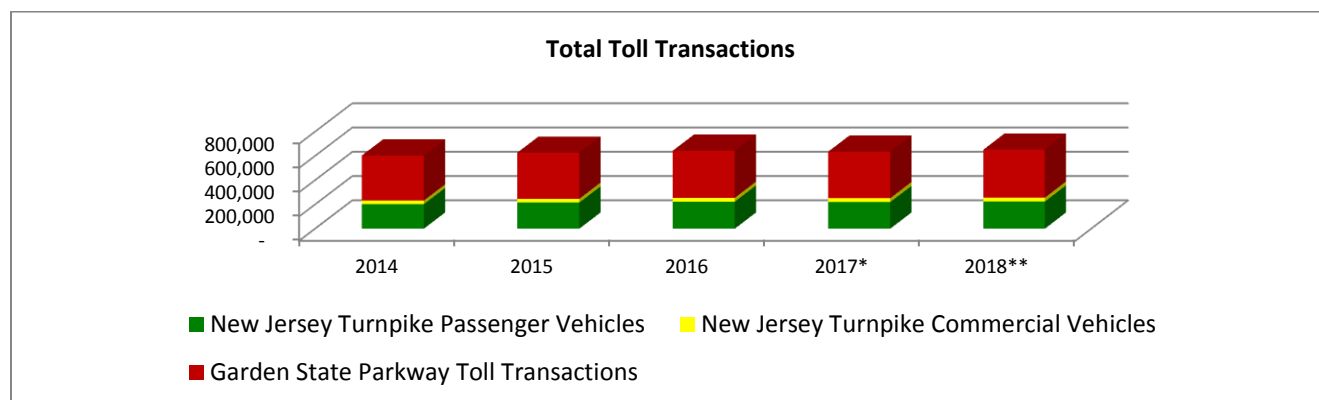


Figure 43: Total Toll Transactions (2014-2018)

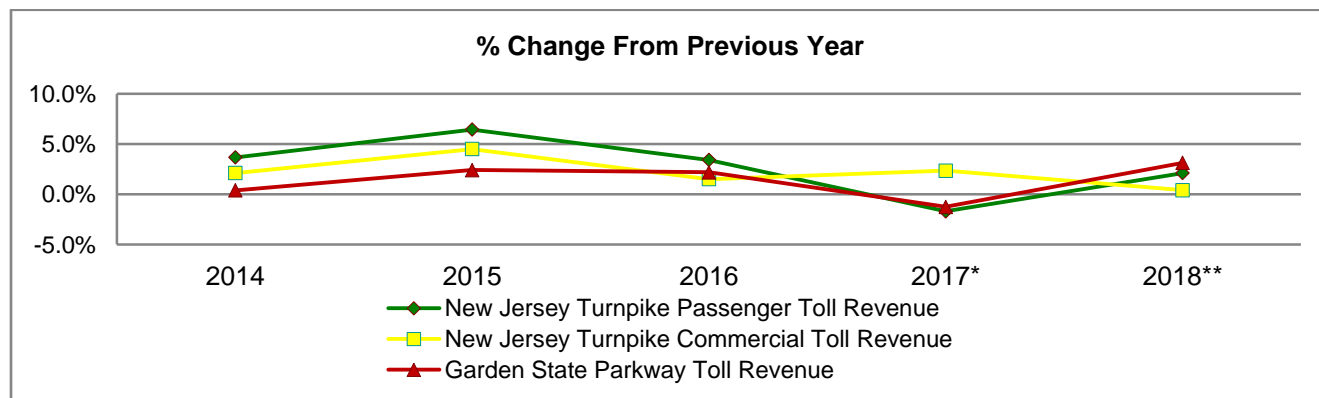


Figure 44: Toll Transactions Percent Change (2014-2018)

* Projected Traffic is based on the CDM Smith Draw Down Letter issued in October 2015 which updated the short-term projections of their Investor Grade Traffic & Revenue Study released in May 2014.

**Projected Traffic is based on the CDM Smith Draw Down Letter issued in March 2017 which updated the short-term projections of their Investor Grade Traffic & Revenue Study released in May 2014.

Toll Revenue by Vehicle Type and Roadway

Toll Revenue (in Thousands):

| | <u>2014</u> | <u>2015</u> | <u>2016</u> | <u>2017*</u> | <u>2018**</u> |
|---|--------------------|--------------------|--------------------|---------------------|----------------------|
| New Jersey Turnpike Passenger Toll Revenue | \$695,129 | \$745,007 | \$774,750 | \$746,980 | \$770,961 |
| New Jersey Turnpike Commercial Toll Revenue | <u>342,614</u> | <u>361,261</u> | <u>367,318</u> | <u>377,322</u> | <u>376,197</u> |
| Total New Jersey Turnpike Toll Revenue | 1,037,743 | 1,106,268 | 1,142,068 | 1,124,302 | 1,147,158 |
| Garden State Parkway Toll Revenue | <u>408,004</u> | <u>416,865</u> | <u>424,844</u> | <u>422,057</u> | <u>432,009</u> |
| Total Turnpike System Toll Revenue | <u>\$1,445,747</u> | <u>\$1,523,133</u> | <u>\$1,566,912</u> | <u>\$1,546,359</u> | <u>\$1,579,167</u> |
| Toll Revenue Growth Rate | <u>2014</u> | <u>2015</u> | <u>2016</u> | <u>2017*</u> | <u>2018**</u> |
| New Jersey Turnpike Passenger Toll Revenue | 3.3% | 7.2% | 4.0% | -3.6% | 3.2% |
| New Jersey Turnpike Commercial Toll Revenue | <u>2.6%</u> | <u>5.4%</u> | <u>1.7%</u> | <u>2.7%</u> | <u>-0.3%</u> |
| Total New Jersey Turnpike Toll Revenue | 3.1% | 6.6% | 3.2% | -1.6% | 2.0% |
| Garden State Parkway Toll Revenue | <u>0.2%</u> | <u>2.2%</u> | <u>1.9%</u> | <u>-0.7%</u> | <u>2.4%</u> |
| Total Turnpike System Toll Revenue | <u>2.3%</u> | <u>5.4%</u> | <u>2.9%</u> | <u>-1.3%</u> | <u>2.1%</u> |

Figure 45: Toll Revenue by Vehicle Type and Roadway (2014-2018)

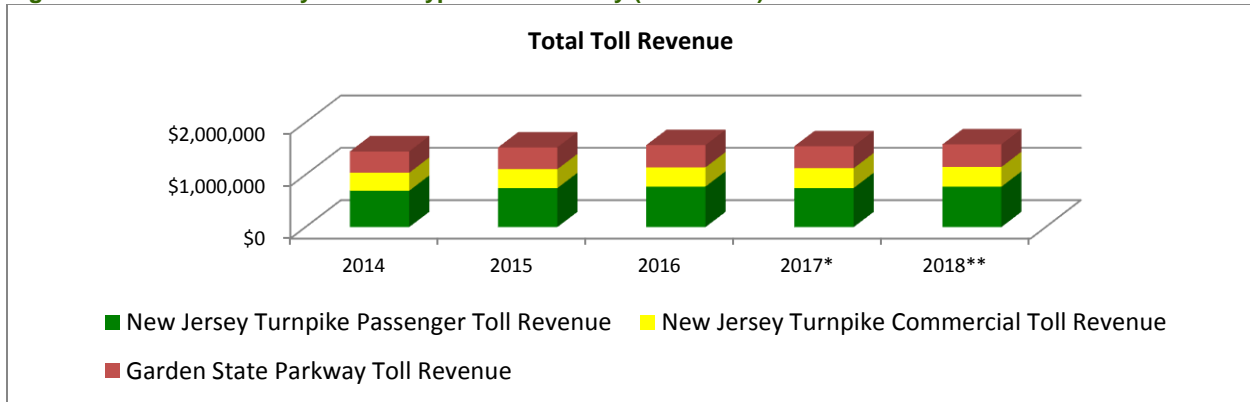


Figure 46: Total Toll Revenue (2014-2018)

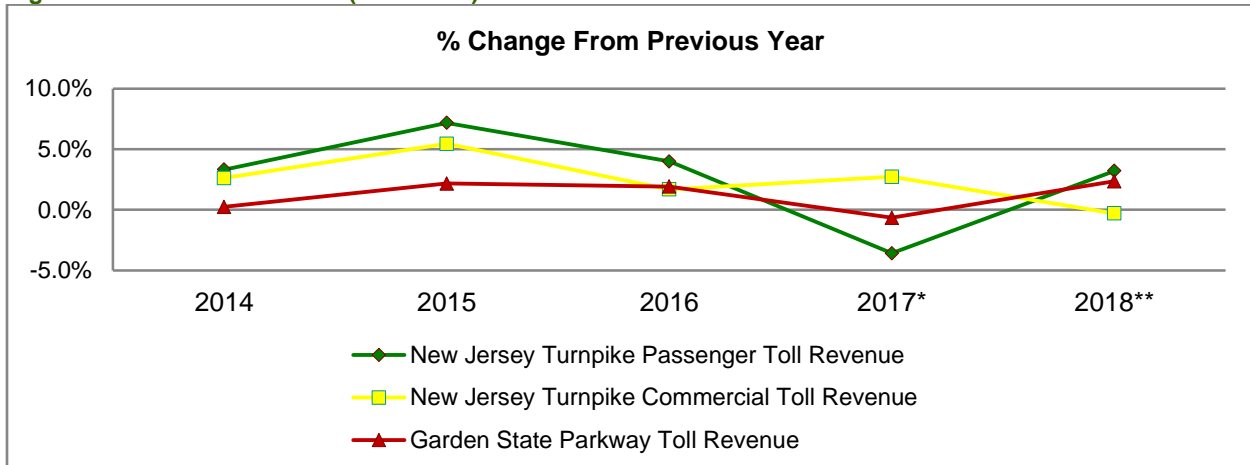


Figure 47: Toll Revenue Percent Change (2014-2018)

* Projected Traffic is based on the CDM Smith Draw Down Letter issued in October 2015 which updated the short-term projections of their Investor Grade Traffic & Revenue Study released in May 2014.

**Projected Traffic is based on the CDM Smith Draw Down Letter issued in March 2017 which updated the short-term projections of their Investor Grade Traffic & Revenue Study released in May 2014.

2018 Operating Budget

| | <u>2016 Actuals</u> | <u>2017 Budget*</u> | <u>2018 Budget</u> | <u>\$ Change from 2017 Budget</u> | <u>% Change from 2017 Budget</u> |
|---|-----------------------|-----------------------|-----------------------|---------------------------------------|--------------------------------------|
| <u>Maintenance of Roadway, Buildings & Equipment</u> | | | | | |
| Maintenance | \$ 172,350,100 | \$ 211,417,700 | \$ 217,752,500 | \$ 6,334,800 | 3.0% |
| Engineering | 12,961,200 | 9,208,700 | 9,418,300 | 209,600 | 2.3% |
| | 185,311,300 | 220,626,400 | 227,170,800 | 6,544,400 | 3.0% |
| <u>Toll Collection</u> | | | | | |
| Toll Collection | 172,197,500 | 161,889,600 | 158,383,600 | (3,506,000) | -2.2% |
| <u>State Police & Traffic Control</u> | | | | | |
| Operations | 11,329,700 | 11,943,100 | 11,787,400 | (155,700) | -1.3% |
| State Police | 68,469,000 | 70,126,700 | 75,532,600 | 5,405,900 | 7.7% |
| | 79,798,700 | 82,069,800 | 87,320,000 | 5,250,200 | 6.4% |
| <u>Technology</u> | | | | | |
| Information Technology Services | 16,604,600 | 21,737,500 | 22,793,100 | 1,055,600 | 4.9% |
| <u>General & Administrative</u> | | | | | |
| Executive Office | 1,020,400 | 1,076,200 | 1,095,300 | 19,100 | 1.8% |
| Law & Insurance Services | 8,650,600 | 9,956,000 | 10,264,000 | 308,000 | 3.1% |
| Purchasing & Materials Management | 7,882,700 | 8,885,200 | 9,090,600 | 205,400 | 2.3% |
| Human Resources & Office Services | 5,436,600 | 5,517,200 | 5,666,400 | 149,200 | 2.7% |
| Finance | 11,735,200 | 11,573,500 | 11,688,100 | 114,600 | 1.0% |
| Patron & Customer Services | 1,816,700 | 1,961,100 | 1,904,200 | (56,900) | -2.9% |
| Internal Audit | 2,770,300 | 3,469,900 | 3,589,300 | 119,400 | 3.4% |
| | 39,312,500 | 42,439,100 | 43,297,900 | 858,800 | 2.0% |
| Total Operating Budget | \$ 493,224,600 | \$ 528,762,400 | \$ 538,965,400 | \$ 10,203,000 | 1.9% |

* Reflects current 2017 budget after year to date budget transfers between departments and/or accounts

Figure 48: Operating Budget (2016-2018)

- Key cost factors in the 2017 Operating Expense Budget are as follows:
 - Salaries & Wages are increasing by approximately \$4.9 million, primarily reflecting the addition of 23 new positions to the Authority at a budgeted cost of \$2.6 million, and fully funding vacant positions which were prorated in 2017.
 - Pension costs are increasing by approximately \$2.8 million based upon estimated PERS payments. The estimated PERS rate for the 4/1/2018 payment is 13.37% up from 12.91% in 2017.
 - Health Benefit costs are increasing by approximately \$3.4 million based upon estimated usage and medical and prescription inflation rates. Trends for medical costs are projected to increase 7%, prescription to increase 9%, and Dental & Vision increase by 3%. The Authority has managed to limit the overall project budget increase to 4% through implementing new third party administration contracts in 2017 and offering employees lower cost plans that help to control overall spending.
 - State police costs are increasing by approximately \$5 million due to the addition of an estimated average of 17 new troopers assigned to the roadway, costing approximately \$3.1 million, plus an increase in existing trooper costs based on assumed wage increases and increased pension costs.
 - Other Professional services are decreasing by approximately \$6.5 million as a result of savings under the new New Jersey E-Z Pass contract. The Authority is benefiting from new pricing under the service center contract, termination of the lane maintenance contract during 2017, and new cost sharing percentages under a new memorandum of understanding between all NJ E-ZPass agencies.
 - Roadway maintenance is increasing by approximately \$2.3 million due to recurring facility repairs, minor lighting repairs, stormwater maintenance, and minor roofing repairs being added as operating expenses as renovation projects have been completed.
 - Building and Equipment Rental is decreasing by approximately \$4 million due to the purchase of the headquarters building at One Turnpike Plaza in 2017.
 - Snow costs continued to be budgeted at \$38,103,500 consistent with the past 3 years.
- The proposed 2018 Operating Expense Budget is increasing by \$10.2 million, driven by approximately \$18.4 million in increases in the key cost factors, offset by savings achieved by purchasing the Authority's headquarter building and the savings achieved from bringing all lane maintenance functions in house, and the implementation of the new E-Z Pass customer service center agreement.
- The 2018 Operating Budget represents a 1.9% increase from the 2017 Operating Budget. In fact, when eliminating the budgeted amounts for snow and severe weather, the 2018 budget for all other operating expenses of \$500.9 million is less than \$35 million higher than the 2011 budget for all other operating expenses of \$466.0 million, which is an increase of only 7.5% over the entire seven year period or an average of only 1% per year.

Budget by Functional Area

| | 2016 Actuals | 2017 Budget* | 2018 Budget | \$ Change from 2017 Budget | % Change from 2017 Budget |
|--|----------------------|----------------------|----------------------|-------------------------------|------------------------------|
| Maintenance of roadway, buildings, & equipment | \$185,311,300 | \$220,626,400 | \$227,170,800 | \$6,544,400 | 3.0% |
| Toll Collection | 172,197,500 | 161,889,600 | 158,383,600 | -\$3,506,000 | -2.2% |
| State Police & Traffic Control | 79,798,700 | 82,069,800 | 87,320,000 | \$5,250,200 | 6.4% |
| Technology | 16,604,600 | 21,737,500 | 22,793,100 | \$1,055,600 | 4.9% |
| General & Administrative | 39,312,600 | 42,439,100 | 43,297,900 | \$858,800 | 2.0% |
| Total Operating Budget | \$493,224,600 | \$528,762,400 | \$538,965,400 | \$10,203,000 | 1.9% |

* Reflects current 2017 budget after year to date budget transfers between departments and/or accounts

Figure 49: Budget by Functional Area (2016-2018)

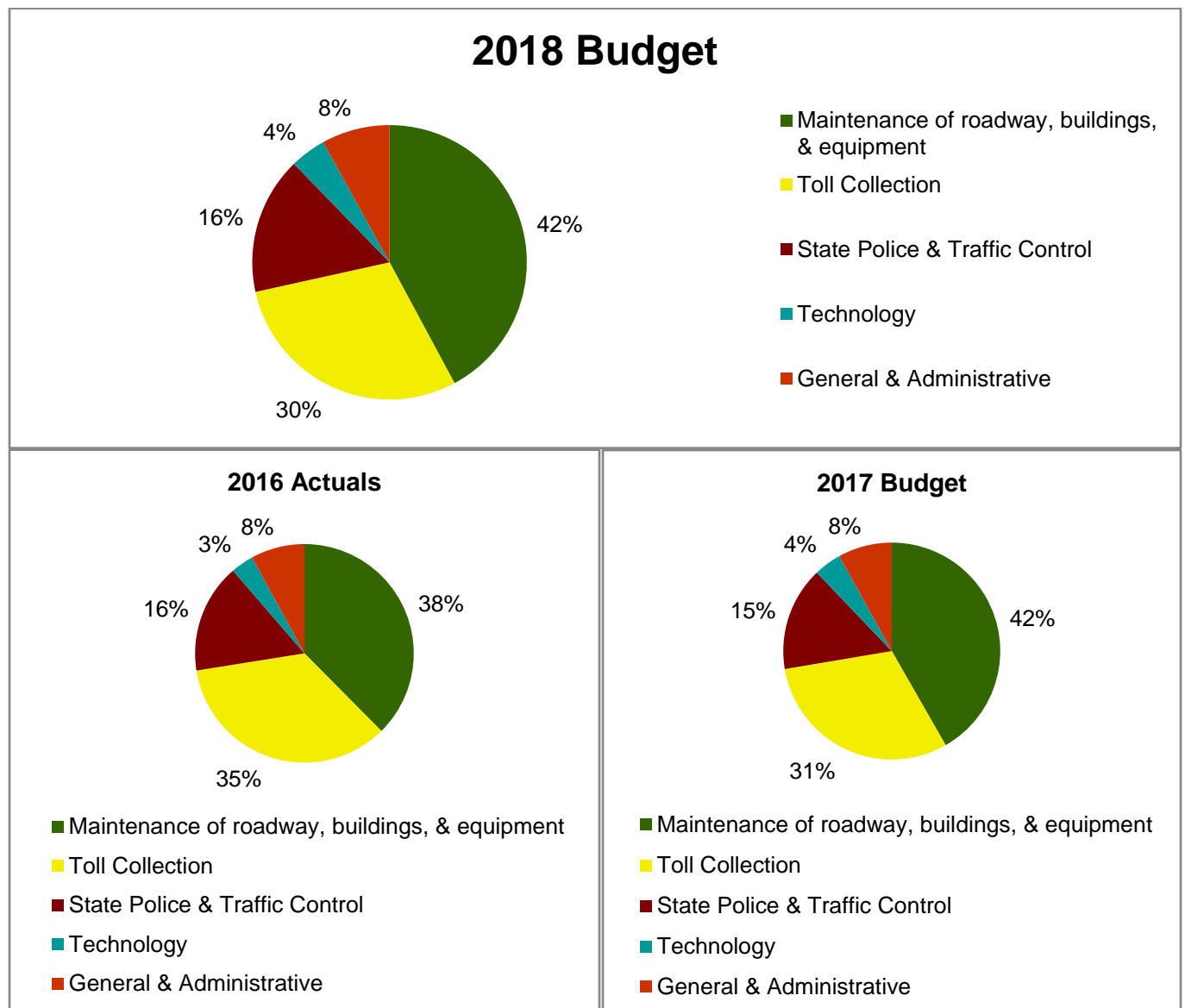


Figure 50: Budget by Functional Area Percentages (2016-2018)

Budget by Expense Type

| | 2016 Actuals | 2017 Budget* | 2018 Budget | \$ Change from 2017 Budget | % Change from 2017 Budget |
|-------------------------------|----------------------|----------------------|----------------------|-------------------------------|------------------------------|
| Personnel Costs | \$253,511,700 | \$261,272,300 | \$272,145,800 | \$10,873,500 | 4.2% |
| Materials & Supplies | 31,778,900 | 46,639,400 | 47,843,400 | \$1,204,000 | 2.6% |
| Services | 161,445,800 | 162,668,100 | 162,540,400 | -\$127,700 | -0.1% |
| Maintenance & Fixed Costs | 28,317,700 | 39,617,400 | 37,404,800 | -\$2,212,600 | -5.6% |
| Equipment | 18,170,600 | 18,565,200 | 19,031,000 | \$465,800 | 2.5% |
| Total Operating Budget | \$493,224,600 | \$528,762,400 | \$538,965,400 | \$10,203,000 | 1.9% |

* Reflects current 2017 budget after year to date budget transfers between departments and/or accounts

Figure 51: Budget by Expense Type (2015-2017)

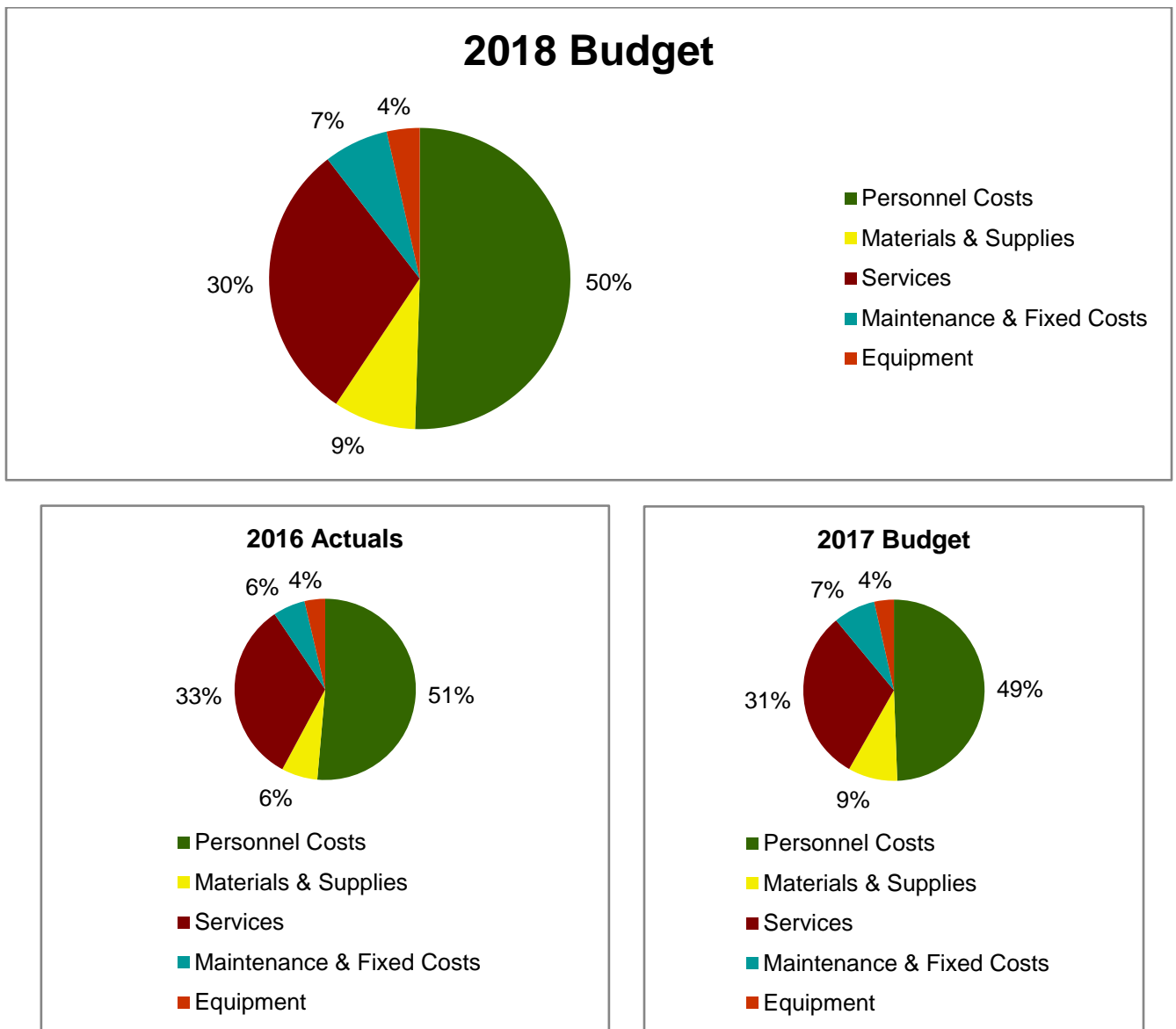


Figure 52: Budget by Expense Type Percentages (2016-2018)

2017 Operating Budget Summary by Line Item

| | 2016 Actuals | 2017 Budget* | 2018 Budget | \$ Change from 2017 Budget | % Change from 2017 Budget |
|--|-----------------------|-----------------------|-----------------------|-------------------------------|------------------------------|
| Personnel Costs | | | | | |
| Salaries & Wages | \$ 149,088,000 | \$ 151,758,800 | \$ 156,643,000 | 4,884,200 | 3.2% |
| Allowances | 909,400 | 1,393,000 | 1,393,000 | - | 0.0% |
| Pension & Payroll Taxes | 26,741,400 | 29,379,700 | 32,243,000 | 2,863,300 | 9.7% |
| Health Benefits | 76,081,500 | 77,886,300 | 80,967,700 | 3,081,400 | 4.0% |
| Tuition | 86,000 | 99,800 | 100,000 | 200 | 0.2% |
| Training & Transportation | 605,400 | 754,700 | 799,100 | 44,400 | 5.9% |
| Total Personal Costs | 253,511,700 | 261,272,300 | 272,145,800 | 10,873,500 | 4.2% |
| Materials & Supplies | | | | | |
| Printing & Office Supplies | 450,700 | 511,400 | 480,800 | (30,600) | -6.0% |
| Vehicle Fuel | 3,488,100 | 4,258,500 | 4,352,700 | 94,200 | 2.2% |
| Medical Supplies | 5,000 | 10,300 | 8,600 | (1,700) | -16.5% |
| Operating Supplies | 1,234,100 | 1,608,900 | 1,758,300 | 149,400 | 9.3% |
| Toll Tickets | 336,000 | 321,300 | 316,200 | (5,100) | -1.6% |
| Utilities | 9,987,600 | 12,444,600 | 12,662,100 | 217,500 | 1.7% |
| Snow/Ice Materials | 4,489,700 | 10,613,600 | 10,669,200 | 55,600 | 0.5% |
| Software | 3,658,300 | 5,110,300 | 5,534,000 | 423,700 | 8.3% |
| Operating Materials | 8,129,300 | 11,760,500 | 12,061,500 | 301,000 | 2.6% |
| Total Materials & Supplies | 31,778,800 | 46,639,400 | 47,843,400 | 1,204,000 | 2.6% |
| Services | | | | | |
| State Police Services | 62,537,500 | 63,854,800 | 68,868,600 | 5,013,800 | 7.9% |
| Credit Card, Trustee & Banking Fees | 27,190,300 | 29,850,800 | 30,189,000 | 338,200 | 1.1% |
| Insurance | 8,659,800 | 10,299,100 | 10,945,400 | 646,300 | 6.3% |
| Facilities Services | 2,404,100 | 2,839,900 | 2,976,300 | 136,400 | 4.8% |
| Legal Services | 1,478,300 | 1,438,200 | 1,459,400 | 21,200 | 1.5% |
| Consulting Services | 1,791,800 | 3,297,900 | 3,640,100 | 342,200 | 10.4% |
| Other Professional Services | 52,620,100 | 45,896,800 | 39,371,300 | (6,525,500) | -14.2% |
| Environmental Services | 4,475,400 | 4,877,900 | 4,759,500 | (118,400) | -2.4% |
| Other Services | 288,500 | 312,700 | 330,800 | 18,100 | 5.8% |
| Total Services | 161,445,800 | 162,668,100 | 162,540,400 | (127,700) | -0.1% |
| Maintenance & Fixed Costs | | | | | |
| Vehicle Maintenance | 509,100 | 546,100 | 490,200 | (55,900) | -10.2% |
| Roadway Maintenance | 11,342,800 | 27,339,600 | 29,598,400 | 2,258,800 | 8.3% |
| Bridge Maintenance | 13,700 | 60,100 | 48,400 | (11,700) | -19.5% |
| Building Maintenance | 969,900 | 1,686,300 | 1,988,300 | 302,000 | 17.9% |
| Toll Booth Maintenance | 6,200 | 77,800 | 76,200 | (1,600) | -2.1% |
| Equipment Maintenance | 12,084,300 | 5,805,700 | 4,832,100 | (973,600) | -16.8% |
| Building & Equipment Rental | 3,241,800 | 3,940,000 | 271,500 | (3,668,500) | -93.1% |
| Taxes | 150,000 | 161,800 | 99,700 | (62,100) | -38.4% |
| Total Maintenance & Fixed Costs | 28,317,800 | 39,617,400 | 37,404,800 | (2,212,600) | -5.6% |
| Equipment | | | | | |
| Equipment | 9,664,200 | 11,340,400 | 11,726,000 | 385,600 | 3.4% |
| Transponders | 8,506,400 | 7,224,800 | 7,305,000 | 80,200 | 1.1% |
| Total Equipment | 18,170,600 | 18,565,200 | 19,031,000 | 465,800 | 2.5% |
| Total Operating Budget by Line Item | \$ 493,224,600 | \$ 528,762,400 | \$ 538,965,400 | \$ 10,203,000 | 1.9% |

* Reflects current 2017 budget after year to date budget transfers between departments and/or accounts

Figure 53: Operating Budget by Line Item (2016-2018)

Budgeted Full Time Employees

| <u>Departments</u> | <u>Authorized 2016</u> | <u>Budget 2017*</u> | <u>Net Change 2016-2017</u> | <u>Budget 2018</u> | <u>Net Change 2017 -2018</u> |
|------------------------------------|----------------------------|-------------------------|---------------------------------|------------------------|----------------------------------|
| Maintenance | 969 | 983 | 14 | 993 | 10 |
| Engineering | 74 | 73 | (1) | 73 | - |
| Toll Collection | 526 | 524 | (2) | 535 | 11 |
| Operations | 73 | 72 | (1) | 74 | 2 |
| State Police | 7 | 7 | - | 7 | - |
| Information Technology Services | 154 | 151 | (3) | 151 | - |
| Executive Office | 5 | 5 | - | 5 | - |
| Law & Insurance Services | 21 | 22 | 1 | 22 | - |
| Procurement & Materials Management | 62 | 63 | 1 | 63 | - |
| Human Resources & Office Services | 36 | 36 | - | 37 | 1 |
| Finance | 84 | 80 | (4) | 80 | - |
| Patron & Customer Services | 13 | 12 | (1) | 11 | (1) |
| Internal Audit | 21 | 22 | 1 | 22 | - |
| TOTALS | 2,045 | 2,050 | 5 | 2,073 | 23 |

*Reflects current 2017 budget after year to date position budget transfers within and between departments.

Figure 54: Budgeted Full Time Employees (2016-2018)

The 2018 Authorized Headcount includes a continued commitment to increase maintenance staff to handle the added capacity of both the Turnpike and Parkway after the significant widening projects. The Toll Collection department will add 11 full time toll collectors to handle volume after the removal of coin machines at mainline toll plazas on the Garden State Parkway. This will allow the Authority to avoid spending over \$4.0 million to replace the aging coin machines on the mainline toll plazas.

Department Budgets

Maintenance

Department Description:

The Maintenance Department is responsible for overseeing the maintenance and care of the Turnpike and Parkway roadways and infrastructure as well as Authority buildings and facilities. Specifically, the Maintenance Department is responsible for the following: the inspection, maintenance and repair of the Authority's maintenance vehicle fleet and equipment; maintenance and repair of approximately 500 facility locations and critical utilities along 321 miles of roadway; HVAC maintenance, inspection and repair; line striping; construction of small structures and facilities; coordination and implementation of snow and ice removal operations; roadway litter and debris removal, and maintenance and care of all roadway vegetation.

Department Organization:

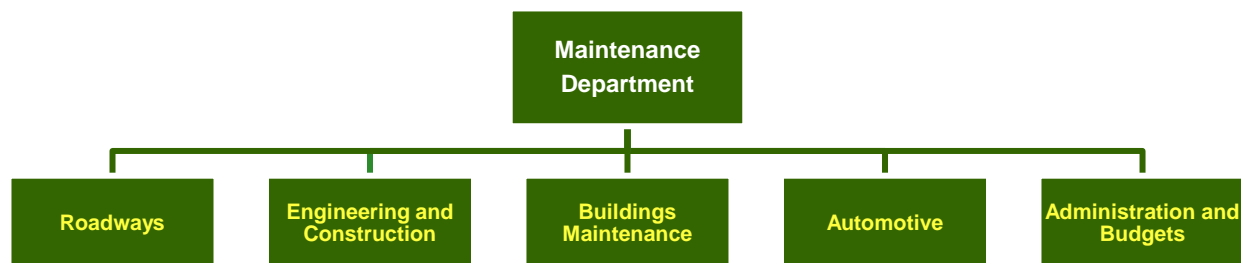


Figure 55: Maintenance Department Organization Chart

Senior Staff:

Director of Maintenance: Kenneth McGoldrick
Deputy Director of Maintenance: William Perna

2017 Accomplishments:

- Continued to expand the Authority's EGIs (electronic geographic information system) with additional field data.
- Completed fleet wide equipment lifecycle cost and analysis program with concentration on heavy duty trucks.
- Commenced our program to restore roadway illumination levels while reducing energy usage through the LED roadway lighting purchase program.

2018 Goals:

- Expand field access to Authority's EGIs system with implementation of field devices-deploy additional units after initial pilot testing.
- Continued expansion of maintenance construction and service contract to parallel all departmental functions.
- Continue on restoration of roadway illumination levels.
- Continued installation of electronic equipment accountability systems at each facility as more sites are constructed and completed. Pilot testing to commence prior to full deployment.
- Provide adequate training on new vehicles for the technicians, up-to-date diagnostic equipment for the department, as well as sufficient training on this equipment for the technicians.

| Maintenance Department Operating Budget | | | | | |
|--|-----------------------|-----------------------|-----------------------|-----------------------|----------------------|
| | 2016 | 2017 | 2018 | \$ Change from | % Change from |
| | Actuals | Budget* | Budget | 2017 Budget | 2017 Budget |
| Salaries & Wages | \$ 72,499,300 | \$ 76,717,700 | \$ 79,784,800 | \$ 3,067,100 | 4.0% |
| Allowances | 667,700 | 1,124,400 | 1,124,400 | - | 0.0% |
| Pension & Payroll Taxes | 12,199,700 | 13,988,700 | 15,519,700 | 1,531,000 | 10.9% |
| Health Benefits | 34,709,000 | 37,084,400 | 38,972,200 | 1,887,800 | 5.1% |
| Training & Transportation | 26,900 | 121,500 | 99,600 | (21,900) | -18.0% |
| Printing & Office Supplies | 62,400 | 77,900 | 64,300 | (13,600) | -17.5% |
| Vehicle Fuel | 3,481,500 | 4,250,800 | 4,340,700 | 89,900 | 2.1% |
| Operating Supplies | 903,100 | 1,005,500 | 1,181,000 | 175,500 | 17.5% |
| Utilities | 9,987,600 | 12,444,600 | 12,662,100 | 217,500 | 1.7% |
| Snow/Ice Materials | 4,489,700 | 10,613,600 | 10,669,200 | 55,600 | 0.5% |
| Software | 16,300 | 23,000 | 15,900 | (7,100) | -30.9% |
| Operating Materials | 6,858,400 | 9,235,200 | 9,550,500 | 315,300 | 3.4% |
| Insurance | 4,633,700 | 4,761,200 | 5,130,900 | 369,700 | 7.8% |
| Facilities Services | 69,900 | 83,000 | 82,900 | (100) | -0.1% |
| Consulting Services | 163,700 | 222,900 | 225,600 | 2,700 | 1.2% |
| Environmental Services | 659,000 | 1,210,100 | 1,081,900 | (128,200) | -10.6% |
| Other Services | 67,900 | 77,800 | 109,300 | 31,500 | 40.5% |
| Vehicle Maintenance | 359,200 | 403,300 | 347,600 | (55,700) | -13.8% |
| Roadway Maintenance | 11,342,800 | 27,339,600 | 29,598,300 | 2,258,700 | 8.3% |
| Bridge Maintenance | 13,700 | 60,100 | 48,400 | (11,700) | -19.5% |
| Building Maintenance | 922,000 | 1,625,000 | 1,906,200 | 281,200 | 17.3% |
| Equipment Maintenance | 101,100 | 99,700 | 99,300 | (400) | -0.4% |
| Building & Equipment Rental | 3,121,300 | 3,805,600 | 137,200 | (3,668,400) | -96.4% |
| Equipment | 4,994,400 | 5,042,100 | 5,000,500 | (41,600) | -0.8% |
| | \$ 172,350,100 | \$ 211,417,700 | \$ 217,752,500 | \$ 6,334,800 | 3.0% |

* Reflects current 2017 budget after year to date budget transfers between departments and/or accounts

Figure 56: Maintenance Department Operating Budget (2016-2018)

2018 Budget Highlights:

- Salaries are increasing to fund 10 additional positions, to cover the cost of contractual wage increases and to fully fund vacant positions.
- Pension is increasing based upon expected increase in PERS required payments
- Health benefits are increasing based upon expected increase in usage and medical inflation
- Increased Operating Supplies costs to cover additional materials for small sign requests
- Roadway Maintenance expenses are rising due to increased maintenance costs for sign and safety repairs, stormwater facility repairs, roadway repairs, lighting repairs, and roofing repairs as upgrade projects have been completed and these are now considered to be routine maintenance costs. Additionally, funds were added for drain cleaning and sweepings
- Decrease in building rental resulting from the purchase of Authority headquarters at One Turnpike Plaza.

Maintenance Department Budgeted Headcount

| | Authorized 2016 | Budget 2017* | Budget 2018 | Net Change 2017-2018 |
|--|----------------------------|-------------------------|------------------------|---------------------------------|
| Administrative Assistant | 2 | 2 | 2 | - |
| Administrative Manager | 1 | 1 | 0 | (1) |
| Administrative Secretary | 1 | 1 | 1 | - |
| Apprentice/Journeyman | 6 | 6 | 6 | - |
| Assistant/ Deputy Director Maintenance | 1 | 1 | 1 | - |
| Assistant Building Maintenance Manager | 0 | 1 | 1 | - |
| Assistant Foreman | 33 | 31 | 31 | - |
| Assistant Janitorial Foreman | 0 | 1 | 1 | - |
| Assistant Landscape Specialist | 0 | 1 | 1 | - |
| Assistant Maintenance Engineer | 1 | 1 | 1 | - |
| Assistant Project Supervisor | 1 | 1 | 1 | - |
| Automotive Manager | 1 | 1 | 1 | - |
| Automotive Assistant | 1 | 1 | 1 | - |
| Automotive Craftsperson 1 | 1 | 1 | 1 | - |
| Automotive Foreman | 3 | 3 | 3 | - |
| Automotive Technician | 41 | 42 | 42 | - |
| Automotive Training Manager | 1 | 1 | 1 | - |
| Body Repairperson | 3 | 3 | 3 | - |
| Building Craftsperson 3 | 3 | 3 | 3 | - |
| Building Maintenance Coordinator | 1 | 1 | 1 | - |
| Building Maintenance Foreman | 3 | 3 | 3 | - |
| Buildings Maintenance Manager | 1 | 1 | 1 | - |
| Building Maintenance Mechanic | 13 | 13 | 13 | - |
| Buildings Division Coordinator | 1 | 1 | 1 | - |
| Carpenter | 12 | 12 | 12 | - |
| Carpenter/Paint Foreman | 2 | 2 | 2 | - |
| Confidential Secretary | 1 | 1 | 1 | - |
| Construction Supervisor, Maintenance | 1 | 1 | 1 | - |
| Craftsperson Assistant - Automotive | 2 | 2 | 2 | - |
| Craftsperson, Automotive | 11 | 12 | 12 | - |
| Craftsperson Field Supervisor | 6 | 6 | 6 | - |
| Crew Manager | 6 | 6 | 6 | - |
| Crew Supervisor | 40 | 40 | 42 | 2 |
| Director of Maintenance | 1 | 1 | 1 | - |
| District Equipment Manager | 3 | 3 | 3 | - |
| District Manager | 3 | 3 | 3 | - |
| Electrical Craftsperson 2 | 16 | 16 | 16 | - |
| Electrical Engineer | 1 | 1 | 1 | - |
| Electrician | 20 | 20 | 20 | - |
| Equipment Manager | 0 | 1 | 1 | - |
| Equipment Trainer | 3 | 3 | 3 | - |
| Executive Secretary 2 | 2 | 2 | 2 | - |
| Facility Craftsperson | 1 | 4 | 4 | - |
| Facilities Manager | 0 | 1 | 1 | - |
| Facility Manager | 1 | 1 | 1 | - |
| Financial & Office Manager | 1 | 1 | 1 | - |
| Fleet Administrator | 1 | 1 | 1 | - |
| General Foreman | 6 | 6 | 6 | - |
| General Foreman - Automotive | 2 | 1 | 1 | - |
| Heavy Equipment Operator | 25 | 25 | 25 | - |

Maintenance Department Budgeted Headcount- Continued

| | Authorized | Budget | Budget | Net Change |
|--|-------------------|---------------|---------------|-------------------|
| | 2016 | 2017* | 2018 | 2017-2018 |
| Inv Quality Assurance Mngr & Materials Exp | 1 | 1 | 1 | - |
| Janitor | 6 | 7 | 9 | 2 |
| Janitorial Foreman | 1 | 1 | 1 | - |
| Janitorial Manager | 0 | 1 | 1 | - |
| Landscape Manager | 0 | 1 | 1 | - |
| Landscape Specialist | 2 | 0 | 0 | - |
| Landscaper | 8 | 7 | 7 | - |
| Landscaping Foreman | 2 | 2 | 2 | - |
| Linestriper | 2 | 2 | 2 | - |
| Maintenance Automotive Manager | 0 | 1 | 1 | - |
| Maintenance Coordinator | 1 | 1 | 1 | - |
| Maintenance District Coordinator | 2 | 2 | 2 | - |
| Maintenance Engineer | 4 | 4 | 4 | - |
| Maintenance Person | 220 | 222 | 222 | - |
| Maintenance Person - General | 37 | 33 | 33 | - |
| Maintenance Person 1 | 202 | 212 | 215 | 3 |
| Maintenance Person 2 | 15 | 15 | 15 | - |
| Maintenance Person 3 | 2 | 3 | 3 | - |
| Maintenance Person 4 | 7 | 6 | 10 | 4 |
| Maintenance Records Clerk | 20 | 20 | 20 | - |
| Maintenance Roadway Specialist | 3 | 2 | 2 | - |
| Maintenance Specialist - Landscape | 4 | 4 | 4 | - |
| Mark Out Coordinator | 1 | 0 | 0 | - |
| Mason | 4 | 4 | 4 | - |
| Mechanic 1 | 36 | 37 | 37 | - |
| Mechanic Specialist | 3 | 2 | 2 | - |
| Mechanical Craftsperson 2 | 17 | 16 | 16 | - |
| Motor Vehicle Supervisor | 1 | 0 | 0 | - |
| Office Assistant | 1 | 1 | 1 | - |
| One Call Coordinator Turnpike | 1 | 1 | 1 | - |
| Painter | 4 | 4 | 4 | - |
| Power Electric Foreman | 4 | 5 | 5 | - |
| Procedure Analyst | 1 | 1 | 1 | - |
| Project Analyst | 2 | 1 | 1 | - |
| Project Supervisor | 12 | 11 | 11 | - |
| Property Inspector | 1 | 1 | 1 | - |
| Roadway Foreman | 16 | 16 | 16 | - |
| Roadway Superintendent | 4 | 4 | 4 | - |
| Senior Administrative Assistant - Division | 1 | 1 | 1 | - |
| Senior Clerk | 17 | 18 | 18 | - |
| Senior Maintenance Budget Supervisor | 1 | 1 | 1 | - |

Maintenance Department Budgeted Headcount- Continued

| | Authorized 2016 | Budget 2017* | Budget 2018 | Net Change 2017-2018 |
|--|----------------------------|-------------------------|------------------------|---------------------------------|
| Senior Maintenance Budget Supervisor | 1 | 1 | 1 | - |
| Senior Maintenance Engineer | 1 | 1 | 1 | - |
| Senior Maintenance Lighting Specialist | 1 | 1 | 1 | - |
| Sign Fabricator 1 | 6 | 8 | 8 | - |
| Sign Fabricator Specialist | 1 | 1 | 1 | - |
| Sign Shop Manager | 1 | 1 | 1 | - |
| Superintendent of Snow Operations | 1 | 1 | 1 | - |
| Training Equipment Supervisor | 1 | 1 | 1 | - |
| Welder | 5 | 5 | 5 | - |
| | 969 | 983 | 993 | 10 |

*Reflects current 2017 budget after year to date position budget transfers within and between departments.

Figure 57: Maintenance Department Headcount (2016-2018)

Engineering

Department Description:

The Engineering Department’s mission is focused on the preservation and improvement of the Authority’s roadways, structures, buildings and other facilities. Responsibilities include planning, design, and construction management. In-house staff is supplemented by engineers from outside consulting engineering firms who work under direct Authority supervision. The Engineering Department is comprised of two main divisions -- Design Division and Construction Division.

The Design Division is focused on delivery of the Capital Improvement Program. Specifically, the planning and design of projects within the current 10-Year, \$7 billion Capital Improvement Program, which include widening, bridge, roadway, interchange, and facility improvement projects. In addition to the Capital Improvements Program, the design Division is also responsible for the design of various maintenance contracts including annual bridge deck and pavement resurfacing contracts.

The Construction Division is organized into three (3) sections; Contracts, Highways and Structures. The Contracts Section is responsible for transitioning construction contracts from design to construction through the public bid process, maintaining the Authority’s standard specifications and providing current supplemental specifications, and prequalifying all contractors interested in bidding on Authority construction contracts. The Highways and Structures Division is responsible for ensuring that the Authority’s roadway and structural repair/improvement construction contracts are constructed in accordance with the contract’s plans and specifications.

Department Organization:

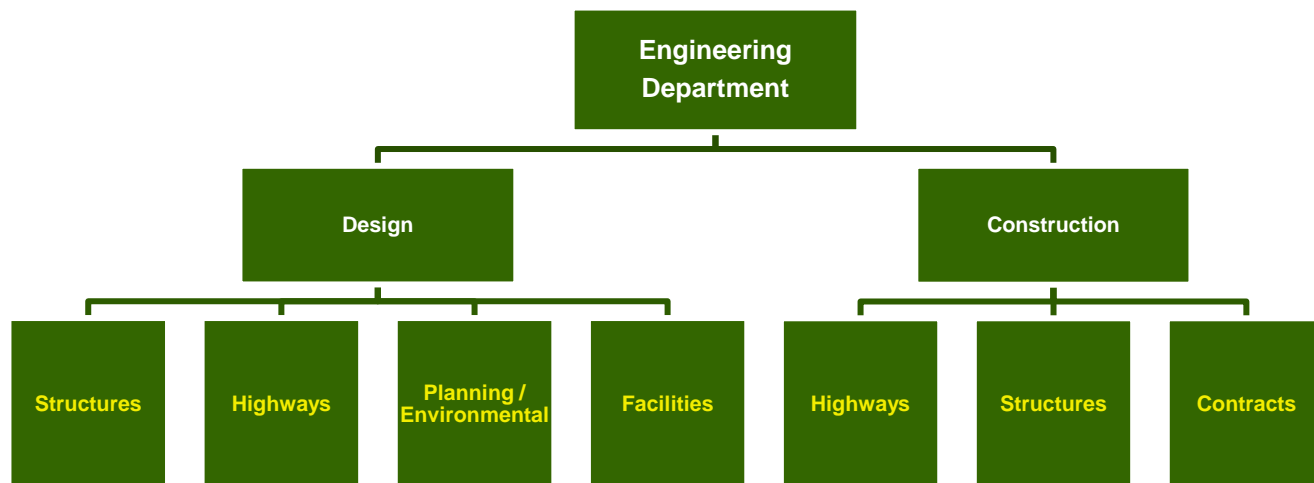


Figure 58: Engineering Department Organization Chart

Senior Staff:

Chief Engineer: Robert J. Fischer
 Deputy Chief Engineer – Construction: J. Lawrence Williams
 Deputy Chief Engineer – Design: John Keller

2017 Accomplishments:

- Continued implementation of current \$7 Billion Capital Program.
- Continued development of a new Capital Improvement Program.
- Implementation of the Pavement Management Systems for prioritizing resurfacing needs.
- Filled five vacant positions in the Engineering Department.
- Successfully repaired the Delaware River Turnpike Bridge following a seven week emergency closure, in conjunction with the Pennsylvania Turnpike Commission.

2018 Goals:

- Award the final contracts to complete the implementation of the \$7 Billion Capital Improvement Program.
- Increase pavement resurfacing on the New Jersey Turnpike to bring the roadway to a state of good repair.
- Continue to populate the Geographic Information System (GIS) for Authority wide use.
- Repair large drainage culverts, lighting and median barrier through the Maintenance Reserve Fund.
- Back fill open staff positions.
- Develop a plan to increase capacity between Interchange 14 and 14A to include rehabilitation of the Newark Bay Bridge.

Engineering Department Operating Budget

| | 2016 Actuals | 2017 Budget* | 2018 Budget | \$ Change from 2017 Budget | % Change from 2017 Budget |
|----------------------------|-------------------------|-------------------------|------------------------|---------------------------------------|--------------------------------------|
| Salaries & Wages | \$ 3,360,400 | \$ 1,929,700 | \$ 2,007,600 | \$ 77,900 | 4.0% |
| Allowances | 600 | 1,100 | 1,200 | 100 | 9.1% |
| Pension & Payroll Taxes | 1,196,000 | 395,800 | 436,800 | 41,000 | 10.4% |
| Health Benefits | 3,402,800 | 1,049,100 | 1,096,900 | 47,800 | 4.6% |
| Training & Transportation | 3,200 | 11,600 | 14,900 | 3,300 | 28.4% |
| Printing & Office Supplies | 27,300 | 23,600 | 27,000 | 3,400 | 14.4% |
| Operating Supplies | 500 | 1,100 | 1,900 | 800 | 72.7% |
| Operating Materials | 100 | 300 | 200 | (100) | -33.3% |
| Consulting Services | 1,145,200 | 2,121,800 | 2,144,400 | 22,600 | 1.1% |
| Environmental Services | 3,815,900 | 3,665,200 | 3,675,000 | 9,800 | 0.3% |
| Other Services | 9,100 | 9,400 | 11,700 | 2,300 | 24.5% |
| Consulting Services | - | - | 700 | 700 | 100.0% |
| Totals | \$ 12,961,200 | \$ 9,208,700 | \$ 9,418,300 | \$ 209,600 | 2.3% |

*Reflects current 2017 budget after year to date budget transfers between departments and/or accounts

Figure 59: Engineering Department Operating Budget (2016-2018)**2018 Budget Highlights:**

- Salaries are increasing to cover the cost of contractual wage increases and fully fund vacant positions.
- Pension is increasing based upon expected increase in PERS required payments
- Health benefits are increasing based upon expected increase in usage and medical inflation
- Consulting Services are increased due to projected increased services of the Authority's general consulting engineer.

Engineering Department Budgeted Headcount

| | Authorized 2016 | Budget 2017* | Budget 2018 | Net Change 2017-2018 |
|------------------------------------|----------------------------|-------------------------|------------------------|---------------------------------|
| Administrative Secretary/Assistant | 6 | 5 | 5 | - |
| Assistant/Deputy Chief Engineer | 2 | 2 | 2 | - |
| Assistant Project Supervisor | 2 | 2 | 2 | - |
| Assistant Engineer | 3 | 6 | 6 | - |
| CAAD Engineering Technician | 1 | 1 | 1 | - |
| Chief Engineer | 1 | 1 | 1 | - |
| Chief File Clerk | 1 | 1 | 1 | - |
| Clerk | 2 | 1 | 1 | - |
| Confidential Secretary | 1 | 1 | 1 | - |
| Contracts Division Manager | 1 | 1 | 1 | - |
| Coordinator, Bargaining | 1 | 1 | 1 | - |
| Engineering Project Analyst | 1 | 1 | 1 | - |
| Engineering Administrative Aide | 1 | 1 | 1 | - |
| Engineering Assistant | 1 | 1 | 1 | - |
| Engineering Coordinator | 2 | 2 | 2 | - |
| Engineering Technician | 1 | 2 | 2 | - |
| Field Environmental Manager | 1 | 1 | 1 | - |
| Highway Engineer | 1 | 1 | 1 | - |
| Office Administrator, Engineering | 1 | 1 | 1 | - |
| Project Engineer | 15 | 12 | 12 | - |
| Project Manager | 2 | 2 | 2 | - |
| Project Supervisor | 8 | 8 | 8 | - |
| Right of Way Manager | 1 | 1 | 1 | - |
| Senior CADD Engineering Technician | 1 | 1 | 1 | - |
| Senior Clerk | 1 | 2 | 2 | - |
| Senior Construction Engineer | 1 | 1 | 1 | - |
| Senior Project Engineer | 4 | 4 | 4 | - |
| Senior Environmental Supervisor | 2 | 2 | 2 | - |
| Senior Environmental Manager | 1 | 1 | 1 | - |
| Senior File Room Supervisor | 1 | 1 | 1 | - |
| Senior Structures Engineer | 1 | 1 | 1 | - |
| Structures Engineer | 1 | 0 | 0 | - |
| Supervising Engineer | 1 | 2 | 2 | - |
| Senior Supervising Engineer | 4 | 3 | 3 | - |
| | 74 | 73 | 73 | - |

*Reflects current 2017 budget after year to date position budget transfers within and between departments.

Figure 60: Engineering Department Headcount (2016-2018)

Toll Collection

Department Description:

The Toll Collection Department oversees the collection of toll revenue through both manual and automatic coin machine methods for the New Jersey Turnpike and the Garden State Parkway. The Department currently has 528 full-time employees and 550 part-time and temporary employees. In addition, the budget includes the costs associated with Electronic Toll Collection although oversight for this function is spread over several departments.

Department Organization:

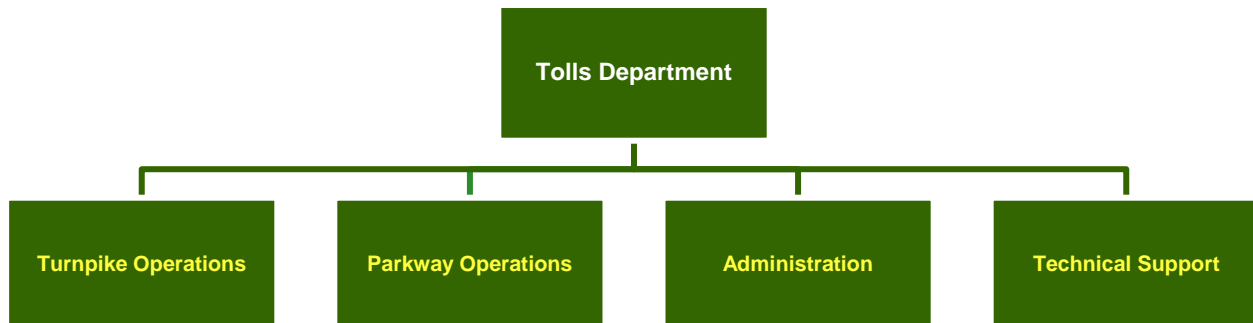


Figure 61: Tolls Department Organization Chart

Senior Staff:

Director of Tolls: Robert B. Quirk

Deputy Director of Tolls: F. Scott Barton

Assistant Director of Tolls – Operation: Larry D. Clarke

Assistant Director of Tolls – Training: Colleen L. Lentini

2017 Accomplishments:

- Interchanges 16E/18E and 17 underwent abutment replacement enhancing the safety of our employees and motorists.
- Tolls and Procurement entered a new contract for courier service providing greater efficiencies in our coin and currency exchanges.
- Implementation of Uniforms for all personnel.
- HVAC System replacements now provide better working conditions for employees while creating Authority savings.
- Installing Signage at Interchange 10 entry and Interchange 8A exit providing more efficiency at these plazas.
- Interchange 125 SBX, E-ZPass Only, lanes were opened in July of 2017 on the Parkway.
- Investigated and looked into the procurement of smart safes for Parkway toll plazas

2018 Goals:

- Implementation of a Plaza Supervisor training program to more efficiently ready candidates for duty.
- Interchange 6 High-Speed E-Z PASS Exit from 1 Lane currently to 2 Lanes going into Pennsylvania.
- Installing new abutments at Interchanges 3 and 4. Removing and installing new toll-booths, Interchange 4.
- Changing the exit configuration at Interchange 1 for the motorists exiting into Delaware.
- Continuing the training of new Supervisors providing new materials to keep up with the industry standards.
- Investigate and implement the removal of ACM's from off of the mainline plazas on the Parkway – to include reconfiguring plaza operations and bolstering staff lanes.
- Eliminate the use of PWF envelopes around April 2018
- Continue to address heating and air conditioning concerns using the new climate control technology in all toll booths.
- Continue to investigate and implement new programs for training newly promoted Plaza Supervisors

Tolls Department Operating Budget

| | 2016 Actuals | 2017 Budget* | 2018 Budget | \$ Change from 2017 Budget | % Change from 2017 Budget |
|-------------------------------------|-------------------------|-------------------------|------------------------|---------------------------------------|--------------------------------------|
| Salaries & Wages | \$42,391,900 | \$ 41,746,500 | \$ 43,260,200 | \$ 1,513,700 | 3.6% |
| Allow ances | 174,300 | 190,200 | 190,200 | - | 0.0% |
| Pension & Payroll Taxes | 7,414,500 | 8,561,500 | 9,412,100 | 850,600 | 9.9% |
| Health Benefits | 21,094,800 | 22,696,900 | 23,635,500 | 938,600 | 4.1% |
| Training & Transportation | 486,500 | 497,600 | 485,500 | (12,100) | -2.4% |
| Printing & Office Supplies | 73,400 | 78,900 | 78,800 | (100) | -0.1% |
| Operating Supplies | 260,900 | 483,700 | 461,900 | (21,800) | -4.5% |
| Toll Tickets | 336,000 | 321,300 | 316,200 | (5,100) | -1.6% |
| Softw are | 1,273,900 | 1,778,800 | 1,930,700 | 151,900 | 8.5% |
| Operating Materials | 386,500 | 1,319,000 | 1,313,900 | (5,100) | -0.4% |
| Credit Card, Trustee & Banking Fees | 26,684,000 | 29,330,500 | 29,661,000 | 330,500 | 1.1% |
| Facilities Services | 1,903,300 | 2,310,100 | 2,446,700 | 136,600 | 5.9% |
| Other Professional Services | 50,618,200 | 42,877,600 | 36,236,800 | (6,640,800) | -15.5% |
| Toll Booth Maintenance | 6,200 | 77,800 | 76,200 | (1,600) | -2.1% |
| Equipment Maintenance | 10,586,600 | 2,369,400 | 1,565,700 | (803,700) | -33.9% |
| Equipment | - | 25,000 | 7,200 | (17,800) | -71.2% |
| Transponders | 8,506,400 | 7,224,800 | 7,305,000 | 80,200 | 1.1% |
| | \$172,197,500 | \$161,889,600 | \$ 158,383,600 | \$ (3,506,000) | -2.2% |

* Reflects current 2017 budget after year to date budget transfers between departments and/or accounts

Figure 62: Tolls Department Operating Budget (2016-2018)

2018 Budget Highlights:

- Increase in Salaries due to the addition of 11 full time and 25 part time toll collectors required to fill lanes to offset the removal of coin machines on the Garden State Parkway mainline toll plazas, contractual wage increases, and fully funding vacancies. The annual cost of the additional collectors including pension and benefits is approximately \$830,000 compared to \$4,000,000 for additional coin machines. It is anticipated that due to other changes in toll lane configurations, this additional cost will only be incurred for one year. At that time, the number of toll collectors will be able to be reduced back to the 2017 level and those positions can be moved to the maintenance department to continue to increase roadway staffing levels on the Parkway.
- Pension is increasing based upon expected increase in PERS required payments
- Health benefits are increasing based upon expected increase in usage and medical inflation
- Other Professional Services and Equipment Maintenance are decreased as a result of a full year of lower pricing from the contract for the NJ E-ZPass service center and new cost sharing percentages with other agencies.
- Credit Card, Trustee & Banking Fees have a slight increase due to higher credit card fees resulting from volume increases.
- Facilities Services represents courier services on both roadways.
- Equipment maintenance is decreasing due to the transition from an outside contractor performing maintenance on toll lane equipment to an in house model.

Toll Collection Department Budgeted Headcount

| | Authorized <u>2016</u> | Budget <u>2017*</u> | Budget <u>2018</u> | Net Change <u>2017-2018</u> |
|---|---------------------------|------------------------|-----------------------|--------------------------------|
| Administrative Assistant | 1 | 1 | 1 | - |
| Administrative Secretary | 2 | 2 | 2 | - |
| Administration Toll Collection Manager | 1 | 1 | 1 | - |
| Area Manager | 6 | 6 | 6 | - |
| Assistant Director, Technical Services Parkw ay | 1 | 0 | 0 | - |
| Assistant Director of Tolls - Operations | 0 | 1 | 1 | - |
| Assistant Director of Tolls - Training | 0 | 1 | 1 | - |
| Assistant Division Manager | 2 | 2 | 2 | - |
| Assistant Manager, Toll Facilities | 1 | 1 | 1 | - |
| Assistant Plaza Supervisor | 20 | 20 | 20 | - |
| Assistant/Deputy Director Tolls | 1 | 1 | 1 | - |
| Director of Tolls | 1 | 1 | 1 | - |
| Distribution Clerk | 1 | 0 | 0 | - |
| Field Operations Manager | 1 | 1 | 1 | - |
| Interchange Manager | 8 | 8 | 8 | - |
| Manager, Toll Systems Reconciliation | 1 | 1 | 1 | - |
| Senior Clerk | 1 | 1 | 1 | - |
| Stock Control Toll Collection Supervisor | 1 | 0 | 0 | - |
| Stock Service Clerk | 2 | 0 | 0 | - |
| Toll Collector - Parkw ay | 136 | 136 | 147 | 11 |
| Toll Collector - Turnpike | 194 | 194 | 194 | - |
| Toll Plaza Supervisor - Parkw ay | 44 | 44 | 44 | - |
| Toll Plaza Supervisor - Turnpike | 93 | 93 | 93 | - |
| Toll Plaza Supervisor - Training | 2 | 3 | 3 | - |
| Toll Records Clerk | 4 | 4 | 4 | - |
| Tolls Field Coordinator | 2 | 2 | 2 | - |
| | 526 | 524 | 535 | 11 |

*Reflects current 2017 budget after year to date position budget transfers within and between departments.

Figure 63: Tolls Department Headcount (2016-2018)

Operations

Department Description:

The Operations Department ensures the continuous, safe and efficient movement of traffic on the Turnpike and Parkway by developing and implementing programs and by scheduling and coordinating activities of other Authority operating departments, contractors and outside agencies. The department is responsible for all traffic engineering functions and also all contracts with authorized towers, fire squads, first aid squads, and hazardous material clean-up contractors. Operations is also the Authority liaison with the New Jersey State Police.

Department Organization:

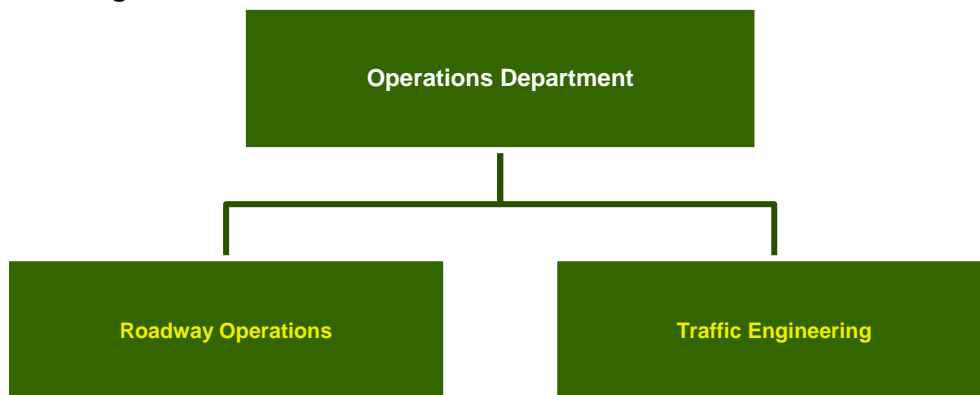


Figure 64: Operations Department Organization Chart

Senior Staff:

Director of Operations: Henry Eibel

Deputy Director of Operations: Kevin Dunn

2017 Accomplishments:

- Motorist Aid Software, Phase 3 implemented, dissemination of motorist aids to the towers is now done electronically (minor enhancements in 2018).
- The new Traffic Manual has been adopted, single lane taper points, times of lane closures, holiday restrictions, special event restrictions, etc.
- Completion of the construction scheduling software (Minor enhancements in 2018).
- Created and hired an Assistant Manager for the Traffic Operation Center.
- With the loss of two key employees in the Operations Department (Manager Traffic Operations and the Traffic Engineer) those two key positions were replaced and trained with existing employees.
- Designed and purchased a Roadway Weather Information System (RWIS).
- Navigational and customer-service signing designed and installed at the PNC Bank Arts Center.
- Drum Sign replacement, (HCMS) plan set up for 2018 (1st year implementation).

2018 Goals:

- Manager and Supervision training for staff, with emphasis on team building.
- Phase 1 of the Drum Sign replacement program.
- Contract G, Variable Message Sign fill process implemented.

- Phase 1 implementation of Automatic Traffic Detection and activation of overhead VMS. (Test areas of GSP- Exit 130 and TPK Exit 4.
- Implementation of Warning Signs on curves to begin to comply with 2019 FHWA mandate.
- Expand the pilot functionality of the Traffic Volume/ Traffic Count Application into a complete product to allow for enhanced traffic count data integration, management and reporting capabilities for the entire length of the Parkway.
- Complete Guide signing to establish Interstate 95 route continuity.

Operations Department Operating Budget

| | 2016 Actuals | 2017 Budget* | 2018 Budget | \$ Change from 2017 Budget | % Change from 2017 Budget |
|-----------------------------|----------------------|----------------------|----------------------|-------------------------------|------------------------------|
| Salaries & Wages | \$ 6,215,100 | \$ 6,256,100 | \$ 6,108,500 | \$ (147,600) | -2.4% |
| Allowances | 22,100 | 23,800 | 23,800 | - | 0.0% |
| Pension & Payroll Taxes | 1,092,800 | 1,283,000 | 1,329,000 | 46,000 | 3.6% |
| Health Benefits | 3,109,100 | 3,401,300 | 3,337,400 | (63,900) | -1.9% |
| Training & Transportation | 7,200 | 7,200 | 12,300 | 5,100 | 70.8% |
| Printing & Office Supplies | 10,600 | 10,800 | 10,800 | - | 0.0% |
| Operating Supplies | 1,700 | 1,700 | 1,700 | - | 0.0% |
| Operating Materials | (3,800) | 1,700 | 7,300 | 5,600 | 329.4% |
| Facilities Services | 430,800 | 446,800 | 446,700 | (100) | 0.0% |
| Other Professional Services | 339,600 | 387,200 | 403,200 | 16,000 | 4.1% |
| Other Services | 104,400 | 121,400 | 104,400 | (17,000) | -14.0% |
| Vehicle Maintenance | 100 | 400 | 300 | (100) | -25.0% |
| Roadway Maintenance | - | - | 100 | 100 | 100.0% |
| Equipment | 100 | 1,700 | 1,900 | 200 | 11.8% |
| | \$ 11,329,700 | \$ 11,943,100 | \$ 11,787,400 | \$ (155,700) | -1.3% |

* Reflects current 2017 budget after year to date budget transfers between departments and/or accounts

Figure 65: Operations Department Operating Budget (2016-2018)

2018 Budget Highlights:

- Decrease in Salaries due to budgeted retirement payouts in 2017 which will not be recurring in 2018 offset by 2 additional positions, filling existing positions at lower salaries, and contractual wage increases.
- Pension is increasing based upon expected increase in PERS required payments
- Health benefits are decreasing as the departmental allocation is based on salaries
- Other professional services is rising due to a projected increase in weather forecasting services.
- Other services is decreasing due to a lower budgeted cost for I95 corridor membership fees.

Operations Department Budgeted Headcount

| | Authorized 2016 | Budget 2017* | Budget 2018 | Net Change 2017-2018 |
|---|----------------------------|-------------------------|------------------------|---------------------------------|
| Administrative Assistant | 1 | 1 | 1 | - |
| Administrative Secretary | 1 | 1 | 1 | - |
| Assistant Traffic Engineer | 2 | 3 | 3 | - |
| Assistant/Deputy Director of Operations | 1 | 1 | 1 | - |
| Assistant Manager STMC | 0 | 1 | 1 | - |
| Assistant Manager Traffic Operations | 0 | 0 | 1 | 1 |
| Communications Dispatcher | 23 | 23 | 23 | - |
| Director of Operations | 1 | 1 | 1 | - |
| Emergency Services Supervisor | 1 | 1 | 1 | - |
| Engineering Aide - Traffic | 1 | 1 | 1 | - |
| Executive Secretary 1 | 2 | 2 | 2 | - |
| Incident Management Coordinator | 1 | 1 | 1 | - |
| Manager, STMC | 1 | 1 | 1 | - |
| Manager, Traffic Operations | 1 | 1 | 1 | - |
| Operations Administrative Supervisor | 1 | 0 | 0 | - |
| Operations Coordinator | 1 | 1 | 1 | - |
| Operations Engineer | 1 | 0 | 0 | - |
| Roadway Services Administrator | 1 | 1 | 1 | - |
| Senior Clerk | 1 | 0 | 0 | - |
| Senior Emergency Services Manager | 1 | 1 | 1 | - |
| Senior Engineering Technician | 1 | 1 | 1 | - |
| Senior Traffic Control Supervisor | 1 | 0 | 0 | - |
| Shift Supervisor | 12 | 12 | 12 | - |
| Supervisor, STMC | 1 | 1 | 1 | - |
| Traffic Control Supervisor | 10 | 11 | 12 | 1 |
| Traffic Engineer | 3 | 3 | 3 | - |
| Traffic Operations Specialist | 1 | 1 | 1 | - |
| Traffic Technician | 1 | 1 | 1 | - |
| Trailblazer Supervisor | 1 | 1 | 1 | - |
| | 73 | 72 | 74 | 2 |

*Reflects current 2017 budget after year to date position budget transfers within and between departments.

Figure 66: Operations Department Headcount (2016-2018)

State Police

Department Description:

The Mission of the New Jersey State Police Troop D is the safety of all travelers and patrons of the New Jersey Turnpike and Garden State Parkway. Troop D provides all police services including, but are not limited to, the enforcement of laws and regulations, the prevention of crime, the pursuit and apprehension of offenders, providing stranded motorists with assistance and policing of service areas, for both Turnpike and Parkway through its six regional stations in Cranbury, Moorestown, Newark, Galloway, Bloomfield and Holmdel as well as specialized traffic enforcement, construction and criminal investigation units.

The strict enforcement of all motor vehicle laws inclusive of Driving While Intoxicated, investigation of motor vehicle accidents and truck inspection and enforcement programs are essential to maintaining and improving traffic safety and reducing motor vehicle crashes occurring on both roadways as well as the resulting fatalities, injuries, property damage, and traffic flow management.

Department Organization:

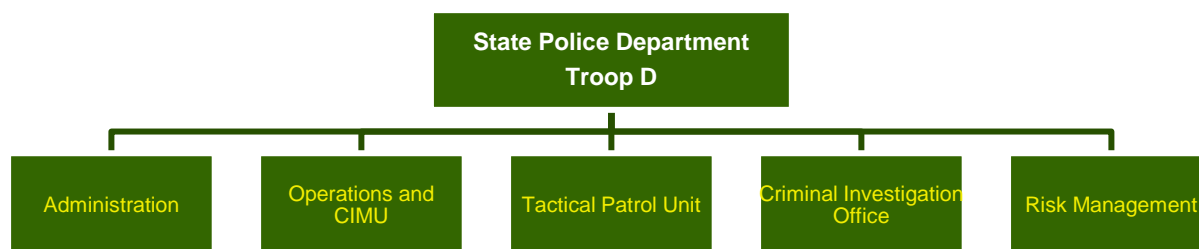


Figure 67: State Police Department Organization Chart

Senior Staff:

Major Eric Heitmann, Troop Commander
 Captain Vincent Greene, Deputy Troop Commander
 Captain Gene Noll, Regional Commander

The New Jersey Turnpike Authority’s State Police Manager/liaison is responsible for supporting the New Jersey State Police Troop D assigned to patrol the Turnpike and the Parkway. The State Troopers and their superiors are contracted through an agreement with the New Jersey State Police. Although the costs associated with the Troopers are budgeted in the Authority’s State Police Department, the Authority does not exercise control over the Troop assigned to patrol its roadways and does not include the Troop roster in the Authority’s headcount. The cost of Troopers is a contractual service.

2017 Accomplishments:

- Multiple High profile criminal investigations
- Overall Motor vehicle traffic enforcement, criminal investigation and related arrests remained consistent with expectations.
- DWI arrests increased over 2016
- Began installation of an Automatic License Plate Reader system at the PNC Arts Center, as well as the positive protection project to place barriers at strategic locations to protect patrons.

- Troop D Construction/Incident Management Unit (CIMU) is fully staffed and trained in ICS300/400, OSHA, and incident specific FEMA training. All are equipped to respond to large scale incidents whether planned or naturally occurring.
- Established a security post at the new NJTA headquarters
- Troop D mobile command post has been refurbished for use during all deployments
- Established a bi-weekly overtime accounting system by pay week.

2018 Goals:

- Increase trooper staff
- Continue safety and security efforts for the PNC Bank Arts Center including implementation of an ALPR system to aid in safety and counter-terrorism and investigative efforts.
- Obtain security assessments from the NJSP Infrastructure Protection Unit for the PNC and the STMC.
- Continue Intelligence Led Policing (SAFE) and Quality of Life Details at all Service Areas, commuter and construction lots to detect and thwart criminal activity and apprehend criminals.
- Serve as a liaison with Federal, State, and Local law enforcement agencies regarding crimes committed on the roadways and the surrounding jurisdictions.
- Continue supplemental traffic details to focus on specific violations known to precipitate crashes in an effort to reduce motor vehicle accidents on the roadways.
- Leverage technology to detect suspicious activity as well as receive reports of possible traffic issues and criminal activity.
- Comply with new State directives regarding Body worn cameras and Criminal Justice (bail) Reforms.
- Upgrade training facility and sub-stations at Avalon and Pleasant Plains.
- Continue to combat aggressive and inattentive drivers and pursue a reduced crash rate.
- Increase the number of Troop D members with advances crash investigation training.

State Police Department Operating Budget

| | 2016 Actuals | 2017 Budget* | 2018 Budget | \$ Change from 2017 Budget | % Change from 2017 Budget |
|-----------------------------|----------------------|----------------------|----------------------|-------------------------------|------------------------------|
| Salaries & Wages | \$ 444,100 | \$ 477,700 | \$ 481,200 | \$ 3,500 | 0.7% |
| State Police Services | 62,537,500 | 63,854,800 | 68,868,600 | 5,013,800 | 7.9% |
| Pension & Payroll Taxes | 94,700 | 98,000 | 104,700 | 6,700 | 6.8% |
| Health Benefits | 269,500 | 259,700 | 262,900 | 3,200 | 1.2% |
| Training & Transportation | 1,400 | 2,100 | 2,100 | - | 0.0% |
| Printing & Office Supplies | 50,100 | 56,100 | 56,000 | (100) | -0.2% |
| Vehicle Fuel | 6,500 | 7,700 | 12,000 | 4,300 | 55.8% |
| Operating Supplies | 41,400 | 38,500 | 38,400 | (100) | -0.3% |
| Software | 2,400 | 5,100 | 1,800 | (3,300) | -64.7% |
| Operating Materials | 775,000 | 783,500 | 783,400 | (100) | 0.0% |
| Consulting Services | 10,800 | 10,800 | 10,700 | (100) | -0.9% |
| Vehicle Maintenance | 149,800 | 142,400 | 142,300 | (100) | -0.1% |
| Equipment Maintenance | 43,100 | 38,400 | 38,300 | (100) | -0.3% |
| Building & Equipment Rental | 300 | 400 | 1,000 | 600 | 150.0% |
| Equipment | 4,042,400 | 4,351,500 | 4,729,200 | 377,700 | 8.7% |
| | <u>\$ 68,469,000</u> | <u>\$ 70,126,700</u> | <u>\$ 75,532,600</u> | <u>\$ 5,405,900</u> | <u>7.7%</u> |

* Reflects current 2017 budget after year to date budget transfers between departments and/or accounts

Figure 68: State Police Department Operating Budget (2016-2018)

2018 Budget Highlights:

- The Authority is expected to increase headcount by 17 troopers because of a new state trooper class
- Trooper costs are increasing by \$1.9 million for increased costs related to the current number of troopers & \$3.1 million for increased costs related to the additional troopers.
- The 2018 budget assumes an approximate 1% increase in troopers compensation and a 17% increase in pension costs.
- Equipment costs cover replacement of fleet and all associated costs. They are increasing due to the increase in the size of the trooper compliment

State Police Department Budgeted Headcount

| | Authorized | Budget | Budget | Net Change |
|-------------------------------|--------------------|---------------------|--------------------|-------------------------|
| | <u>2016</u> | <u>2017*</u> | <u>2018</u> | <u>2017-2018</u> |
| Confidential Secretarial Aide | 1 | 1 | 1 | - |
| Motor Pool Fleet Specialist | 1 | 1 | 1 | - |
| Police Operations Clerk | 3 | 3 | 3 | - |
| Police Services Manager | 1 | 1 | 1 | - |
| Secretary | 1 | 1 | 1 | - |
| | 7 | 7 | 7 | - |

*Reflects current 2017 budget after year to date position budget transfers within and between departments.

Figure 69: State Police Department Headcount (2016-2018)

Information Technology Services

Department Description:

New Jersey Turnpike Authority's Technology Department was officially launched on January 1st, 2017 with a new department name and new leadership under Jose Dios. Undergoing a minor departmental name change, but still maintaining its initials of "ITS," the word "Integrated" was replaced with "Information." This name change symbolizes the end of an integration phase where the Electronic Toll Collection and Technology Administrative Services departments merged to form one unified technology department. After four successful years of aggressively working to create efficient business processes and achieving economies of scale, the department continues to improve on the IT delivery model to launch services and products which enhance Authority operations.

Department Organization:

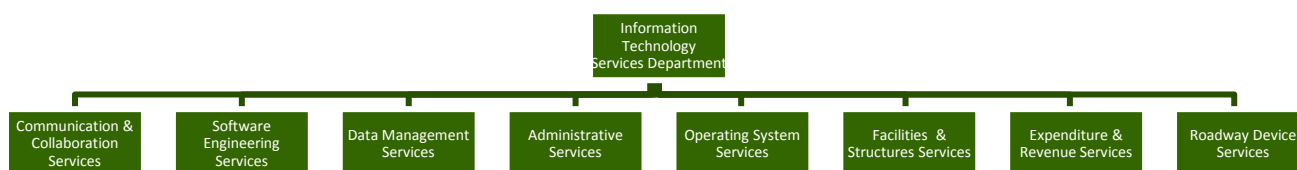


Figure 70: ITS Department Organization Chart

Senior Staff:

Chief Information Officer: Jose Dios

Assistant Director, Software Engineering: Ning Ding

Assistant Director, Data Management Services: Stanley J. Ciszewski

2017 Accomplishments:

The ITS Team continues to place safety, finance, mobility, talent, and good state of repair at the center of all IT activities to ensure leading edge technology services and products are delivered in a secure, cost effective, and timely manner. These services and products benefit the motorist and employee community. Milestone highlights of major 2017 projects are listed below:

Contract & Business Administration Services

- Continued to improve all technology contract terms and conditions.
- Continued to leverage key supplier relationships to consolidate maintenance and licensing agreements, thus reducing Total Cost of Ownership (TCO).
- Phase One Go-Live of the E-ZPass Customer Service Center initiative is scheduled for a 4th Quarter 2017 launch.
- The Active Management Model proved successful with functional leads from Procurement and Material Management, Internal Audit, Legal, Customer Service, Finance & Budgets, and ITS taking a keen role in governing their respective business processes.
- Finalized schedule, requirements, design, and development for Phase Two A and B of the E-ZPass Customer Service Center initiative.
- Utilized available capital funds in the most efficient and expeditious manner by ensuring on-time on-budget delivery of major initiatives.
- Met operating expense objectives.
- Achieved monthly procurement objectives as outlined in the ITS 2017 procurement plan.

Communication Services

- Completed Motorola P25 Phase II ancillary installations and configurations providing Authority staff with enhanced workforce management tools.
- Designed, configured, and deployed enterprise video communication services on both roadways.

Facility Services

- Completed technology installations for all new scheduled buildings within the Facilities Improvement Program.
- Commissioned the new exit 125 ramp on the Garden State Parkway.

Risk Management Services

- Developed and implemented preventive and operating models for security initiatives.
- Completed employee and contractor safety improvements for selected ITS Data Points (sign, sensor, and camera locations) on both roadways.
- Completed design, construction, setup, and commissioning of a redundant Traffic Management Center at Authority headquarters.
- Completed design, construction, setup, and commissioning of an active Data Center at Authority headquarters.

Motorist Services

- Launched new Authority website.

Administration and Employee Services

- Completed upgrade of PeopleSoft Financials version 9.2.
- Launched FileHold software into production as a cost-effective solution for enterprise wide document management tool.
- Migration to Microsoft Exchange 2017.
- Configured and installed a warehouse management software platform.

Traffic Operations and Management Services

- Advertised an RFP and awarded a contract for a Road Weather Information System (RWIS).

Maintenance Operations and Management Services

- Conducted workshops to define and document business requirements. Documentation gathered will help prioritize module implementation in a transportation-focused Enterprise Asset Management (EAM) Platform.

Tolling Operations and Management Services

- Continuation of Toll Lane System Evaluation Program in which ITS tested new software and hardware components of the tolling system on both the New Jersey Turnpike and Garden State Parkway.
- Continuation of the Production Toll Lane System Refresh Program. This is a multi-year project in which ITS will begin to upgrade and replace components of the Authority's tolling infrastructure. These components have been successfully tested and validated as part of the Toll Lane System Evaluation Project.
- Finalized software configuration of High-Speed E-ZPass software at several Turnpike Open Road Tolling (ORT) locations.
- Began the design specifications for replacing all the Automatic Coin Machines on the Garden State Parkway.

Talent

- As of 3rd quarter 2017, ITS successfully filled 63% of all active vacancies.
- Maintained a high level of leadership visibility and energy with the ITS team and across the Authority.
- Continued to implement an active succession plan by positioning the next generation of ITS leaders in challenging and visible roles.

2018 Goals:*Contract & Business Administration Services*

- Complete Phase Two A and B Go-Live of the E-ZPass Customer Service Center Contract.
- Continue to operate and manage the Active Management Model.
- Continue to improve all technology contract terms and conditions.
- Continue to leverage key supplier relationships to consolidate maintenance and licensing agreements, thus reducing Total Cost of Ownership (TCO).
- Utilize available capital funds in the most efficient and expeditious manner by ensuring on-time on-budget delivery of major initiatives.
- Meet operating expense objectives.
- Achieve monthly procurement objectives as outlined in the ITS 2018 procurement plan.

Communication Services

- Continue radio installations in Authority vehicles.
- Begin upgrade of State Police Troop D communication's infrastructure.
- Continue network upgrades (wired and wireless) to ensure additional capacity as necessary on both roadways.
- Develop and implement a secure mobile strategy which inspires social and team collaboration in a digital workspace.

Facility Services

- Continue technology installations in new buildings as part of the Facilities Improvement Program.

Risk Management Services

- Continue to prioritize and complete selected remediation activities identified in recent IT Security Assessment.
- Update and activate disaster recovery and business continuity plans.
- Replace UPSs at various critical locations throughout both roadways to reduce the risk of power interruptions.

Motorist Services

- Enhance Commuter Aid Dispatch Software.
- Implement subpoena and OPRA administration software.

Administration and Employee Services

- Collaborate with Human Resources in evaluating, documenting, and implementing a digital transformation enhancing employee self-service, recruitment, and onboarding.
- Continue FileHold deployment as a cost-effective solution for enterprise-wide document management tool.
- Advertise a RFP and award contract for a Capital Project Portfolio Management Platform.

Traffic Operations and Management Services

- Introduce microservices software delivery practice to enhance the current service-oriented architecture. First step will use real time traffic data to drive decision making process.
- Continue installation of Road Weather Information System (RWIS) Program.

Maintenance Operations and Management

- Implement the first Enterprise Asset Management (EAM) module.

Tolling Operations and Management Services

- Continuation of the Toll Lane System Evaluation Program.
- Continuation of the Production Toll Lane System Refresh Program.
 - Finalize software configuration of High-Speed E-ZPass for both roadways.
 - Complete design and begin installation of Automatic Coin Machines on the Garden State Parkway.

Talent Management

- Fill the remaining ITS vacancies.
- Maintain high level of leadership visibility and energy with the ITS team and across the Authority.
- Continue to implement an active succession plan by positioning the next generation of ITS leaders in challenging and visible roles.

Information Technology Services Department Operating Budget

| | 2016 Actuals | 2017 Budget* | 2018 Budget | \$ Change from 2017 Budget | % Change from 2017 Budget |
|-----------------------------|----------------------|----------------------|----------------------|-------------------------------|------------------------------|
| Salaries & Wages | \$ 6,353,600 | \$ 6,497,300 | \$ 6,687,500 | \$ 190,200 | 2.9% |
| Allowances | 24,500 | 28,100 | 28,100 | - | 0.0% |
| Pension & Payroll Taxes | 1,318,600 | 1,332,500 | 1,455,000 | 122,500 | 9.2% |
| Health Benefits | 3,751,600 | 3,532,500 | 3,653,800 | 121,300 | 3.4% |
| Training & Transportation | 23,300 | 38,300 | 60,000 | 21,700 | 56.7% |
| Printing & Office Supplies | 15,100 | 22,700 | 22,700 | - | 0.0% |
| Operating Supplies | 7,300 | 49,800 | 48,100 | (1,700) | -3.4% |
| Software | 2,365,800 | 3,303,400 | 3,585,600 | 282,200 | 8.5% |
| Operating Materials | 111,400 | 397,600 | 395,900 | (1,700) | -0.4% |
| Consulting Services | - | - | 288,000 | 288,000 | 100.0% |
| Other Professional Services | 593,500 | 1,460,500 | 1,630,000 | 169,500 | 11.6% |
| Other Services | 1,600 | 1,400 | 1,100 | (300) | -21.4% |
| Equipment Maintenance | 1,310,500 | 3,056,100 | 2,880,000 | (176,100) | -5.8% |
| Building & Equipment Rental | 114,700 | 117,300 | 117,300 | - | 0.0% |
| Equipment | 613,100 | 1,900,000 | 1,940,000 | 40,000 | 2.1% |
| | <u>\$ 16,604,600</u> | <u>\$ 21,737,500</u> | <u>\$ 22,793,100</u> | <u>\$ 1,055,600</u> | <u>4.9%</u> |

* Reflects current 2017 budget after year to date budget transfers between departments and/or accounts

Figure 71: ITS Department Operating Budget (2016-2018)

2018 Budget Highlights:

- Salaries are increasing to cover the cost of contractual wage increases and fully fund vacant positions.
- Pension is increasing based upon expected increase in PERS required payments
- Health benefits are increasing based upon expected increase in usage and medical inflation
- Software is increasing due to the increasing costs of Microsoft, Redhat, Bluebeam, Deister, and AIX support. In addition, the ATMP and lane closure projects were completed and on-going software costs are now treated as operating expenses.
- Increase in Consulting Services to support Egis supplemental staff
- Increase in Other Professional Services as website redesign and fire alarm projects were completed and on-going costs are now treated as operating expenses.

| Information Technology Services Department Budgeted Headcount | | | | |
|--|-------------------|---------------|---------------|-------------------|
| | Authorized | Budget | Budget | Net Change |
| | 2016 | 2017* | 2018 | 2017-2018 |
| Administrative Secretary | 2 | 2 | 2 | - |
| Administrative/Executive Assistant | 1 | 1 | 1 | - |
| AIX Administrator | 1 | 0 | 0 | - |
| ASP Programmer | 0 | 1 | 1 | - |
| Assistant Director | 2 | 2 | 2 | - |
| Assistant Telecom Manager | 1 | 1 | 1 | - |
| Chief Information Officer | 1 | 1 | 1 | - |
| Clerk | 0 | 0 | 0 | - |
| Collaboration Services Manager | 1 | 1 | 1 | - |
| Communications Systems Analyst | 1 | 1 | 1 | - |
| Configuration/Software Quality Assurance Manager | 1 | 1 | 1 | - |
| CSC/VPC Operations Manager | 1 | 1 | 1 | - |
| Customer Service Contract Administrator | 0 | 1 | 1 | - |
| Data Processing Operating Coordinator | 1 | 1 | 1 | - |
| Database Administrator | 2 | 2 | 2 | - |
| Deputy Chief Information Officer | 1 | 0 | 0 | - |
| Electrical Engineer | 1 | 1 | 1 | - |
| Electronic Data Capturing Devices Manager | 1 | 0 | 0 | - |
| Electronic Project Supervisor | 1 | 1 | 1 | - |
| ETC Customer Relations Representative | 1 | 1 | 1 | - |
| ETC Database Manager | 1 | 1 | 1 | - |
| ETC Hardware Installation Specialist | 1 | 0 | 0 | - |
| ETC Programmer | 4 | 4 | 4 | - |
| ETC Project Engineer | 1 | 1 | 1 | - |
| Fiber Optic Engineer | 1 | 1 | 1 | - |
| Field Electronics Manager | 1 | 1 | 1 | - |
| Field Supervisor | 2 | 0 | 0 | - |
| Foreman, Inventory Control - TEM | 1 | 0 | 0 | - |
| Hardware Engineer | 1 | 1 | 1 | - |
| ITS Administrator | 1 | 0 | 0 | - |
| ITS Admin Support Specialist | 0 | 1 | 1 | - |
| ITS Aide | 1 | 1 | 1 | - |
| ITS Coordinator | 1 | 1 | 1 | - |
| ITS Repair & Asset Specialist | 0 | 1 | 1 | - |
| Junior Software Programmer 1 | 0 | 1 | 1 | - |
| LAN/WAN Network Administrator | 1 | 1 | 1 | - |
| Lane Maintenance Supervisor | 3 | 0 | 0 | - |
| Local/Wide Area Network Administrative Manager | 1 | 0 | 0 | - |
| Manager, Administration Software | 1 | 1 | 1 | - |
| Manager, Communication Services | 1 | 1 | 1 | - |
| Manager, Field Ops & Special Projects | 1 | 1 | 1 | - |
| Manager, GIS Platform | 0 | 1 | 1 | - |
| Manager, GSP Tech Device Technician | 0 | 2 | 2 | - |
| Manager, Infrastructure/User Support | 1 | 1 | 1 | - |
| Manager, Technical Services | 1 | 1 | 1 | - |
| Manager, Technology Leased Assets | 1 | 1 | 1 | - |

Information Technology Services Department Budgeted Headcount - Continued

| | Authorized | Budget | Budget | Net Change |
|---|--------------------|---------------------|--------------------|-------------------------|
| | <u>2016</u> | <u>2017*</u> | <u>2018</u> | <u>2017-2018</u> |
| Manager, Traffic Operations Software | 1 | 1 | 1 | - |
| Manager, Windows Administration | 0 | 1 | 1 | - |
| Network Engineer | 1 | 1 | 1 | - |
| Network Engineer, Voice, Video & Data | 1 | 1 | 1 | - |
| Planner | 1 | 0 | 0 | - |
| Program Analyst | 1 | 1 | 1 | - |
| Programmer | 2 | 2 | 2 | - |
| Project Change Manager | 1 | 1 | 1 | - |
| Project Engineer, ITS | 1 | 1 | 1 | - |
| Project Manager Telecommunications | 1 | 1 | 1 | - |
| Radio Engineer | 0 | 1 | 1 | - |
| Security Analyst | 0 | 1 | 1 | - |
| Senior Engineer, Voice & Coliab Services | 1 | 1 | 1 | - |
| Senior ETC Analyst | 1 | 0 | 0 | - |
| Senior ETC Programmer | 2 | 2 | 2 | - |
| Senior ETC Project Analyst | 1 | 0 | 0 | - |
| Senior IT Engineer, Facilities & Structures | 3 | 3 | 3 | - |
| Senior Network Administrator | 8 | 8 | 8 | - |
| Senior Telecom Technical Assistant | 1 | 1 | 1 | - |
| Software Engineer | 3 | 2 | 2 | - |
| Systems Administrator | 3 | 4 | 4 | - |
| Systems Supervisor Parkway | 2 | 2 | 2 | - |
| TAS Office & Budget Administrator | 1 | 0 | 0 | - |
| Technology Device Technician | 60 | 59 | 59 | - |
| Technology Device Technician Supervisor | 0 | 8 | 8 | - |
| Telecom Systems Administrator | 1 | 1 | 1 | - |
| TEM Manager | 1 | 1 | 1 | - |
| Toll Equipment Supervisor | 1 | 1 | 1 | - |
| Toll Maintenance Foreman | 5 | 0 | 0 | - |
| User Support Administrator | 1 | 1 | 1 | - |
| Voice Engineer | 1 | 1 | 1 | - |
| Windows Platform Support Manager | 1 | 1 | 1 | - |
| | 154 | 151 | 151 | - |

*Reflects current 2017 budget after year to date position budget transfers within and between departments.

Figure 72: ITS Department Headcount (2016-2018)

Executive Offices

Department Description:

The Executive Office is the primary liaison with the Board of Commissioners and is responsible for the daily and long-term administration and functioning of the Authority, including coordination and prioritization of policy, strategic planning, and special projects. The Department provides leadership and oversight in the development and implementation of efficient solutions and responses to matters concerning both internal and external departmental operations and Authority initiatives.

Department Organization:

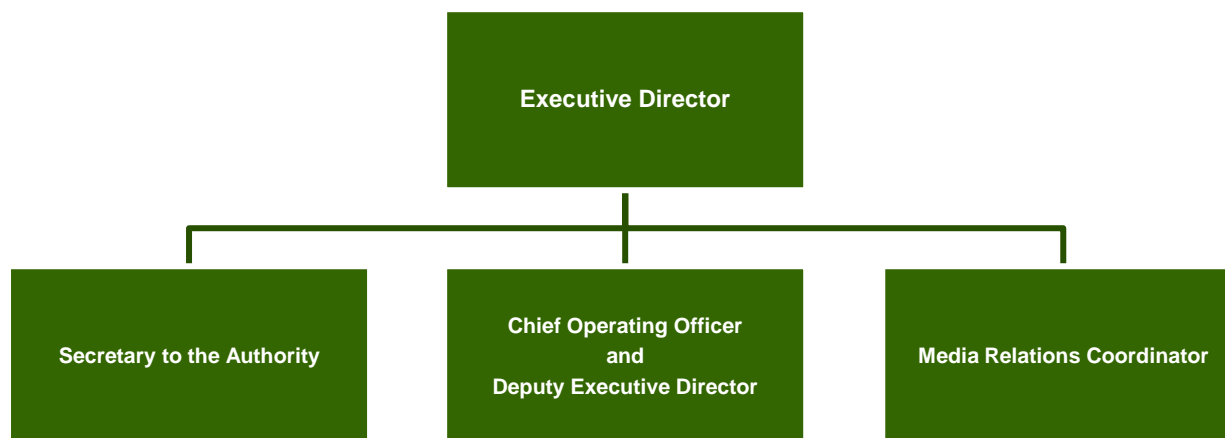


Figure 73: Executive Offices Department Organization Chart

Senior Staff:

Executive Director: Joseph W. Mrozek

Chief Operating Officer and Deputy Executive Director: John F. O'Hern

Secretary to the Authority: Kim Schurman

2017 Accomplishments:

- Entered into 25-year contracts with HMSHost Toll Roads Inc. to provide Food Services at Authority Service Areas and Sunoco Retail LLC to Provide Fuel Services at Authority Service Areas. As a result of the contracts, a combined \$215 million will be invested by HMSHost and Sunoco in the service areas in the next seven (7) years providing, among other things, nine (9) new restaurant buildings and major refurbishments of six (6) other restaurant buildings.
- Seamlessly moved approximately 450 full-time employees into new Authority headquarters building.

2018 Goals:

- Begin implementation of Authority's 10-Year Strategic Plan

Executive Offices Department Operating Budget

| | 2016 Actuals | 2017 Budget* | 2018 Budget | \$ Change from 2017 | % Change from 2017 Budget |
|-----------------------------|-------------------------|-------------------------|------------------------|--------------------------------|--------------------------------------|
| Salaries & Wages | \$ 550,300 | \$ 570,200 | \$ 577,000 | \$ 6,800 | 1.2% |
| Pension & Payroll Taxes | 104,300 | 116,900 | 125,500 | 8,600 | 7.4% |
| Health Benefits | 296,800 | 310,000 | 315,200 | 5,200 | 1.7% |
| Training & Transportation | 2,000 | 2,300 | 1,400 | (900) | -39.1% |
| Printing & Office Supplies | 5,200 | 7,500 | 7,400 | (100) | -1.3% |
| Other Professional Services | 59,300 | 61,800 | 59,300 | (2,500) | -4.0% |
| Other Services | 2,500 | 7,500 | 9,500 | 2,000 | 26.7% |
| | \$ 1,020,400 | \$ 1,076,200 | \$ 1,095,300 | \$ 19,100 | 1.8% |

* Reflects current 2017 budget after year to date budget transfers between departments and/or accounts

Figure 74: Executive Offices Department Operating Budget (2016-2018)

2018 Budget Highlights:

- Pension is increasing based upon expected increase in PERS required payments
- Health benefits are increasing based upon expected increase in usage and medical inflation

Executive Offices Department Budgeted Headcount

| | Authorized 2016 | Budget 2017* | Budget 2018 | Net Change 2017-2018 |
|---|----------------------------|-------------------------|------------------------|---------------------------------|
| Administrative/Executive Assistant | 1 | 1 | 1 | - |
| Chief Operating Officer & Deputy Executive Director | 1 | 1 | 1 | - |
| Executive Director | 1 | 1 | 1 | - |
| Media Relations Coordinator | 1 | 1 | 1 | - |
| Secretary to the Authority | 1 | 1 | 1 | - |
| | 5 | 5 | 5 | - |

*Reflects current 2017 budget after year to date position budget transfers within and between departments.

Figure 75: Executive Offices Department Headcount (2016-2018)

Law

Department Description:

The Law Department manages all legal, insurance and real estate matters for the Authority as well as EEO and SBE compliance. Duties include providing or supervising the provision of legal advice to the Authority's departments, supervising and managing of outside counsel, insurance and risk management consultant, insurance brokers and third party administrators. The departmental budget includes all insurance costs other than property, professional liability, OCIP and worker's compensation, which are budgeted elsewhere.

Department Organization:

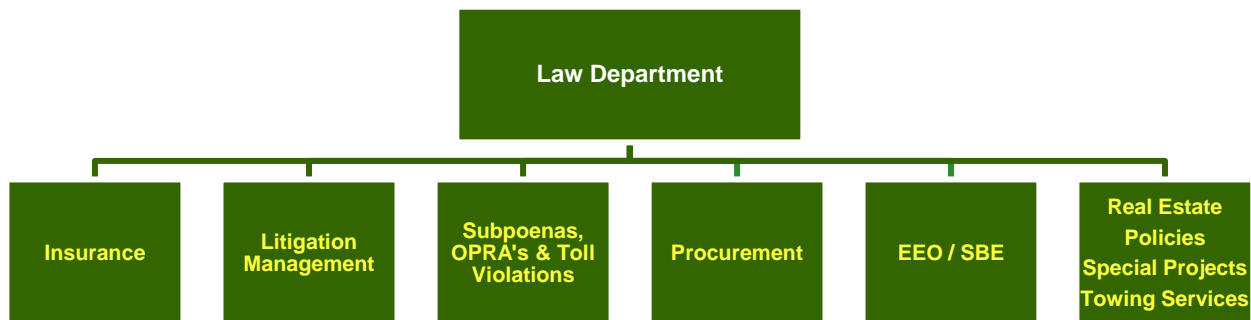


Figure 76: Law Department Organization Chart

Senior Staff:

General Counsel: Bruce A. Harris
 Deputy General Counsel: Maura K. Tully
 Assistant Director of Law: Ann Monica

2017 Accomplishments:

- Increased the efficiency of managing litigation by utilizing an online database to track all litigation matters and file relevant documents. Increased role of Third Party Administrator in the claims and litigation process.
- Continued all necessary right of way acquisitions in support of the various ongoing roadway improvement projects authorized under the Authority's Ten Year Capital Program.
- Enhanced the Authority's cyber insurance coverage to include dependent business interruption and system failure coverages; increased limit by \$10 million.
- Finalized adoption of updated Authority regulations.
- Identified and sold surplus real estate, producing \$1.6 million in closed sales and/or executed contracts of sale.
- Investigated 25 EEO complaints (through September 1).
- Processed 424 OPRA requests and 270 Subpoenas (through August 30th).
- Obtained Board approval of new bylaws for the Authority.
- Managed 6 successful bid protests.
- Proposed and worked with Finance and ITS to implement a program of taking civil action against toll violators.
- Issued RFP for and selected Third Party Administrator for liability insurance.
- Issued RFQs for and selected Real Estate Professionals to perform various services, including appraisals, licensed professional planning services and title insurance services

- Evaluated proposals and selected vendor for software to manage OPRA, subpoenas and litigation hold.

2018 Goals:

- Complete implementation of the Authority's document retention schedule.
- Continue to identify and market surplus real estate.
- Investigate the potential sale of judgments (as surplus personal property).
- Work with Human Resources and other departments to increase workforce diversity; expand outreach.
- Work with Human Resources to implement Sexual Harassment and Diversity training.
- Increase litigation management by analyzing the budget estimates prepared over the past years with actuals.
- Continue to work with the Risk Management Committee to advance a full review of the Authority's operations, for the purpose of creating a master plan to prioritize the Authority's enterprise risk management goals, including a timetable for implementing all goals, actions and recommendations identified in the master plan.
- Continue to evaluate the Authority's insurance program and ensure timely renewal of insurance policies.
- Coordinate right of way acquisitions necessary to finalize the Authority's Ten Year Capital Program.
- Continue to work with Finance and ITS to increase enforcement and collection of toll violations.
- Implement software to manage OPRA, subpoenas and litigation hold.
- Implement module of CAPEX to handle (1) review of new contractor and engineering consultant insurance certificates and (2) calendar renewals of all required insurance for engineering contractors and consultants.

Law Department Operating Budget

| | 2016 Actuals | 2017 Budget* | 2018 Budget | \$ Change from 2017 Budget | % Change from 2017 Budget |
|-----------------------------|---------------------|---------------------|-------------------|-------------------------------|------------------------------|
| Salaries & Wages | \$ 1,474,100 | \$ 1,451,900 | \$ 1,522,500 | \$ 70,600 | 4.9% |
| Pension & Payroll Taxes | 338,200 | 297,800 | 331,300 | 33,500 | 11.2% |
| Health Benefits | 962,200 | 789,400 | 831,800 | 42,400 | 5.4% |
| Training & Transportation | 2,700 | 10,600 | 10,700 | 100 | 0.9% |
| Printing & Office Supplies | 26,000 | 27,900 | 28,100 | 200 | 0.7% |
| Insurance | 4,026,100 | 5,537,900 | 5,814,500 | 276,600 | 5.0% |
| Legal Services | 1,478,300 | 1,438,200 | 1,459,400 | 21,200 | 1.5% |
| Other Professional Services | 186,200 | 233,400 | 159,100 | (74,300) | -31.8% |
| Other Services | 6,700 | 7,100 | 6,900 | (200) | -2.8% |
| Taxes | 150,000 | 161,800 | 99,700 | (62,100) | -38.4% |
| | \$ 8,650,600 | \$ 9,956,000 | 10,264,000 | \$ 308,000 | 3.1% |

* Reflects current 2017 budget after year to date budget transfers between departments and/or accounts

Figure 77: Law Department Operating Budget (2016-2018)

2018 Budget Highlights:

- Salaries are increasing to cover the cost of contractual wage increases and full funding of the authorized headcount in 2018.
- Pension is increasing based upon expected increase in PERS required payments
- Health benefits are increasing based upon expected increase in usage and medical inflation
- The Authority's liability insurance premiums are projected to increase approximately 5% in 2018 based on projected increases for upcoming policy renewals.
- Other professional services decreased as our insurance & risk management consultant costs have decreased.
- Property taxes continue to decrease as the Authority maintains less surplus property

Law Department Budgeted Headcount

| | Authorized | Budget | Budget | Net Change |
|--------------------------------------|-------------|--------------|-------------|------------------|
| | <u>2016</u> | <u>2017*</u> | <u>2018</u> | <u>2017-2018</u> |
| Administrative Assistant | 1 | 1 | 1 | - |
| Administrative Secretary | 1 | 1 | 1 | - |
| Assistant Director of Law | 1 | 1 | 1 | - |
| Attorney | 7 | 8 | 8 | - |
| Claims Coordinator | 1 | 1 | 1 | - |
| Compliance Manager | 1 | 1 | 1 | - |
| Confidential Secretary | 1 | 1 | 1 | - |
| Coordinator | 1 | 1 | 1 | - |
| Deputy General Counsel | 1 | 1 | 1 | - |
| Document Services Coordinator | 1 | 1 | 1 | - |
| Equal Employment Opportunity Officer | 1 | 1 | 1 | - |
| General Counsel | 1 | 1 | 1 | - |
| Secretary | 1 | 1 | 1 | - |
| Senior ETC Project Analyst | 0 | 1 | 1 | - |
| Senior Secretary | 1 | 1 | 1 | - |
| Staff Attorney | 1 | 0 | 0 | - |
| | <u>21</u> | <u>22</u> | <u>22</u> | <u>-</u> |

*Reflects current 2017 budget after year to date position budget transfers within and between departments.

Figure 78: Law Department Headcount (2016-2018)

Procurement and Materials Management

Department Description:

Procurement and Materials Management is tasked with procuring goods and services and managing the flow of inventory items in the most efficient and cost effective manner. Objectives include: enhancing all procurement and materials management processes; reducing spending on contracts; monitoring compliance with procurement laws, policies, and procedures; maintaining strong internal controls for the Authority’s physical inventory of goods; increasing revenue via surplus property sales and significantly reducing paper/manual processes.

The Department is separated into three primary functional areas: 1) Procurement; 2) Materials Management and 3) Office/Mail Services. Procurement is further divided into staff generally dedicated to types of commodities/services as well as methods of procurement. For examples, most of technology goods and services are procured via the New Jersey State Contract system and most of maintenance equipment and services are procured via competitive (public bid/informal solicitations or request for proposals for professional services.) Materials Management Section is separated into Inventory Control at one centralized warehouse and two satellite facilities on both Roadways; Supply Chain Management, Asset Control, Office Services and Personal Property Surplus Sales. Offices/Mail Services distributes mail and offices supplies to Authority facilities.

Department Organization:

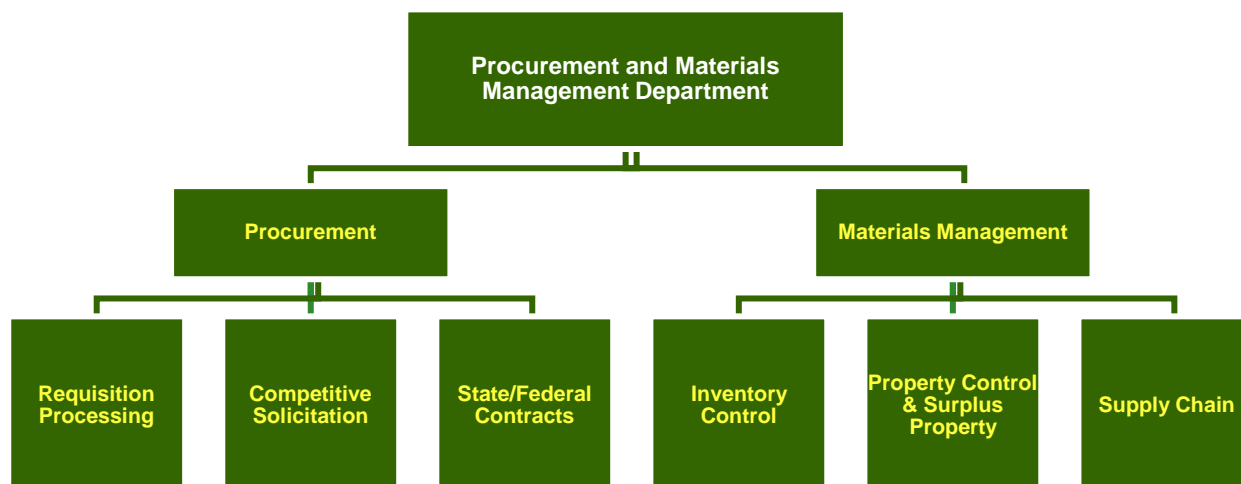


Figure 79: Procurement and Materials Management Department Organization Chart

Senior Staff:

Director of Procurement and Materials Management: Andrea E. Ward
 Deputy Director of Procurement and Materials Management: Donna Wilser

2017 Accomplishments:

- Completed approximately 50 public bid solicitations including complex procurements such as: contracts for Snow Removal and Salting Services for 31 locations on both Roadways; Armored Car Services (with a new vendor) and Direct Purchase of Turnpike Revenue Bonds. In addition, completed solicitations for eight professional services contracts including Real Estate Professional Services (awarded to 15 firms); Health Benefits Consulting Services and Roadway Weather Information System Services (for 24 locations and two mobile units).

- Continued implementation of “Bid Express” which is the electronic bidding system for the competitive solicitations of goods and services. In 2017, 46/50 requests for bid (“RFB”) included the option for electronic submissions. (Electronic bids were submitted for 24 contracts.) In addition, the implementation involved redrafting the RFB template to require mandatory electronic bid submission on the majority of procurement contracts. PMM also facilitated three in-person training sessions for vendors on the Bid Express platform.
- Opened of a centralized warehouse facility which changed the Authority’s Inventory business model, consolidated multiple warehouses into one achieving operating and financial efficiencies. This also included implementation of a state of the art warehouse management software system that acts as the Authority’s inventory system of record and integrates with the Authority’s ERP system.
- Conducted three Surplus personal property sales with proceeds that total approximately \$900,000 (third sale is scheduled for 11/2017 and proceeds are estimated).
- Participated in the Authority’s PeopleSoft Financials upgrade for the Procurement and Inventory modules

2018 Goals:

- Complete implementation of Bid Express for public bids (requiring mandatory electronic submission) and explore the electronic process for informal solicitation and professional service contracts by end of 2018.
- Commence vendor registration via the updated Authority website by June 30, 2018. (The website update was postponed for most of 2017.)
- Implement electronic sourcing of purchase orders for the Authority’s office supplies. This will reduce inventory levels held on hand by the Authority.

Procurement and Materials Management Department Operating Budget

| | 2016 Actuals | 2017 Budget* | 2018 Budget | \$ Change from 2017 Budget | %Change from 2017 Budget |
|-----------------------------|---------------------|---------------------|---------------------|-------------------------------|-----------------------------|
| Salaries & Wages | \$4,889,400 | \$ 5,014,900 | \$ 5,076,100 | \$ 61,200 | 1.2% |
| Allowances | 9,400 | 13,700 | 13,700 | - | 0.0% |
| Pension & Payroll Taxes | 738,900 | 1,028,500 | 1,104,400 | 75,900 | 7.4% |
| Health Benefits | 2,102,200 | 2,726,500 | 2,773,400 | 46,900 | 1.7% |
| Training & Transportation | 1000 | 3,700 | 2,600 | (1,100) | -29.7% |
| Printing & Office Supplies | 48,500 | 34,900 | 27,300 | (7,600) | -21.8% |
| Operating Supplies | 5,800 | 6,800 | 6,700 | (100) | -1.5% |
| Operating Materials | 400 | 900 | 800 | (100) | -11.1% |
| Consulting Services | 32,100 | - | - | - | N/A |
| Other Services | 55,000 | 45,000 | 45,400 | 400 | 0.9% |
| Equipment Maintenance | - | 300 | 200 | (100) | -33.3% |
| Building & Equipment Rental | - | 10,000 | 10,000 | - | 0.0% |
| Equipment | - | - | 30,000 | 30,000 | 100.0% |
| | <u>\$ 7,882,700</u> | <u>\$ 8,885,200</u> | <u>\$ 9,090,600</u> | <u>\$ 205,400</u> | <u>2.3%</u> |

* Reflects current 2017 budget after year to date budget transfers between departments and/or accounts

Figure 80: Procurement and Materials Management Department Operating Budget (2016-2018)

2018 Budget Highlights:

- Salaries are increasing due to expected contractual wage increases
- Pension is increasing based upon expected increase in PERS required payments
- Health benefits are increasing based upon expected increase in usage and medical inflation
- Increase in Other Services representing fees for Bid Express registration
- Increase in equipment expenses to fund an electric order picker for the Smith Street warehouse

Procurement & Materials Management Department Budgeted Headcount

| | Authorized 2016 | Budget 2017* | Budget 2018 | Net Change 2017-2018 |
|--|----------------------------|-------------------------|------------------------|---------------------------------|
| Administrative Secretary | 2 | 0 | 0 | - |
| Assistant Buyer | 1 | 1 | 1 | - |
| Assistant Office Services Manager | 1 | 1 | 1 | - |
| Assistant Warehouse Supervisor | 1 | 0 | 0 | - |
| Buyer | 3 | 3 | 3 | - |
| Clerk | 1 | 1 | 1 | - |
| Confidential Secretary | 1 | 1 | 1 | - |
| Deputy Director Procurement & Materials Mngmnt | 1 | 1 | 1 | - |
| Director Procurement & Materials Management | 1 | 1 | 1 | - |
| Expediter | 0 | 1 | 1 | - |
| Inventory and Field Buyer | 1 | 1 | 1 | - |
| Inventory and Materials Supervisor | 0 | 8 | 8 | - |
| Inventory Control Supervisor | 2 | 0 | 0 | - |
| Inventory Manager | 1 | 0 | 0 | - |
| Inventory Records Clerk | 0 | 1 | 1 | - |
| Maintenance Records Clerk | 2 | 2 | 2 | - |
| Materials Supervisor | 2 | 0 | 0 | - |
| Office Services Aide | 1 | 0 | 0 | - |
| Office Services Assistant | 1 | 2 | 2 | - |
| Office Services Clerk | 1 | 0 | 0 | - |
| Parts/Inventory Counter Clerk | 11 | 13 | 13 | - |
| Print & Supply Specialist | 1 | 1 | 1 | - |
| Procurement Coordinator | 0 | 1 | 1 | - |
| Procurement Specialist | 2 | 2 | 2 | - |
| Procurements Specialist Manager | 1 | 1 | 1 | - |
| Property & Materials Supervisor | 3 | 3 | 3 | - |
| Property Control Manager | 1 | 1 | 1 | - |
| Property Control Specialist | 1 | 1 | 1 | - |
| Purchasing Assistant | 1 | 0 | 0 | - |
| Purchasing Manager | 1 | 1 | 1 | - |

Procurement & Materials Management Department Budgeted Headcount - Continued

| | Authorized 2016 | Budget 2017* | Budget 2018 | Net Change 2017-2018 |
|---|----------------------------|-------------------------|------------------------|---------------------------------|
| Senior Clerk | 1 | 1 | 1 | - |
| Senior Confidential Secretary | 1 | 0 | 0 | - |
| Senior Mail/ Messenger/Shipping Clerk | 2 | 2 | 2 | - |
| Senior Secretary Parkway | 1 | 1 | 1 | - |
| Senior Stockperson | 1 | 0 | 0 | - |
| Stock Control Supervisor | 1 | 0 | 0 | - |
| Stockperson | 1 | 0 | 0 | - |
| Storekeeper 2 | 2 | 2 | 2 | - |
| Storekeeper 3 | 4 | 6 | 6 | - |
| Supply Chain Analyst | 1 | 1 | 1 | - |
| Supply Chain Manager | 1 | 1 | 1 | - |
| Tolls Inventory and Staffing Manager | 0 | 1 | 1 | - |
| Warehouse Inventory Control Coordinator | 1 | 0 | 0 | - |
| | 62 | 63 | 63 | - |

*Reflects current 2017 budget after year to date position budget transfers within and between departments.

Figure 81: Procurement and Materials Management Department Headcount (2016-2018)

Human Resources and Office Services

Department Description:

The Human Resources & Office Services Department supports the activities of the Authority by providing employment services which include hiring, development & training, labor relations management, health administration, safety administration and benefits administration.

Department Organization:



Figure 82: Human Resources and Office Services Department Organization Chart

Senior Staff:

Director of Human Resources: Mary-Elizabeth Garrity
 Assistant Director of Human Resources: Kevin Burke
 Assistant Director of Human Resources – Policy & Training: Brenda Coleman-Caldwell

2017 Accomplishments:

- Delivered managerial and upper level supervisory training
- Upgraded background check process
- Developed intake process for various complaints (CEPA, violence in workplace, etc.).
- Delivered safety training classes
- Delivered monthly wellness lunch and learn programs
- Delivered a “Know Your Numbers” Biometric screening program

2018 Goals:

- Provide mandatory training (including sexual harassment) for all employees
- Implemented intake process for various complaints
- Developed HR Calendar of events for the year
- Implement software for DA-1/Disciplinary letter/Grievance tracking
- Update Job Descriptions
- Establish a Filing program for the HR department
- Revamp the on boarding process

Human Resources & Office Services Department Operating Budget

| | 2016 Actuals | 2017 Budget* | 2018 Budget | \$ Change from 2017 Budget | % Change from 2017 Budget |
|-----------------------------|--------------------|--------------------|---------------------|-------------------------------|------------------------------|
| Salaries & Wages | \$2,663,300 | \$2,800,000 | \$ 2,821,000 | \$ 21,000 | 0.8% |
| Allowances | 7,200 | 7,000 | 7,000 | - | 0.0% |
| Pension & Payroll Taxes | 620,100 | 574,200 | 613,700 | 39,500 | 6.9% |
| Health Benefits | 1,764,300 | 1,522,300 | 1,541,300 | 19,000 | 1.2% |
| Tuition | 86,000 | 99,800 | 100,000 | 200 | 0.2% |
| Training & Transportation | 49,900 | 58,100 | 109,300 | 51,200 | 88.1% |
| Printing & Office Supplies | 88,200 | 123,600 | 117,200 | (6,400) | -5.2% |
| Medical Supplies | 5,000 | 10,300 | 8,600 | (1,700) | -16.5% |
| Operating Supplies | 8,700 | 11,200 | 9,600 | (1,600) | -14.3% |
| Operating Materials | 500 | 21,400 | 9,200 | (12,200) | -57.0% |
| Consulting Services | 15,000 | 27,100 | 46,600 | 19,500 | 72.0% |
| Other Professional Services | 39,200 | 138,700 | 133,300 | (5,400) | -3.9% |
| Environmental Services | 500 | 2,600 | 2,600 | - | 0.0% |
| Other Services | 2,000 | 2,400 | 2,400 | - | 0.0% |
| Building Maintenance | 47,900 | 61,300 | 82,100 | 20,800 | 33.9% |
| Equipment Maintenance | 23,300 | 36,400 | 45,300 | 8,900 | 24.5% |
| Building & Equipment Rental | 1,300 | 700 | - | (700) | -100.0% |
| Equipment | 14,100 | 20,100 | 17,200 | (2,900) | -14.4% |
| | <u>\$5,436,600</u> | <u>\$5,517,200</u> | <u>\$ 5,666,400</u> | <u>\$ 149,200</u> | <u>2.7%</u> |

* Reflects current 2017 budget after year to date budget transfers between departments and/or accounts

Figure 83: Human Resources and Office Services Department Operating Budget (2016-2018)

2018 Budget Highlights:

- Salaries are increasing to cover the cost of contractual wage increases and fully fund vacant positions offset by savings achieved by replacing employees who retired in 2017 at a lower cost in 2018.
- Pension is increasing based upon expected increase in PERS required payments
- Health benefits are increasing based upon expected increase in usage and medical inflation
- Increase in Training & Transportation costs to cover the increase in investment for training for all Authority employees, especially supervisory & management training.
- Consulting services are increasing due to services required by safety staff related to Silica oversight based on OSHA requirements.
- Increase in Building Maintenance so cover rising costs associated with obtaining and maintaining fire extinguishers and fire panels, along with the associated maintenance contracts.
- Equipment Maintenance has increased as print shop equipment has come off warranty.

Human Resources & Office Services Department Budgeted Headcount

| | Authorized | Budget | Budget | Net Change |
|--|--------------------|---------------------|--------------------|-------------------------|
| | <u>2016</u> | <u>2017*</u> | <u>2018</u> | <u>2017-2018</u> |
| Administrative Assistant | 1 | 0 | 0 | - |
| Administrative Manager | 0 | 0 | 1 | 1 |
| Assistant Director, HR Policy & Training | 1 | 1 | 1 | - |
| Benefits Administrator | 1 | 1 | 1 | - |
| Benefits Manager | 1 | 1 | 1 | - |
| Camera Person | 0 | 1 | 1 | - |
| Computer Graphics Coordinator | 1 | 1 | 1 | - |
| Confidential Secretary | 2 | 3 | 3 | - |
| Director of Human Resources | 1 | 1 | 1 | - |
| Employment Manager | 1 | 1 | 1 | - |
| Human Resources Aide | 1 | 0 | 0 | - |
| Human Resources Clerk | 1 | 1 | 1 | - |
| Human Resources Generalist | 5 | 3 | 3 | - |
| Human Resources Manager | 1 | 1 | 1 | - |
| Human Resources Specialist | 0 | 1 | 1 | - |
| Junior Printer | 2 | 2 | 2 | - |
| Manager - Safety Programs | 1 | 1 | 1 | - |
| Nurse | 1 | 1 | 1 | - |
| Operator | 1 | 0 | 0 | - |
| Paste-Up / Graphic Artist | 1 | 1 | 1 | - |
| Print Shop Manager | 1 | 1 | 1 | - |
| Printer | 1 | 1 | 1 | - |
| Safety Manager | 2 | 2 | 2 | - |
| Senior Benefits Manager | 1 | 1 | 1 | - |
| Senior Clerk | 1 | 1 | 1 | - |
| Senior Human Resources Generalist | 0 | 4 | 4 | - |
| Senior HR Office Administrator | 1 | 0 | 0 | - |
| Senior Human Resources Manager | 1 | 1 | 1 | - |
| Senior Nurse | 1 | 1 | 1 | - |
| Senior Printer | 2 | 2 | 2 | - |
| Senior Safety Inspector | 1 | 1 | 1 | - |
| Senior Secretary Parkway | 1 | 0 | 0 | - |
| | 36 | 36 | 37 | 1 |

*Reflects current 2017 budget after year to date position budget transfers within and between departments.

Figure 84: Human Resources and Office Services Department Headcount (2016-2018)

Finance

Department Description:

The Finance Department is responsible for all fiscal matters of the Authority. The department ensures compliance with trust agreements, manages the Authority's resources, structures financial plans to maintain debt service coverage, and works with all departments to manage costs. Overall financial policies and reporting requirements are dictated by the terms of the Authority's Bond Resolution, and also mandated by statute or Executive Order. Responsibility for meeting the deadlines and financial covenants of the bond resolution lie with the Finance Department. Financial policies approved by the Board of Commissioners include the Guidelines, Debt Management Plan, Investment Policy and Swap Management Plan.

Department Organization:

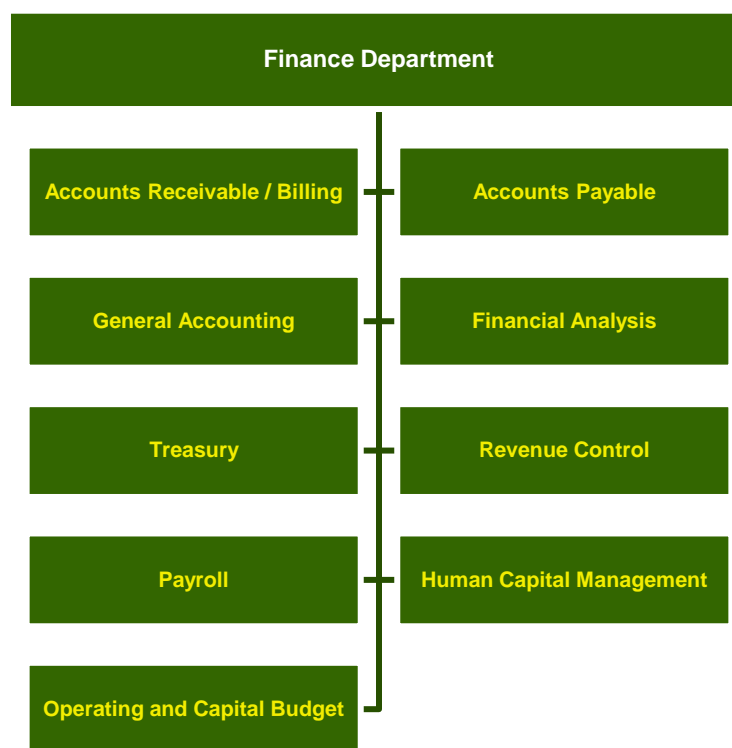


Figure 85: Finance Department Organization Chart

Senior Staff:

Chief Financial Officer: Donna Manuelli
 Deputy Chief Financial Officer: Pamela J. Varga
 Assistant Director of Finance: Katherine M. Johnstone

2017 Accomplishments:

- Successfully refunded the Series 2009E, Series 2009H, Series 2009I and Series 2013 A. The Series 2009E was 100% refunded while the Series 2009H, Series 2009I and Series 2013 A were partially refunded. The refunding resulted in net PV savings of \$96,188,545 or 13.70%. The Authority received the highest price (lowest yields) for the 2017 B Bonds available in the marketplace on the date of sale.
- Successfully refunded the variable rate Bonds Series 2000B-G, Series 2013D-3, Series 2013E-3 and Series 2014B-3, eliminating basis risk on the interest rate swaps associated with the bonds, as well as eliminating rollover risk on the Series 2013D-3, Series 2013 E-3 and Series 2014B-3 bonds.
- Issued \$600 million of new money bonds in April to continue to fund the \$7 billion CIP.
- Implementation and testing of new E-ZPass Customer Service Center contract with Conduent and continued enhancement of violations collection.
- Completed the testing and implementation of the PeopleSoft Financial system upgrade in October.
- Implementation of state of the art system to manage inventory. This will reduce time it reconcile inventory accounts.

2018 Goals:

- Issue \$525 million of new money bonds in 2018 to provide additional funding for the \$7 billion CIP.
- Continuous improvements in the departmental reporting by incorporating more quantifiable performance measures.
- Identify and sell off surplus real estate and equipment.
- Improve upon current liquidity of 650 days cash on hand (FY 2016).
- Reach target of general reserve budget of \$150.0 million.
- Review and update board approved financial policies.

Finance Department Operating Budget

| | 2016 Actuals | 2017 Budget* | 2018 Budget | \$ Change from 2017 Budget | % Change from 2017 Budget |
|-----------------------------|-------------------------|-------------------------|------------------------|---------------------------------------|--------------------------------------|
| Salaries & Wages | \$ 5,580,500 | \$ 5,461,900 | \$ 5,460,100 | \$ (1,800) | 0.0% |
| Allowances | - | 300 | 300 | - | 0.0% |
| Pension & Payroll Taxes | 1,167,200 | 1,121,400 | 1,189,300 | 67,900 | 6.1% |
| Health Benefits | 3,320,800 | 2,973,000 | 2,986,600 | 13,600 | 0.5% |
| Training & Transportation | 1,200 | 1,400 | 700 | (700) | -50.0% |
| Printing & Office Supplies | 34,400 | 34,500 | 29,500 | (5,000) | -14.5% |
| Operating Materials | 700 | 900 | 300 | (600) | -66.7% |
| Credit Card, Trustee & Ba | 506,200 | 520,300 | 528,000 | 7,700 | 1.5% |
| Consulting Services | 349,300 | 682,800 | 704,800 | 22,000 | 3.2% |
| Other Professional Services | 736,600 | 737,600 | 749,600 | 12,000 | 1.6% |
| Other Services | 38,300 | 39,400 | 38,900 | (500) | -1.3% |
| | \$ 11,735,200 | \$ 11,573,500 | \$ 11,688,100 | \$ 114,600 | 1.0% |

* Reflects current 2017 budget after year to date budget transfers between departments and/or accounts

Figure 86: Finance Department Operating Budget (2016-2018)

2018 Budget Highlights:

- Salaries are stable as headcount has decreased and offsets the cost of contractual wage increases and fully funded vacant positions.
- Pension is increasing based upon expected increase in PERS required payments
- Health benefits are increasing based upon expected increase in usage and medical inflation
- Increase in Other Professional Services due to a contractual increase for auditing services for 2018
- Consulting services are increasing to cover the costs of actuarial reports required for the preparation of the Authority's annual financial statements.

Finance Department Budgeted Headcount

| | Authorized <u>2016</u> | Budget <u>2017*</u> | Budget <u>2018</u> | Net Change <u>2017-2018</u> |
|--|---------------------------|------------------------|-----------------------|--------------------------------|
| Accounting Manager, Internal Control | 1 | 1 | 1 | - |
| Accounting Manager, General Ledger | 1 | 1 | 1 | - |
| Accounts Clerk | 2 | 1 | 1 | - |
| Accounts Payable Analyst | 1 | 0 | 0 | - |
| Accounts Payable/Disbursements Manager | 1 | 1 | 1 | - |
| Accounts Recievable Analyst | 0 | 1 | 1 | - |
| Accounts Receivable Manager | 1 | 1 | 1 | - |
| Accounts Receivable Supervisor | 1 | 1 | 1 | - |
| Administrative Assistant | 1 | 1 | 1 | - |
| Assistant Director of Finance | 1 | 1 | 1 | - |
| Audit Data Inspector | 1 | 1 | 1 | - |
| Audit Data Specialist | 2 | 2 | 2 | - |
| Billings Manager/Administrator | 1 | 1 | 1 | - |
| Billings Supervisor | 1 | 1 | 1 | - |
| Budget Coordinator, Finance | 1 | 1 | 1 | - |
| Budget Supervisor | 1 | 1 | 1 | - |
| Capital Budget Analyst | 1 | 0 | 0 | - |
| Capital Budget Supervisor | 0 | 1 | 1 | - |
| Cash Manager | 1 | 1 | 1 | - |
| Cash Management Supervisor | 1 | 0 | 0 | - |
| Cash Toll Audit Manager | 1 | 1 | 1 | - |
| Chief Financial Officer | 1 | 1 | 1 | - |
| Clerk 1, 70 | 2 | 1 | 1 | - |
| Confidential Secretary | 0 | 1 | 1 | - |
| Coordinator - Bargaining | 0 | 1 | 1 | - |
| Data Analyst | 3 | 3 | 3 | - |
| Deputy Chief Financial Officer | 1 | 1 | 1 | - |
| Disbursements Clerk | 1 | 1 | 1 | - |
| Disbursements Section Supervisor | 1 | 2 | 2 | - |
| Documents Services Coordinator | 1 | 0 | 0 | - |
| ETC Audit Supervisor | 1 | 0 | 0 | - |
| Executive Secretary | 1 | 0 | 0 | - |
| Financial Manager | 2 | 2 | 2 | - |
| Financial Analyst | 2 | 1 | 1 | - |
| Financial Resources Specialist | 1 | 1 | 1 | - |
| Human Capital Management Specialist | 1 | 1 | 1 | - |
| Human Capital Management Analyst | 2 | 2 | 2 | - |
| Human Capital Management Manager | 1 | 1 | 1 | - |
| Junior Accountant | 5 | 4 | 4 | - |
| Junior Accounting Analyst | 8 | 13 | 13 | - |
| Payroll Administrator/Manager | 1 | 1 | 1 | - |

Finance Department Budgeted Headcount - Continued

| | Authorized | Budget | Budget | Net Change |
|--------------------------------------|--------------------|---------------------|--------------------|-------------------------|
| | <u>2016</u> | <u>2017*</u> | <u>2018</u> | <u>2017-2018</u> |
| Payroll Coordinator | 3 | 3 | 3 | - |
| Revenue Control Manager | 1 | 1 | 1 | - |
| Senior Accounting Analyst | 1 | 0 | 0 | - |
| Senior Accounts Clerk | 1 | 1 | 1 | - |
| Senior Accounts Payable Supervisor | 1 | 1 | 1 | - |
| Senior Budget Supervisor | 2 | 2 | 2 | - |
| Senior Clerk | 9 | 6 | 6 | - |
| Senior Confidential Secretary | 1 | 0 | 0 | - |
| Senior Data Analyst | 1 | 1 | 1 | - |
| Senior Document Services Coordinator | 0 | 1 | 1 | - |
| Senior F&B Document Specialist | 1 | 1 | 1 | - |
| Senior Toll Audit Coordinator | 3 | 3 | 3 | - |
| Staff Accountant | 2 | 2 | 2 | - |
| Variance Analyzer Coordinator | 2 | 2 | 2 | - |
| | 84 | 80 | 80 | - |

*Reflects current 2017 budget after year to date position budget transfers within and between departments.

Figure 87: Finance Department Headcount (2016-2018)

Patron and Customer Services

Department Description:

The primary responsibility of Patron Services is to oversee the management and operation of all service area facilities located on the New Jersey Turnpike and Garden State Parkway. The division oversees the majority of lease agreements that produce non-toll revenue for the Authority. The Authority's non-toll revenue programs managed by Patron Services include, but are not limited to, billboard vendors, installation and operation of electric vehicle charging stations, the PNC Bank Arts Center operator, the operation of park-and-ride facilities and commuter bus services provider(s). Patron Services is also responsible for participating in the negotiation of lease agreements and the procurement of services provided by the above-referenced vendors.

Department Organization:

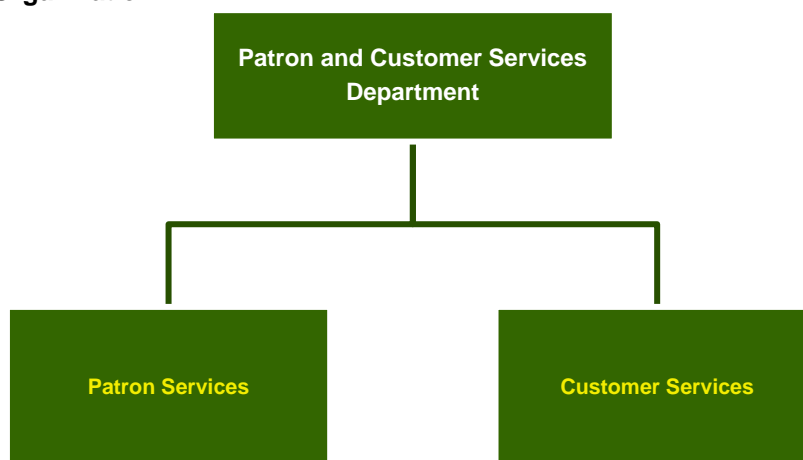


Figure 88: Patron and Customer Services Department Organization Chart

Senior Staff:

Patron Services Manager: Erika Vargas-Garrison

Customer Services Manager: Denise DeSante

2017 Accomplishments:

- Extended the Academy bus agreement by 10 years and received a \$1.25 million capital contribution for park & ride improvements

2018 Goals:

- Begin implementation of the new service area improvements under the new HMS Host & Sunoco contracts

Patron and Customer Services Department Budget

| | 2016 Actuals | 2017 Budget* | 2018 Budget | \$ Change from 2017 Budget | % Change from 2017 Budget |
|-----------------------------|-------------------------|-------------------------|------------------------|---------------------------------------|--------------------------------------|
| Salaries & Wages | \$ 1,021,185 | \$ 984,500 | \$ 951,600 | \$ (32,900) | -3.3% |
| Allowances | - | 300 | 300 | - | 0.0% |
| Pension & Payroll Taxes | 173,300 | 201,900 | 207,000 | 5,100 | 2.5% |
| Health Benefits | 493,200 | 535,200 | 519,900 | (15,300) | -2.9% |
| Training & Transportation | 100 | 100 | - | (100) | -100.0% |
| Printing & Office Supplies | 5,800 | 6,600 | 5,400 | (1,200) | -18.2% |
| Consulting Services | 75,700 | 232,500 | 220,000 | (12,500) | -5.4% |
| Other Professional Services | 47,500 | - | - | - | N/A |
| | \$ 1,816,700 | \$ 1,961,100 | \$ 1,904,200 | \$ (56,900) | -2.9% |

* Reflects current 2017 budget after year to date budget transfers between departments and/or accounts

Figure 89: Patron and Customer Services Department Operating Budget (2016-2018)

2018 Budget Highlights:

- Salaries decreasing due to the reduction of one position through attrition offset by the cost of contractual wage increases and fully funded vacant positions.
- Pension is increasing based upon expected increase in PERS required payments
- Health benefits are decreasing as the departmental allocation is based on salaries
- Consulting Services are decreasing as higher reimbursements are expected from the new service area contracts.

Patron and Customer Services Budgeted Headcount

| | Authorized 2016 | Budget 2017* | Budget 2018 | Net Change 2017-2018 |
|------------------------------------|----------------------------|-------------------------|------------------------|---------------------------------|
| Assistant Customer Service Manager | 2 | 2 | 2 | - |
| Assistant Patron Services Manager | 1 | 1 | 1 | - |
| Contract Services Supervisor | 1 | 1 | 1 | - |
| Customer Service Manager | 1 | 1 | 1 | - |
| Marketing Coordinator | 1 | 1 | 1 | - |
| Patron Services Contract Manager | 1 | 0 | 0 | - |
| Patron Services Manager | 1 | 1 | 1 | - |
| Receptionist | 2 | 2 | 1 | (1) |
| Senior Clerk | 1 | 1 | 1 | - |
| Senior Patron Services Aide | 2 | 2 | 2 | - |
| | 13 | 12 | 11 | (1) |

*Reflects current 2017 budget after year to date position budget transfers within and between departments.

Figure 90: Patron and Customer Services Department Headcount (2016-2018)

Internal Audit

Department Description:

The Internal Audit Department reports functionally to the Audit Committee and the Authority's Commissioners and administratively to the Executive Director. The department is responsible for providing an independent appraisal of Authority financial and operating activities. In addition, the department is responsible for safeguarding the Authority's assets as well as its employees.

Department Organization:

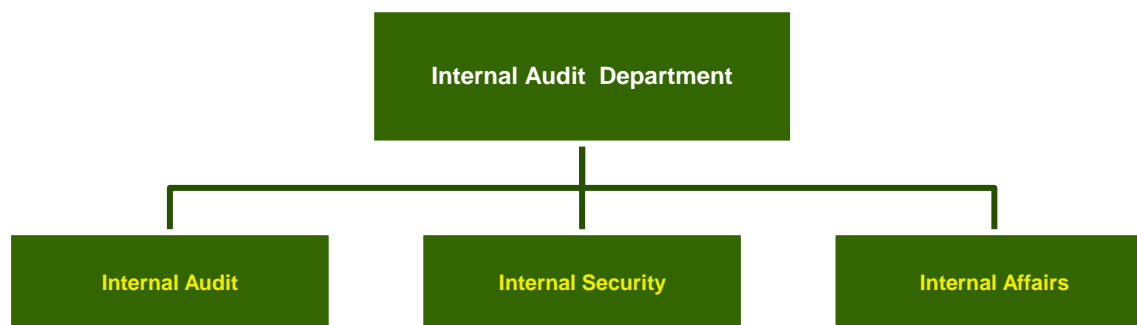


Figure 91: Internal Audit Department Organization Chart

Senior Staff:

Director of Internal Audit: James Carone
 Deputy Director of Internal Audit: Tracey Walters
 Senior Security Manager: Thomas McGowan

2017 Accomplishments:

- Continued updating the Authority-wide Enterprise Risk Assessment to provide an efficient and systematic process to determine the universe of auditable areas.
- Oversaw the installation and implementation of the Toll Plaza Security Upgrade project for the remaining seven Turnpike Toll Facility locations.
- Upgraded the access control system software (C-Cure 9000) needed to accommodate the increase in facilities as the Authority moves forward with the completion of its Facilities Improvement Program.
- Conducted twenty-five (25) Toll Plaza/Interchange inspections with the assistance of the New Jersey State Police. In addition, we assisted the New Jersey State Police in investigating five major Toll Collection theft cases resulting in recovering approximately \$6,200.
- Completed a number of Internal Audit projects resulting in internal control improvements and monetary recoveries.

2018 Goals:

- Continue to update the Authority-wide Enterprise Risk Assessment to provide an efficient and systematic process to determine the universe of auditable areas. Also, update the 2018 Audit Plan to include major projects identified in this assessment.
- Identify major IT Audit Projects and train staff to support these initiatives.
- Oversee the continued installation and implementation of both the Toll Plaza Security Project and the Facilities Improvement Program controlled access system.

Internal Audit Department Operating Budget

| | 2016 Actuals | 2017 Budget* | 2018 Budget | \$ Change from 2017 Budget | % Change from 2017 Budget |
|-----------------------------|-------------------------|-------------------------|------------------------|---------------------------------------|--------------------------------------|
| Salaries & Wages | \$ 1,644,800 | \$ 1,850,400 | \$ 1,904,900 | \$ 54,500 | 2.9% |
| Allowances | 3,600 | 4,100 | 4,000 | (100) | -2.4% |
| Pension & Payroll Taxes | 283,000 | 379,500 | 414,500 | 35,000 | 9.2% |
| Health Benefits | 805,200 | 1,006,000 | 1,040,800 | 34,800 | 3.5% |
| Training & Transportation | 100 | 200 | - | (200) | -100.0% |
| Printing & Office Supplies | 3,800 | 6,400 | 6,300 | (100) | -1.6% |
| Operating Supplies | 4,600 | 10,600 | 9,000 | (1,600) | -15.1% |
| Other Services | 1,200 | 1,300 | 1,200 | (100) | -7.7% |
| Equipment Maintenance | 19,700 | 205,400 | 202,600 | (2,800) | -1.4% |
| Building & Equipment Rental | 4,300 | 6,000 | 6,000 | - | 0.0% |
| | \$ 2,770,300 | \$ 3,469,900 | \$ 3,589,300 | \$ (119,400) | 3.4% |

* Reflects current 2017 budget after year to date budget transfers between departments and/or accounts

Figure 92: Internal Audit Department Operating Budget (2016-2018)

2018 Budget Highlights:

- Salaries are increasing due to expected contractual wage increases, fully funded vacancies and use of temporary staffing to supplement permanent staff. Additional staff added to the security section to allow for timely internal investigations
- Pension is increasing based upon expected increase in PERS required payments
- Health benefits are increasing based upon expected increase in usage and medical inflation

Internal Audit Department Budgeted Headcount

| | Authorized 2016 | Budget 2017* | Budget 2018 | Net Change 2017-2018 |
|--------------------------------|----------------------------|-------------------------|------------------------|---------------------------------|
| Audit Manager | 1 | 1 | 1 | - |
| Auditor | 3 | 3 | 3 | - |
| Case Manager | 1 | 1 | 1 | - |
| Clerk | 2 | 2 | 2 | - |
| Confidential Secretary | 2 | 2 | 2 | - |
| Deputy Director Internal Audit | 1 | 1 | 1 | - |
| Director Internal Audit | 1 | 1 | 1 | - |
| Security Inspector | 1 | 1 | 1 | - |
| Security Officer | 2 | 2 | 2 | - |
| Security Supervisor | 2 | 2 | 2 | - |
| Senior Auditor | 2 | 2 | 2 | - |
| Senior Security Manager | 1 | 1 | 1 | - |
| Tolls Investigation Manager | 1 | 1 | 1 | - |
| Tolls Investigation Supervisor | 1 | 2 | 2 | - |
| | 21 | 22 | 22 | - |

*Reflects current 2017 budget after year to date position budget transfers within and between departments.

Figure 93: Internal Audit Department Headcount (2016-2018)

Capital and General Reserve Spending Budgets

The Authority considers its Capital Budget to consist of projects included in the Maintenance Reserve Fund, Special Project Reserve Fund, and Supplemental Capital (a part of the General Reserve Fund) budgets. These budgets include total spending of \$336 million in 2018. All projects submitted for consideration for funding in the 2018 Capital Budget were categorized into one of the following eight (8) categories that briefly describe the need for or benefit of the project. They are:

1. Employee Health & Safety
2. Frequent Problems
3. Generates Cost Savings
4. Public Benefit
5. Public Safety
6. Regulatory Mandate
7. State of Good Repair
8. Strategic Goal

During the evaluation process of determining which projects would be funded, the categories were considered. Priority was given to those projects that maintain a state of good repair of the roadways and facilities, improve the safety of our roadways for our patrons, and provide a high level of service for our patrons. A summary of the 2018 Capital Budget projects by category is as follows:

| <u>Category</u> | <u>% of Total Capital Budget Funding</u> |
|--------------------------|--|
| State of Good Repair | 74% |
| Public Safety | 17% |
| Strategic Goal | 3% |
| Employee Health & Safety | 2% |
| Public Benefit | 1% |
| Regulatory Mandate | 1% |
| Frequent Problems | 1% |
| Generates Cost Savings | 1% |

Approximately 74% of the total funding for 2018 is intended to maintain assets in a state of good repair. This includes bridge repair, roadway resurfacing projects and facility improvements. The Authority continues to increase its funding to maintain the roadways in a state of good repair. In 2018 the Authority will continue the goal of resurfacing 200 lane miles per year (12 year repaving cycle) and painting 20,000 tons of steel per year (15 year cycle). Approximately 17% of the total 2018 Capital Budget funding is for projects which are intended to improve Public Safety, such as providing better lighting and more effective signage, and programs that will provide a benefit to the public other than safety, such as park & ride facilities and evaluation of interchanges or sections of the roadway that may be improved to provide patrons with a more efficient travel experience.

| | 2016 <u>Actual</u> | 2017 <u>Budget</u> | 2018 <u>Budget</u> | \$ Change from <u>2017 Budget</u> | % Change from <u>2017 Budget</u> |
|--|-----------------------|-----------------------|-----------------------|--------------------------------------|-------------------------------------|
| Maintenance Reserve Fund | \$ 73,275,700 | \$ 132,500,000 | \$ 134,246,900 | \$ 1,746,900 | 1% |
| Special Project Reserve Fund | 28,231,500 | 48,438,500 | 61,154,900 | 12,716,400 | 26% |
| General Reserve Fund: | | | | | |
| General Reserve Fund* | 322,343,100 | 286,595,000 | 244,945,000 | (41,650,000) | -15% |
| Supplemental Capital Fund | 14,673,900 | 81,905,000 | 140,627,000 | 58,722,000 | 72% |
| Total Capital and General Reserve Funds | \$ 438,524,200 | \$ 549,438,500 | \$ 580,973,800 | \$ 31,535,300 | 6% |

*This amount is net of reimbursable projects and capital contributions.

Figure 94: Total Capital and General Reserve Funds Budget (2016-2018)

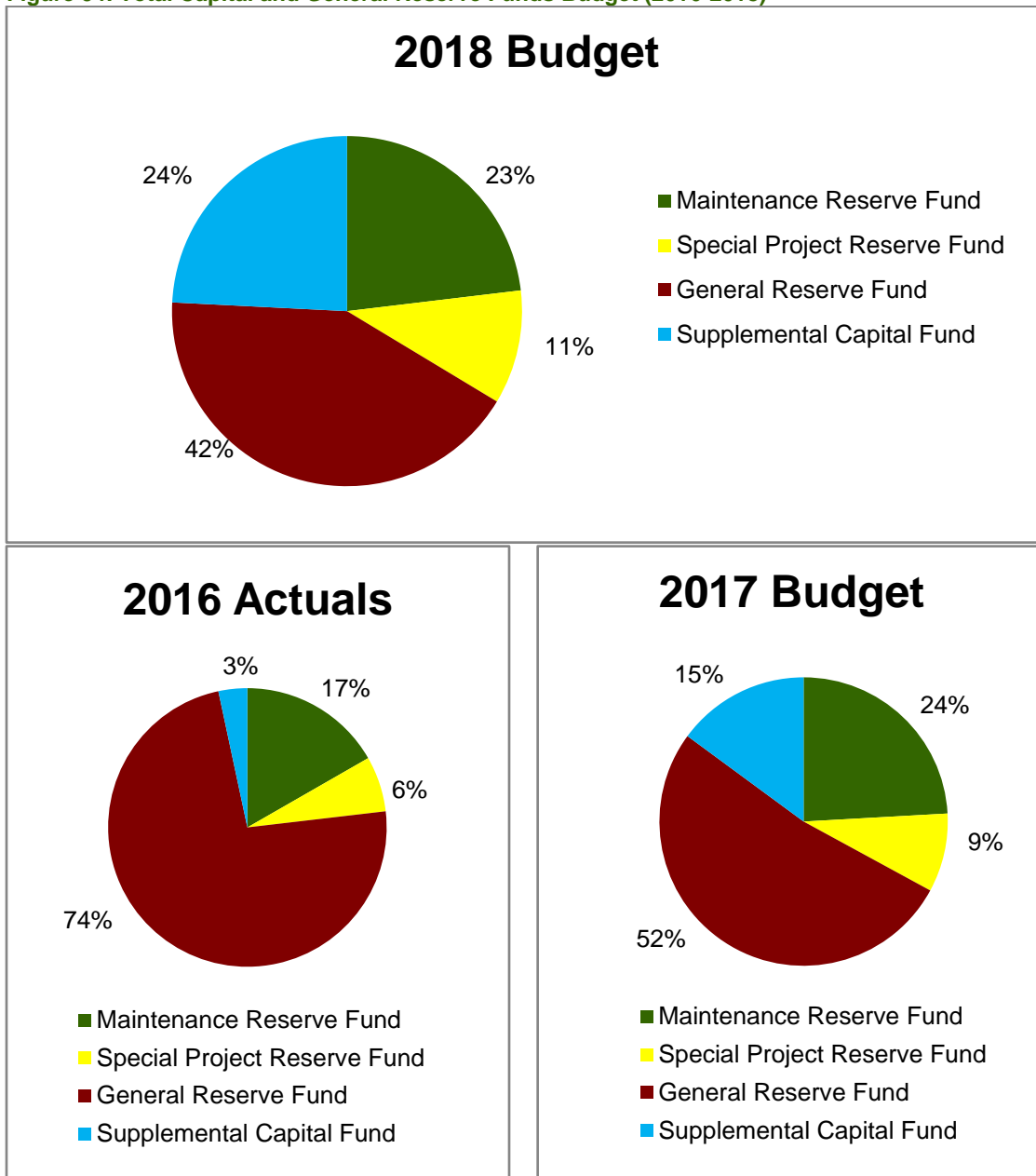


Figure 95: Total Capital and General Reserve Funds Percentages (2016-2018)

Capital Budget Spending by Project Type

| | 2016 <u>Actual</u> | 2017 <u>Budget *</u> | 2018 <u>Budget</u> | \$ Change from <u>2017 Budget</u> | % Change from <u>2017 Budget</u> |
|--------------------------------------|-----------------------|-------------------------|-----------------------|--------------------------------------|-------------------------------------|
| Drainage Structure Repair | \$ 3,136,000 | \$ 5,755,000 | \$ 5,223,500 | \$ (531,500) | -9.2% |
| Concrete Barrier Repairs | - | 750,000 | 6,865,600 | 6,115,600 | 815.4% |
| Bridge Repairs | 39,838,000 | 56,400,000 | 73,661,300 | 17,261,300 | 30.6% |
| Resurfacing | 26,009,000 | 51,423,000 | 70,129,500 | 18,706,500 | 36.4% |
| Roadway Lighting Repairs | 2,002,000 | 3,630,000 | 15,400,000 | 11,770,000 | 324.2% |
| Emergency Maintenance | - | 10,500,000 | 10,100,000 | (400,000) | -3.8% |
| Culvert Inspections | - | 792,000 | 551,100 | (240,900) | -30.4% |
| Bridge and Structure Inspections | 7,031,000 | 10,600,000 | 9,968,100 | (631,900) | -6.0% |
| Pavement Management | 761,000 | 1,327,000 | 1,447,200 | 120,200 | 9.1% |
| Other Roadway Improvements | 4,023,000 | 30,034,700 | 42,972,500 | 12,937,800 | 43.1% |
| Total Roadway Improvements | 82,800,000 | 171,211,700 | 236,318,800 | 65,107,100 | 38.0% |
| Facility Improvements | 10,860,000 | 50,356,753 | 52,453,300 | 2,096,547 | 4.2% |
| Fleet Upgrades | 9,774,000 | 11,128,600 | 10,800,000 | (328,600) | -3.0% |
| Technology Improvements | 12,747,000 | 30,146,447 | 36,456,700 | 6,310,253 | 20.9% |
| Total Capital Budget Spending | \$ 116,181,000 | \$ 262,843,500 | \$ 336,028,800 | \$ 73,185,300 | 27.8% |

* Reflects current 2017 budget after year to date budget transfers between projects

Capital Budget Funding Sources

| | 2016 <u>Actual</u> | 2017 <u>Budget *</u> | 2018 <u>Budget</u> | \$ Change from <u>2017 Budget</u> | % Change from <u>2017 Budget</u> |
|-------------------------|-----------------------|-------------------------|-----------------------|--------------------------------------|-------------------------------------|
| Maintenance Reserve | \$ 73,276,000 | \$ 132,500,000 | \$ 134,246,900 | \$ 1,746,900 | 1.3% |
| Special Project Reserve | 28,231,000 | 48,438,500 | 61,154,900 | 12,716,400 | 26.3% |
| Supplemental Capital | 14,674,000 | 81,905,000 | 140,627,000 | 58,722,000 | 71.7% |
| Total | \$ 116,181,000 | \$ 262,843,500 | \$ 336,028,800 | \$ 73,185,300 | 27.8% |

* Reflects current 2017 budget after year to date budget transfers between projects

Figure 96: Capital Budget Spending and Funding (2016-2018)

Some highlights for the Capital Budget include

- An increase of 150 lane miles resurfaced in 2018 as compared to 2017
- An increase in over 800% for concrete barrier repairs. The Authority aims to target old and deteriorating concrete barriers. These repairs will not only help to maintain a state of good repair, but more importantly increase patron safety.
- An increase in over 300% for roadway lighting repairs. The Authority is committed to not only providing safer roadways for patrons, but also becoming more energy efficient. By upgrading lighting fixtures to LEDs the roadways will not only be brighter and safer but also more cost and energy efficient.

Maintenance Reserve Fund

- The New Jersey Turnpike lanes will be resurfaced northbound and southbound between mileposts 84.5 and 88.9 and mileposts 92.6 and 96.2 for a total of 140 lane miles, and ramps at New Jersey Turnpike Interchanges 6A, 13, 13A, 15E, 15W, 16E and 17 will be resurfaced for a total of 37 lane miles.
- The New Jersey Turnpike is scheduled to have 20 bridge decks repaired.
- The Garden State Parkway southbound lanes between mileposts 119.2 and 122.8, mileposts 115.2 and 115.8, mileposts 110.9 and 111.1, and mileposts 80.8 and 81.75 will be resurfaced for a total of 25 lane miles. An additional 150 lane miles is in the Supplemental Capital Budget for resurfacing on the Garden State Parkway northbound and southbound between mileposts 12 and 34.5.
- The Garden State Parkway is scheduled to have 21 bridge decks repaired.

| | 2016 | 2017 | 2018 | \$ Change from | % Change from |
|---------------------------------------|---------------------|-----------------------|-----------------------|---------------------|--------------------|
| <u>Capital Projects</u> | <u>Actual</u> | <u>Budget*</u> | <u>Budget</u> | <u>2017 Budget</u> | <u>2017 Budget</u> |
| Drainage Structure Repairs | \$ - | \$ 2,208,000 | \$ 4,796,000 | \$ 2,588,000 | 117.21% |
| Concrete Barrier Repairs | - | 500,000 | 6,847,000 | 6,347,000 | 1269.40% |
| Bridge Repairs | 39,838,400 | 56,400,000 | 59,965,400 | 3,565,400 | 6.32% |
| Resurfacing | 25,645,000 | 50,173,000 | 39,538,500 | (10,634,500) | -21.20% |
| Roadway Lighting Repairs | - | - | 13,000,000 | 13,000,000 | 100.00% |
| Emergency Maintenance | - | 10,500,000 | 10,100,000 | (400,000) | 100.00% |
| | 65,483,400 | 119,781,000 | 134,246,900 | 14,465,900 | 12% |
| Expense Projects** | | | | | |
| Culvert Inspections | - | 792,000 | - | (792,000) | -100.00% |
| Bridge and Structure Inspections | 7,031,000 | 10,600,000 | - | (10,600,000) | -100.00% |
| Pavement Management | 761,300 | 1,327,000 | - | (1,327,000) | -100.00% |
| Total Maintenance Reserve Fund | \$73,275,700 | \$ 132,500,000 | \$ 134,246,900 | \$ 1,746,900 | 1% |

* Reflects current 2017 budget after year to date budget transfers between projects.

** Note: Expensed Projects were moved to Special Project Reserve Fund Budget in 2018.

Figure 97: Maintenance Reserve Fund Projects (2016-2018)

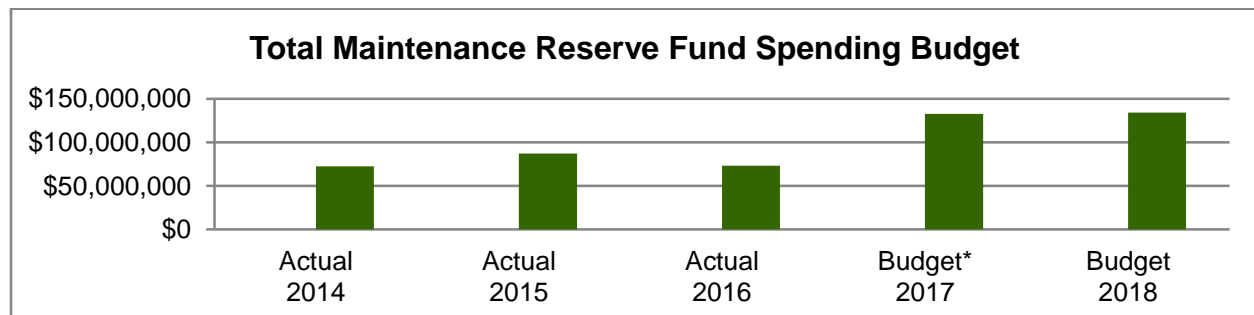


Figure 98: Maintenance Reserve Fund Budget Graph (2014-2018)

| Maintenance Reserve Fund Balance | | | | | |
|---|----------------|-------------------|---------------|---------------------|---------------------|
| | 2016 | 2017 | 2018 | 2017 to 2018 | 2017 to 2018 |
| | Actuals | Est/Actual | Budget | \$ Change | %Change |
| Beginning Balance | \$20,105,500 | \$36,199,800 | \$41,823,900 | \$5,624,100 | |
| Transfer from Revenue Fund | 89,370,000 | 116,751,000 | 119,086,000 | 2,335,000 | |
| Project Expenses | (73,275,700) | (111,126,900) | (134,246,900) | (23,120,000) | |
| Ending Balance* | \$ 36,199,800 | \$ 41,823,900 | \$ 26,663,000 | \$ (15,160,900) | -36% |

*Does not agree to fund balance in the Authority's financial statement as this chart excludes capitalized assets.

Figure 99: Maintenance Reserve Fund Balance (2016-2018)

Maintenance Reserve Fund 2018 Projects

| Project # | Project Name | 2018 Budget |
|------------------|---------------------------------------|-----------------------|
| 030C00001 | Drainage Structure Repair | \$ 4,796,000 |
| 030C00002 | Concrete Barrier Repairs | 6,847,000 |
| 030C10001 | TPK - Bridge Repairs | 29,806,900 |
| 030C10002 | TPK - Resurfacing | 33,511,200 |
| 030C20001 | GSP-Bridge Repairs | 30,158,500 |
| 030C20005 | GSP- Resurfacing | 6,027,300 |
| <i>030C00003</i> | <i>Roadway Lighting Repairs</i> | 13,000,000 |
| 039999999 | Emergency Maintenance | 10,100,000 |
| | Total Maintenance Reserve Fund | \$ 134,246,900 |

***New projects are italicized*

Figure 100: Maintenance Reserve Fund 2018 Projects

Maintenance Reserve Fund

| <u>Project #</u> | <u>Project Name</u> | <u>Project Description</u> |
|-------------------------|---------------------------------|---|
| 030C00001 | Drainage Structure Repair | Provide resources for the design and construction of scheduled major reconstruction, repairs and improvements of drainage facilities/culverts. |
| 030C00002 | Concrete Barrier Repairs | Provides for a dedicated funding source to allow for the annual maintenance and upgrade of existing concrete median barrier at various locations along the length of the Garden State Parkway and New Jersey Turnpike roadways to restore this asset to a safe and serviceable and aesthetically pleasing condition. Includes design, construction and supervision. |
| 030C10001 | TPK - Bridge Repairs | Inspection, design, construction and construction supervision for repairs of New Jersey Turnpike bridges. |
| 030C10002 | TPK - Resurfacing | Provides a dedicated funding source for annual roadway resurfacing program for the New Jersey Turnpike based upon evaluation results. Funding this program at the levels shown below will allow surface course pavement to be maintained in a safe and serviceable condition and for the benefit of patrons. |
| 030C20001 | GSP-Bridge Repairs | Inspection, design, construction and construction supervision for repairs of Garden State Parkway bridges. |
| 030C20005 | GSP- Resurfacing | Provides for a dedicated funding source for annual roadway resurfacing program for the Garden State Parkway based upon evaluation results. Funding this project at the levels shown above will allow pavement to be maintained in a safe and serviceable condition and for the benefit of patrons. |
| 030C00003 | <i>Roadway Lighting Repairs</i> | Funding for design and construction resources for scheduled major reconstruction, repairs and improvements of the roadway lighting systems on the New Jersey Turnpike and Garden State Parkway. This project includes the replacement of series lighting on the New Jersey Turnpike. |
| 039999999 | Emergency Maintenance | Emergency/Unanticipated roadway, bridge or structure maintenance as approved by Executive Staff. |

Figure 101: Maintenance Reserve Fund Project Descriptions

Special Project Reserve Fund

Approximately \$20.1 million (33%) is budgeted for Facility Improvements, \$10.8 million (18%) on Fleet Upgrades, \$21.6 million (35%) for Roadway Improvements, and \$8.7 million (14%) on Technology Improvements.

| Category | 2016 | 2017 | 2018 | \$ Change from | % Change from |
|---|----------------------|----------------------|----------------------|----------------------|--------------------|
| | <u>Actuals</u> | <u>Budget*</u> | <u>Budget</u> | <u>2017 Budget</u> | <u>2017 Budget</u> |
| Facility Improvements | \$3,918,700 | \$8,301,600 | \$20,069,100 | \$11,767,500 | 141.7% |
| Fleet Upgrades | 9,773,700 | 11,128,600 | 10,800,000 | (328,600) | -3.0% |
| Roadway Improvements | 8,087,700 | 16,068,700 | 21,625,900 | 5,557,200 | 34.6% |
| Technology Improvements | 6,451,400 | 12,939,600 | 8,659,900 | (4,279,700) | -33.1% |
| Total Special Project Reserve Fund | \$ 28,231,500 | \$ 48,438,500 | \$ 61,154,900 | \$ 12,716,400 | 26.3% |

* Reflects current 2017 budget after year to date budget transfers between projects.

Figure 102: Special Project Reserve Fund Budget (2016-2018)

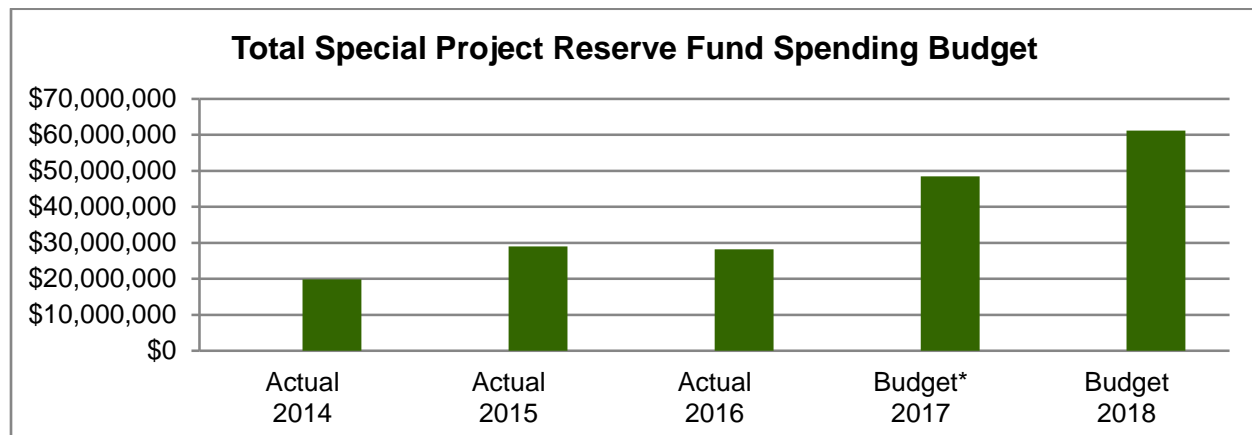


Figure 103: Special Project Reserve Fund Budget Graph (2014-2018)

| | Special Project Reserve Fund Balance | | | | |
|----------------------------|--------------------------------------|--------------------|---------------|------------------|-----------------|
| | 2016 | 2017 | 2018 | 2017 to 2018 | 2017 to 2018 |
| | <u>Actuals</u> | <u>Est/Actuals</u> | <u>Budget</u> | <u>\$ Change</u> | <u>% Change</u> |
| Beginning Balance | \$50,909,100 | \$61,595,600 | \$71,031,102 | \$9,435,502 | |
| Transfer from Revenue Fund | 38,918,000 | 39,696,000 | 40,490,000 | 794,000 | |
| Project Expenses | (28,231,500) | (30,260,498) | (61,154,900) | (30,894,402) | |
| Ending Balance* | \$ 61,595,600 | \$ 71,031,102 | \$ 50,366,202 | \$ (20,664,900) | -29% |

*Does not agree to fund balance in the Authority's financial statement as this chart excludes capitalized assets.

Figure 104: Special Project Reserve Fund Balance (2016-2018)

Figure 105: Special Project Reserve Fund Project

| Special Projects Reserve Fund 2018 Projects | | 2018 Budget |
|---|--|----------------------|
| <u>Project #</u> | <u>Project Name</u> | |
| Capitalized Projects | | |
| 040C00002 | State Police Shooting Range Improvements | \$ 283,500 |
| 040C00003 | Replacement of Underground Storage Tanks | 1,965,400 |
| 040C00007 | Telegraph Hill Pre-engineered Storage Building | 750,000 |
| 040C00012 | PD5 GSP Sign Shop Pre-engineered Storage Building | 750,000 |
| 040C00124 | Turnpike Commercial Vehicle Inspection | 260,000 |
| 040C08157 | Toll Plaza Canopy Signs | 3,086,500 |
| 040C17027 | Major Building Improvements | 500,000 |
| <i>040C00032</i> | <i>Arts Center Pedestrian Entrance Improvement Project</i> | 600,000 |
| <i>040C00033</i> | <i>HQ UST Replacement project</i> | 250,000 |
| <i>040C00034</i> | <i>Maintenance Department Material Storage Facilities</i> | 500,000 |
| <i>040C00035</i> | <i>GSP Maintenance Winter Subyard Trailer Replacement</i> | 100,000 |
| <i>040C00036</i> | <i>Training Trailer for Tolls TPK South</i> | 100,000 |
| <i>040C00037</i> | <i>Turnpike HCMS Renovation</i> | 200,000 |
| <i>040C00038</i> | <i>Design of Stormwater Pump Replacement & Bldg. Reno , TPK MP 92 -Int. 11</i> | 386,300 |
| <i>040C00039</i> | <i>Service Replacement of the Water Supply System at the Vince Lombardi Service Area on the Turnpike</i> | 309,000 |
| <i>040C00040</i> | <i>Design/Construction Salt Shed TMD 6 Elizabeth</i> | 772,500 |
| <i>040C00041</i> | <i>Design of Trades Shop & Vehicle Storage Building TMD 7 Newark</i> | 412,000 |
| <i>040C00042</i> | <i>Service Area 6S/N Water Distribution System</i> | 1,529,600 |
| <i>040C00043</i> | <i>Water Tower Upgrades at Service Areas 1N & 4N</i> | 226,600 |
| <i>040C00044</i> | <i>Septic Systems at Asbury Park, Interchange 13A & Interchange 8A</i> | 247,200 |
| <i>040C00045</i> | <i>Service Area 3S Pump Station Force Main Upgrade</i> | 304,500 |
| <i>040C00046</i> | <i>Service Area 6S Wastewater Pre Treatment Plant</i> | 468,700 |
| <i>040C00047</i> | <i>Pre Engineered Storage Building TMD 1 Roadway</i> | 1,500,000 |
| <i>040C00048</i> | <i>Construction of Pavement Markings for Service Areas</i> | 850,000 |
| 040C00024 | Major Fleet Augmentation - Tractors | 1,050,000 |
| 040C00025 | Major Fleet Augmentation Bucket Trucks | 750,000 |
| 040C07021 | Major Fleet Augmentation | 3,100,000 |
| 040C07021D | Major Fleet Augmentation Dump Trucks | 4,800,000 |
| 040C07021L | Major Fleet Augmentation Loaders | 1,100,000 |
| 040C00004 | 16E/18E Cross Drain Repairs | 427,500 |
| 040C00005 | Turnpike I-95 Section Z Turn Modifications | 128,800 |
| 040C00008 | Turnpike Milepost 29 Grade Separated U Turn | 865,200 |
| 040C00009 | Turnpike Interchange 13 TB & ST Ramp Improvements | 208,200 |
| 040C00010 | Turnpike MP 58.4 Z Turn | 74,200 |
| 040C00011 | Major Sign & Safety Replacement & Improvements | 800,000 |
| <i>040C00049</i> | <i>Asbury Express E-ZPass Lane Improvements</i> | 983,700 |
| <i>040C00050</i> | <i>GSP Interchange 127 SBE Merge Improvements</i> | 212,200 |
| <i>040C00051</i> | <i>Interchange 11 TNO Ramp Merge Improvements</i> | 515,000 |
| <i>040C00052</i> | <i>Data Collection Hardware</i> | 150,000 |
| <i>040C00053</i> | <i>Statewide Re-designation of I95 to NJ Turnpike - Design & Construction</i> | 1,050,000 |
| <i>040C00054</i> | <i>Interchange 114 Park & Ride Facility</i> | 600,000 |
| 040C00013 | Law Dept Software Enhancements | 103,500 |
| 040C00015 | Enterprise Asset Management | 750,000 |
| 040C00020 | Security Remediation | 490,000 |
| 040C08056 | Traffic Permitting & Lane Closure Application | 385,600 |
| 040C08086 | PeopleSoft Upgrades & Support | 463,000 |
| 040C08161 | Document Management | 100,000 |
| 040C08167 | UPS Replacement - Cranbury | 244,000 |
| 040C00061 | Time & Attendance Evaluation and Upgrade | 300,000 |
| <i>040C00055</i> | <i>Radio Tower Backup Power</i> | 248,200 |
| <i>040C00056</i> | <i>Backup Server Upgrade</i> | 100,000 |
| <i>040C00057</i> | <i>CADS Native Application</i> | 70,000 |
| <i>040C00058</i> | <i>HR Software Improvements & Implementation</i> | 750,000 |
| <i>040C00059</i> | <i>CapEx eGIS Project Planning</i> | 250,000 |
| | | \$ 37,420,900 |

** New projects are italicized

| Special Projects Reserve Fund 2018 Projects- Continued | | 2018 Budget |
|---|--|----------------------|
| Project # | Project Name | |
| <u>Expensed Projects</u> | | |
| 040E00001 | Maintenance Studies & Scoping | \$ 150,000 |
| 040E00004 | Toll Facility Study | 100,000 |
| 040E00006 | Remedial Investigation & Remedial Action at Chromate Sites | 360,500 |
| 040E00007 | Building Demolition | 2,703,800 |
| <i>040E00039</i> | <i>Permitting - Bass River Maintenance Yard</i> | 103,000 |
| <i>040E00030</i> | <i>Pavement Markings for Turnpike Service Areas - Study</i> | 300,000 |
| 040E00009 | Preparation of Jurisdictional Limits Maps | 129,000 |
| 040E00024 | Horizontal Curve Warning Signs - Study | 500,000 |
| 040E10062 | Engineering Studies | 568,000 |
| 040E18054 | On Call Traffic Services Engineer | 552,000 |
| 040E18068 | NBHCE Capacity Study | 795,200 |
| <i>040E00031</i> | <i>Study Light Rail at Vince Lombardi Service area</i> | 100,000 |
| <i>040E00032</i> | <i>Culvert Inspections</i> | 551,100 |
| <i>040E10018</i> | <i>Bridge and Structure Inspections</i> | 9,968,100 |
| <i>040E00033</i> | <i>Pavement Management</i> | 1,447,200 |
| <i>040E00034</i> | <i>Special Maintenance & Protection of Traffic (MPT) Plans for GSP North</i> | 500,000 |
| <i>040E00035</i> | <i>I-95 Extension Managed Lanes Feasibility Study</i> | 100,000 |
| <i>040E00037</i> | <i>Interchange 114 Traffic Signal Study</i> | 91,500 |
| <i>040E00036</i> | <i>ITS and Lighting Design Document Updates</i> | 309,000 |
| 040E00023 | Data Resources Systems Upgrade | 162,000 |
| 040E00026 | Rutgers Assignment - Maintenance software | 200,000 |
| 040E00046 | E-ZPass Contract Implementation | 1,600,000 |
| 040E00046R | E-ZPass Contract Implementation - Reimbursable | (150,000) |
| 040E08171 | eGis Data Collection | 293,600 |
| 049999999 | Contingency | 2,000,000 |
| <i>040E00038</i> | <i>Capital Project Portfolio Management Study</i> | 300,000 |
| Total Special Project Reserve Fund | | \$ 23,734,000 |
| | | \$ 61,154,900 |

** New projects are italicized

Figure 106: Special Project Reserve Fund Project Descriptions

| Special Projects Reserve Fund | | |
|--------------------------------------|--|--|
| <u>Project #</u> | <u>Project Name</u> | <u>Project Description</u> |
| <u>Capitalized Projects</u> | | |
| 040C00002 | State Police Shooting Range Improvements | Improvements at the NJSP Shooting Range |
| 040C00003 | Replacement of Underground Storage Tanks | Preparation of Plans & Specifications for replacing Underground Storage Tanks (UST) at GSP Maintenance Districts 1, 2 & 3. Design took place in 2017; Construction & Tank Removal will take place in 2018. |
| 040C00007 | Telegraph Hill Pre-engineered Storage Building | Construction of a storage building at Telegraph Hill. |
| 040C00012 | PD5 GSP Sign Shop Pre-engineered Storage Building | Construction for a Sign Shop Storage Building at Parkway District 5. |
| 040C00124 | Turnpike Commercial Vehicle Inspection | Preparation of design documents for top ranked sites developed in 2016 evaluations. |
| 040C08157 | Toll Plaza Canopy Signs | Construction of Contract T600.417 to install canopy signs over toll lanes at various Interchanges on the New Jersey Turnpike. |
| 040C17027 | Major Building Improvements | Major Reconstruction, Replacement and Improvements to Authority's buildings with a project cost greater than \$50,000.00. |
| 040C00032 | <i>Arts Center Pedestrian Entrance Improvement Project</i> | Design and construction of improvements to enhance the safety of the pedestrian entrance to the PNC Bank Arts Center. |
| 040C00033 | <i>HQ UST Replacement project</i> | Removal and replacement of underground storage tanks at the New Jersey Turnpike Authority Headquarters facility. |
| 040C00034 | <i>Maintenance Department Material Storage Facilities</i> | Funding for design, permitting, purchasing and construction resources for a storage facility for equipment, materials, etc. Locations to include TPK District 10 and GSP District 5. |
| 040C00035 | <i>GSP Maintenance Winter Subyard Trailer Replacement</i> | Funding for design, permitting, purchasing and construction resources for the replacement of the seasonal Maintenance facility and associated site work at this location for Pleasant Plains and Bass River trailer replacement. |
| 040C00036 | <i>Training Trailer for Tolls TPK South</i> | Funding for design, permitting, purchasing and construction resources for a training trailer located on the TPK south roadway. This facility will help reduce travel time and overtime expenses of staff traveling. Increase efficiency of the toll department's |

operations.

| | | |
|-----------|---|--|
| 040C00037 | <i>Turnpike HCMS Renovation</i> | This is an effort to extend the life of the drum sign faces for the changeable message signs in the Northern Mixing Bowl on the Turnpike. The Hybrid CMS replacement program has prioritized these signs to be replaced in approximately Year 4 of the five-year construction plan. This means that the Northern Mixing Bowl will remain in their current conditions for approximately 7 years. New sign face overlays installed by the Maintenance Department will restore visibility and legibility for the non-standard messages. |
| 040C00038 | <i>Design of Stormwater Pump Replacement & Bldg. Reno , TPK MP 92 -Int. 11</i> | Issue OPS for the preparation of plans and specifications to replace the existing Pump House at MP 92 on the Turnpike. |
| 040C00039 | <i>Design Replacement of the Water Supply System at the Vince Lombardi Service Area on the Turnpike</i> | Full replacement of Victoria Terrace routed water main feeding Vince Lombardi service area that is hung on structure. |
| 040C00040 | <i>Design/Construction Salt Shed TMD 6 Elizabeth</i> | Engineering to issue an OPS for Design and Construction of a salt shed. |
| 040C00041 | <i>Design of Trades Shop & Vehicle Storage Building TMD 7 Newark</i> | Engineering to issue a design OPS for the preparation of plans and specifications issue for construction of a new Trades shop as well as a vehicle storage building (for small vehicles that can't be stored in the garage). |
| 040C00042 | <i>Service Area 6S/N Water Distribution System</i> | Currently the potable water pipe co-resides with the sewer pipe. The pipes are reaching the end of their useful life. A new 12" water line is required to correct the code violation and will provide safe water and fire suppression to the service areas. Placement includes boring under the width of the roadway. |
| 040C00043 | <i>Water Tower Upgrades at Service Areas 1N & 4N</i> | Funding to upgrade the water towers at the two named service areas. |
| 040C00044 | <i>Septic Systems at Asbury Park, Interchange 13A & Interchange 8A</i> | Replacement of failing septic systems at the specified locations. |

| | | |
|------------|---|---|
| 040C00045 | Service Area 3S Pump Station Force Main Upgrade | Funding for the replacement of the force main at Service Area 3S. The existing force main is excessively long with many dips and rises. The pipe clogs often and due to the profile cannot be cleaned safely. |
| 040C00046 | Service Area 6S Wastewater Pre Treatment Plant | Funding for the replacement of the plant which is past its useful life. Many components have reached the end of their lifespans and cannot be replaced. The air supply system is expensive to operate and breaks annually. The SBR system will be replaced by a smaller system that will allow the plant to meet new township sewage quality standards. |
| 040C00047 | Pre Engineered Storage Building TMD 1 Roadway | Funding for construction of a new mixed use building to serve the new maintenance district. |
| 040C00048 | Construction of Pavement Markings for Service Areas | All service areas would benefit from a refurbishment or replacement of pavement markings to provide channelization. In addition, the NJSP request that the truck stalls be alphanumerically numbered for faster response during incidents. A small number of regulatory signs in both size and quantity to support the pavement markings may be required. For the majority of service areas, pavement markings will be contained to the parking areas where HMS and Marriott will NOT have influence of their expected improvements. Increasing the amount of truck parking at each service area is an intended goal. |
| 040C00024 | Major Fleet Augmentation - Tractors | Designated Program for Lawn mower replacement. |
| 040C00025 | Major Fleet Augmentation Bucket Trucks | Designated Program for annual Bucket Truck replacement. |
| 040C07021 | Major Fleet Augmentation | The purchase of replacement and supplemental equipment as needed on a priority and lifecycle basis. |
| 040C07021D | Major Fleet Augmentation Dump Trucks | Annual purchase of twenty seven (27) dump trucks to maintain current lifecycle levels. (Vehicles have a twelve (12) year life cycle). Replace models that have exhausted their life expectancy as well as supplementing the Roadway Divisions fleet due to widening projects on both roadways. |
| 040C07021L | Major Fleet Augmentation Loaders | Designated program for Loader Replacement that lack diesel particulate filters, as required by the Environmental Protection Agency. |
| 040C00004 | 16E/18E Cross Drain Repairs | Improvements to existing cross-drains at Turnpike Interchange 16E/18E. |

| | | |
|-----------|---|--|
| 040C00005 | Turnpike I-95 Section Z Turn Modifications | Relocate I-95 SNX/SNL 120.6 Z-turn north to 120.7 in order to facilitate acceleration and deceleration between roadways and a more level transition. |
| 040C00008 | Turnpike Milepost 29 Grade Separated U Turn | Preparation of construction documents for a U-turn for Maintenance and Operational needs; cost and time savings can be found during incident response and winter weather operations. The project will require provisions for construction of the U-turn roadway over a fiber optic line and also in close proximity to a Colonial Pipeline facility. |
| 040C00009 | Turnpike Interchange 13 TB & ST Ramp Improvements | Construct improvements to ramp pavement and intersection geometry. |
| 040C00010 | Turnpike MP 58.4 Z Turn | Preparation of construction documents for a new access Z-Turn to improve emergency vehicle response at TMD 3. |
| 040C00011 | Major Sign & Safety Replacement & Improvements | Funding for design, permitting, purchasing and construction resources for replacement or new installs of roadside signage and safety features with costs greater than \$50,000.00. |
| 040C00049 | <i>Asbury Express E-ZPass Lane Improvements</i> | New static panels and guiderail to replace cone line. |
| 040C00050 | <i>GSP Interchange 127 SBE Merge Improvements</i> | Reconfigure southbound entrance ramp from Route 440 and Smith Street to improve merging conditions on GSP Southbound. |
| 040C00051 | <i>Interchange 11 TNO Ramp Merge Improvements</i> | Reconfigure northbound entrance ramp from the Interchange 11 toll plaza (TNO) to the northbound Turnpike outer roadway to improve acceleration lane geometry. |
| 040C00052 | <i>Data Collection Hardware</i> | This project will replace 20-year old traffic data collection equipment that has surpassed its useful service life. This will also implement complementary devices to ensure accurate data and appropriately calibrated hardware. Up-to-date data collection processes will ensure accurate and timely reporting to other Authority departments and external stakeholders. |

| | | |
|-----------|---|---|
| 040C00053 | <i>Statewide Re-designation of I95 to NJ Turnpike - Design & Construction</i> | PennDOT and the Pennsylvania Turnpike Commission are expected to complete the connection of Interstate 95 in August 2018 in Bristol Township, PA thereby completing final continuity of I-95. In order to provide that continuity in New Jersey for the navigational benefit of the motorist, several signs will need to be designed and implemented. No new overhead sign structures are needed. This effort needs to achieve two primary tasks both with overhead and ground-mounted signs. First is the introduction of I-95 Route shields on existing guide signs built in the 6 to 9 Widening. Second will be adding/replacing additional guide signs outside the limits of the 6-9 Widening to achieve sign message congruency. Signs need to be installed by August 2018 for the benefit of the region. NJDOT efforts are currently in parallel and are also expected in August of 2018. |
| 040C00054 | <i>Interchange 114 Park & Ride Facility</i> | Preliminary Design, Permitting, Final Design and Construction of a Park and Ride Facility at GSP Interchange 114. |
| 040C00013 | Law Dept Software Enhancements | This project will enable the Authority to procure software, services, and hardware that will support managing the OPRA and Subpoena process. |
| 040C00015 | Enterprise Asset Management | The Authority uses a computerized maintenance management system, Spear 4i, for maintenance of fleet, roadway, building maintenance, and snow events. Spear 4i is an old client server application which is no longer manufactured and has limited vendor support. The vendor does not support any upgrades or patches and the Authority has outgrown its usefulness. In 3rd Quarter 2017, ITS conducted multiple discovery sessions with Maintenance, Finance, PMM, ITS, and Internal Audit to capture the business requirements. The results of this report will drive the replacement process. In addition, the Track-It system which is currently used by ITS and Building Maintenance will be upgraded to a more robust software package. |

| | | |
|-----------|---|--|
| 040C00020 | Security Remediation | ITS requests funding to remediate security vulnerabilities exposed during the 2016 security assessment. Improvements include but are not limited to databases and software applications. This procurement includes software, hardware, and services. |
| 040C08056 | Traffic Permitting & Lane Closure Application | Operations has identified new enhancements to the enterprise-wide traffic permitting and lane closure system. This project will fund these enhancements. |
| 040C08086 | PeopleSoft Upgrades & Support | Upgrade various components of the PeopleSoft platform (HCM and FIN). This project will cover the cost of hardware, software, and professional services. |
| 040C08161 | Document Management | Continuation of 2017's development of the FileHold software. Project will include analysis of Authority documents to be catalogued, document types, metadata, access, as well as retrieval rules. Funding is requested for software, hardware and services to bring the remaining departments onto FileHold. |
| 040C08167 | UPS Replacement - Cranbury | This project will replace the UPS at Cranbury State Police: State Police Troop D Headquarters. This facility is the only State Police facility which does not have a stable UPS. All other State Police buildings have reliable power. The current UPS is the original UPS installed when the building was built. This procurement includes hardware, software, and services. |
| 040C00061 | <i>Time & Attendance Evaluation and Upgrade</i> | Funding is requested to upgrade to the current Kronos version and make database changes. In addition, funding is requested to fully understand the business impact on integrating Kronos with PeopleSoft. After discovering the full impact, it is anticipated requesting time off and non align employees can be used as a test bed. Full integration with PeopleSoft is necessary to meet the labor requirements documented for the Enterprise Asset Management System initiative. |

| | | |
|-----------|--|--|
| 040C00055 | <i>Radio Tower Backup Power</i> | <p>The radio tower equipment on the Parkway and the Turnpike is powered by a 48VDC inverter containing twelve (12) 180AH VRLA batteries at 26 sites. It is estimated these batteries were installed at least 10+ years ago (max life cycle is 13 years). ITS has identified 16 of 26 as critical locations that cannot afford power interruptions. ITS plans to proactively upgrade the batteries at all 26 sites and install a web-based monitoring system. ITS also plans to extend circuitry to the network switch gear and eliminate rack-mounted UPS systems. This procurement includes hardware, software, and services.</p> |
| 040C00056 | <i>Backup Server Upgrade</i> | <p>The current Windows-based Commvault Media Agents are unable to effectively handle the current load. There is a growing number of backup and restore operations being conducted at all times of the day. Additionally, the version of Simpana (software) must be upgraded to handle newer operating systems and application packages. This project will provide (2) two new Media Agent servers as well as Commvault Professional Services to provide implementation and support services.</p> |
| 040C00057 | <i>CADS Native Application</i> | <p>DENTED, the CADS software provider, will redesign the existing digital dispatch web based mobile application to a native mobile application. The native mobile application will run on both Apple iOS and Android devices. Existing web based mobile applications have limitations on alert management and making calls. The redesigned native app will overcome these issues.</p> |
| 040C00058 | <i>HR Software Improvements & Implementation</i> | <p>Funding is requested to purchase, implement, configure, and/or install various HR centric software solutions which are required to streamline and automate many manual processes in the HR department. This project will provide funding for services, software, and hardware.</p> |

040C00059 *CapEx eGIS Project Planning*

This request is to provide upgrades to the CapEx Manager application in order to allow design consultants, NJTA staff as well as construction supervision consultants to provide up-to-date (construction) project planning data (on a daily basis) directly into CapEx Manager so that it can be exported to the NJTA eGIS system (eGIS Project Planning "Mapplication"). Having the ability to enter this additional data into CapEx will assist the designers, contractors, as well as NJTA staff when planning/scheduling new and/or active projects as well as aid with lane closing planning. This will also be used to coordinate TPK projects with other agencies project schedules.

Expensed Projects

040E00001 Maintenance Studies & Scoping

The study of various maintenance projects. The consultant will assist the Maintenance department in properly studying, scoping, and quantifying projects on an immediate or scheduled basis.

040E00004 Toll Facility Study

Study the Authority's toll plazas on both roadways to determine the optimal lane type and configuration for future toll plaza improvements.

040E00006 Remedial Investigation & Remedial Action at Chromate Sites

Efforts associated with the remediation of chromium impacted soil and/or groundwater at Chromate Sites in accordance with a court ordered mandate. Pre-Design investigation to commence fourth quarter 2017; bid spec preparation, and Conrail negotiations to commence second quarter 2018; remediation will be done through a construction contract at an estimated cost of \$750k; Construction to commence late 2018/early 2019 through 2021.

040E00007 Building Demolition

Funding for demolition of the former NJTA & NJHA Headquarters sites.

040E00039 *Permitting - Bass River Maintenance Yard*

Issue OPS (or On-Call Task) to begin the permitting (DEP, Pinelands, etc.) process for the possible construction of a new MUB at Bass River similar to those that have been constructed under the facilities program at other Maintenance Yards on the TPK & GSP.

040E00030 *Pavement Markings for Turnpike Service Areas - Study*

Study to determine the feasibility and configuration of pavement markings at Service Areas 1N, 1S, 3S, 4N, 6S, 6N, 7S, 8N, 10S and possibly 10N.

| | | |
|-----------|--|--|
| 040E00009 | Preparation of Jurisdictional Limits Maps | Provide for preparation of Maintenance & Jurisdictional Limit Maps that do not exist. This will benefit the Authority by clearly depicting the Authority's limits of responsibility. This will also help in defining maintenance responsibilities and responsibility relative to lawsuits. Each year a manageable number of maps will be prioritized and developed in a stepped process. |
| 040E00024 | Horizontal Curve Warning Signs - Study | FHWA has a December 31, 2019 compliance date for the required installation of warning signs for horizontal curves. Almost every ramp terminal the Authority owns is retrofitted into preexisting urban areas or other environmental constraints resulting in ramps with low operating speeds. With these operational prerequisites satisfied, FHWA requires the warning signing on these ramps. Begun in 2017, the remaining effort is to collect inclinometer readings on identified ramps south of Woodbridge on both roads. This data will be transformed into construction documents. Estimated costs include data collection and design. |
| 040E10062 | Engineering Studies | Funding for various Engineering studies. |
| 040E18054 | On Call Traffic Services Engineer | Funding for Traffic Engineering Studies required by the Authority's Operations Department. There are currently a number of special needs that the Operations Department has that can be addressed under an on-call assignment. This assignment will allow the Operations Department the benefit of immediately utilizing a consultant's extensive experience with the NJTA. |
| 040E18068 | NBHCE Capacity Study | Funding for a study related to options for increasing the capacity of the NBHCE and associated next steps. |
| 040E00031 | <i>Study Light Rail at Vince Lombardi Service area</i> | Feasibility study of a light rail connection at the Vince Lombardi Service area on the New Jersey Turnpike. |
| 040E00032 | <i>Culvert Inspections</i> | Inspection of large culverts (5ft. to 20 ft. span) on the New Jersey Turnpike and Garden State Parkway. |
| 040E10018 | <i>Bridge and Structure Inspections</i> | Inspection of New Jersey Turnpike & Garden State Parkway facilities including but not limited to major bridges, routine bridges, sign structures, antenna towers and other structural roadway features. |

| | | |
|-----------|--|---|
| 040E00033 | <i>Pavement Management</i> | <p>Funding to maintain the Pavement Decision Support System which will analyze annual and historic data to assess pavement performance, determine the remaining service life of pavement sections and make objective recommendations regarding repair types, methods and materials; Collection of Annual Pavement Distress (APD) data (IRI and SDI) for use in the Annual quantitative assessment of the overall condition of the GSP and NJT; and integrating into the eGIS Virtual Driver application high-resolution panoramic images with location attributes.</p> |
| 040E00034 | <i>Special Maintenance & Protection of Traffic (MPT) Plans for GSP North</i> | <p>There are several common corridors or toll plazas where Maintenance and Protection of Traffic (MPT) Standard Drawings cannot apply. These locations are the bypass lanes to toll plazas, the Driscoll Bridge and the GSP between Woodbridge and Paramus.</p> |
| | | <p>A collection of MPT site-specific drawings will be created and approved for use by the Maintenance Department and any contractor. Designers would benefit from these drawings reducing design costs. A reference document would be created in perpetuity; possibly as an Appendix to the NJTA Manual on Traffic Control in Work Zones.</p> |
| 040E00035 | <i>I-95 Extension Managed Lanes Feasibility Study</i> | <p>This study will investigate maximum benefit(s) for repurposing the I-95 extension. Currently the corridor is a two-lane Express Roadway and a three-lane Local Roadway with limited shoulders. Rebuilding the corridor to one, six-lane roadway where two lanes are tolled providing express service to the George Washington Bridge and four, free general-purpose local lanes. The study will task non-financial elements to justify the purpose such as legislative hurdles, origin-destination data, right-of-way limitations and changeable message sign impacts for diversions. Should the study conclude that repurposing the corridor is feasible, the Authority can consider a financial feasibility study to determine if and when the project would recover its costs through the tolled express lanes.</p> |

| | | |
|------------|--|--|
| 040E00037 | Interchange 114 Traffic Signal Study | To study alternatives for the modification of the traffic signal at the Interchange 114 off ramp traffic signal. Improvements will be the responsibility of Monmouth County. |
| 040E00036 | ITS and Lighting Design Document Updates | Revisions to sections 7 and 8 of the Design Manual and associated standard drawings and specifications to reflect current practices. |
| 040E00023 | Data Resources Systems Upgrade | The Data Resources section of the Operations Department has antiquated and obsolete software and tools to produce and store basic volume, crash, and roadway statistics. In addition, these systems are unable to communicate directly with the State Police. File transferring between Operations and State Police is time consuming and incongruent creating multiple steps to cross-communicate. This effort will investigate if new software is necessary, if on-site temporary staff can be used to rectify these situations, or other. This effort will also investigate how to relieve the Department of its obligation to software and programs built and designed by employees whom no longer work for the Authority. |
| 040E00026 | Rutgers Assignment - Maintenance software | Continue developing, upgrading and improving the Authority's web based Maintenance Roadway Management Software. |
| 040E00046 | E-ZPass Contract Implementation | Continual assistance for the implementation of the Authority's E-ZPass contract. Specifically Phase 2A and 2B. |
| 040E00046R | E-ZPass Contract Implementation - Reimbursable | Assist the Authority in transitioning to the new E-ZPass contract. |
| 040E08171 | eGis Data Collection | Expand, enhance and maintain the Engineering Department's AIR Enterprise Geographic Information System. Includes training for Authority staff; administering the GIS databases and services; system assessments, maintenance and enhancements; and discovery, development and delivery of key datasets and spatial applications. |
| 049999999 | Contingency | Provides additional funding for increased project needs or unanticipated projects that fit the description of an eligible Special Project Reserve Fund project as approved by Executive Staff. |

040E00038 *Capital Project Portfolio Management Study*

This project request will allow ITS to procure professional services from an analyst to document the business requirements from ITS, Finance, and Engineering in order to publish a software RFP for the next capital program.

General Reserve Fund

The General Reserve Fund includes \$193 million (73%) for contractual state payments, including the State Transportation Projects Funding Agreement payments of \$166.5 million. The 2018 budget also includes \$32.3 million (12%) for Extraordinary Events, which are generally costs for state of emergency weather events, and \$19 million (7%) for reserves, primarily OPEB. The 2018 budget also includes all reimbursable projects which net to zero spending and projects with an associated capital contribution to be received from third parties under contractual arrangements.

| Category | 2016 | 2017 | 2018 | \$ Change from 2017 Budget | % Change from 2017 Budget |
|---|-----------------------|-----------------------|-----------------------|-------------------------------|------------------------------|
| | Actual | Budget* | Budget | | |
| Extraordinary Events | \$ 10,750,000 | \$ 32,295,000 | \$ 32,295,000 | \$ - | 0% |
| Claim Settlements | 2,500,000 | 3,000,000 | 4,000,000 | 1,000,000 | 33% |
| Other Post-Employment Benefits | 13,000,000 | 17,500,000 | 15,000,000 | (2,500,000) | -14% |
| Bond Cost of Issuance | 295,500 | 1,250,000 | 600,000 | (650,000) | -52% |
| Miscellaneous Expenditures | 1,806,700 | 50,000 | 50,000 | - | 0% |
| State Payments | 294,000,000 | 232,500,000 | 193,000,000 | (39,500,000) | -17% |
| Reimbursable Expenditures | 19,141,600 | 61,480,900 | 18,790,300 | (42,690,600) | -69% |
| Total GRF Expenditures | 341,493,800 | 348,075,900 | 263,735,300 | (84,340,600) | -24% |
| Recoveries from Reimbursable Expenditures | (18,580,700) | (49,427,700) | (13,790,300) | 35,637,400 | -72% |
| Capital Contributions to General Reserve Projects | (570,000) | (12,053,200) | (5,000,000) | 7,053,200 | -59% |
| Total GRF Expenditures Net of Recoveries | \$ 322,343,100 | \$ 286,595,000 | \$ 244,945,000 | \$ (41,650,000) | -15% |

*Reflects current 2017 budget after year to date budget transfers between projects

Figure 107: General Reserve Fund Budget (2016-2018)

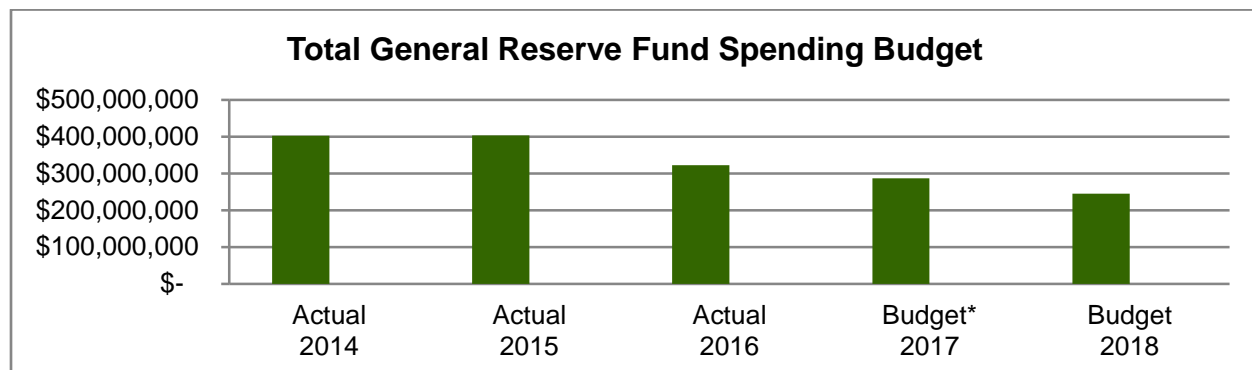


Figure 108: General Reserve Fund Budget Graph (2014-2018)

| | General Reserve Fund Balance | | | | |
|---|------------------------------|------------------------|----------------------|---------------------------|-------------------------|
| | 2016 Actuals | 2017 Est. / Actuals | 2018 Budget | 2017 to 2018 \$ Change | 2017 to 2018 %Change |
| Beginning Balance | \$243,198,400 | \$331,093,000 | \$341,536,700 | \$10,443,700 | |
| Transfer from Revenue Fund | 424,911,600 | 306,927,000 | 279,828,000 | (27,099,000) | |
| General Reserve Expenditures- | | | | | |
| Net of Recoveries & Capital Contributions | (322,343,100) | (260,562,800) | (244,945,000) | 15,617,800 | |
| Supplemental Capital Expenditures | (14,673,900) | (35,920,500) | (140,627,000) | (104,706,500) | |
| Ending Balance | \$331,093,000 | \$341,536,700 | \$235,792,700 | (\$105,744,000) | -31% |

Figure 109: General Reserve Fund Balance (2016-2018)

General Reserve Fund 2018 Projects

| <u>Project #</u> | <u>Project Name</u> | <u>2018 Budget</u> |
|-------------------------|--|------------------------------|
| 080E00014 | Bond Cost of Issuance | \$ 600,000 |
| 080E07000 | Extraordinary Events | 32,295,000 |
| 080E07007 | Transportation Trust Fund | 22,000,000 |
| 080E07015 | Feeder Road Reimbursement NJDOT | 4,500,000 |
| 080E07137 | State Transportation 2016-2021 | 166,500,000 |
| 080E07990 | Claim Settlements | 4,000,000 |
| 080E07991 | Other Post-employment benefits | 15,000,000 |
| 080E07997 | Arbitrage Expense | 50,000 |
| 080E07045 | I-95 GWB Approach Signs PANYNJ | 33,500 |
| 080E17032 | PTC Arch Hardening | 9,127,000 |
| 080E17033 | PTC Repaint and Improvements | 4,500,000 |
| 080C17035 | Parkway Interchange 125 | 5,000,000 |
| 080E27021 | Fiber Relocation Newark Airport | 129,800 |
| 080E27026 | Goethals Bridge Project | 200,000 |
| | | <u>263,935,300</u> |
| 080E07045R | I-95 GWB Approach Signs PANYNJ- Reimbursable | (33,500) |
| 080E17032R | PTC Arch Hardening - Reimbursable | (9,127,000) |
| 080E17033R | PTC Repaint and Improvements - Reimbursable | (4,500,000) |
| 080E27021R | Fiber Relocation Newark Airport - Reimbursable | (129,800) |
| 080E27026R | Goethals Bridge Project - Reimbursable | (200,000) |
| | Total General Reserve Fund Projects | <u>\$ 249,945,000</u> |

Capital Contributions

| <u>Project #</u> | <u>Project Name</u> | <u>2018 Budget</u> |
|-------------------------|--|---------------------------|
| 080E17035R | Parkway Interchange 125 - Capital Contribution | \$ (5,000,000) |

Figure 110: General Reserve Fund Projects

General Reserve Fund

| <u>Project #</u> | <u>Project Name</u> | <u>Project Description</u> |
|------------------|---------------------------------|--|
| 080E00014 | Bond Cost of Issuance | To pay rating agency, legal, trustee, financial advisor, general consulting & traffic engineer fees, etc. for cost of issuance expenses related to variable rate debt. |
| 080E07000 | Extraordinary Events | To pay for the cost of major weather or other events when there is a declared state of emergency. |
| 080E07007 | Transportation Trust Fund | Under an agreement dated 4/27/84, Authority pays the Treasurer of State of New Jersey. These funds are to be used by the State of New Jersey, or the Transportation Trust Fund, to pay or provide for the development of State transportation projects, in effort to further satisfy the overall transportation needs of the State. The agreement expires when all obligations of the Transportation Trust Fund have been satisfied. |
| 080E07015 | Feeder Road Reimbursement NJDOT | Annual renewable Cost Sharing Agreement to provide reimbursement by the Authority to the NJDOT for reconstruction, maintenance and repair of Feeder Roads at twenty New Jersey Turnpike Interchanges and thirty-six Garden State Parkway Interchanges. |
| 080E07137 | State Transportation 2016-2021 | The Authority makes annual payments to the State of New Jersey under a five-year Transportation Projects Funding Agreement for the development of transportation purposes. The agreement expires in 2021. |
| 080E07990 | Claim Settlements | To fund reserve for the Authority's self-insured retention on claims related to property, general liability, and/or auto liability. |
| 080E07991 | Other Post-employment benefits | To fund reserve for OPEB, representing a portion of the additional funding necessary to meet the difference between actuarially calculated Annual Required Contribution (ARC) and pay-go expenses paid through the Operating Expense budget. |
| 080E07997 | Arbitrage Expense | To fund reserve for potential arbitrage payments due to the IRS on the Authority's bonds based upon the arbitrage consultant's annual calculations. |
| 080E07045 | I-95 GWB Approach Signs PANYNJ | Installation of five (5) new Sign Structures, the installation of fixed sign panels on one (1) existing sign structures and the modification of two (2) existing Changeable Message Signs, within the I-95 Corridor. The locations are MP 117.8, MP 118.24, MP 118.4, MP 120.95, MP 121.16, MP 121.32, MP 121.48 and MP 121.68. |

| | | |
|-----------------------------|--|---|
| 080E17032 | PTC Arch Hardening | Local hardening of the arch chords in the main arch truss portion of the bridge. |
| 080E17033 | PTC Repaint and Improvements | Bridge painting and seismic retrofit, structural steel repairs, catwalk repairs, and installation of security gates. |
| 080C17035 | Parkway Interchange 125 | Funding for improvements in Sayreville including the construction of a new E-ZPass only interchange. |
| 080E27021 | Fiber Relocation Newark Airport | Relocation of Existing Fiber Optic Facilities at Newark Liberty Airport. Design and construct an Engineered Material Arresting System (EMAS) for Runaway 11 in response to the Federal Aviation Administration Runway Safety Program. As part of this project, the existing perimeter roadway at the airport adjacent to the Turnpike, Brewster Road, needs to be relocated onto the NJTA right-of-way. |
| 080E27026 | Goethals Bridge Project | Project consists of the design, building, financing and maintenance of the Replacement Bridge. Demolition and removal of the Existing Bridge (Goethals) and all associated work. Paving, curbing and other modifications to Interchange 13 connecting. Agreement between PANYNJ and NJTA. |
| 080E07045R | I-95 GWB Approach Signs PANYNJ-Reimbursable | Reimbursement to be received from the PANYNJ. |
| 080E17032R | PTC Arch Hardening- Reimbursable | Reimbursement to be received from the Pennsylvania Turnpike. |
| 080E17033R | PTC Repaint and Improvements-Reimbursable | Reimbursement to be received from the Pennsylvania Turnpike. |
| 080E27021R | Fiber Relocation Newark Airport-Reimbursable | Reimbursement to be received from the PANYNJ. |
| 080E27026R | Goethals Bridge Project- Reimbursable | Reimbursement to be received from the PANYNJ. |
| Capital Contribution | | |
| 080C17035 | Parkway Interchange 125 | Capital Contribution to be received from Sayreville Seaport Associates |

Figure 111: General Reserve Fund Project Descriptions

Supplemental Capital Fund

Approximately \$27.8 million (20%) is budgeted for Technology Improvements, \$80.4 million (57%) for Roadway Improvements, and \$32.4 million (23%) for Facility Improvements.

| Category | 2016 Actual | 2017 Budget* | 2018 Budget | \$ Change from 2017 Budget | % Change from 2017 Budget |
|--|----------------------|----------------------|-----------------------|-------------------------------|------------------------------|
| Facility Improvements | \$ 6,941,000 | \$ 42,055,200 | \$ 32,384,200 | \$ (9,671,000) | -23% |
| Roadway Improvements | 1,437,200 | 22,643,000 | 80,446,000 | 57,803,000 | 255% |
| Technology Improvements | 6,295,700 | 17,206,800 | 27,796,800 | 10,590,000 | 62% |
| Total Supplemental Capital Fund | \$ 14,673,900 | \$ 81,905,000 | \$ 140,627,000 | \$ 58,722,000 | 71.7% |

*Reflects current 2017 budget after year to date budget transfers between projects.

Figure 112: Supplemental Capital Fund Budget (2016-2018)

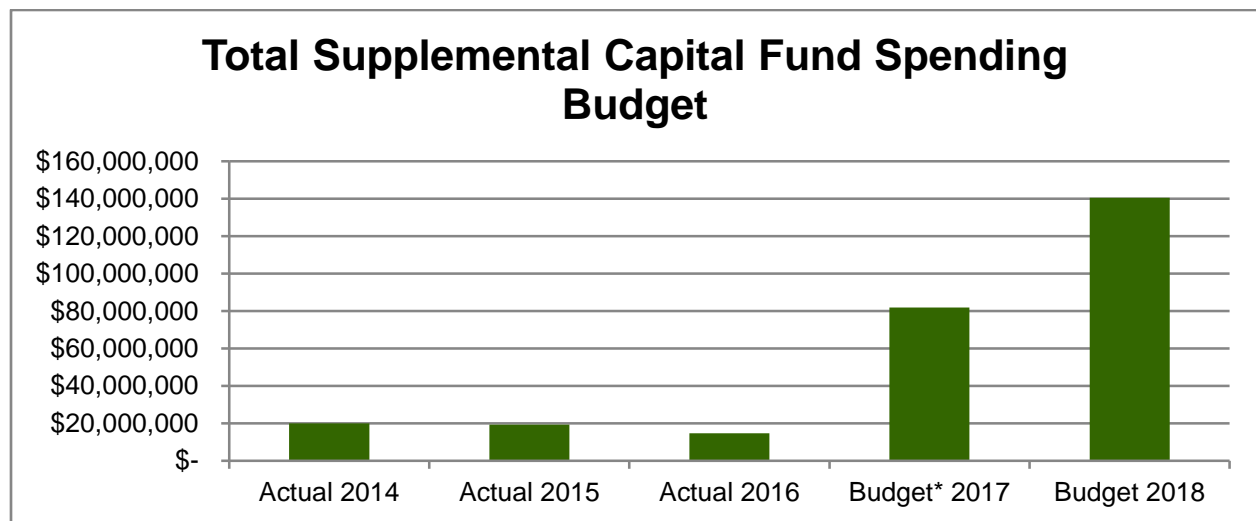


Figure 113: Supplemental Capital Fund Budget Graph (2014-2018)

Supplemental Capital Fund 2018 Projects

| Project # | Project Name | 2018 Budget |
|------------------|--|-----------------------|
| 080C00001 | Toll Plaza Utility Building Improvements at GSP 117 Keyport | \$1,503,800 |
| 080C00002 | Replacement Toll Booths for Turnpike & Parkway | 793,100 |
| 080C00003 | Major Backup Generator Replacement | 5,000,000 |
| 080C00004 | Replacement of Concrete Abutments at Interchanges 3 & 4 (15 lanes) | 2,060,000 |
| 080C00005 | Toll Facility Repairs & Improvements | 7,274,400 |
| 080C07019 | Major Roofing Replacements | 1,500,000 |
| 080C07033 | Security Systems/C Cure | 1,500,000 |
| 080C07117 | HVAC & Boiler Replacement Program | 4,500,000 |
| 080C07118 | Arts Center Parking Lot Lighting | 3,678,900 |
| 080C20019 | Commuter Park and Ride Design & Construction (Int. 58) | 400,000 |
| 080C20021 | Monmouth Service Area Improvements | 24,000 |
| 080C27033 | Arts Center Improvements | 2,750,000 |
| <i>080C00017</i> | <i>TPK Service Area 1S and 1N Driveway Modifications</i> | 500,000 |
| <i>080C00018</i> | <i>Service Area Redevelopment Owners Rep</i> | 400,000 |
| <i>080C00019</i> | <i>Arts Center Traffic Signals and Parking Lot Expansion</i> | 500,000 |
| 080C00006 | Slope Stabilization | 2,312,000 |
| 080C00007 | Hybrid Changeable Message Sign Replacement Project | 10,897,400 |
| 080C00008 | Interchange Improvements | 507,000 |
| 080C00009 | Concrete Barrier Repairs | 18,600 |
| 080C00015 | Gate Repair and Replacement | 2,000,000 |
| 080C07050 | LED Lighting Upgrades | 1,000,000 |
| 080C17034 | Non-Vegetative Management | 300,000 |
| 080C18028 | Morris Canal Bridge | 3,553,500 |
| 080C18029 | Sound Barrier Repair/Replacement | 1,109,600 |
| 080E00020 | NBHCE Pulaski Skyway - stand-by | 240,000 |
| <i>080C00020</i> | <i>GSP MP 117.4 NB Crossover Tunnel Lighting</i> | 650,000 |
| <i>080C00021</i> | <i>GSP Central Interchange Lighting Installation</i> | 750,000 |
| <i>080C00022</i> | <i>Bridge Fender Reconstruction</i> | 2,026,000 |
| <i>080C00023</i> | <i>Reconstruction of the Westerly Hackensack River Bridge Piers</i> | 11,669,900 |
| <i>080C00016</i> | <i>Turnpike Interchange 6 Express E-ZPass Improvements</i> | 2,800,000 |
| <i>080C00024</i> | <i>TPK Int. 14B Canopy Replacement (accident damage)</i> | 2,705,000 |
| <i>080C00025</i> | <i>GSP Br. 82.3N beam repair (accident damage)</i> | 1,916,000 |
| <i>080C00026</i> | <i>Additional Resurfacing on the Garden State Parkway</i> | 30,591,000 |
| <i>080C00027</i> | <i>Interchange 14B Traffic Signal</i> | 400,000 |
| <i>080C00028</i> | <i>Interchange 18E High Speed E-ZPass/Interchange 16E Improvements</i> | 1,000,000 |
| <i>080C00029</i> | <i>Horizontal Curve Warning Signs Installation</i> | 4,000,000 |
| 080C00011 | Coin Machine Replacement - GSP | 1,800,000 |
| 080C00012 | Road Weather Information Systems (RWIS) | 2,444,000 |
| 080C00013 | Production Toll Lane System Refresh | 7,860,800 |
| 080C07052 | Network Infrastructure Improvements | 60,000 |
| 080C07108 | Radio Replacement Project | 1,000,000 |
| 080C20020 | Toll Plaza Cash Recyclers | 1,500,000 |
| 08999999 | Contingency | 5,000,000 |
| <i>080C00030</i> | <i>Traffic Software Upgrade & Improvements</i> | 1,332,000 |
| <i>080C00031</i> | <i>Motorola Consolettes NJSP</i> | 1,100,000 |
| <i>080C00032</i> | <i>Motorola Portable Radios NJSP</i> | 4,200,000 |
| <i>080C00033</i> | <i>State Police Body Cameras</i> | 1,500,000 |
| | Total Supplement Capital | \$ 140,627,000 |

** New projects are italicized

Figure 114: Supplemental Capital Fund Projects

Supplemental Capital Fund

| <u>Project #</u> | <u>Project Name</u> | <u>Project Description</u> |
|------------------|--|---|
| 080C00001 | Toll Plaza Utility Building Improvements at GSP 117 Keyport | Toll Plaza Utility building improvements at GSP Interchange 117 (Keyport). The existing building condition is poor and in need of repair or replacement. This work will improve conditions for staff as well as IT equipment. |
| 080C00002 | Replacement Toll Booths for Turnpike & Parkway | Design, construction and purchase of toll booths. Surplus existing toll booths identified through design will be rehabilitated. Stock of short supply will be procured. |
| 080C00003 | Major Backup Generator Replacement | Funding for design, permitting, purchasing and construction resources for facility and site improvements in coordination with our overall generator replacement program. |
| 080C00004 | Replacement of Concrete Abutments at Interchanges 3 & 4 (15 lanes) | Design, construction and supervision of toll island bumper block rehabilitation. |
| 080C00005 | Toll Facility Repairs & Improvements | Toll Plaza Site rehabilitation at GSP Interchange 142, TPK Interchanges 1, 14B and 15E and Treadle repairs at GSP and TPK Toll Plazas. |
| 080C07019 | Major Roofing Replacements | Funding for design, permitting, purchasing, investigation, building commissioning and construction resources for all Authority Buildings, facilities and building structures with costs over \$50,000.00. Facilities include service areas, toll department facilities, maintenance yards, etc. |
| 080C07033 | Security Systems/C Cure | Continual deployment of distress and security devices on the New Jersey Turnpike, specifically within the booths. This project will be shared between ITS and Security. This procurement includes hardware, software, support, and services. |
| 080C07117 | HVAC & Boiler Replacement Program | Funding for design, permitting, purchasing and construction resources to continue the Maintenance Department's Authority-wide HVAC equipment replacement program. Facilities include service areas, toll department facilities, maintenance yards, etc. |
| 080C07118 | Arts Center Parking Lot Lighting | Upgrade of the lighting in the parking lot at the PNC Bank Arts Center. |
| 080C20019 | Commuter Park and Ride Design & Construction (Int. 58) | Funding is required for the Authority to reimburse Ocean County for the design and construction of a new Park & /Ride facility at MP 58 on the Parkway. The design costs (maximum of \$400 thousand) are to be paid upon completion of the design & the construction costs (\$2 million) are to be paid monthly based on construction progress. |

| | | |
|-----------|--|---|
| 080C20021 | Monmouth Service Area Improvements | Final design, permitting and construction support for the redevelopment of the Monmouth Service Area in conjunction with HMS Host's replacement of the service area building. |
| 080C27033 | Arts Center Improvements | Engineering to issue design OPS for the preparation of plans and specifications for improvements to the PNC Bank Arts Center facility (Amphitheater and site improvements). |
| 080C00017 | <i>TPK Service Area 1S and 1N Driveway Modifications</i> | Funding for design, permitting, purchasing and construction resources for the driveway entrance/exit modifications. |
| 080C00018 | <i>Service Area Redevelopment Owners Rep</i> | Provide project management/liaison/oversight services between NJTA and HMS Host and their respective contractors during renovation/reconstruction of service areas on the Garden State Parkway and New Jersey Turnpike. |
| 080C00019 | <i>Arts Center Traffic Signals and Parking Lot Expansion</i> | The traffic patterns inside the Arts Center are the reverse of customary travel violating driver expectancy. Traffic signals are proposed at the termini of both the northbound and southbound ramps into the Arts Center at the East-West Road. These signals will implement accustomed traffic patterns for both the summer concert season and the non-summer season. An additional overhead lane-use signal system is proposed to support event operations and special traffic patterns. In addition, the traffic signal on the northbound side will need to be removed and the existing intersection islands and curbing be reconstructed to allow for potential modifications to the South Main parking lot. |
| 080C00006 | Slope Stabilization | Stabilization of slope for Heards Brook on the property of the NJTA Headquarters building. |
| 080C00007 | Hybrid Changeable Message Sign Replacement Project | Funding for the procurement, design, construction and supervision to replace legacy Changeable Message Signs on the Turnpike. |
| 080C00008 | Interchange Improvements | Implementation of Improvements at GSP interchanges. |
| 080C00009 | Concrete Barrier Repairs | Completion of design for median barrier on TPK. Project will close once D-20 is complete. |
| 080C00015 | Gate Repair and Replacement | Continue the design and preparation of construction documents for the New Jersey Turnpike Interchange 11 pilot site for new railroad style ramp gates. Funding for in-house trades repair and replacement of existing gates due to end of life or incident. |
| 080C07050 | LED Lighting Upgrades | Upgrade multiple locations to LED Lights for TPK Underpasses, Highmast Poles, Interchange and Ramp lights, Toll Department Facilities, etc. New LED systems will provide maintenance free lighting for 10 years as well as a 55% reduction in energy usage. |

| | | |
|-----------|---|--|
| 080C17034 | Non-Vegetative Management | This contract provides a pervious asphaltic ground surfacing to combat vegetation growth adjacent to Authority roadways. Selected areas are chosen based on priority, significant man-hours and resources are spent on maintenance, and/or place our employees in potentially unsafe conditions. |
| 080C18028 | Morris Canal Bridge | Design, Supervision and Construction of vehicular bridge over the Morris Canal; connecting Jersey Avenue and Phillips Street in Jersey City. |
| 080C18029 | Sound Barrier Repair/Replacement | Repair or replacement of damaged sound barriers or MSE walls. If the repair is the result of an accident and is recoverable, a reimbursable project will be used instead. |
| 080E00020 | NBHCE Pulaski Skyway - stand-by | To provide stand-by wrecker service during the construction on the Pulaski Skyway. |
| 080C00020 | <i>GSP MP 117.4 NB Crossover Tunnel Lighting</i> | Tunnel is not presently illuminated. Per Authority and AASHTO highway lighting guidelines, a tunnel lighting system is needed for day and night illumination. |
| 080C00021 | <i>GSP Central Interchange Lighting Installation</i> | Funding for design, permitting, purchasing and construction resource for the replacement of Utility Owned (Flat Rate) Lighting at GSP Interchanges 114, 117 & 118 to Authority Owned LED Lighting per AASHTO and Authority guidelines. |
| 080C00022 | <i>Bridge Fender Reconstruction</i> | Inspection, design, construction and construction supervision for reconstruction of deteriorated structural members and channel marking lighting systems of waterway channel fender protection systems of New Jersey Turnpike and Garden State Parkway bridges. |
| 080C00023 | <i>Reconstruction of the Westerly Hackensack River Bridge Piers</i> | Inspection, design, construction and construction supervision for reconstruction of deteriorated bridge piers supporting the Westerly extension which exhibit severe spalling, section loss wide cracks. |
| 080C00016 | <i>Turnpike Interchange 6 Express E-ZPass Improvements</i> | Implement dual Express E-ZPass lanes in the eastbound and westbound directions at the Interchange 6 toll plaza. |
| 080C00024 | <i>TPK Int. 14B Canopy Replacement (accident damage)</i> | Funding to repair damage at Turnpike Interchange 14B Canopy caused by a motor vehicle accident. Some funds may be recovered through insurance claims. |
| 080C00025 | <i>GSP Br. 82.3N beam repair (accident damage)</i> | Funding to repair damage at Parkway Br. 82.3N's Beam caused by a motor vehicle accident. Some funds may be recovered through insurance claims. |
| 080C00026 | <i>Additional Resurfacing on the Garden State Parkway</i> | Provides for additional funding for annual roadway resurfacing program for the Garden State Parkway. |

| | | |
|-----------|--|--|
| 080C00027 | <i>Interchange 14B Traffic Signal</i> | <p>The existing interchange is original and dates to 1954 with original geometry not designed for present-day volumes. Furthermore, the traffic islands create counterintuitive right-of-way assignment that may violate driver expectancy. The removal of the islands and the creation of a T-intersection recommends a complete pavement repair of the intersection outside the toll plaza. The traffic signal and pavement repairs are estimated at \$5,000,000.</p> |
| 080C00028 | <i>Interchange 18E High Speed E-ZPass/Interchange 16E Improvements</i> | <p>As a result of the study to remedy the AM peak period bus queueing at Interchange 16E, a long-term proposal for Interchanges 16E/18E is to create a high-speed bypass for Interchange 18E and allow 18E cash customers to use the remaining toll plaza at 16E. A ramp would be constructed to allow traffic to return to the SNE Roadway. The high-speed bypass proposal may support future All-Electronic Tolling.</p> |
| 080C00029 | <i>Horizontal Curve Warning Signs Installation</i> | <p>Data was collected and designs concluded in 2017 to install approximately 250 warning signs to achieve a 2019 FHWA mandate. Phase I was limited to both roads at Interchange 11 on the Turnpike and Interchange 129 on the Parkway and north to both roadway termini.</p> |
| 080C00011 | Coin Machine Replacement - GSP | <p>The Automatic Coin Machines used on the Parkway have been in operations for 20+ years. These machines have been obsolete for many years and replacement parts are difficult or impossible to acquire. In 2017 two (2) vendors were identified to supply ACMs according to ITS's specifications. Both machines were purchased for evaluation. Based on the testing phase, ITS will draft and submit an RFP and plans to purchase equipment in the 2nd quarter of 2018. This procurement includes hardware, software, and services.</p> |
| 080C00012 | Road Weather Information Systems (RWIS) | <p>Joint effort between ITS, Operations, and Engineering. This project will provide for the procurement of hardware, software, support, and installation services, in addition to engineering design, construction, and supervision services for the installation of approximately 24 weather stations on the Parkway and Turnpike. This procurement includes hardware, software, and services.</p> |

| | | |
|-----------|-------------------------------------|---|
| 080C00013 | Production Toll Lane System Refresh | This is a multiyear project in which ITS will replace all system components which have been tested and qualified for use through the Toll Lane System Evaluation project. The current toll collection equipment is approximately 20 years old. Funding for this project will replace equipment in High Speed, Manual, Standard, and Automatic lanes. Components in these lanes include, but are not limited to lane controllers, Automatic Vehicle Classification (AVC), Automatic Vehicle Identification (AVI), Violation Enforcement System (VES), Lane Electronic Cabinet (LEC), Patron Fare Display (PFD), Manual Lane Toll Terminals (MLT), and Zone Controllers. These components have been fully tested and ITS will continue to systematically replace components in the lane. This procurement includes hardware, software, and support services. In addition, funding will support software initiatives such as migrating reports from Actuate 9 to JReport, replacing Xerox software in all High Speed Lanes on the Turnpike and Parkway, migration of Turnpike Plazas from Windows 2003 to Linux, and enhancing the tolling Audit software. |
| 080C07052 | Network Infrastructure Improvements | Continuation of installing wireless, switching, and routing equipment as well as terminating / installing fiber in locations where communications are required along the New Jersey Turnpike and Garden State Parkway. The equipment and material will connect the Intelligent Transportation Data Points (signs, cameras and sensors) back to the Authority's network. This procurement includes hardware, software, and services. |
| 080C07108 | Radio Replacement Project | Continuation of radio replacement efforts in 2017. Funding is required for additional radios and software licenses, as well as installation services. This is required as NJTA currently manages more than 1,200 vehicles. 1,200 was the original amount of vehicles listed in the procurement three years ago. |
| 080C20020 | Toll Plaza Cash Recyclers | Funding for the purchase of money counting machines for each toll plaza to be used in the collector bank out process. Machines include a vault that secures funds until picked up by armored car company. The machines also transmit electronically a verified money count to the Authority's bank that is credited the same day to the Authority's account. |
| 08999999 | Contingency | Provides additional funding for increased project needs or unanticipated projects that fit the description of an eligible Supplemental Capital or General Reserve Fund project as approved by Executive Staff. |

| | |
|--|--|
| <i>080C00030 Traffic Software Upgrade & Improvements</i> | This project will provide funding for a pilot project to automate sign control based on traffic conditions. It will also upgrade the ITMS sign control system to the latest version. Lastly, Operations and ITS have identified the need for the creation of a Traffic Volume/Traffic count application. The application will provide for enhanced traffic count data integration, management, and reporting capabilities. |
| <i>080C00031 Motorola Consolettes NJSP</i> | The existing consolettes for NJSP radio system are over 10 years old and are no longer supported by the vendor. These consolettes are located at all the barracks and STMC. These consolettes will also be required to connect to the new NJSP P25 Phase 2 system currently being deployed by NJSP. The new consolettes will also require an antennas upgrade. This procurement includes software, hardware, and services. |
| <i>080C00032 Motorola Portable Radios NJSP</i> | The existing portable radios carried by NJSP trooper and approved NJTA personal are end of life and are no longer supported by the vendor. Currently there is a need for approximately 400 portable radios. The existing portable radios are analog and will not function on the new NJSP P25 Phase 2 radio system currently being deployed by NJSP. The new radios will be fully compatible with the NJSP P25 Phase 2 system. |
| <i>080C00033 State Police Body Cameras</i> | State Police Project to install body cameras on Troopers. This procurement includes hardware, software, and services. |

Figure 115: Supplemental Capital Fund Project Descriptions

Construction Fund

Capital Improvement Program

The New Jersey Turnpike Authority's 10 year, \$7 billion CIP was adopted in October 2008. The program includes projects focused on capacity, state of good repair, safety and security. These projects are separated into the following categories: Turnpike Interchanges 6 to 9 Widening, Bridge Construction, Preservation and Security, Roadway Improvements, Interchange Improvements, Facilities Improvements, and Widening of the Garden State Parkway (Mileposts 35 to 80). To date, the Authority has issued \$7.6 billion of the Turnpike revenue Bonds to fund the \$7 billion CIP. Approximately \$525 million of additional bonds are expected to be issued through 2018.

A summary of the projects in the \$7 billion CIP is shown below:

| <u>Tier I Project Groups</u> | <u>Current Budget</u> | <u>Project Amount Spent or Committed Through 9/30/17</u> | <u>Percentage of Budget</u> |
|--|-------------------------|--|-----------------------------|
| Turnpike Interchange 6-9 Widening | \$ 2,231,399,000 | \$ 2,135,665,000 | 95.7% |
| Bridge Construction, Preservation & Security | 1,682,762,000 | 1,470,716,000 | 87.4% |
| Roadway Improvements | 816,783,000 | 797,205,000 | 97.6% |
| Interchange Improvements | 1,026,431,000 | 938,692,000 | 91.5% |
| Facilities Improvements | 652,625,000 | 648,602,000 | 99.4% |
| Parkway Mileposts 35-80 Widening* | 590,000,000 | 569,183,000 | 96.5% |
| | \$ 7,000,000,000 | \$ 6,560,063,000 | 93.7% |

* The total Parkway Mileposts 35-80 Widening cost is \$690,000,000, but \$100,000,000 was financed with Bond Anticipation Notes proceeds prior to the first series of bonds being issued for the CIP.

Figure 116: Capital Improvement Program Projects Summary

| Construction Fund Balance | | | | | |
|--|-----------------------|-----------------------|-----------------------|-----------------------|---------------------|
| | 2016 | 2017 | 2018 | 2017 to 2018 | 2017 to 2018 |
| | Actual | Est. / Actuals | Budget | \$ Change | % Change |
| Beginning Cash and Investments | \$ 940,950,000 | \$ 282,587,000 | \$ 441,698,400 | \$ 159,111,400 | |
| Bond Proceeds | - | 600,000,000 | 525,000,000 | (75,000,000) | |
| Interest Income | 2,514,000 | 3,000,000 | 2,000,000 | (1,000,000) | |
| Spending | (660,877,000) | (443,888,600) | (295,810,500) | 148,078,100 | |
| Ending Available Cash and Investments* | \$ 282,587,000 | \$ 441,698,400 | \$ 672,887,900 | \$ 231,189,500 | 52.3% |

*Does not agree to fund balance in financial statement as this chart excludes capitalized assets.

Figure 117: Construction Fund Balance (2016-2018)

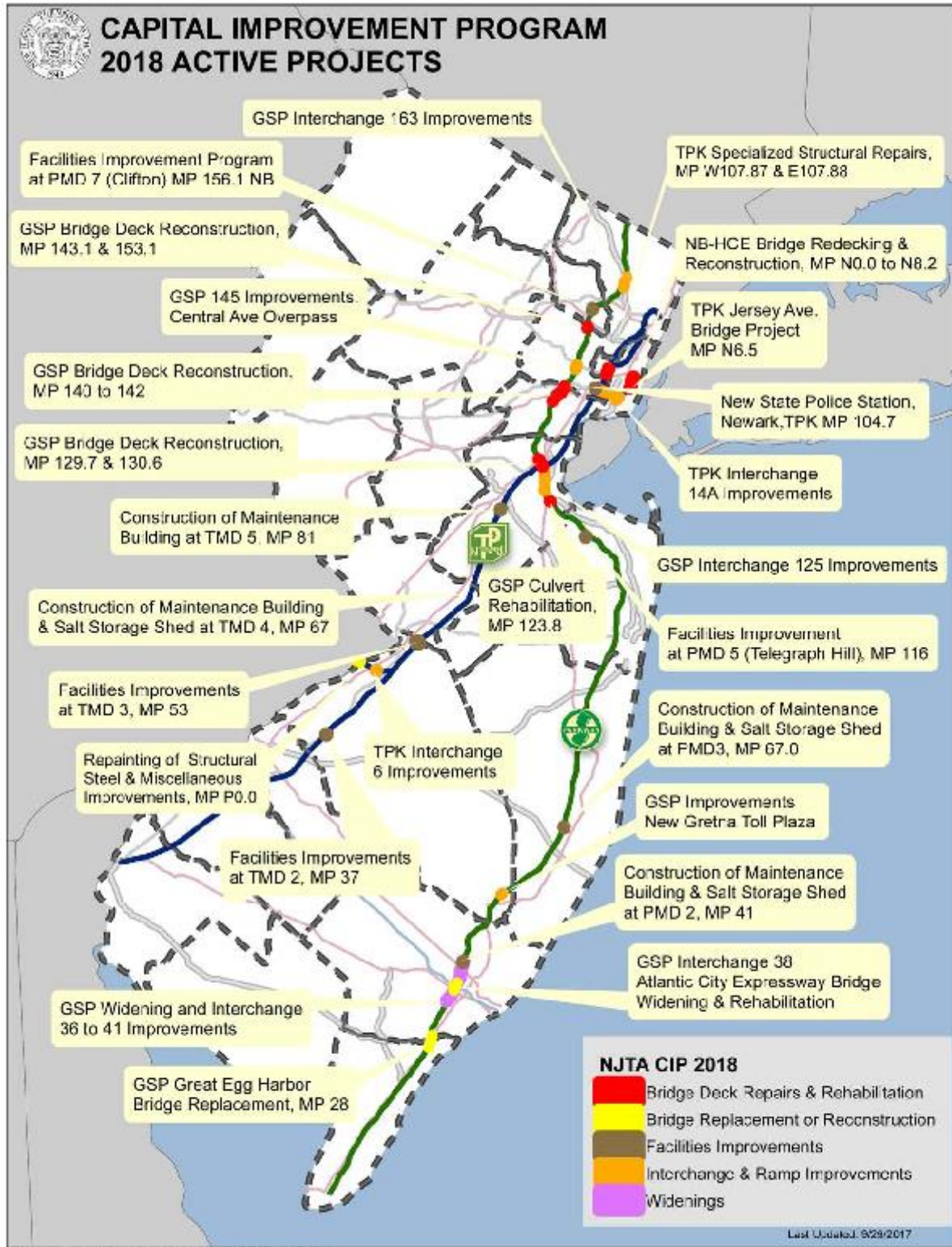


Figure 118: Map of Capital Improvement Program Active Projects

Funding for the 10-year CIP began with the issuance of \$160 million of Series 2008A Subordinate Bond Anticipation Notes. In April 2009, the Authority issued \$1.75 billion of Turnpike Revenue Bonds, which included \$1.375 billion of Federally Taxable, Issuer Subsidy, Build America Bonds, which were authorized under the American Recovery and Reinvestment Act of 2009. The Authority was one of the first issuers in the country to take advantage of this financing option. Financing of the program has continued, at an average net interest cost below 5%.

The \$7 billion CIP includes the following projects:

Turnpike Widening (Interchange 6-9)

1. Turnpike Interchange 6-9 Widening

- i. **Location:** Burlington, Mercer, and Middlesex counties
- ii. **Description:** The project involved the construction of 3 additional lanes, both northbound and southbound, between Interchanges 6 and 8A, approximately 25 miles. The project also included the addition of one lane in each direction between Interchanges 8A and 9. The widening project resulted in 12 total mainline lanes being provided between Interchanges 6 and 9. In addition, the project included interchange improvements within the project limits as determined to be necessary to meet traffic demands for the design year of 2032.
- iii. **Status:** Design and construction completed and opened to traffic – November 2014.
- iv. **Impact on Operating Budget:** This project added 216 lane miles of new pavement which increased operating and maintenance expenses approximately 5% for personnel, materials and equipment. These increases in costs have been incorporated into the budget based on actual expenses over the past three years.

Bridge Improvements

1. Bridge Painting Phase I

- i. **Location:** Various counties
- ii. **Location:** This project provided for the design and construction for the cleaning and repainting of structural steel of the highest priority Turnpike and Parkway major and non-major bridges.
- iii. **Status:** Design and construction completed – September 2014
- iv. **Impact on Operating Budget:** This group of bridge projects extends the life of the structural steel and reduces the need for intermittent repairs resulting in minor reductions in routine maintenance costs. These reductions have been incorporated into the operating budget based on actual cost savings.

2. Deck Reconstruction Phase I

- i. **Location:** Various counties
- ii. **Description:** This project provided for the design and construction of the re-decking of the highest priority Turnpike and Parkway mainline bridges.
- iii. **Status:** Design and construction completed and opened to traffic – March 2016
- iv. **Impact on Operating Budget:** This group of bridge projects extends the life of the bridge decks and reduces the need for intermittent repairs which results in minor reductions in routine maintenance costs. These reductions have been incorporated into the operating budget based on actual cost savings.

3. Bridge Preservation & Security

- i. **Location:** Various counties
- ii. **Description:** This project provides for the design and construction phases of countermeasures and security improvements for the Authority's 16 major bridges on the Turnpike and Parkway. It also includes the design and construction of seismic retrofitting of the Turnpike's highest priority bridges as recommended from the Phase I Seismic Screening and Prioritization Report. This project further provides for the design and construction for the miscellaneous bridge work on the Turnpike not covered under the annual miscellaneous structural repair contracts. The primary work includes bridge bearing replacement and significant substructure repairs.
- iii. **Status:** Design and construction is on-going
- iv. **Impact on Operating Budget:** This group of bridge projects focuses primarily on security measures and seismic retrofitting, which has little to no impact on the operating budget. The miscellaneous bridge repairs will provide minor reductions in routine maintenance costs, and have been incorporated into the budget estimates.

4. Deck Reconstruction Phase II

- i. **Location:** Various counties
- ii. **Description:** This project provides for the design and construction of the re-decking of the highest priority Turnpike and Parkway mainline bridges.
- iii. **Status:** Design and construction is on-going
- iv. **Impact on Operating Budget:** This group of bridge projects extends the life of the bridge decks and reduces the need for intermittent repairs which results in minor reductions in routine maintenance costs. These minor reductions have been incorporated into the operating budget.

5. Bridge Painting Phase II

- i. **Location:** Various counties
- ii. **Description:** This project provides for the design and construction for the cleaning and repainting of structural steel of the highest priority Turnpike and Parkway major and non-major bridges.
- iii. **Status:** Design and construction is on-going
- iv. **Impact on Operating Budget:** This group of bridge projects extends the life of the structural steel and reduces the need for intermittent repairs resulting in minor reductions in routine maintenance costs. These reductions have been incorporated into the operating budget.

6. Turnpike Interchange 16E-18E Bridge Improvements

- i. **Location:** Hudson County
- ii. **Description:** This project provided for the widening and re-decking of Structure No. E112.58A and the widening of Secaucus Road, Structure No. E112.10.
- iii. **Status:** Design and construction completed and opened to traffic – 2012
- iv. **Impact on Operating Budget:**

7. Turnpike Hackensack East Bridge Rehabilitation

- i. **Location:** Hudson County
- ii. **Description:** This project provided for the design and construction of the rehabilitation on the Turnpike's existing Eastern Hackensack River Bridge, Structure No. E109.83. The primary work included bridge re-decking, structural repairs and seismic retrofit.

- iii. **Status:** Design and construction completed and opened to traffic – April 2015
 - iv. **Impact on Operating Budget:** This bridge project extends the life of the bridge and reduces the need for intermittent repairs which results in minor reductions in routine maintenance costs. These minor reductions have been incorporated into the operating budget based on actual costs.
- 8. Newark Bay-Hudson County Extension Bridge Re-decking**
- i. **Location:** Hudson and Essex counties
 - ii. **Description:** This project provides for the design and construction of the re-decking of various structures on the Newark Bay-Hudson County Extension, including the Newark Bay Bridge, Structure No. N2.01. This project also provides for the repairs to structural steel and substructure units, security improvements, and painting.
 - iii. **Status:** Design and construction on-going
 - iv. **Impact on Operating Budget:** This group of bridge projects extends the life of the bridge decks and structural steel. These projects reduce the need for intermittent repairs which results in minor reductions in routine maintenance costs. These minor reductions have been incorporated into the operating budget.
- 9. Turnpike Special Bridge Structures**
- i. **Location:** Various counties
 - ii. **Description:** This project provides for the design and construction of specialized bridge repairs on the Turnpike that are not covered under the annual miscellaneous structural repair contracts. The primary work includes mitigation of concrete deterioration caused by Alkali-Silica Reaction (ASR), pile replacement, cable suspender replacements, and high mast lighting repairs.
 - iii. **Status:** Design and construction is on-going
 - iv. **Impact on Operating Budget:** This group of bridge projects extends the life of the bridges and reduces the need for intermittent repairs which results in minor reductions in routine maintenance costs. These minor reductions have been incorporated into the operating budget.
- 10. Parkway Bass River Bridge**
- i. **Location:** Atlantic County
 - ii. **Description:** This project provided for the design and construction of improvements to the Parkway crossing of the Bass River. The primary work included the construction of a new parallel bridge and re-decking, structural repairs and seismic retrofit on the existing bridge, Structure No. 51.9.
 - iii. **Status:** Design and construction completed and opened to traffic – May 2015
 - iv. **Impact on Operating Budget:** This bridge project extends the life of the existing bridge and reduces the need for intermittent repairs which results in minor reductions in routine maintenance costs. In addition, the new bridge adds approximately 3.5 lane miles which increases the operations and maintenance costs by about 0.1%. These operations and maintenance cost savings and additions have been incorporated into the operating budget based on actual costs.
- 11. Parkway Mullica River Bridge**
- i. **Location:** Atlantic County
 - ii. **Description:** This project provided for the design and construction of improvements to the Parkway crossing of the Mullica River. The primary work included the construction of a new

parallel bridge and re-decking, structural repairs and seismic retrofit on the existing bridge, Structure No. 49.0.

- iii. **Status:** Design and construction of new bridge completed and opened to traffic – December 2012. Design and reconstruction of existing bridge completed and opened to traffic – April 2014.
- iv. **Impact on Operating Budget:** This bridge project extends the life of the existing bridge and reduces the need for intermittent repairs which results in minor reductions in routine maintenance costs. In addition, the new bridge adds approximately 3.5 lane miles which increases the operations and maintenance costs by about 0.1%. These operations and maintenance cost savings and additions have been incorporated into the operating budget based on actual costs.

12. Parkway Bridge Substructure Repairs

- i. **Location:** Various counties
- ii. **Description:** This project provided for the design and construction of repairs and rehabilitation of the existing Driscoll Bridge, Structure 127.2, along with pier caps, columns, and substructure elements on other water crossings.
- iii. **Status:** Design and construction completed and opened to traffic – December 2015
- iv. **Impact on Operating Budget:** This group of bridge projects extends the life of the bridges and reduces the need for intermittent repairs which results in minor reductions in routine maintenance costs. These minor reductions have been incorporated into the operating budget.

13. Parkway Great Egg Harbor/Drag Channel Bridges

- i. **Location:** Atlantic County
- ii. **Description:** This project provides for the design and construction of a new parallel bridge carrying the southbound Parkway over Great Egg Harbor and Drag Channel. The new bridge will be constructed west of the existing southbound structure. The new bridges include a new 3,834-foot-long bridge over Great Egg Harbor and a new 770-foot-long bridge over Drag Channel. Construction will also include approximately 4,900 linear feet of new approach roadways; demolition of the existing southbound bridge; rehabilitation of the northbound Parkway bridge; and demolition of the nearby existing Beesley's Point Bridge. Special construction features include use of high performance concrete for the bridge decks, a ten-foot-wide multi-use pathway on the west side of the new bridges and approach roadways, and a plastic lumber fender system to protect the bridge piers.
- iii. **Status:** Design and construction is on-going
- iv. **Impact on Operating Budget:** This bridge project extends the life of the existing bridge and reduces the need for intermittent repairs which results in minor reductions in routine maintenance costs. In addition, new bridges are added which increase the operations and maintenance costs. These operations and maintenance cost savings and additions have been incorporated into the operating budget.

Roadway Improvements

1. Drainage Improvements

- i. **Location:** Various counties
- ii. **Description:** This project includes design services and construction to rehabilitate or replace non-functioning and substandard drainage systems. The project also includes the analysis of the condition of existing median inlets along the Authority's mainline and interchange ramp roadways, and will construct recommended improvements in compliance with current environmental regulations.

- iii. **Status:** Design and construction is on-going
 - iv. **Impact on Operating Budget:** This group of projects extends the life of the drainage systems and reduces the need for intermittent repairs which results in minor reductions in routine maintenance costs. These minor reductions have been incorporated into the operating budget.
- 2. Improvements to Roadway Appurtenances**
- i. **Location:** Various counties
 - ii. **Description:** This project provides for upgrading various guide rail, guide rail end treatments, and crash cushions along the Parkway and Turnpike.
 - iii. **Status:** Design and construction is on-going
 - iv. **Impact on Operating Budget:** This group of projects extends the life of the drainage systems and reduces the need for intermittent repairs which results in minor reductions in routine maintenance costs. These minor reductions have been incorporated into the operating budget.
- 3. Median Barrier Improvements**
- i. **Location:** Various counties
 - ii. **Description:** This project included the inspection and condition assessment of concrete median barrier, and the implementation of a repair/replacement/upgrade program along the Parkway and Turnpike mainline and interchange ramps. The project included sections of severely deteriorated concrete median barrier that required replacement between Parkway MP 141 and MP 160.
 - iii. **Status:** Design and construction completed – July 2014
 - iv. **Impact on Operating Budget:** This group of projects extends the life of the drainage systems and reduces the need for intermittent repairs which results in minor reductions in routine maintenance costs. These minor reductions have been incorporated into the operating budget based on actual costs.
- 4. Guide Sign Replacements Phase I**
- i. **Location:** Various counties
 - ii. **Description:** This project includes inspection, assessment and implementation of the remedial measures necessary to bring dated mainline and interchange guide signing into compliance with current standards. This project will upgrade existing Parkway and Turnpike guide signs and structures, along the mainline, ramps or at facilities to the current design standards. The project includes the study and assessment of current signing legends and locations along with recommendations and plans to procure the construction services necessary to bring signing into compliance with current standards.
 - iii. **Status:** Design and construction is on-going
 - iv. **Impact on Operating Budget:** This group of projects has no impact on the operating budget.
- 5. Guide Sign Replacements Phase II**
- i. **Location:** Various counties
 - ii. **Description:** This project included the deployment of 244 Variable Message Signs (VMSs) at various locations along the length of the Turnpike and the Parkway. The project provided for design and construction of VMS sign supports, provision and installation of VMS signs,

and connectivity utilizing fiber optic communications networks back to the Statewide Traffic Management Center (STMS). All signs are monitored and controlled from the STMC.

- iii. **Status:** Design and construction completed – June 2015
- iv. **Impact on Operating Budget:** This project added 244 VMSs to the Authority facilities, which results in additional operating and maintenance expenses. These additions have been incorporated into the operating budget based on actual costs.

6. Turnpike and Parkway Southern Improvements

- i. **Location:** Various counties
- ii. **Description:** This project provided miscellaneous improvements to mainline and interchanges located in the southern portion of the Turnpike between Interchange 1 and Interchange 4 and on the Parkway between MP 0 and MP 48.
- iii. **Status:** Design and construction completed – December 2015
- iv. **Impact on Operating Budget:** This group of projects cleared numerous maintenance issues and reduces the need for intermittent repairs which results in minor reductions in routine maintenance costs. These minor reductions have been incorporated into the operating budget based on actual costs.

7. Parkway Mainline Shoulder Improvements

- i. **Location:** Ocean and Monmouth counties
- ii. **Description:** In the late 1980's, the right and left mainline shoulders from MP 80 to MP 100 on the Parkway were eliminated and the width of the travel lanes was reduced to create a third travel lane in both the northbound and southbound directions between Interchanges 80 and 91 and a fourth lane between Interchanges 91 and 98. The geometric changes were made to provide additional capacity to meet the traffic demands along this section of the Parkway. This project reconstructed the mainline roadway to provide full-width right and left shoulders and to widen the driving lanes to widths that meet current standards.
- iii. **Status:** Design and construction completed and opened to traffic - December 2015
- iv. **Impact on Operating Budget:** This project added 40 lane miles of new pavement which increased operating and maintenance expenses approximately 1% for personnel, materials and equipment. These increases in costs have been incorporated into the budget based on actual expenses.

Interchange Improvements

8. Facilities Improvements Phase II

- i. **Location:** Various counties
- ii. **Description:** This project includes improvements to interchanges on the Turnpike and Parkway. Interchange locations include Turnpike Interchanges 9, 10, 15W, 16W, and Parkway Interchanges 0, 105, 109, 145, 163.
- iii. **Status:** Design and construction is on-going
- iv. **Impact on Operating Budget:** This group of projects cleared numerous maintenance issues and reduces the need for intermittent repairs which results in minor reductions in routine maintenance costs. These minor reductions have been incorporated into the operating budget based on actual costs.

9. Turnpike Interchange 8A to Route 130 Connector Improvements

- i. **Location:** Middlesex County
- ii. **Description:** This project will address significant traffic congestion near Interchange 8A. The project limits include a section of Route 32 between Interchange 8A and the interconnection of Route 32 with Route 130. Middlesex County has requested that the Authority undertake appropriate improvements on the basis that much of the traffic within the corridor is destined to or from the Turnpike.
- iii. **Status:** Design and construction is on-going
- iv. **Impact on Operating Budget:** This project adds approximately nine lane miles of new pavement which increases operating and maintenance expenses approximately 0.25% for personnel, materials and equipment. These increases in costs have been incorporated into the budget.

10. Turnpike Interchange 14A Reconstruction

- i. **Location:** Hudson County
- ii. **Description:** There are operational limitations due to constrained geometry for this existing Turnpike interchange that it is located within the cities of Bayonne and Jersey City. The proposed redevelopment of the Military Ocean Terminal in Bayonne along with Global Terminal will result in a significant increase in traffic using the Interchange 14A toll plaza. The interchange capacity will be improved and two additional toll lanes will be added to the existing toll plaza to address the operational and capacity deficiencies of the existing interchange.
- iii. **Status:** Design and construction is on-going
- iv. **Impact on Operating Budget:** This project adds six lane miles of new pavement which increases operating and maintenance expenses approximately 0.2% for personnel, materials and equipment. These increases in costs have been incorporated into the budget.

11. Parkway Interchange 41 Improvements

- i. **Location:** Atlantic County
- ii. **Description:** At Interchange 41, local traffic previously accessed the Parkway through a service road to the Atlantic City Service Area from Jimmie Leeds Road. This project provided two additional ramps to allow Parkway access at Jimmie Leeds Road to and from the south.
- iii. **Status:** Design and construction completed and opened to traffic – August 2015
- iv. **Impact on Operating Budget:** This project adds two lane miles of new pavement which increases operating and maintenance expenses less than 0.1% for personnel, materials and equipment. These slight increases in costs have been incorporated into the budget based on actual costs.

12. Parkway Interchange 142 Improvements

- i. **Location:** Union County
- ii. **Description:** This project was a joint cooperative project between the Authority and the New Jersey Department of Transportation (NJDOT) that provided for the design and construction of missing ramp connections between the Parkway and I-78. The project also provided improvements to the interchange's existing ramp network, toll plaza and to the I-78 mainline. The project was funded by the Federal Highway Administration, NJDOT, and the Authority. This project cost represents the Authority's share of the overall cost of the project.
- iii. **Status:** Design and construction completed and opened to traffic – December 2015

- iv. **Impact on Operating Budget:** This project adds new pavement and bridge structures which increased operating and maintenance expenses for personnel, materials and equipment. These increases in costs have been incorporated into the budget based on actual costs.

13. Parkway Interchange 44 Improvements

- i. **Location:** Atlantic County
- ii. **Description:** Interchange 44 previously provided access to the Parkway to and from the north only. This project completed the interchange to provide two additional ramps to allow access to and from the south.
- iii. **Status:** Design and construction completed and opened to traffic – August 2015
- iv. **Impact on Operating Budget:** This project adds two lane miles of new pavement which increases operating and maintenance expenses less than 0.1% for personnel, materials and equipment. These slight increases in costs have been incorporated into the budget based on actual costs.

14. Parkway Interchanges 9, 10 & 11 Improvements

- i. **Location:** Cape May County
- ii. **Description:** There were three traffic signals on the Parkway in Cape May County at Interchanges 9, 10 and 11. This project eliminated the traffic signals by providing three bridges to carry the Parkway over the local streets at each interchange. This project also provided for full access to the Parkway northbound and southbound at each interchange.
- iii. **Status:** Design and construction completed and opened to traffic – April 2016
- iv. **Impact on Operating Budget:** This project adds four lane miles of new pavement which increases operating and maintenance expenses 0.1% for personnel, materials and equipment. These slight increases in costs have been incorporated into the budget based on actual costs.

15. Parkway Interchange 125 Improvements Phase I

- i. **Location:** Middlesex County
- ii. **Description:** Interchange 125 is presently configured with a southbound entrance and northern exit ramp. This project will provide a new northbound entrance and new southbound exit ramp. The southbound exit ramp will be tolled to be consistent with one-way tolls at the Raritan Toll Plaza.
- iii. **Status:** Design and construction is on-going
- iv. **Impact on Operating Budget:** This project adds one lane mile of new pavement which increases operating and maintenance expenses less than 0.1% for personnel, materials and equipment. These slight increases in costs have been incorporated into the budget.

16. Parkway Interchange 88 Improvements

- i. **Location:** Ocean County
- ii. **Description:** This project provided missing ramp movements at this partial interchange along with modifications to the existing ramp movements to and from the north and relocation of ramp toll collection facilities. The project also included the construction of two new bridges over NJ Route 70 for a collector/distributor roadway that was constructed between this location and Interchange 89.
- iii. **Status:** Design and construction completed and opened to traffic – June 2015
- iv. **Impact on Operating Budget:** This project adds 15 lane miles of new pavement which increases operating and maintenance expenses 0.4% for personnel, materials and

equipment. These increases in costs have been incorporated into the budget based on actual costs.

17. Parkway Interchange 91 Improvements

- i. **Location:** Ocean County
- ii. **Description:** This project is a joint cooperative project between the Authority and Ocean County that provides missing ramp movements at this partial interchange along with the reconstruction and safety improvements to the existing northbound ramp toll plaza. This project also includes the construction of two extended service roads and county road improvements that will eliminate the complexity of the current traffic pattern, relieve congestion on local roads, and enhance safety.
- iii. **Status:** Design and construction is on-going
- iv. **Impact on Operating Budget:** This project adds two lane miles of new pavement which increases operating and maintenance expenses less than 0.1% for personnel, materials and equipment. These slight increases in costs have been incorporated into the budget.

Facilities Improvements

18. Salt Storage Facilities

- i. **Location:** Various counties
- ii. **Description:** This project provided new, increased salt storage capacity for the Turnpike and Parkway.
- iii. **Status:** Design and construction is completed – May 2016
- iv. **Impact on Operating Budget:** This group of projects results in better-located, additional salt storage facilities that reduce operating costs because of more storage capacity and improved locations. These reductions have been incorporated into the operating budget.

19. Facilities Improvements Phase I

- i. **Location:** Various counties
- ii. **Description:** This project replaces and rehabilitates facilities at 22 Turnpike and Parkway maintenance districts to bring 50+ year old maintenance buildings into compliance with current building codes and operational standards. The project also includes repairing/rehabilitating several Turnpike toll plazas to incorporate safety and operational improvements. Finally, four new State Police facilities will be constructed under this project.
- iii. **Status:** Design and construction is on-going
- iv. **Impact on Operating Budget:** This group of projects cleared numerous maintenance issues which reduces the need for intermittent repairs which results in minor reductions in routine maintenance costs. In addition, new facilities were added which increase operations and maintenance costs. These minor reductions and additional have been incorporated into the operating budget.

Parkway Widening (Interchange 35-80)

20. Parkway Widening Phase Interchanges 63-80

- i. **Location:** Various counties
- ii. **Description:** This project provided for a third travel lane with full shoulders in each direction on the Parkway and Express **E-ZPass**/One-Way Southbound Tolls at the Barnegat Toll Plaza. Three (3) individual design and construction contracts were provided for mainline widening of the 17-mile section in both directions, new sign structures, ten bridge replacements, realignment of the Parkway at the Barnegat Toll Plaza to provide for the elimination of tolls in the northbound direction, creating Express **E-ZPass** operation in the southbound direction, and a new toll utility building.

- iii. **Status:** Design and construction completed and opened to traffic – May 2011
- iv. **Impact on Operating Budget:** This project adds new pavement which increases operating and maintenance expenses for personnel, materials and equipment. These increases in costs have been incorporated into the budget based on actual costs.

21. Parkway Widening Phase Interchanges 35-63

- i. **Location:** Various counties
- ii. **Description:** This project provides for the construction of a third travel lane with full shoulders in each direction on the Parkway. Six (6) individual design and construction contracts will provide for the widening of the 28-mile section in both directions the Parkway, new sign structures, and multiple bridge replacements.
- iii. **Status:** Design and construction is on-going
- iv. **Impact on Operating Budget:** This project adds 56 lane miles of new pavement which increases operating and maintenance expenses 1.6% for personnel, materials and equipment. These increases in costs have been incorporated into the budget.

Individual projects within the \$7 Billion CIP along with budget status is shown below:

| <u>Project</u> | <u>Current Budget</u> | <u>Total Expended or Committed</u> | <u>Future Anticipated Additional Expenses</u> | <u>% Spent & Committed</u> |
|--|-------------------------|------------------------------------|---|--------------------------------|
| <u>Turnpike Interchange 6-9 Widening</u> | | | | |
| Turnpike Int 6-9 Widening | 2,231,399,000 | 2,135,665,000 | 95,734,000 | 95.7% |
| Total Turnpike Widening | \$ 2,231,399,000 | \$ 2,135,665,000 | \$ 95,734,000 | 95.7% |
| <u>Bridge Construction, Preservation & Security</u> | | | | |
| Bridge Painting Phase I | 110,000,000 | 105,994,000 | 4,006,000 | 96.4% |
| Deck Reconstruction Phase I | 208,000,000 | 201,203,000 | 6,797,000 | 96.7% |
| Bridge Preservation & Security | 111,820,000 | 92,605,000 | 19,215,000 | 82.8% |
| Deck Reconstruction Phase II | 141,300,000 | 134,937,000 | 6,363,000 | 95.5% |
| Bridge Painting Phase II | 100,000,000 | 62,992,000 | 37,008,000 | 63.0% |
| Int 16E-18E Bridge Improvement | 15,147,000 | 15,147,000 | - | 100.0% |
| TP Hackensack East Bridge Rehab | 153,000,000 | 136,206,000 | 16,794,000 | 89.0% |
| NBHCE Bridge Redecking | 400,000,000 | 321,312,000 | 78,688,000 | 80.3% |
| TP Special Bridge Structure | 15,000,000 | 8,684,000 | 6,316,000 | 57.9% |
| Parkway Bass River Bridge | 79,315,000 | 78,957,000 | 358,000 | 99.5% |
| Pky Mullica River Bridge | 50,000,000 | 49,402,000 | 598,000 | 98.8% |
| Parkway Substructure Repairs | 36,000,000 | 33,212,000 | 2,788,000 | 92.3% |
| Great Egg Harbor/Drage Channel | 263,180,000 | 230,065,000 | 33,115,000 | 87.4% |
| Total Bridge Improvements | \$ 1,682,762,000 | \$ 1,470,716,000 | \$ 212,046,000 | 87.4% |
| <u>Roadway Improvements</u> | | | | |
| Drainage Improvements | 67,335,000 | 62,415,000 | 4,920,000 | 92.7% |
| Imp Roadway Appurtenances | 47,000,000 | 41,521,000 | 5,479,000 | 88.3% |
| Median Barrier Improvements | 50,255,000 | 48,107,000 | 2,148,000 | 95.7% |
| Sign Replacements Phase I | 146,690,000 | 145,759,000 | 931,000 | 99.4% |
| Sign Replacements Phase II | 124,100,000 | 122,098,000 | 2,002,000 | 98.4% |
| Turnpike/Parkway So Improve | 17,250,000 | 15,867,000 | 1,383,000 | 92.0% |
| Turnpike Widening Int 16W to Int 18W | - | - | - | 0.0% |
| Parkway Mainline Shoulder Imp | 364,153,000 | 361,438,000 | 2,715,000 | 99.3% |
| Total Roadway Improvements | \$ 816,783,000 | \$ 797,205,000 | \$ 19,578,000 | 97.6% |
| <u>Interchange Improvements</u> | | | | |
| Facilities Improvements Phase II | 314,080,000 | 305,936,000 | 8,144,000 | 97.4% |
| TP Int 8A to Rte 130 Connect | 14,950,000 | 6,992,000 | 7,958,000 | 46.8% |
| TPK Int 14A Reconstruction | 325,500,000 | 286,114,000 | 39,386,000 | 87.9% |
| Pky I/C 41 Improvements | 24,000,000 | 23,723,000 | 277,000 | 98.8% |
| Pky I/C 142 Improvements | 1,725,000 | 663,000 | 1,062,000 | 38.4% |
| Parkway Int 44 Improvements | 30,000,000 | 28,950,000 | 1,050,000 | 96.5% |
| Parkway Int 9, 10 & 11 Improve | 98,651,000 | 85,060,000 | 13,591,000 | 86.2% |
| Parkway Int 125 Phase I | 102,665,000 | 92,357,000 | 10,308,000 | 90.0% |
| GSP I/C 88 Improvements | 102,860,000 | 97,586,000 | 5,274,000 | 94.9% |
| Parkway Int 91 Improvements | 12,000,000 | 11,311,000 | 689,000 | 94.3% |
| Total Interchange Improvements | \$ 1,026,431,000 | \$ 938,692,000 | \$ 87,739,000 | 91.5% |
| <u>Facilities Improvements</u> | | | | |
| Salt Storage Facilities | 17,725,000 | 17,595,000 | 130,000 | 99.3% |
| Facilities Improvements Phase I | 634,900,000 | 631,007,000 | 3,893,000 | 99.4% |
| Total Facilities Improvements | \$ 652,625,000 | \$ 648,602,000 | \$ 4,023,000 | 99.4% |
| <u>Widening of the Garden State Parkway</u> | | | | |
| Parkway Widening Phase Int 63-80 | 135,000,000 | 129,492,000 | 5,508,000 | 95.9% |
| Parkway Widening Phase Int 35 -63 | 455,000,000 | 439,691,000 | 15,309,000 | 96.6% |
| Total Parkway Widening | \$ 590,000,000 | \$ 569,183,000 | \$ 20,817,000 | 96.5% |
| 10 Year CIP Total: | \$ 7,000,000,000 | \$ 6,560,063,000 | \$ 439,937,000 | 93.7% |

Figure 119: Capital Improvement Program Projects

Individual projects within the \$7 Billion CIP with spending by year is shown below:

| Project Number | Project Name | LTD Expenses as of 12/31/2016 | 2017 Spending | 2018 Spending | 2019-2021 Spending | Total CIP Spending |
|---|--------------------------------------|-------------------------------|-----------------------|-----------------------|-----------------------|-------------------------|
| Turnpike Interchange 6-9 Widening | | | | | | |
| 39018001 | Turnpike Int 6-9 Widening | 2,121,144,000 | 34,813,000 | 75,442,000 | - | 2,231,399,000 |
| | | \$ 2,121,144,000 | \$ 34,813,000 | \$ 75,442,000 | \$ - | \$ 2,231,399,000 |
| Bridge Construction, Preservation & Security | | | | | | |
| 39001008 | Bridge Painting Phase I | 103,649,000 | 288,000 | 272,000 | 5,791,000 | 110,000,000 |
| 39001010 | Deck Reconstruction Phase I | 198,003,000 | 511,000 | - | 9,487,000 | 208,001,000 |
| 39001011 | Bridge Preservation & Security | 69,880,000 | 8,939,000 | 17,000 | 32,984,000 | 111,820,000 |
| 39001033 | Deck Reconstruction Phase II | 72,144,000 | 49,229,000 | 19,927,000 | - | 141,300,000 |
| 39001034 | Bridge Painting Phase II | 50,487,000 | 10,000 | 20,000 | 49,483,000 | 100,000,000 |
| 39011002 | Int 16E-18E Bridge Improvement | 15,147,000 | - | - | - | 15,147,000 |
| 39011012 | TP Hackensack East Bridge Rehab | 131,127,000 | 261,000 | - | 21,612,000 | 153,000,000 |
| 39011025 | NBHCE Bridge Redecking | 153,626,000 | 29,540,000 | 104,399,000 | 112,435,000 | 400,000,000 |
| 39011028 | TP Special Bridge Structure | 7,309,000 | 3,532,000 | 4,159,000 | - | 15,000,000 |
| 39021004 | Parkway Bass River Bridge | 76,242,000 | - | - | 3,073,000 | 79,315,000 |
| 39021015 | Pky Mullica River Bridge | 49,391,000 | - | - | 609,000 | 50,000,000 |
| 39021020 | Parkway Substructure Repairs | 33,184,000 | - | - | 2,816,000 | 36,000,000 |
| 39021036 | Great Egg Harbor/Drag Channel | 174,131,000 | 25,740,000 | 210,000 | 63,099,000 | 263,180,000 |
| | | \$ 1,134,320,000 | \$ 118,050,000 | \$ 129,004,000 | \$ 301,389,000 | \$ 1,682,763,000 |
| Roadway Improvements | | | | | | |
| 39002003 | Drainage Improvements | 55,481,000 | 5,862,000 | 123,000 | 5,869,000 | 67,335,000 |
| 39002016 | Imp Roadway Appurtenances | 41,550,000 | 5,449,000 | - | - | 46,999,000 |
| 39002017 | Median Barrier Improvements | 48,074,000 | 9,000 | 7,000 | 2,166,000 | 50,255,000 |
| 39006014 | Sign Replacements Phase I | 128,662,000 | 7,592,000 | 30,000 | 10,406,000 | 146,690,000 |
| 39006019 | Sign Replacements Phase II | 119,053,000 | - | - | 5,047,000 | 124,100,000 |
| 39009036 | Turnpike/Parkway So Improve | 15,774,000 | - | - | 1,476,000 | 17,250,000 |
| 39018032 | Turnpike Widening Int 16W to Int 18W | - | - | - | - | - |
| 39022023 | Parkway Mainline Shoulder Imp | 341,794,000 | 18,591,000 | - | 3,768,000 | 364,153,000 |
| | | \$ 750,388,000 | \$ 37,503,000 | \$ 160,000 | \$ 28,732,000 | \$ 816,782,000 |
| Interchange Improvements | | | | | | |
| 39003035 | Facilities Improvements Phase II | 262,130,000 | 14,000 | 14,000 | 51,922,000 | 314,080,000 |
| 39013005 | TP Int 8A to Rte 130 Connect | 6,095,000 | - | - | 8,855,000 | 14,950,000 |
| 39013027 | TPK Int 14A Reconstruction | 214,952,000 | 56,957,000 | 10,058,000 | 43,532,000 | 325,500,000 |
| 39023006 | Pky I/C 41 Improvements | 22,201,000 | 300,000 | 105,000 | 1,394,000 | 24,000,000 |
| 39023007 | Pky I/C 142 Improvements | 655,000 | - | - | 1,070,000 | 1,725,000 |
| 39023009 | Parkway Int 44 Improvements | 28,742,000 | - | - | 1,258,000 | 30,000,000 |
| 39023022 | Parkway Int 9, 10 & 11 Improve | 79,459,000 | 3,355,000 | - | 15,837,000 | 98,651,000 |
| 39023024 | Parkway Int 125 Phase I | 30,439,000 | 27,257,000 | 27,130,000 | 17,839,000 | 102,665,000 |
| 39023029 | GSP I/C 88 Improvements | 96,729,000 | 896,000 | - | 5,235,000 | 102,860,000 |
| 39023030 | Parkway Int 91 Improvements | 2,490,000 | 1,500,000 | - | 8,010,000 | 12,000,000 |
| | | \$ 743,892,000 | \$ 90,279,000 | \$ 37,307,000 | \$ 154,952,000 | \$ 1,026,431,000 |
| Facilities Improvements | | | | | | |
| 39003040 | Salt Storage Facilities | 17,516,000 | 162,000 | 1,000 | 46,000 | 17,725,000 |
| 39005013 | Facilities Improvements Phase I | 434,065,000 | 122,000,000 | 49,300,000 | 29,535,000 | 634,900,000 |
| | | \$ 451,581,000 | \$ 122,162,000 | \$ 49,301,000 | \$ 29,581,000 | \$ 652,625,000 |
| Widening of Garden State Parkway | | | | | | |
| 39028018 | Parkway Widening Phase Int 63-80 | 126,474,000 | - | - | 8,526,000 | 135,000,000 |
| 39028031 | Parkway Widening Phase Int 35 -63 | 363,244,000 | 41,082,000 | 4,596,000 | 46,078,000 | 455,000,000 |
| | | \$ 489,718,000 | \$ 41,082,000 | \$ 4,596,000 | \$ 54,604,000 | \$ 590,000,000 |
| GRAND TOTAL: | | \$ 5,691,043,000 | \$ 443,889,000 | \$ 295,810,000 | \$ 569,258,000 | \$ 7,000,000,000 |

Figure 120: Capital Improvement Program Project Spending By Year

Debt

Debt Limit

In accordance with the Bond Resolution, the amount of bonds to be issued is limited by the following:

- 1) **Additional Bonds Test - New Money Purposes:** In accordance with Section 203 of the Bond Resolution, in order for the Authority to issue and sell its bonds for new money purposes, the Authority must, among other things, satisfy the following tests:
 - a) the Net Revenues of the Authority (Pledged Revenues minus Operating Expenses) for any period of twelve (12) consecutive calendar months out of the twenty-four (24) calendar months next preceding the issuance of such bonds must equal or exceed the Net Revenue Requirement for such twelve (12) month period without regard to the bonds proposed to be issued; and
 - b) the estimated Net Revenues for the first full five (5) calendar years after the financed asset is estimated to be placed in service must equal or exceed the Net Revenue Requirement for each such year and the estimated Net Revenues in the 5th such calendar year must equal or exceed the future maximum Aggregate Debt Service in any year.

In addition, all other requirements of the Bond Resolution relating to the issuance of bonds for new money purposes must be satisfied.

For purposes of the Bond Resolution, the “Net Revenue Requirement” in any year is the greater of:

- (i) the sum of the Aggregate Debt Service on all outstanding Authority bonds, the Maintenance Reserve Payments, the Special Project Reserve Payment and all deposits to the Charges Fund in such year; or
 - (ii) 1.20 times the Aggregate Debt Service on all outstanding Authority bonds in such year.
- 2) **Additional Bonds Test - Refunding:** In accordance with Section 204 of the Bond Resolution, in order for the Authority to issue and sell its bonds for refunding purposes, the Authority must, among other things, either:
 - a) demonstrate that the Aggregate Debt Service on all outstanding Authority bonds is not increased in the then current or any future calendar year as a result of the issuance of such refunding bonds, or
 - b) satisfy both of the tests described in clauses (a) and (b) of the preceding subsection of this policy entitled “Additional Bonds Test – New Money Purposes”.

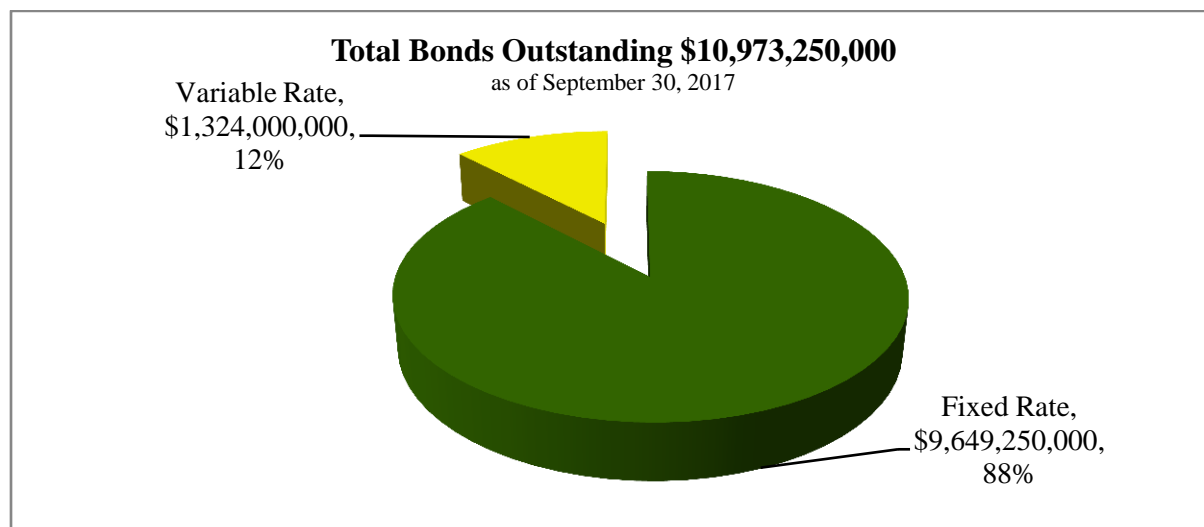


Figure 121: Total Outstanding Bond

Bond Indebtedness

| Bond Series | Amount Outstanding September 30, 2017 | Refunded or acquired and canceled in current year | Mandatory redemption / sinking fund installments | Projected Debt issuance | Amount outstanding December 31, 2018 |
|------------------------|--|--|---|----------------------------|---|
| Series 2000 B-G | \$ 400,000,000 | \$ (400,000,000) | \$ - | \$ - | \$ - |
| Series 2004 C-2 | 132,850,000 | - | - | - | 132,850,000 |
| Series 2005 A | 173,650,000 | - | - | - | 173,650,000 |
| Series 2005 B | 32,500,000 | - | - | - | 32,500,000 |
| Series 2005 D1-D4 | 208,735,000 | - | - | - | 208,735,000 |
| Series 2009 F | 1,375,000,000 | - | - | - | 1,375,000,000 |
| Series 2009 G | 19,125,000 | - | (19,125,000) | - | - |
| Series 2009 H | 199,020,000 | - | - | - | 199,020,000 |
| Series 2009 I | 1,570,000 | - | - | - | 1,570,000 |
| Series 2010 A | 1,850,000,000 | - | - | - | 1,850,000,000 |
| Series 2012A | 141,255,000 | - | - | - | 141,255,000 |
| Series 2012B | 804,435,000 | - | - | - | 804,435,000 |
| Series 2013A | 1,271,610,000 | - | (5,350,000) | - | 1,266,260,000 |
| Series 2013B | 52,500,000 | - | (52,500,000) | - | - |
| Series 2013C | 141,500,000 | - | (141,500,000) | - | - |
| Series 2013D | 77,625,000 | (77,625,000) | - | - | - |
| Series 2013E | 51,750,000 | (51,750,000) | - | - | - |
| Series 2013F | 90,880,000 | - | - | - | 90,880,000 |
| Series 2014A | 1,000,000,000 | - | - | - | 1,000,000,000 |
| Series 2014B-3 | 50,000,000 | (50,000,000) | - | - | - |
| Series 2014C | 201,860,000 | - | - | - | 201,860,000 |
| Series 2015A | 92,500,000 | - | - | - | 92,500,000 |
| Series 2015B | 50,000,000 | - | - | - | 50,000,000 |
| Series 2015C | 43,750,000 | - | - | - | 43,750,000 |
| Series 2015D | 43,750,000 | - | - | - | 43,750,000 |
| Series 2015E | 750,000,000 | - | - | - | 750,000,000 |
| Series 2015F | 72,350,000 | - | - | - | 72,350,000 |
| Series 2015G | 25,000,000 | - | - | - | 25,000,000 |
| Series 2015H | 48,235,000 | - | - | - | 48,235,000 |
| Series 2016A | 149,995,000 | - | - | - | 149,995,000 |
| Series 2016B | 75,025,000 | - | - | - | 75,025,000 |
| Series 2016C | 50,015,000 | - | - | - | 50,015,000 |
| Series 2016D | 50,000,000 | - | - | - | 50,000,000 |
| Series 2017A | 600,000,000 | - | - | - | 600,000,000 |
| Series 2017B | 646,765,000 | - | - | - | 646,765,000 |
| Series 2017C | - | - | - | 400,000,000 | 400,000,000 |
| Series 2017D | - | - | - | 179,375,000 | 179,375,000 |
| Series 2018 A* | - | - | - | 525,000,000 | 525,000,000 |
| Premiums and discounts | 856,940,000 | - | - | - | 856,940,000 |
| | <u>\$ 11,830,190,000</u> | <u>\$ (579,375,000)</u> | <u>\$ (218,475,000)</u> | <u>\$ 1,104,375,000</u> | <u>\$ 12,136,715,000</u> |

*Amounts are projected

Figure 122: Bond Indebtedness

Aggregate Bond Debt Service Requirement

| Fiscal Year Ending 12/31 | Principal | Interest | Total Debt Service (1) |
|-----------------------------|--------------------------|-------------------------|--------------------------|
| 2017(2) | \$ 218,475,000 | \$ 602,811,750 | \$ 821,286,750 |
| 2018(2) | 199,685,000 | 596,596,402 | 796,281,402 |
| 2019 | 226,585,000 | 586,700,702 | 813,285,702 |
| 2020 | 247,740,000 | 576,216,562 | 823,956,562 |
| 2021 | 278,220,000 | 565,117,888 | 843,337,888 |
| 2022 | 288,750,000 | 553,111,438 | 841,861,438 |
| 2023 | 305,930,000 | 540,553,874 | 846,483,874 |
| 2024 | 357,535,000 | 526,822,840 | 884,357,840 |
| 2025 | 376,155,000 | 508,449,770 | 884,604,770 |
| 2026 | 393,520,000 | 489,931,791 | 883,451,791 |
| 2027 | 413,700,000 | 470,330,799 | 884,030,799 |
| 2028 | 425,485,000 | 449,675,860 | 875,160,860 |
| 2029 | 428,285,000 | 428,347,884 | 856,632,884 |
| 2030 | 445,605,000 | 407,327,575 | 852,932,575 |
| 2031 | 467,280,000 | 385,659,925 | 852,939,925 |
| 2032 | 501,675,000 | 362,295,925 | 863,970,925 |
| 2033 | 539,270,000 | 337,666,175 | 876,936,175 |
| 2034 | 525,043,000 | 311,064,325 | 836,107,325 |
| 2035 | 538,427,000 | 282,856,331 | 821,283,331 |
| 2036 | 552,814,000 | 248,833,165 | 801,647,165 |
| 2037 | 595,212,000 | 211,095,870 | 806,307,870 |
| 2038 | 631,404,000 | 170,187,655 | 801,591,655 |
| 2039 | 674,732,000 | 126,835,110 | 801,567,110 |
| 2040 | 771,033,000 | 80,448,490 | 851,481,490 |
| 2041 | 182,665,000 | 27,806,300 | 210,471,300 |
| 2042 | 191,525,000 | 18,951,750 | 210,476,750 |
| 2043 | 95,890,000 | 9,667,800 | 105,557,800 |
| 2044 | 100,610,000 | 4,950,000 | 105,560,000 |
| | <u>\$ 10,973,250,000</u> | <u>\$ 9,880,313,956</u> | <u>\$ 20,853,563,956</u> |

Notes:

(1) Total Debt Service does not include debt service from the potential \$525 million 2018A new money issuance.

(2) Does not agree to the 2017 and 2018 Debt Service Fund Budget as the budget includes debt service on projected new money issuance in 2017 and 2018.

Figure 123: Aggregate Bond Debt Service Requirement

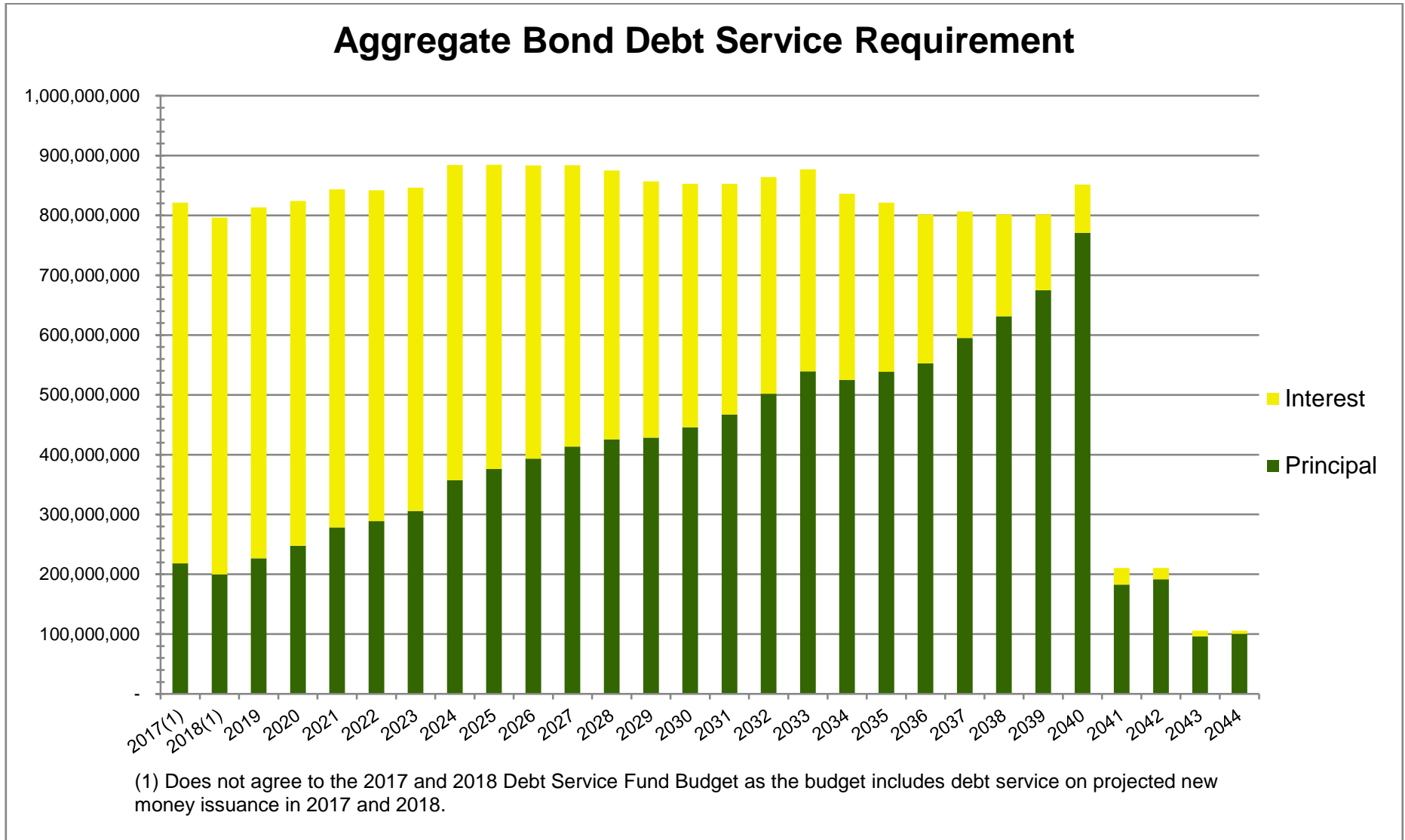


Figure 124: Aggregate Bond Debt Service Requirement Graph

Debt Services Fund Budget

| Bond Series | 2016 Actual | 2017 Budget | 2018 Budget | \$ Change from 2017 Budget | % Change from 2017 Budget |
|--------------------------|------------------------|------------------------|------------------------|---------------------------------------|--------------------------------------|
| 2000 Series B-G (1) | \$ 17,099,000 | \$ 17,248,000 | \$ - | \$ (17,248,000) | |
| 2004 Series B | 1,448,000 | - | - | - | |
| 2004 Series C-2 | 7,307,000 | 7,307,000 | 7,307,000 | - | |
| 2005 Series A | 9,117,000 | 9,117,000 | 9,117,000 | - | |
| 2005 Series B | 1,563,000 | 1,563,000 | 34,063,000 | 32,500,000 | |
| 2005 Series D1-4 | 10,959,000 | 10,959,000 | 10,959,000 | - | |
| 2009 Series E | 15,750,000 | 15,750,000 | - | (15,750,000) | |
| 2009 Series F | 101,943,000 | 101,943,000 | 101,943,000 | - | |
| 2009 Series G | 17,384,000 | 20,081,000 | - | (20,081,000) | |
| 2009 Series H | 15,193,000 | 15,193,000 | 9,876,000 | (5,317,000) | |
| 2009 Series I | 8,900,000 | 8,900,000 | 79,000 | (8,821,000) | |
| 2010 Series A | 131,387,000 | 131,387,000 | 131,387,000 | - | |
| 2012 Series A | 6,894,000 | 6,894,000 | 6,894,000 | - | |
| 2012 Series B | 39,772,000 | 39,772,000 | 198,207,000 | 158,435,000 | |
| 2013 Series A | 72,916,000 | 72,916,000 | 67,001,000 | (5,915,000) | |
| 2013 Series B (1)(3) | 108,170,000 | 55,737,000 | - | (55,737,000) | |
| 2013 Series C (1)(3) | 146,123,000 | 150,215,000 | - | (150,215,000) | |
| 2013 Series D 2-3 (1)(3) | 6,197,000 | 6,257,000 | - | (6,257,000) | |
| 2013 Series E 2-3 (1)(3) | 3,972,000 | 4,171,000 | - | (4,171,000) | |
| 2013 Series F | 4,357,000 | 4,357,000 | 4,357,000 | - | |
| 2014 Series A (4) | 48,890,000 | 48,890,000 | 48,890,000 | - | |
| 2014 Series B 2-3 (1)(3) | 3,787,000 | 3,845,000 | - | (3,845,000) | |
| 2014 Series C | 10,093,000 | 10,093,000 | 13,223,000 | 3,130,000 | |
| 2015 Series A (1)(2)(3) | 3,340,000 | 3,929,000 | 3,929,000 | - | |
| 2015 Series B (1)(3) | 1,893,000 | 1,891,000 | 1,891,000 | - | |
| 2015 Series C (1)(3) | 1,728,000 | 1,728,000 | 1,728,000 | - | |
| 2015 Series D (1)(3) | 1,729,000 | 1,729,000 | 1,729,000 | - | |
| 2015 Series E | 36,413,000 | 36,413,000 | 36,413,000 | - | |
| 2015 Series F (1)(3) | 2,911,000 | 2,926,000 | 2,926,000 | - | |
| 2015 Series G (1)(3) | 976,000 | 988,000 | 988,000 | - | |
| 2015 Series H (1)(3) | 1,939,000 | 1,951,000 | 1,951,000 | - | |
| 2016 Series A | 6,683,000 | 7,312,000 | 7,312,000 | - | |
| 2016 Series B (1)(3) | 84,000 | - | 3,060,000 | 3,060,000 | |
| 2016 Series C (1)(3) | 55,000 | - | 2,040,000 | 2,040,000 | |
| 2016 Series D (1)(3) | 56,000 | - | 1,995,000 | 1,995,000 | |
| 2017 Series A | - | 26,250,000 | 29,409,000 | 3,159,000 | |
| 2017 Series B | - | - | 31,304,000 | 31,304,000 | |
| 2017 Series C (1)(3) | - | - | 18,967,000 | 18,967,000 | |
| 2017 Series D (1)(3) | - | - | 7,340,000 | 7,340,000 | |
| 2017 New Money - B | - | 18,750,000 | - | (18,750,000) | |
| 2018 New Money - A (5) | - | - | 13,125,000 | 13,125,000 | |
| | \$ 847,028,000 | \$ 846,462,000 | \$ 809,410,000 | \$ (37,052,000) | -4.4% |

(1) Variable rate debt with an associated Interest Swap Agreement has interest included at the fixed swap rate.

(2) Interest on the \$5,000,000 unhedged portion is calculated at the maximum rate of 12%.

(3) Include the fixed credit spread as interest expense.

(4) Funding includes capitalized interest from the date of the bond issuance through May 2016. Interest is payable from revenue from June 2016 forward.

(5) Assumed new money issuances in 2018 of up to \$525 million to fund the \$7 billion capital program with interest at 5%.

Figure 125: Debt Service Fund Budget

The Debt Service Fund Budget is decreasing in 2018 due to lower required principal payments on existing bonds. The 2018 budget assumes the issuance of up to \$525 million of new money Turnpike Revenue Bonds to provide additional funds for the \$7 billion CIP at an interest rate of 5%.

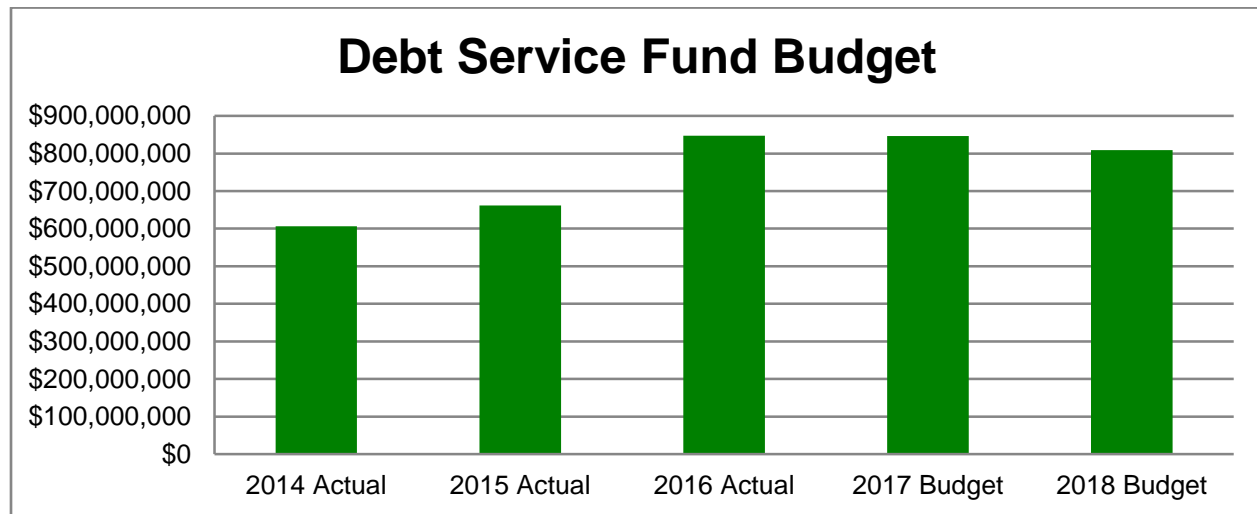


Figure 126: Debt Service Fund Budget Graph (2014-2018)

| Debt Service Fund Balance | | | | | |
|----------------------------------|----------------|-----------------------|----------------|---------------------|---------------------|
| | 2016 | 2017 | 2018 | 2016 to 2017 | 2016 to 2017 |
| | Actuals | Est. / Actuals | Budget | \$ Change | % Change |
| Beginning Balance | \$ 142,115,000 | \$ 197,740,000 | \$ 218,475,000 | \$ 20,735,000 | |
| Interfund Transfers | 773,078,000 | 818,865,000 | 809,406,000 | (9,459,000) | |
| Interest Expense | (575,338,000) | (600,390,000) | (609,721,000) | (9,331,000) | |
| Principle Payments | (142,115,000) | (197,740,000) | (218,475,000) | (20,735,000) | |
| Ending Balance | \$ 197,740,000 | \$ 218,475,000 | \$ 199,685,000 | \$ (18,790,000) | -8.6% |

Figure 127: Debt Service Fund Balance (2016-2018)

Debt Reserve Fund

No spending budget is required for the Debt Reserve Fund, as no draws on the Debt Reserve Fund are anticipated for 2018. The Authority does expect to issue up to \$525 million of new money Turnpike Revenue Bonds in 2018 which would increase the debt reserve requirement. Any increase in the Debt Reserve requirement will be funded with bond proceeds.

| Debt Reserve Fund Balance | | | | | |
|----------------------------------|----------------|-----------------------|----------------|---------------------|---------------------|
| | 2016 | 2017 | 2018 | 2017 to 2018 | 2016 to 2017 |
| | Actuals | Est. / Actuals | Budget | \$ Change | % Change |
| Beginning Balance | \$ 588,911,000 | \$ 589,325,000 | \$ 598,655,000 | \$ (9,330,000) | |
| Interfund Transfers | 414,000 | 9,330,000 | 7,208,000 | 2,122,000 | |
| Ending Balance | \$ 589,325,000 | \$ 598,655,000 | \$ 605,863,000 | \$ (7,208,000) | -1.2% |

Figure 128: Debt Reserve Fund Balance (2016-2018)

Charges Fund Budget

The Series 2000B-G Bonds were refunded in October 2017, and therefore eliminating the remarketing fees. These fees were the only fees required to be paid from this fund.

| Bond Series | 2016 | 2017 | 2018 | \$ Change from 2017 Budget | %Change from 2017 Budget |
|---------------------------|-------------------|-------------------|---------------|-------------------------------|-----------------------------|
| | <u>Actual</u> | <u>Budget</u> | <u>Budget</u> | | |
| 2000B-G | \$ 175,000 | \$ 155,000 | \$ - | \$ (155,000) | -100.0% |
| Total Charges Fund | \$ 175,000 | \$ 155,000 | \$ - | \$ (155,000) | -100.0% |

Figure 129: Total Charges Fund Budget (2016-2018)

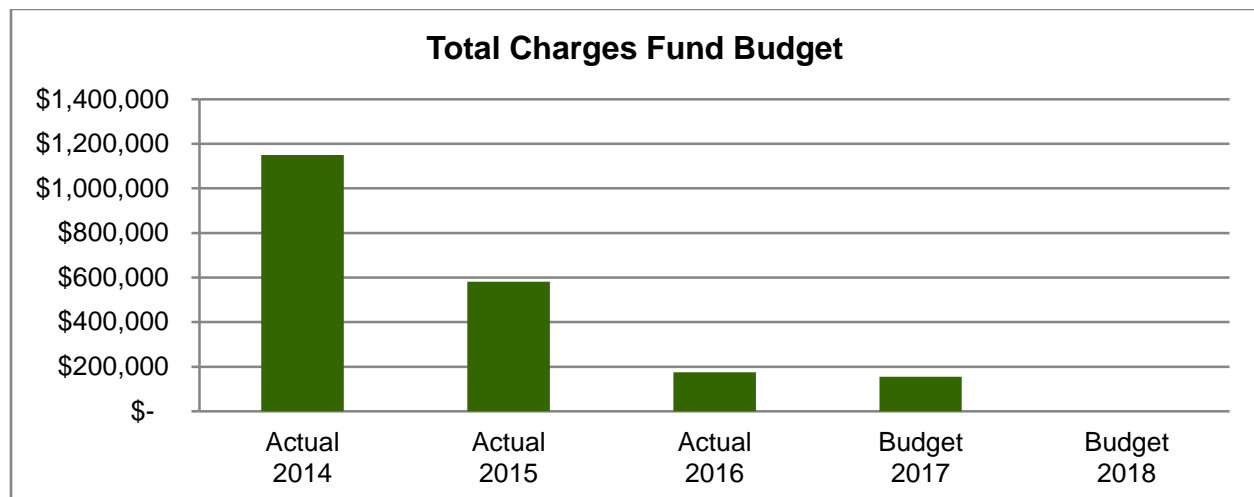


Figure 130: Total Charges Fund Budget Graph (2014-2018)

| | Charges Fund Balance | | | | |
|---------------------|----------------------|------------------------|----------------|---------------------------|-------------------------|
| | 2016 Actual | 2017 Est. / Actuals | 2018 Budget | 2017 to 2018 \$ Change | 2017 to 2018 %Change |
| Beginning Balance | \$ 83,000 | \$ 2,000 | \$ 13,000 | \$ 11,000 | |
| Interfund Transfers | 94,000 | 130,000 | (13,000) | (143,000) | |
| Payments | (175,000) | (119,000) | - | 119,000 | |
| Ending Balance | \$ 2,000 | \$ 13,000 | \$ - | \$ (13,000) | -100.0% |

Figure 131: Charges Fund Balance (2016-2018)

Appendices

Appendix A: General Consulting Engineer's Approval

HNTB Corporation
The HNTB Companies
Infrastructure Solutions

9 Entin Road
Suite 202
Parsippany, NJ 07054

Telephone (973) 434-3100
Facsimile (973) 434-3101
www.hntb.com

October 18, 2017

Joseph W. Mrozek
Executive Director
New Jersey Turnpike Authority
1 Turnpike Plaza
Woodbridge, NJ 07095-5042



Re: Order for Professional Services No. A3584
General Consulting Engineering Services
Review of Final 2018 Annual Budget
Turnpike Revenue Bond Resolution

Dear Mr. Mrozek:

In accordance with the provisions of Section 710(a) of the Turnpike Revenue Bond Resolution, adopted August 20, 1991, as amended and restated September 26, 1991 and as Further Amended and Restated as of November 22, 1991, HNTB has reviewed the New Jersey Turnpike Authority Final 2018 Annual Budget.

HNTB hereby approves the New Jersey Turnpike Authority Final 2018 Annual Budget. The Final 2018 Annual Budget includes:

- Operating Expense Budget - \$538,965,400
- Debt Service Budget - \$809,410,000
- Charges Fund Budget - \$0
- Maintenance Reserve Fund Spending Budget - \$134,246,900
- Special Projects Reserve Fund Spending Budget - \$61,154,900
- Supplemental Capital Fund Spending Budget - \$140,627,000
- General Reserve Fund Spending Budget - \$244,945,000

In addition, the Final 2018 Annual Budget includes the following deposits:

- Maintenance Reserve Fund - \$119,086,000
- Special Projects Reserve Fund - \$40,490,000
- General Reserve Fund - \$279,828,000

We appreciate being of service to you in this regard. Should you have any questions or comments related to our review of this budget, please contact us.

Very truly yours,

A handwritten signature in black ink that reads "Gregory A. Le Frois".

Gregory A. Le Frois, PE
Senior Vice President
Project Manager

Copy: Donna Manuelli, CFO, NJTA

GAL/sb

Appendix B Financial Policies

Financial Management Principals and Guidelines

I. INTRODUCTION

A. Purpose of Financial Management Principles and Guidelines

These Financial Management Principles and Guidelines are intended to serve as a management tool to enable the New Jersey Turnpike Authority (the "Authority") to communicate the Authority's commitment to a sound financial decision making process and affirm to investors and the credit rating agencies management's commitment to the long term financial viability of the Authority and repayment of its bonds. These Financial Management Principles and Guidelines are also intended to serve as guidance for management of the Authority with respect to:

- i. the issuance and management of Authority debt in appropriate amounts and types with the goals of achieving the lowest possible costs of capital within prudent risk parameters and ensuring ongoing access to the capital markets; and
- ii. compliance by the Authority with all provisions of the Act (as hereinafter defined) relating to bonds, notes or other obligations of the Authority, as well as all provisions of the Authority's Bond Resolution (as hereinafter defined).

These Financial Management Principles and Guidelines will be reviewed by the Authority no less than once every two (2) years and any changes to these Financial Management Principles and Guidelines will be presented to and approved by the Authority's Board of Commissioners. These Financial Management Principles and Guidelines will also be made available on the Authority's website (<http://www.state.nj.us/turnpike>)*.

B. Best Interests of the Authority

While adherence to these Financial Management Principles and Guidelines is desirable, deviations from these Financial Management Principles and Guidelines may be appropriate from time to time to address: (i) changing financial goals; (ii) emerging financial products/debt structures; and (iii) unique market opportunities. As a result, the general best interests of the Authority shall supersede any provision of these Financial Management Principles and Guidelines.

C. The Authority

The Authority is a public body corporate and politic of the State of New Jersey created under and by virtue of the New Jersey Turnpike Authority Act of 1948, constituting Chapter 454 of the Laws of New Jersey of 1948, as amended and supplemented (the "Act"). Pursuant to the Act, the Authority is authorized and empowered to issue and incur its bonds, notes and other obligations for the purposes and on the terms and conditions set forth in the Act. All currently issued and outstanding bonds of the Authority, and all future bonds, notes or other obligations of the Authority, have been or will be issued and incurred under and pursuant to, and/or in accordance with, the terms and provisions of the Act and a resolution of the Authority adopted on August 20, 1991 and entitled, "Turnpike Revenue Bond Resolution", as amended and restated on September 26, 1991, and as further amended and restated on November 22, 1991, as the same has been and will be further amended, restated and supplemented from time to time (the "Bond Resolution"). Capitalized terms used herein which are not otherwise defined shall have the meaning given to such terms in the Bond Resolution.

*Effective 10/17, Authority website is <http://www.njta.com>

II. FINANCIAL MANAGEMENT PRINCIPLES AND GUIDELINES

- A. Management will conduct Authority business in a manner that is in compliance with the requirements of the Act and the Bond Resolution, as well as all other applicable federal and state laws, rules and regulations.
- B. Revenues and bond proceeds will be used to improve and/or maintain safe and efficient roadways.
- C. The Authority will employ a Traffic Engineer to develop conservative toll revenue growth projections and establish toll rate schedules.
- D. The Authority will manage operating expenses within its available annual authorized operating budget, with a goal of reducing operating expenses while maintaining the quality of its roads and services.
- E. The Authority will adequately fund its Maintenance Reserve Fund, Special Project Reserve Fund, and other capital budgets in compliance with the provisions of the Bond Resolution and the recommendations of its Consulting Engineer.
- F. The Authority will manage its cash flow and total expenditure levels such that it maintains average unrestricted cash balances in the General Reserve Fund equal to at least:
 - (1) one hundred and twenty-five million dollars (\$125,000,000) as of December 31, 2017;
 - (2) one hundred and fifty million dollars (\$150,000,000) as of December 31, 2018;
 - (3) one hundred and seventy-five million dollars (\$175,000,000) as of December 31, 2019; and
 - (4) ten (10) percent of total annual revenue as of December 31, 2020 and each December 31st thereafter, based on that year's budgeted total annual revenue.
- G. The Authority will continue to fund its approved Capital Improvement Program with the lowest possible cost of capital. The Capital Improvement Program will be reviewed on an annual basis. Management will establish a Capital Improvement Program Reserve within the Capital Improvement Program budget to protect against risk.
- H. The Authority will prepare, at a minimum, a 5-year financial plan and update this plan on a regular basis as assumptions change.
- I. The Authority shall invest all of its funds (including the proceeds received from the sale of its bonds, notes or other obligations) which are not immediately needed for the purposes of the Authority in Investment Securities as provided in the Bond Resolution. The Authority shall invest all of its funds in a manner that allows such funds to be available when needed to be applied for their intended purposes. Funds will be invested in a manner consistent with the Investment Plan to be hereafter adopted by the Authority in accordance with Paragraph S below, with the goals of safety, liquidity and then yield in that order of priority.
- J. The Authority will prepare its books, records, and accounts according to General Accepted Accounting Principles applicable to governmental entities in the United States of America

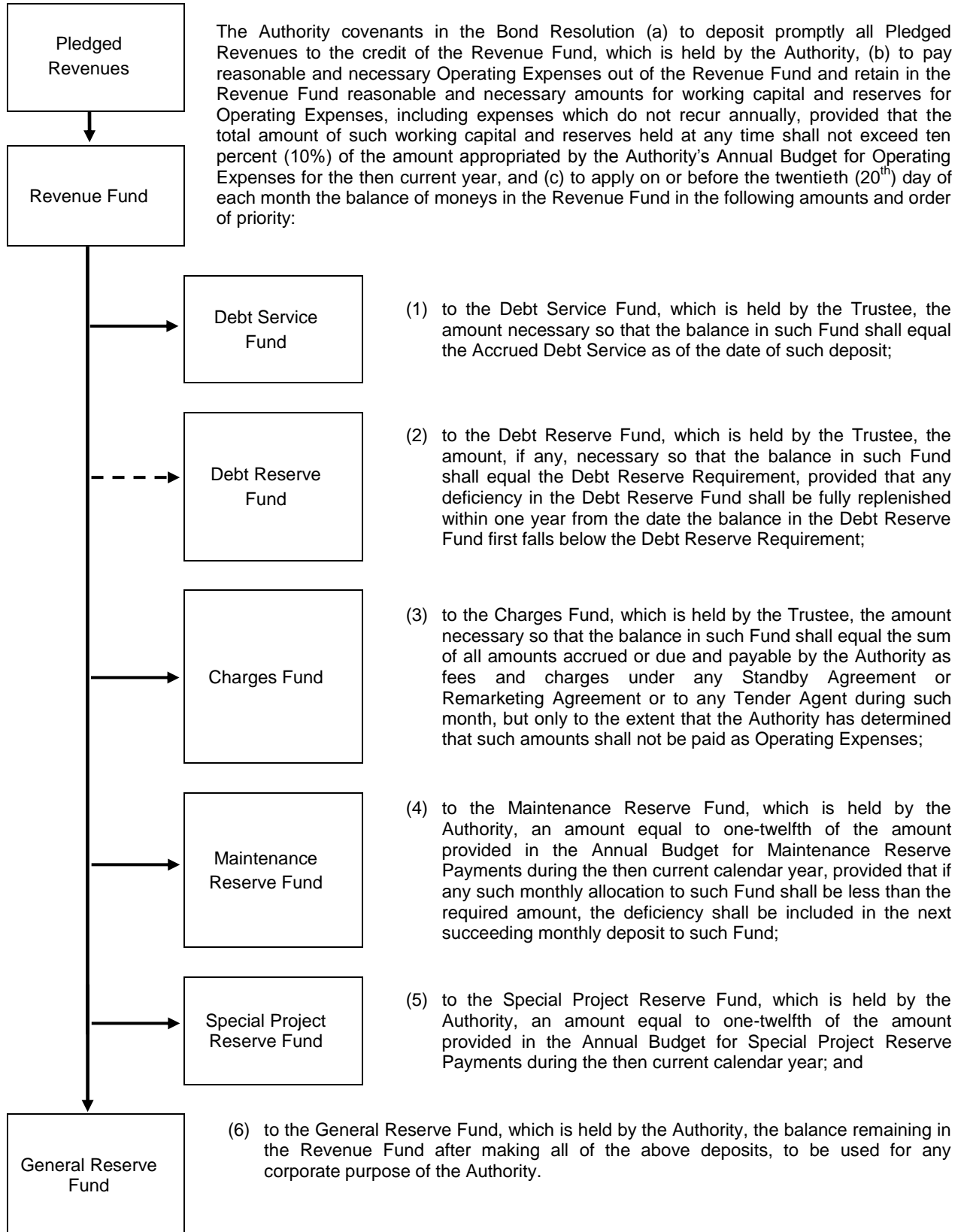
and cause such books, records and accounts to be annually audited by a nationally recognized firm of Certified Public Accountants. The Authority shall record all transactions consistent with the provisions of the Bond Resolution, including the provisions relating to all Funds and Accounts established under the Bond Resolution.

- K. The Authority will maintain current and meaningful financial and other information on its website for the benefit of investors, credit enhancement providers, and credit rating agencies.
- L. The Authority shall strive to maintain or improve the credit ratings for its debt without adversely affecting the levels or types of debt that may be issued by the Authority to finance its essential capital activities. The Authority will strive to communicate regularly with the rating agencies. To the extent possible and/or necessary, the Authority will forward periodic financial and other information to the rating agencies, update the rating agencies upon the occurrence of any significant financial developments and communicate with the rating agencies prior to each Authority debt issuance.
- M. The Authority will manage its toll rates, expense budget, and debt issuance program to achieve a minimum senior debt service coverage of 1.4x, and a total requirements coverage of 1.2x, although compliance with the Net Revenue Requirement under the Bond Resolution only requires the Authority to generate Net Revenues in each calendar year in an amount equal to the greater of (i) the sum of Aggregate Debt Service, required payments into the Maintenance Reserve Fund, required payments into the Special Project Reserve Fund and the payments, if any, into the Charges Fund for such year, or (ii) 1.2x the Aggregate Debt Service for such year. Furthermore, although the Bond Resolution permits the Authority to include amounts which are withdrawn from the Construction Fund, the Special Project Reserve Fund, and the General Reserve Fund and deposited into the Revenue Fund as part of the Pledged Revenues for purposes calculating compliance with the Net Revenue Requirement, the Authority shall not, in any calendar year, set its toll rates and/or adopt an annual budget which in any manner expressly relies, in whole or in part, upon any such withdrawals and deposits into the Revenue Fund as a means for achieving compliance with the Net Revenue Requirement or any other higher debt service or other coverage level which the Authority has established as its goal.
- N. Bonds, notes, and other obligations will be issued by the Authority solely for the purposes of financing its essential capital activities or refunding outstanding debt. Debt will not be issued by the Authority to fund, in whole or in part, operation and maintenance costs of the Turnpike System or capital assets with remaining useful lives shorter than the final maturity date of the associated debt. All bonds, notes and other obligations issued by the Authority will comply with the requirements of the Act and the Bond Resolution, as well as all other applicable federal and state laws, rules and regulations.
- O. The Authority will structure its new money debt maturities to achieve either an overall level debt service structure or a standalone level debt service structure. The Authority will continue to issue its bonds with maturities up to thirty (30) years from date of issuance to finance essential capital activities for the Turnpike System, including the acquisition, construction and rehabilitation of major capital assets for and/or additions to the New Jersey Turnpike, the Garden State Parkway and any other component of the Turnpike System.

- P. During the financing of the Authority's currently approved Capital Investment Program, the Authority does not intend to increase its overall variable rate debt in an amount greater than 20% of its overall debt.
- Q. During the financing of the currently approved Capital Investment Program, the Authority does not intend to increase the overall aggregate notional amount of its currently outstanding interest rate swap agreements and will look to reduce its outstanding interest rate swaps as economic opportunities to do so arise. Over the long-term, the Authority will not enter into interest rate swaps in an aggregate notional amount greater than 20% of its overall debt outstanding. If additional swaps are entered into, the Authority will have a goal to achieve a diversified (no more than 25% with any single counterparty) and highly rated (A1/A+ or better) group of counterparties. The Authority will require appropriate collateral provisions from such counterparties if their ratings decline below A2/A. The Authority will not provide collateral or termination rights to the counterparty unless the Authority's ratings decline below Baa2/BBB or lower. Any additional interest rate swap agreements will be entered into by the Authority in a manner consistent with the Interest Rate Swap Management Plan to be hereafter adopted by the Authority in accordance with Paragraph S below.
- R. When identifying potential refunding candidates for economic refundings, the Authority will generally seek a minimum per transaction present value savings threshold of 3%. Notwithstanding the above, the 3% savings threshold shall not apply for debt with a call date between one (1) and three (3) years from their stated maturity, or for small principal maturities and bonds that produce significant negative arbitrage. In certain instances, it may be advantageous for the Authority to issue refunding debt that does not produce positive economic savings but serves to restructure existing debt or retire debt in order to remove undesirable debt covenants. Prior to issuing non-economic refunding debt, the Authority will evaluate the benefits (both intangible and tangible) of issuing such debt as well as the economic cost of such debt.
- S. The Authority will hereafter adopt a formal Debt Management Plan, an Interest Rate Swap Management Plan and an Investment Plan, all of which shall be consistent with the provisions of the Act, the Bond Resolution and these Financial Management Principles and Guidelines.

III. BOND RESOLUTION FLOW OF FUNDS:

The Bond Resolution creates and establishes various Funds and provides that the Pledged Revenues shall be deposited into such Funds in the amounts and in the order of priority set forth in the Bond Resolution. The Authority will at all times comply with the provisions of the Bond Resolution in connection with the deposit and application of the Pledged Revenues. The following chart illustrates and generally describes the provisions of the Bond Resolution governing the deposit and application of the Pledged Revenues to the various Funds created and established under the Bond Resolution:



IV. STATUTORY PROVISIONS AND CONSIDERATIONS

A. General

Bonds, notes or other obligations issued by the Authority are revenue obligations of the Authority and are not a debt or liability of the State of New Jersey or any political subdivision thereof (other than the Authority). Neither the faith and credit nor the taxing power of the State of New Jersey or of any political subdivision thereof is pledged to the payment of the Authority's bonds, notes or other obligations. The Authority has no taxing power.

B. Approvals of Governor and State Treasurer

Pursuant to Section 3(F) of the Act (N.J.S.A. 27:23-3(F)), no resolution or other action of the Authority providing for the issuance of bonds, refunding bonds or other obligations or the fixing, revising or adjusting of tolls for the use of the Turnpike System shall be adopted or otherwise made effective by the Authority without the prior written approval of the Governor and the State Treasurer. Section 3(F) of the Act further provides that the powers conferred upon the Governor and the State Treasurer pursuant to such Section shall be exercised with due regard of the rights of the holders of the Authority's bonds at any time outstanding and nothing in such Section shall in any limit, restrict or alter the obligation or powers of the Authority to carry out and perform each and every covenant, agreement or contract at any time made or enter into by or on behalf of the Authority with respect to its bonds or for the benefit, protection and security of the holders thereof.

C. State Non-Impairment Agreement

Pursuant to Section 7 of the Act (N.J.S.A. 27:23-7), the State of New Jersey has pledged and agreed with the holders of the Authority's bonds that it will not limit or restrict the rights vested in the Authority to acquire, maintain, construct, improve, manage, repair, reconstruct and operate the Turnpike System, or to establish and collect such charges and tolls as may be convenient or necessary to produce sufficient revenue to meet the expenses of maintenance and operation thereof and to fulfill the terms of any agreements made with the holders of the Authority's bonds or in any way impair the rights and remedies of the holders of such bonds until the bonds, together with interest thereon, are fully paid and discharged.

Debt Management Policy

I. INTRODUCTION

A. Purpose of Policy

This Debt Management Policy is intended to serve as a management tool to enable the New Jersey Turnpike Authority (the "Authority") to identify circumstances and transactions under which the Authority can issue and manage its bonds, notes and other obligations in the most efficient manner and provide for the full and timely repayment thereof. This policy is also intended to serve as guidance for management of the Authority with respect to:

- (i) the issuance and incurrence of Authority debt in appropriate amounts and types with the goals of achieving the lowest possible costs of capital within prudent risk parameters and ensuring ongoing access to the capital markets;
- (ii) compliance by the Authority with all provisions of the Act (as hereinafter defined) relating to bonds, notes or other obligations of the Authority, as well as all provisions of the Authority's Bond Resolution (as hereinafter defined);
- (iii) preservation of financial flexibility to maintain appropriate resources and funding capacity for present and future capital needs;
- (iv) management of interest rate risk exposure to promote the appropriate diversification within the debt portfolio to balance risk and liquidity and promote and maintain an acceptable balance between interest rate risk and the long-term cost of capital; and
- (v) securing of highly qualified professional services firms to assist with debt issuance in an open and competitive process.

B. The Authority

The Authority is a public body corporate and politic of the State of New Jersey created under and by virtue of the New Jersey Turnpike Authority Act of 1948, constituting Chapter 454 of the Laws of New Jersey of 1948, as amended and supplemented (the "Act").

C. Review

This Policy will be reviewed by the Authority no less than once every (2) two years and any changes to this Policy will be presented to and approved by the Authority's Board of Commissioners. This Policy will also be made available on the Authority's website (<http://www.state.nj.us/turnpike>)*.

D. Best Interests of the Authority

Although adherence to this policy is desirable, deviations from the policy may be appropriate at times to address: (i) changing financial goals; (ii) emerging financial products/debt structures; and/or (iii) unique market opportunities. Consequently, the general best interests of the Authority shall supersede any provision of the policy.

*Effective 10/17, Authority website is <http://www.njta.com>

II. TURNPIKE REVENUE BONDS

A. Legal Authority

Pursuant to the Act, the Authority is authorized and empowered to issue and incur its bonds, notes and other obligations for the purposes and on the terms and conditions set forth in the Act. All currently issued and outstanding bonds of the Authority, and all future bonds, notes or other obligations of the Authority, have been or will be issued and incurred under and pursuant to, and/or in accordance with, the terms and provisions of the Act and a resolution of the Authority adopted on August 20, 1991 and entitled, "Turnpike Revenue Bond Resolution", as amended and restated on September 26, 1991, and as further amended and restated on November 22, 1991, as the same has been and will be further amended, restated and supplemented from time to time (the "Bond Resolution") (Capitalized terms used herein which are not otherwise defined shall have the meaning given to such terms in the Bond Resolution).

B. Approvals of Governor and State Treasurer

Pursuant to Section 3(F) of the Act (N.J.S.A. 27:23-3(F)), no resolution or other action of the Authority providing for the issuance of bonds, refunding bonds or other obligations or the fixing, revising or adjusting of tolls for the use of the Turnpike System shall be adopted or otherwise made effective by the Authority without the prior written approval of the Governor and the State Treasurer. Section 3(F) of the Act further provides that the powers conferred upon the Governor and the State Treasurer pursuant to such Section shall be exercised with due regard of the rights of the holders of the Authority's bonds at any time outstanding and nothing in such Section shall in any way limit, restrict or alter the obligation or powers of the Authority to carry out and perform each and every covenant, agreement or contract at any time made or enter into by or on behalf of the Authority with respect to its bonds or for the benefit, protection and security of the holders thereof.

C. Use of Debt Proceeds

As more fully described in this Policy, bonds, notes and other obligations will be issued by the Authority solely for the purposes of financing its essential capital activities or refunding outstanding debt. Debt will not be issued by the Authority to fund, in whole or in part, operation and maintenance costs of the Turnpike System or capital assets with average useful lives which are shorter than the average maturity of the associated debt. All bonds, notes and other obligations issued by the Authority will comply with the requirements of the Act and the Bond Resolution, as well as all other applicable federal and state laws, rules and regulations.

D. Types of Debt

Under the Bond Resolution, the Authority is authorized to issue Turnpike Revenue Bonds payable from and secured by a lien on and pledge of the Pledged Revenues of the Turnpike System on a parity with all Bonds Outstanding under the Bond Resolution from time to time and the reimbursement and payment obligations under certain Credit Facilities and Qualified Swap (as such terms are defined in the Bond Resolution). Specific types of debt that can be issued are as follows:

- (i) **Long-Term Debt**: Although the Statute and Bond Resolution allow debt to be issued up to forty (40) years, the Authority will limit its maturities to up to thirty (30) years from date of issuance to finance essential capital activities for the Turnpike System, including the acquisition, construction, and rehabilitation of major capital assets for and/or additions to the New Jersey Turnpike, the Garden State Parkway, and any other component of the Turnpike System.
- (ii) **Short-Term Debt**: Short-term debt with maturities of two (2) years or shorter may be used to provide interim financing for the acquisition, construction, and rehabilitation of capital assets for and/or additions to the Turnpike System and/or to reduce or hedge interest rate costs. Short-term debt obligations may include bond anticipation notes and variable rate bonds or notes, as well as any other appropriate instrument(s).

- (iii) Variable Rate Debt: In addition to fixed rate debt, the Authority may issue bonds/notes with a variable interest rate to: (i) diversify its debt portfolio; (ii) reduce interest costs; (iii) improve its match of assets to liabilities; and/or (iv) provide budgetary relief. Pursuant to and in accordance with the provisions of the Bond Resolution and its Interest Rate Swap Management Plan, the Authority may also enter Qualified Swap Agreements and/or Exchange Agreements to hedge its interest rate risk on variable rate debt where appropriate.

E. Purposes

The Authority may issue debt for either new money or refunding purposes.

- (i) New Money: New money debt may be issued by the Authority to provide funding for essential capital activities as described in the Section entitled "Types of Debt" above.
- (ii) Economic Refunding: The Authority may issue refunding debt to achieve debt service savings on its outstanding debt by redeeming outstanding debt with lower interest rate debt. The Authority may structure the savings from these refunding issues on a level, accelerated or deferred basis depending on the Authority's financing goals.
- (iii) Non-Economic Refunding: In certain instances, it may be advantageous for the Authority to issue refunding debt that does not produce positive economic savings but serves to restructure existing debt or retire debt in order to remove undesirable debt covenants. Prior to issuing non-economic refunding debt, the Authority will evaluate the benefits (both intangible and tangible) of issuing such debt as well as the economic cost of such debt.

F. Debt Limit

The amount of bonds to be issued is limited by the following in the Bond Resolution:

- (i) Additional Bonds Test - New Money Purposes: In accordance with Section 203 of the Bond Resolution, in order for the Authority to issue and sell its bonds for new money purposes, the Authority must, among other things, satisfy the following tests:
 - (a) the Net Revenues of the Authority (Pledged Revenues minus Operating Expenses) for any period of twelve (12) consecutive calendar months out of the twenty-four (24) calendar months next preceding the issuance of such bonds must equal or exceed the Net Revenue Requirement for such twelve (12) month period without regard to the bonds proposed to be issued; and
 - (b) the estimated Net Revenues for the first full five (5) calendar years after the financed asset is estimated to be placed in service must equal or exceed the Net Revenue Requirement for each such year and the estimated Net Revenues in the 5th such calendar year must equal or exceed the future maximum Aggregate Debt Service in any year.

In addition, all other requirements of the Bond Resolution relating to the issuance of bonds for new money purposes must be satisfied.

For purposes of the Bond Resolution, the "Net Revenue Requirement" in any year is the greater of: (i) the sum of the Aggregate Debt Service on all outstanding Authority bonds, the Maintenance Reserve Payments, the Special Project Reserve Payment and all deposits to the Charges Fund in such year; or (ii) 1.20 times the Aggregate Debt Service on all outstanding Authority bonds in such year.

- (ii) Additional Bonds Test - Refunding: In accordance with Section 204 of the Bond Resolution, in order for the Authority to issue and sell its bonds for refunding purposes, the Authority must, among other things, either (i) demonstrate that the Aggregate Debt Service on all outstanding

Authority bonds is not increased in the then current or any future calendar year as a result of the issuance of such refunding bonds, or (ii) satisfy both of the tests described in clauses (a) and (b) of the preceding subsection of this policy entitled “Additional Bonds Test – New Money Purposes”.

G. State Non-Impairment Agreement

Pursuant to Section 7 of the Act (N.J.S.A. 27:23-7), the State of New Jersey has pledged and agreed with the holders of the Authority’s bonds that it will not limit or restrict the rights vested in the Authority to acquire, maintain, construct, improve, manage, repair, reconstruct and operate the Turnpike System, or to establish and collect such charges and tolls as may be convenient or necessary to produce sufficient revenue to meet the expenses of maintenance and operation thereof and to fulfill the terms of any agreements made with the holders of the Authority’s bonds or in any way impair the rights and remedies of the holders of such bonds until the bonds, together with interest thereon, are fully paid and discharged.

III. DEBT STRUCTURING

A. Maximum Term

The Authority will limit its maturities to a maximum of thirty (30) years from date of issuance. The average maturity of the Authority’s bonds may not exceed the average remaining useful life of the assets being financed or the limitations set forth in the Act.

B. Bond and Debt Service Structure

Turnpike Revenue Bonds can be structured using discount, par, or premium coupons or any combination, utilizing the coupon structure, which produces the lowest True Interest Cost (TIC), taking into consideration the call option value of any callable maturities. When comparing yields associated with callable premium bonds and callable discount bonds of the same maturity, the yield-to-maturity should be evaluated in addition to the yield-to-call date. The use of capital appreciation bonds or zero-coupon bonds should be used only when necessary to meet minimum Net Revenue Requirement targets or minimum General Reserve Fund target balances as specified in the Authority’s Financial Management Principles and Guidelines, or if they produce the lowest TIC compared to other structures. The Authority will structure its new money debt maturities to achieve either an overall level debt service structure for its debt portfolio or a standalone level debt service structure. The determination of debt service structure will consider Net Revenue Requirement targeted levels and minimum General Reserve Fund balance target levels as specified in the Authority’s Financial Management Principles and Guidelines, as well as the TIC for various debt service structures to achieve the optimum structure.

C. Maturities

Bonds or notes may be serial bonds or notes, or term bonds or notes, or any combination thereof.

D. Composition of Debt

The aggregate amount of the Authority’s long-term variable rate debt should not exceed 20% of its outstanding long-term debt.

E. Credit Enhancement

The Authority may secure credit and/or liquidity enhancement for all or a portion of each debt issuance, which may be in the form of municipal bond insurance, a letter/line of credit or a standby purchase arrangement. The Executive Director and the Chief Financial Officer shall make the final recommendation to use bond insurance for a particular debt issuance after taking into account such factors as the economic benefit of the enhancement, the Authority’s available insurance capacity with the insurance community, and future secondary market trading conditions. The Authority will not secure credit enhancement through the final maturity date of a particular debt issuance unless it meets the minimum

threshold of providing a net economic benefit to the transaction, assuming the debt remains outstanding until its final maturity date. With respect to bond insurance or any other form of credit enhancement which is paid for with an upfront premium, the Authority will analyze the economic benefit both to the final maturity date of the debt and to the first optional redemption date of the debt.

The Authority may also use a letter/line of credit and/or a standby purchase arrangement (collectively, a "Credit/Liquidity Facility") to provide credit and/or liquidity support for its debt. The Authority shall consider the following criteria when selecting the provider of a Credit/Liquidity Facility: (i) the long-term ratings of the provider, which shall be at least equal to or better than the Authority's long-term ratings; (ii) the short-term ratings of the provider, which shall be at least P-1/A-1; (iii) the legal and business terms and conditions of the agreement with the provider, which shall be acceptable to the Authority; (iv) a representative list of clients similar to the Authority for whom the provider has provided credit and/or liquidity support; (v) the costs to the Authority associated with the proposed Credit/Liquidity Facility, including the cost of the Credit/Liquidity Facility itself, the fees associated with any drawings on the Credit/Liquidity Facility, the fees and expenses of counsel to the provider and any other administrative costs associated with the Credit/Liquidity Facility, and (vi) the trading differential cost between the Authority's debt which is supported by the proposed Credit/Liquidity Facility and its unenhanced debt.

F. Capitalized Interest

Capitalized Interest may be used if needed for new money bonds but is limited to two (2) years.

G. Derivative Agreements

The Authority shall maintain an Interest Rate Swap Management Plan and the time to time use by the Authority of any Qualified Swap Agreements, Exchange Agreements, and other derivative agreements and instruments in connection with its debt shall comply with the terms of its Interest Rate Swap Management Plan as in effect. The Authority shall consult with its Bond Counsel and Financial/Swap Advisor in the event that the Authority is considering entering into any Qualified Swap Agreement, Exchange Agreement, and other derivative agreement or instrument in connection with any debt.

H. Call Provisions

Long-term fixed rate tax-exempt debt should generally be callable in ten (10) years. This provides flexibility to refund bonds if interest rates decline. An analysis should be performed to determine the economic benefit of utilizing call provisions shorter than ten (10) years.

I. Tax Status

The Authority may issue debt on a taxable or tax-exempt basis. The Authority has a preference for issuing debt on a tax-exempt basis to take advantage of the expected interest costs savings compared to issuing taxable debt.

IV. DEBT ISSUANCE

A. Sale of Bonds

The Authority shall determine the method of sale of its bonds (competitive versus negotiated) by evaluating the benefits that are associated with each method of sale, in addition to examining financial and market conditions. Due to the size and complexity of the Authority's debt issues, bonds are normally sold on a negotiated basis. Underwriters shall be selected through a Request For Proposal (RFP) process and the Authority will encourage the participation of minority-owned and women-owned business enterprises, and will take into consideration an applicant's presence in New Jersey. The RFP process will be in compliance with the Authority's procurement policies and Executive Order 37 (Corzine). The Authority will use the services of a financial advisor and bond counsel, each of which will be selected through an RFP process.

In accordance with Article IX of the Bond Resolution, the Authority shall appoint a Trustee, Paying Agent, and Registrar for the new bond series. All Fiduciaries shall accept all responsibilities as outlined in Article IX of the Bond Resolution.

B. Credit Ratings

The Authority shall have a ratings strategy that is guided by achieving the best economic results for the Authority, including attaining a proper balance between minimizing borrowing costs and maximizing financial flexibility for the Authority's debt program. The Authority shall strive to maintain or improve the credit ratings for its debt without adversely affecting the levels or types of debt that may be issued by the Authority to finance its essential capital activities, including the acquisition, construction and rehabilitation of major capital assets for and/or additions to the Turnpike System. The Authority recognizes and acknowledges, however, that as market conditions and financing needs change and evolve, so should the Authority's credit ratings strategy. The Authority may accept a lower credit rating or downgrade to its existing ratings (and thus incur a modest financing cost differential) in order to gain the flexibility needed to effect significant policy initiatives. The Authority will periodically review its credit rating strategy to assess whether market or capital plan developments warrant a revision in the Authority's approach to its ratings.

As of January 2014, the Authority is rated A3* by Moody's Investors Services, A+ by Standard and Poor's Ratings Services, and A by Fitch Ratings Inc. The Authority will receive ratings from at least two (2) of the four (4) nationally recognized credit rating agencies, which are currently Moody's Investors Services, Standard and Poor's Rating Services, Fitch Ratings Inc., and Kroll Bond Rating Agency. Selection of the ultimate number of ratings and credit rating agency will be based upon overall cost, service to the Authority, any investor requirements and the recommendation of the Authority's financial advisor.

The Authority will strive to communicate regularly and frequently with the credit rating agencies. To the extent possible and/or necessary, the Authority will forward periodic information to the credit rating agencies, arrange regular conference calls to update the rating analysts on any significant financial developments and communicate with the credit rating agencies prior to each Authority debt issuance. The Authority will also maintain periodic communication with its credit enhancement providers, updating them on financial developments as a means of facilitating future market participation with the credit enhancement community.

C. Economic Refunding Criteria

When identifying potential refunding candidates for economic refunding, the Authority will generally seek a minimum per transaction present value savings threshold of three percent (3%). Notwithstanding the above, the 3% savings threshold shall not apply for debt with a call date between one (1) and three (3) years from their stated maturity, or for small principal maturities and bonds that produce significant negative arbitrage. In addition, for an advance refunding, the Authority will consider the refunding efficiency of potential bond refunding, considering the negative arbitrage, if any, on the refunding escrow and will seek a minimum refunding efficiency percentage of at least seventy percent (70%).

*Effective 7/16, the Authority's credit rating was upgraded to A2

V. DEBT MANAGEMENT

A. Investment of Funds

The Authority shall invest all of its funds (including the proceeds received from the sale of its bonds, notes or other obligations), which are not immediately needed for the purposes of the Authority, in Investment Securities as provided in the Bond Resolution. The Authority shall invest all of its funds in a manner that allows such funds to be available when needed to be applied for their intended purposes. Investments are further governed by the terms of the Authority's Investment Policy.

B. Compliance with Bond Resolution

The Bond Resolution, including specifically Article VII thereof, contains several covenants, requirements and other provisions which the Authority has agreed to comply with for the benefit, protection and security of the holders of its outstanding bonds issued from time to time under and pursuant to the Bond Resolution. The Authority shall at all times manage its debt portfolio and operate and manage the Turnpike System in a manner which results in the Authority being in compliance with all covenants, requirements, and other provisions of the Bond Resolution, including, without limitation, the Sections of the Bond Resolution more fully described below.

(i) Tolls and Charges

Pursuant to Section 713 of the Bond Resolution, the Authority has covenanted to, at all times, fix, charge and collect such tolls for the use of the Turnpike System as shall be required in order that in each calendar year the Net Revenues shall at least equal the Net Revenue Requirement for such year. Section 713 of the Bond Resolution further provides that, on or before December 1 in each year, the Authority shall complete a review of its financial condition for the purpose of estimating whether the Net Revenues for such year and the next succeeding year will be sufficient to meet the Net Revenue Requirement and shall by resolution of its Board of Commissioners make a determination with respect thereto. The Authority shall file a copy of its determination with the Trustee under the Bond Resolution on or before December 20 of each year. If the Authority determines that the Net Revenues may not be sufficient to meet the Net Revenue Requirement, the Authority shall cause its Traffic Engineers to make a study for the purpose of recommending a new schedule of tolls which will cause the Authority to have sufficient Net Revenues to meet the Net Revenue Requirement, and, as promptly as practicable, but by no later than the following April 1, the Authority shall adopt and place into effect the schedule of tolls recommended by the Traffic Engineers.

(ii) Annual Budget

Section 710 of the Bond Resolution contains certain covenants, agreements and provisions relating to the preparation, filing and adoption of the Authority's annual budget for each calendar year. The Authority shall at all times comply with the provisions of Section 710 in connection with the adoption of each annual budget.

(iii) Sale, Lease or Disposal of Property

Section 708 of the Bond Resolution provides that no part of the Turnpike System shall be sold, mortgaged, leased or otherwise disposed of, except as permitted by such Section. Among other things, Section 708 permits the Authority to sell, lease or exchange any property or facilities constituting part of the Turnpike System and not useful or necessary in the operations thereof, but any proceeds of any such transaction not used to acquire other property necessary or desirable for the safe and efficient operation of the Turnpike System shall be deposited in the Revenue Fund or the General Reserve Fund as the Authority may determine. The Authority shall at all times comply with the provisions of Section 708 of the Bond Resolution.

(iv) **Consulting and Traffic Engineers**

As required by Section 709 of the Bond Resolution, the Authority shall employ, at the times and in the manner set forth in Section 709, the services of separate, independently nationally recognized engineering firms or entities to perform the functions and duties of the Consulting Engineers and the Traffic Engineers, respectively, set forth in the Bond Resolution.

(v) **Books, Accounts, Records and Reports**

As required by Section 717 of the Bond Resolution, the Authority shall keep and maintain proper books of record and accounts in which complete and correct entries shall be made of all transactions relating to the Turnpike System and all Funds and Accounts established under the Bond Resolution. The Authority shall also prepare, or caused to be prepared, and file with the Trustee, the Consulting Engineers and, if applicable, the holders of any of the Authority's bonds, all financial and statistical reports, including its annual audited financial statements, required by the provisions of Section 717 at the times and in the manner required by the provisions of such Section. The Authority shall prepare and keep its books of record and accounts and its financial statements and reports in accordance with generally accepted accounting principles applicable to governmental entities in the United States of America. The Authority shall from time to time institute such controls as may be recommended by its independent auditor and other best practices deemed appropriate by its Chief Financial Officer.

(vi) **Debt Service Reserve Requirement**

In connection with the issuance of any bonds by the Authority, the Bond Resolution also requires that the Debt Reserve Fund created under the Bond Resolution must be funded to the Debt Reserve Requirement, which is the lesser of (i) the greatest amount of interest accruing on all outstanding bonds of the Authority any in calendar year, or (ii) the maximum amount permitted by the provisions of the Internal Revenue Code of 1986, as amended.

C. Compliance with Financial Management Principles and Guidelines

The Authority will comply with its Financial Management Principles and Guidelines as they pertain to the issuance, structure and management of debt.

D. Arbitrage and Rebate

The Authority will engage the services of an Arbitrage and Rebate Consultant to provide written reports to assist the Authority in monitoring yield on investments and calculating any rebate that may be due for all tax-exempt bonds. The consultant will provide written reports on the arbitrage liability, if any, on an annual basis. The Authority will file all required forms with the Internal Revenue Service and make any required payments when due.

E. Continuing Disclosure Agreement

In order to enable the underwriters of its bonds to comply with SEC Rule 15c2-12, the Authority enters into a Continuing Disclosure Agreement for each bond issue to provide for the timely filing of annual financial information, and material event notifications. Under its existing Continuing Disclosure Agreements, the Authority has agreed to provide, by May 1 of each year, its Audited Financial Statements, Annual Budget, and Financial Summary for the Twelve Months Ended December 31 and its Net Revenue Certification. A Continuing Disclosure Agreement will be executed for each bond issue.

F. Investor Relations

The Authority will maintain current and meaningful financial and other information on its website for the benefit of investors, credit enhancement providers and credit rating agencies. At a minimum, the Authority's investor relations website will contain traffic and revenue statistics, audited financial statements, trustee reports, and financial summaries.

VI. POST-ISSUANCE COMPLIANCE POLICY

A. Purpose

This Post-Issuance Compliance Policy (the "Policy") sets forth policies of the Authority designed to monitor compliance of tax-advantaged obligations ("Obligations") issued by the Authority with applicable provisions of the Internal Revenue Code of 1986 as amended (the "Code") and regulations promulgated thereunder ("Treasury Regulations").

The Policy documents existing practices and describes various procedures and systems designed to identify on a timely basis facts relevant to demonstrating compliance with the requirements that must be satisfied subsequent to the issuance of Obligations in order that the interest on such Obligations be, or continue to be, or would be but for certain provisions of the Code, excludable from gross income for Federal income tax purposes.

The Authority recognizes that compliance with applicable provisions of law is an ongoing process, necessary during the entire term of the Obligations. Accordingly, analysis of information and implementation of this Policy will require continual monitoring and likely, ongoing consultation with bond counsel. Further policies and procedures may be identified from time to time by Authority staff in consultation with bond counsel and the arbitrage and rebate consultant.

B. Policy Statement

After Obligations are issued, the compliance process includes a focus on use and investment of proceeds of the Obligations and includes:

- Tracking bond proceeds spending for qualified and nonqualified purposes;
- Maintaining detailed records of expenditures and investments;
- Ensuring that the facilities financed are used in a manner consistent with legal and tax requirements;
- Providing necessary disclosure information regarding financial and operating status;
- Maintaining adequate records.

C. Organizational Responsibility

The Executive Director has overall responsibility for post-issuance compliance for Obligations issued by the Authority and may delegate such responsibilities to a "Compliance Officer," who will have primary responsibility for post-issuance compliance to ensure and monitor post-issuance matters with respect to Obligations. The Executive Director shall be responsible for assuring an adequate succession plan for transferring post-issuance compliance responsibility when changes in staff occur.

In the case of Obligations for which the Authority must review and approve requisitions, the Authority's Finance Department shall review requisitions to assure that proceeds are expended on projects as authorized in the applicable bond documents, that reimbursement of pre-issuance costs are permissible, and to determine when projects are completed and/or placed in service, including for Build America Bonds. The Chief Financial Officer, or designee, shall direct investment of proceeds, review monthly bank statements from trustees or custodians and engage an Arbitrage and Rebate Consultant for each issue of Authority Obligations. The Chief Financial Officer, or designee, shall consult with the Authority's Bond Counsel if questions should arise.

D. Tracking Expenditures and Investment Earnings

The Authority shall maintain detailed records regarding the use and allocation of bond proceeds, including investment earnings, throughout the term of the bonds to ensure compliance with covenants and restrictions set forth in the Tax Certificate relating to the Bonds. The Authority's Accounting System will maintain copies of approved requisitions and invoices for expenditures, as well as investment earnings records, including bank statements. The Finance Department will maintain copies of bank statements if electronic statements are not available.

The Authority's Compliance Officer will monitor the application and use of bond proceeds on an ongoing basis and inform the Executive Director and bond counsel of events relating to use of bond proceeds which may result in issues which must be analyzed for compliance with Federal tax laws.

E. Records Retention

The Authority will maintain the following documents for the term of each issue of bonds plus at least three (3) years:

- The bond transcript of proceedings;
- All resolutions, including reimbursement resolutions, and minutes pertaining to the projects financed, if not included in the bond transcript;
- All surveys, feasibility or demand studies and any publications, brochures and newspaper articles with respect to the bonds, if not included in the bond transcript;
- All bond yield computations including supporting certificates and investment records, including trustee records, pertaining to the issue price of the bonds, proceeds of the bonds, investment agreements and related bidding documents, credit enhancement and liquidity documents, swap documents, rebate reports and rebate payments;
- All documents pertaining to the expenditure or granting of bond proceeds for the acquisition, construction or renovation of bond financed property including any trustee records, requisitions, reimbursements, draw schedules, draw requests, construction contracts, invoices, bills, land/project related appraisals, payment records, requisition statements, reimbursement records, cancelled checks, a final schedule of property financed by the bonds and final allocations of bond proceeds;
- All formal elections made for the bond financing (e.g., an election to employ an accounting methodology other than specific tracing);
- All records of trade or business use, purchase, lease, sublease or sale of bond financed property including any leasehold improvement contracts and ownership documentations such as joint venture arrangements, limited liability corporation arrangements or partnership arrangements;
- All management contracts and other service agreements, research contracts, and naming rights contracts;
- All accounting audits for bond financed property;
- All information reports filed for the bonds;
- All documentation pertaining to any prior IRS examination of Authority and/or tax-exempt bonds; and
- All correspondence related to the above including faxes, emails, and letters.

The Authority, in the Tax Certificate and/or other documents pertaining to the bonds that are finalized in connection with the issuance of the bonds, shall designate an employee responsible for retaining the records listed above. Records may be retained in electronic format.

F. Arbitrage and Rebate

The Authority will engage the services of an Arbitrage and Rebate Consultant to provide written reports to assist the Authority in monitoring yield on investments and calculating any rebate that may be due. The Consultant will work with the Chief Financial Officer to review the yield on investments to determine if there is a possible rebate liability. If the Consultant provides a written report that rebate is due, the Authority will make any required payments to the IRS and any required filings.

G. Credit Enhancement or Other Agreements Relating to Bonds

The Compliance Officer will monitor any extension or alteration of any credit enhancement relating to the Authority's tax-exempt debt or of any changes to other agreements relating to Authority Obligations such as guaranteed investment contracts or derivative products to assure that any changes meet post-issuance compliance requirements. The Compliance Officer will also monitor information relating to the ratings of counterparties to such agreements to assure that provisions of such agreements are fulfilled. The Compliance Officer will report any questions or issues to bond counsel.

H. Disclosures and Filings

The Authority will, according to the bond documents, enter into Continuing Disclosure Agreements with the trustee for the applicable Obligations and to comply with continuing disclosure requirements. In addition, the Authority will provide bond documents, as applicable, and copies of reports sent to credit providers and insurance companies and other parties to transactions, as well as financial information. The Authority's bond counsel will be responsible for completing any necessary material event notice filings.

I. Continuity and Training

The Compliance Officer will receive periodic training regarding the tax and other requirements applicable to Obligations and provide periodic training to staff with responsibilities relating to the procedures set forth above. Such training will cover the purposes and importance of these procedures. Training may be provided by bond counsel and shall include a review of the IRS Code and the IRS's web site established for the use of the tax-exempt bond community located at:
<http://www.irs.gov/taxexemptbond/index.html?navmenu=menu1>.

To provide for continuity of compliance with post-issuance debt requirements, the Authority will periodically review this policy but no less frequent than once every two (2) years, to assure that it comports with current law.

J. Remedial Action

Should the Authority become aware of events which may affect the permissible use and investment of bond proceeds the Authority will take steps, with advice from bond counsel, to seek remedial action with respect to such events.

Interest Rate Swap Management Plan

1. PURPOSE

This Interest Rate Swap Management Plan sets forth the manner of execution of interest rate swaps and related agreements, provides for security and payment provisions, and sets forth certain other provisions related to interest rate swap agreements between the New Jersey Turnpike Authority ("Authority") and qualified swap counterparties. The Interest Rate Swap Management Plan also outlines procedures to be followed to insure compliance with all applicable federal and state laws. This Interest Rate Swap Management Plan will be reviewed by the Authority no less than once every two (2) years and any changes to this Interest Rate Swap Management Plan will be presented to the Authority's Board of Commissioners for approval. This Interest Rate Swap Management Plan will be made available on the Authority's website, <http://www.state.nj.us/turnpike>.*

2. BEST INTERESTS OF THE AUTHORITY

Although adherence to this Interest Rate Swap Management Plan ("Plan") is desirable, deviations from this Plan may be appropriate from time to time to address: (i) changing financial goals; (ii) emerging financial products/debt structures; and (iii) unique market opportunities. As a result, the general best interests of the Authority shall supersede any provision of this Swap Management Plan.

3. THE AUTHORITY

The Authority is a public body corporate and politic of the State Of New Jersey operated under and by virtue of the New Jersey Turnpike Authority Act of 1948, constituting Chapter 454 of the Laws of New Jersey of 1948, as amended and supplemented (the "Act"). Pursuant to Section 5 of the Act, and Section 201 of the General Bond Resolution, the Authority is authorized to enter into interest rate swap transactions as it deems fit in order to obtain lower costs of capital or other advantages associated with this financing technique. The Authority may only enter into a swap transaction in connection with a specifically identified series of Authority bonds issued under its senior lien General Bond Resolution.

4. INTEREST RATE SWAP MANAGEMENT GOALS

The Authority intends to execute interest rate swaps if the transaction can be expected to result in the following:

- A. Hedging to reduced exposure to changes in interest rates on a particular financial transaction;
- B. Reduction in interest rate risk in order to maintain from the Authority's overall asset/liability balance;
- C. Obtain a lower net cost of borrowing with respect to the Authority's debt; and
- D. Manage variable interest rate exposure consistent with prudent debt practices.

The Authority shall not enter into interest rate swaps for speculative purposes or not in connection with a specified bond issue.

*Effective 10/17, Authority website is <http://www.njta.com>

5. PROCUREMENT OF INTEREST RATE SWAP AGREEMENTS

The Authority will award interest rate swap transactions to one or more qualified counterparties (as herein defined) through competitive or negotiated procurement methods. The general method of procurement and the specific procurement process will be determined based on the prevailing market conditions at the time. Regardless of the procurement method employed, the Authority shall endeavor to obtain the best pricing and execution possible, diversify counterparty exposure and minimize aggregate counterparty risk. To that end, before entering into a transaction, the Authority, with input from its financial advisor and/or swap advisor, will evaluate the prevailing market conditions to determine the optimal procurement process and will evaluate how the proposed transaction would affect the Authority's aggregate counterparty exposure.

6. INTEREST RATE SWAP RISK FACTORS

The Authority recognizes that there are certain risks associated with interest rate swap transactions that it will consider prior to entering into each transaction. Such risks include:

- A. Counterparty risk** is the risk that the swap counterparty will not fulfill its obligation to honor its obligations as specified under the contracts. Failure of a counterparty could result in an unplanned change in the expected costs of funds of a particular transaction that could increase debt service costs to the Authority, depending upon the interest rate environment when this occurred.

In order to mitigate against this risk the Authority intends to diversify its counterparties and expects that going forward, no more than 25% of its interest rate swap exposure will be with any one counterparty. An exception will be made for fully collateralized swaps or if market conditions are such that it is not economically feasible to diversify or the interest rate swap market is such that no additional counterparties exist.

In order to diversify the Authority's counterparty risk, and to limit the Authority's credit exposure to any one counterparty, limits will be established by the Executive Director based in part upon the credit rating of the counterparty as well as the relative level of risk associated with each existing interest rate swap transaction.

The Authority shall be authorized to enter into interest swap transactions only with qualified swap counterparties rated at least A1/A+, or equivalent, by any two (2) of the nationally recognized rating agencies (e.g. Moody's, Standard and Poor's, or Fitch); or a "AAA" subsidiary as rated by at least one nationally recognized credit rating agency.

- B. Termination risk** is the risk that the interest rate swap could be terminated by the counterparty due to any of several events, which may include issuer or counterparty ratings downgrade, covenant violation by either party, bankruptcy of either party, swap payment default by either party, and default events as defined in the issuer's bond indenture.

In order to mitigate against these risks the Authority will require collateral postings from counterparties if the counterparties ratings decline below A2/A and other protection measures. As a general rule, the Authority will not enter into swaps where the counterparty has any optional right of termination.

The Authority shall consider including in all interest rate swap transactions provisions granting the Authority the right to optionally terminate a swap agreement at any time over the term of the agreement. The Executive Director shall determine if it is financially advantageous for the Authority to terminate a swap agreement.

A termination payment to or from the Authority may be required in the event of termination of an interest rate swap agreement due to a default or a decrease in credit rating of either the Authority or the counterparty. It is the intent of the Authority not to make a termination payment to a

counterparty that does not meet its contractual obligations. Prior to making any such termination payment, the Executive Director shall evaluate whether it is financially advantageous for the Authority to obtain a replacement counterparty to avoid making such termination payment.

As part of any interest rate swap agreement, the Authority may require collateralization or other credit enhancement to secure any or all swap payment obligations. As appropriate, the Authority may require collateral or other credit enhancement to be posted by each swap counterparty under the following circumstances:

- i. Each counterparty to the Authority may be required to post collateral if the credit rating of the counterparty or parent falls below the A2/A category. Additional collateral for further decreases in credit ratings of each counterparty shall be posted by each counterparty in accordance with the provisions contained in the collateral support agreement to each interest rate swap agreement with the Authority.
- ii. The Collateral shall consist of cash, U.S. Treasury securities and Federal agency securities.
- iii. Collateral shall be deposited with a third party trustee, or as mutually agreed upon between the Authority and each counterparty.
- iv. A list of acceptable securities that may be posted as collateral and the valuation of such collateral will be determined and mutually agreed upon during negotiation of the swap agreement with each swap counterparty.
- v. The market value of the collateral shall be determined on at least a monthly basis.
- vi. The Authority will determine reasonable threshold limits for the initial deposit and for increments of collateral posting thereafter.

The Executive Director shall determine on a case by case basis whether other forms of credit enhancement are more beneficial to the Authority

C. Basis risk refers to a mismatch between the interest rate received from the interest rate swap contract and the interest actually owed on the Authority's variable rate bonds. Prior to the execution of any interest rate swap, the Authority will undertake any analysis of both the starting basis risk match and the historical basis risk match in order to select an index payment of the interest rate swap and a mode mechanic for the variable rate debt that most closely approximates a zero basis risk profile, while still maintaining the economic advantages of the interest rate swap.

D. Tax event risk. All issuers who issue tax-exempt variable rate bonds that trade accept risk stemming from changes in marginal income tax rates. These risks are best mitigated by limiting the amount of variable rate debt as a percentage of the Authority's total debt outstanding. The Authority does not expect to issue more than 20% of its total debt in a variable rate mode of any form.

E. Rollover risk is the risk that the swap contract is not coterminous with related bonds. The Executive Director shall determine the appropriate term for an interest rate swap agreement on a case-by-case basis. The slope of the interest rate swap curve, the marginal change in interest rate swap rates from year to year along the interest rate swap curve, and the impact that the term of the interest rate swap has on the overall exposure of the Authority shall be considered in determining the appropriate term of any interest rate swap agreement. In connection with the issuance or carrying of bonds, the term of the interest rate swap agreement between the Authority and a qualified interest rate swap counterparty shall not extend beyond the final maturity date of existing debt of the Authority, or in the case of a refunding transaction, beyond the final maturity date of the refunding bonds. The Authority does not intend to execute interest rate swaps that have rollover risk.

F. Amortization risk represents the cost to the issuer of servicing debt or honoring interest rate swap payments due to a mismatch between bonds and the notional amount of the interest rate swap. The Authority intends to always match the principal amount of bonds with the notional amount of the interest rate swap.

G. Liquidity risk refers to the issuer's inability to continue or renew a liquidity facility to assist in the sale of outstanding debt. The Authority will endeavor to provide sufficient liquidity available for swapped debt.

7. PAYMENT OBLIGATIONS

Pursuant to Section 201 of the General Bond Resolution, the Authority's payment obligation under any qualified interest rate swap shall be made from the Debt Service Fund.

8. LEGAL MATTERS

Each interest rate swap executed by the Authority shall contain terms and conditions as set forth in the International Swap and Derivatives Association, Inc. ("ISDA") Master Agreement, including any schedules and confirmations. The interest rate swap agreements between the Authority and each qualified swap counterparty shall include payment, term, security, collateral, default, remedy, termination, and other terms, conditions and provisions as the Executive Director or his/her designee deems necessary or desirable. The Executive Director is authorized to sign all representations and disclosures as required.

9. REGULATORY COMPLIANCE

Following is a list of regulatory requirements imposed at the Federal level with which the Authority shall make every reasonable effort to comply:

A. Dodd-Frank Compliance. Pursuant to the authority of Section 731 of Title VII of Dodd-Frank Act, which includes amendments to the Commodity Exchange Act ("CEA") regarding over-the-counter derivative instruments, regulations were published by the Commodities Futures Trading Commission ("CFTC") that define business conduct between Swap Dealers or Major Swap Participants and their counterparties, including Swap Dealers or Major Swap Participants engaged in transactions with state and local governmental counterparties such as the Authority (referred to in the regulations as "Special Entities"). The new business conduct rules are far ranging and they can impact the Authority on several fronts as the Authority enters into or modifies transactions. The following sections are included in this Swap Management Plan in order to assist the Authority in complying with the CEA as amended by Dodd-Frank:

(1) Qualified Independent Representative

- a) In accordance with the CEA and as amended by Dodd-Frank, the Authority shall select a QIR that meets the following enumerated criteria:
 - i. has sufficient knowledge to evaluate the transaction and risks;
 - ii. is not subject to a statutory disqualification;
 - iii. is independent of the interest rate swap provider or major interest rate swap participant. To be independent the QIR must currently not, and was not with a one-year look back, an associated person of the swap dealer; has no principal relationship with the swap dealer, provides timely disclosures of all potential conflicts of interest, complies with procedures designed to manage and mitigate conflicts of interest, is not controlled by, in

control of, or under common control with the swap dealer, and was not recommended to the issuer by the swap dealer within one year of the transaction date;

- iv. undertakes a duty to act in the best interests of the Authority;
 - v. makes appropriate and timely disclosures to the Authority;
 - vi. evaluates, consistent with any guidelines provided by the Authority, fair pricing and the appropriateness of the transaction; and
 - vii. is subject to restrictions on certain political contributions imposed by the CFTC, the SEC, or a self-regulatory organization subject to the jurisdiction of the CFTC or the SEC.
- b) At least annually, or as required by the Board of Commissioners, the Authority shall conduct a review of its QIR to ensure that the QIR still meets the above enumerated criteria. In the event that it is determined that the QIR no longer meets the enumerated criteria, then prior to the execution of any transaction the Authority shall select a replacement QIR that meets the enumerated criteria.
- (2) Written Representations. In order to ensure that the Authority is in compliance with the new regulations imposed by Dodd-Frank, the Authority may, but is not required to, execute a ISDA August 2012 DF Protocol Agreement with its QIR and each Counterparty prior to executing any transactions. If the Authority elects not to execute a ISDA August 2012 DF Protocol Agreement with a counterparty, then the Authority shall provide an alternate form of written representation to such Counterparty that meets all applicable disclosure requirements as required by Dodd-Frank.
- (3) Derivative Clearing Requirement.
- (a) The CEA, as amended by Dodd-Frank, requires that certain derivative transactions, including those commonly entered into by state and local

governmental entities, must be cleared through a derivatives clearing organization unless otherwise exempt from clearing under the "End User Exception" as specified in Section 2(h)(7) of the CEA. In order to qualify for the End User Exception to the clearing requirements of the CEA, the Special Entity must report to the CFTC on either an annual or a transaction-by-transaction basis that it:

- (i) is not a financial entity;
 - (ii) is using swaps to hedge or mitigate commercial risk; and
 - (iii) will notify the CFTC, in a manner set forth by the CFTC, how it generally meets its financial obligations associated with entering into non-cleared swaps.
- (b) The Authority, in consultation with its QIR, shall make its best efforts to comply with the applicable derivative clearing requirements of the CEA as amended by Dodd-Frank.

10. SELECTION OF QIR

The Authority will competitively procure the services of a financial advisor or a swap advisor, whose scope of work shall include swap advisory services which will allow the firm to serve as the Authority's QIR under Dodd-Frank.

11. RECORD KEEPING

Written records noting the status of all interest rate swap agreements will be maintained by the Authority and shall include the following information:

1. Highlights of all material changes to swap agreements or new swap agreements entered into by the Authority since the last report
2. Market value of each of the Authority's interest rate swap agreements.
3. For each counterparty, the Authority shall provide the total notional amount position, the average life of each swap agreement, the available capacity to enter into a swap transaction, and the remaining term of each swap agreement.
4. The credit rating of each swap counterparty and credit enhancer insuring swap payments
5. Actual collateral posting by swap counterparty, if any, per swap agreement and in total by swap counterparty.
6. A summary of each swap agreement, including but not limited to the type of swap, the rates paid by the Authority and received by the Authority, and other terms.
7. Results of the default, including but not limited to the financial impact to the Authority, if any.
8. A summary of any swap agreements that were terminated.

12. COMPLIANCE WITH ACCOUNTING STANDARDS

Any interest rate swap agreement entered into by the Authority under this Interest Rate Swap Management Plan shall be described in the Authority's annual audited financial statements in accordance with applicable accounting standards. This Interest Rate Swap Management plan shall be reviewed on an annual basis with the Authority's external auditor and any necessary changes shall be promptly implemented.

Investment Policy

I. INTRODUCTION

A. Purpose of Investment Policy

The purpose of the Investment Policy is to define guidelines and operational factors governing the investment of all funds held by the New Jersey Turnpike Authority (the "Authority") or its bond trustees. This Investment Policy is intended to show compliance with all provisions of the Act (as defined herein) relating to investment of funds of the Authority, as well as provisions of the Authority's Bond Resolution (as defined herein). The Investment Policy will be reviewed by the Authority's Chief Financial Officer no less than once every 2 years, and any changes to this document will be presented to the Authority's Board of Commissioners for approval. This Investment Policy will be made available on the Authority's website, <http://www.state.nj.us/turnpike>.

B. The Authority

The Authority is a public body corporate and politic of the State of New Jersey created under and by virtue of the New Jersey Turnpike Authority Act of 1948, constituting Chapter 454 of the Laws of New Jersey of 1948, as amended and supplemented (the "Act"). Pursuant to the Act, the Authority is authorized and empowered to, subject to any agreement with the bondholders, invest moneys of the Authority not required for immediate use, including proceeds from the sale of any bonds, in such obligations, securities and other investments as the Authority shall deem prudent. All investments that have been purchased or will be purchased under and pursuant to, and/or in accordance with, the terms and provision of the Act and a resolution of the Authority adopted on August 20, 1991 and entitled, "Turnpike Revenue Bond Resolution", as amended and restated on September 26, 1991, and as further amended and restated on November 22, 1991, as the same has been and will be further amended, restated and supplemented from time to time (the "Bond Resolution"). Capitalized terms used herein which are not otherwise defined shall have the meaning given to such terms in the Bond Resolution.

C. Best Interest of the Authority

Although adherence to this Investment Policy is desirable, deviations from this Policy may be appropriate from time to time to address: (i) changing financial goals; (ii) changing financial markets; and (iii) unique market opportunities. As a result, the general best interests of the Authority shall supersede any provision of this Investment Policy, provided that those provisions mandated by the Act or the Bond Resolution cannot be superseded without amendments to the Act or the Bond Resolution.

II. INVESTMENT OBJECTIVES

A. All investment decisions will meet the following requirements:

1. Safeguard and preserve the principal amount of invested funds.
2. Manage and maintain adequate liquidity to meet cash flow requirements, including bond payments.
3. Maintain demand bank balances at minimum levels consistent with sound operations.
4. Maximize the total rate of return on invested funds.

III. PERMITTED INVESTMENTS**A. Eligible securities are defined in the Bond Resolution and shall include:**

1. Any direct and general obligations of, or any obligations guaranteed by, the United States of America, including but not limited to interest obligations of the Resolution Funding Corporation or any successor thereto.
2. Any obligations of any state or political subdivision of a state which bonds are fully secured as to principal and interest by an irrevocable pledge of moneys or direct and general obligations of, or obligations guaranteed by the United States of America, which moneys or obligations are segregated in trust and pledged for the benefit of the holders of the bonds.
3. Certificates of ownership of the principal or interest of direct and general obligations of, or obligations guaranteed by, the United States of America, which obligations are held in trust by a commercial bank which is a member of the Federal Reserve System.
4. Bonds, debentures, notes or other evidences of indebtedness issued by any agency or instrumentality of the United States to the extent such obligations are guaranteed by the United States or by another such agency the obligations (including guarantees) of which are guaranteed by the United States.
5. Bonds, debentures, notes or other evidences of indebtedness issued by any of the following agencies:
 - Government National Mortgage Assn. (GNMA)
 - Federal Home Loan Mortgage Corp. (FHLMC)
 - Federal National Mortgage Assn. (FNMA)
 - Federal Home Loan Banks (FHLB)
 - Federal Land Banks
 - Federal Intermediate Credit Banks
 - Banks for Cooperatives
 - Tennessee Valley Authority
 - United States Postal Service
 - Farmers Home Administration
 - Export-Import Bank
 - Federal Financing Bank
 - Student Loan Marketing Assn.(SLMA);
6. Negotiable or non-negotiable certificates of deposit issued by any bank, trust company or national banking association, which certificates of deposit shall be continuously secured or collateralized by obligations described in subparagraphs 1,2,3,4 and 5 above, which shall have a market value (exclusive of accrued interest) at all times at least equal to the principal amount of such certificates of deposit and shall be lodged with the Trustee, as custodian, by the bank, trust company or national banking association issuing such certificates of deposit.
7. Uncollateralized negotiable or non-negotiable certificates of deposit issued by any bank, trust company or national banking association, the unsecured obligations of which are rated in one of the two highest rating categories, without regard to rating sub-categories, by Moody Investors Service (Moody's) and Standard & Poor's (S&P).
8. Repurchase agreements collateralized by obligations described in subparagraphs 1,2,3,4, and 5 above with any registered broker/dealer subject to the Securities Investors Protection Corporation jurisdiction, which has an uninsured, unsecured and

unguaranteed obligation rated "Prime-1" or "A3" or better by Moody's and "A-1" or "A" or better by S&P, or any commercial bank with the above ratings provided:

- A. A master repurchase agreement or specific written repurchase agreement governs the transaction, which characterizes the transaction as a purchase and sale of securities.
 - B. The securities are held free and clear of any lien, by the Trustee or an independent third party acting solely as agent for the Trustee, and such third party is (i) a Federal Reserve Bank, (ii) a bank which is a member of the Federal Deposit Insurance Corporation and which has combined capital, surplus, and undivided profits of not less than \$75,000,000, or (iii) a bank approved in writing for such purpose by each Credit Issuer, if any, and the Trustee shall have received written confirmation from such third party that it holds such securities, free and clear of any lien, as agent for the Trustee.
 - C. A perfected first security interest under the Uniform Commercial Code, or book entry procedures prescribed at 31 CFR 306.1 et seq. or 31 CFR 350.0 et seq. or a successor provision in such securities is created for the benefit of the Trustee.
 - D. The repurchase agreement has a term of six month or less, or the Authority will value the collateral securities no less frequently than monthly and will liquidate the collateral securities if any deficiency in the required collateral percentage is not restored within two business days of such valuation.
 - E. The repurchase agreement matures on or before a debt service payment date (or other appropriate liquidation period).
 - F. The fair market value of the securities in relation to the amount of the repurchase obligation is equal to at least 100%.
9. Banker's acceptances, Eurodollar deposits and certificates of deposit (in addition to the certificates of deposit provided for by subparagraphs 6 and 7 above) of the domestic branches of foreign banks having a capital and surplus of \$1,000,000,000 or more, or any bank or trust company organized under the laws of the United States of America or Canada, or any state or province thereof, having capital and surplus, in the amount of \$1,000,000,000; provided that the aggregate maturity value of all such banker's acceptances and certificates of deposit held at an times as investment of funds under the Bond Resolution with respect to any particular bank, trust company or national association shall not exceed 5% of its capital and surplus; and provided further that any such bank, trust company, or national association shall be rated in one of the two highest rating categories, without regard to rating sub-categories, by both Moody's and S&P.
 10. Other obligations of the United States of America or any agency thereof which may then be purchased with funds belonging to the State of New Jersey or which are legal investments for savings banks in the State of New Jersey.
 11. Deposits in the New Jersey Cash Management Fund.
 12. Obligations of any state, commonwealth or possession of the United States or a political subdivision thereof or any agency or instrumentality of such a state, commonwealth, possession or political subdivision, provided that at the time of their purchase such obligations are rated in either of the two highest rating categories by both Moody's and S&P.
 13. Commercial paper with a maturity date not in excess of 270 days rated A1+ and P-1 by Moody's at the time of such investment, issued by an entity incorporated under the laws of the United States or any state thereof.

IV. INVESTMENT PRACTICES

A. Investment Concentration

It is the policy of the Authority to diversify its investment portfolio. Assets held in the investment portfolio shall be diversified to eliminate the risk of loss resulting from over-concentration of assets in a specific maturity, a specific issuer or a specific class of securities. The Authority will maintain an investment concentration not to exceed the percentages noted below. The Chief Financial Officer, or designee, is authorized to approve any deviation from these limits on a case by case basis.

1. There are no limitations on investments carrying the full faith and credit of the United States Government, including repurchase agreements collateralized by such investments.
2. Investments in any single Federal Agency not carrying the full faith and credit of the United States Government are limited to 40% of the portfolio.
3. Investments in Certificates of Deposit are limited to 30% of the portfolio.
4. Investments made in Commercial Paper are limited to 30% of the total portfolio.
5. Investments in Municipal securities are limited to 30% of the total portfolio.
6. Investments in any one single issuer (excluding US Treasury and Federal Agency securities) are limited to 5% of the portfolio.

B. Quality of Investments

All investments shall be made with judgment and care, which persons of prudence, discretion and intelligence exercise in the management of their own affairs, not for speculation, but for investment, considering the probable safety of capital as well as the probable income to be derived.

All investments ratings shall be based on security ratings at the time of purchase. In the event of a downgrade in rating, the Chief Financial Officer, or designee, will determine whether to sell or hold the investment. The Authority will not make an investment in an issuer who has a negative outlook associated with their credit rating, except for US Treasury or Federal Agencies. The portfolio's average credit quality should be rated Aa3/AA- or better by Moody's/S&P.

C. Maximum Maturity

At the time of purchase, the maturity of each security in the portfolio may not exceed the following maximum timeframes for the respective fund in which the investment is made in accordance with the Bond Resolution or Authority policy. The maximum maturity will take into account any call, put, prepayment or other features that may impact maturity. All investments mature no later than necessary to provide moneys when needed for payments to be made from such funds.

- Revenue Funds – 1 year (by Bond Resolution)
- Construction Funds – 5 years (by Authority Policy)
- Maintenance Reserve Fund – 2 years (by Bond Resolution)

- Special Projects Reserve Fund – 2 years (by Bond Resolution)
- General Reserve Fund – 3 years (by Bond Resolution)
- Debt Service Fund – 1 year (by Authority Policy)
- Charges Fund – 3 months (by Authority Policy)
- Debt Reserve Fund – 5 years (by Bond Resolution)

Investments are generally purchased with the intent of holding to maturity, but the Chief Financial Officer, or designee, has the flexibility to restructure and rebalance portfolio holdings to manage risk and take advantage of market opportunities.

D. Security Purchases

All securities purchased by the Authority under this Investment Policy shall be designated as assets of the Authority and shall be conducted on a delivery-versus-payment (DVP) basis, with the securities delivered to a designated Authority custodian. The securities will be protected through the use of a third-party custodian/safekeeping agent, which may be a Trustee. A minimum of three (3) informal bids or offers will be solicited for direct purchases of securities. The award will be based on lowest cost for purchase. The Authority may use electronic trading screens to facilitate the informal bid process.

V. REPORTING REQUIREMENTS

- A. On an annual basis, the Authority's Finance Department will prepare an Investment Plan, which will specify the targets for average invested balances, average maturity and average yield by fund. The report will also include concentration targets by investment type and issuer for the upcoming year considering current and projected market conditions.
- B. On a quarterly basis, the Authority's Finance Department will prepare an investment report which details actual performance compared to the Investment Plan.
- C. On a monthly basis, the Authority's Finance Department will prepare the following:
- Schedule of Investments by fund;
 - Detailed purchases, maturities, sales of investments by fund;
 - Investments by Issuer;
 - Credit ratings by Issuer;
 - Average invested balances, maturity and yield by fund.

Appendix C: Management Salaries

| Pay Grade | Job Title | Employee's Name | Annual Salary | Employee's Department |
|-----------|--|-------------------------|---------------|-----------------------|
| V35 | Executive Director | Mrozek, Joseph | \$174,000.00 | Executive |
| U35 | General Counsel | Harris, Bruce | \$165,000.00 | Law |
| U35 | Chief Engineer | Fischer, Robert J. | \$148,569.14 | Engineering |
| U35 | Chief Financial Officer | Manuelli, Donna | \$148,569.14 | Finance |
| U35 | Chief Operating Officer & DED | O'Hern, John | \$141,701.33 | Executive |
| U35 | Chief Information Officer | Dios, Jose | \$140,332.24 | ITS |
| T35 | Director of Human Resources | Garrity, Mary-Elizabeth | \$130,815.51 | Human Resources |
| T35 | Director of Internal Audit | Carone, James D. | \$131,811.00 | Internal Audit |
| T35 | Director of Maintenance | McGoldrick, Kenneth | \$132,600.00 | Maintenance |
| T35 | Director of Operations | Eibel, Henry | \$127,896.84 | Operations |
| T35 | Director of Procurement and Materials Management | Ward, Andrea | \$130,815.85 | PMM |
| T35 | Director of Tolls | Quirk, Robert B. | \$129,118.73 | Tolls |
| S35 | Deputy Chief Engineer - Construction | Williams, James L. | \$137,625.65 | Engineering |
| S35 | Deputy Chief Engineer - Design | Keller, John | \$134,367.66 | Engineering |
| S35 | Deputy Chief Financial Officer | Varga, Pamela J. | \$135,678.57 | Finance |
| S35 | Deputy Director Internal Audit | Walters, Tracey | \$134,685.74 | Internal Audit |
| S35 | Deputy Director Maintenance | Perna, William | \$124,414.50 | Maintenance |
| S35 | Deputy Director Operations | Dunn, Kevin | \$118,885.31 | Operations |
| S35 | Deputy Director Tolls | Barton, F. Scott | \$122,919.34 | Tolls |
| S35 | Deputy Director Procurement and Materials Management | Wilser, Donna C. | \$124,433.85 | PMM |
| S35 | Deputy General Counsel | Tully, Maura K. | \$123,525.57 | Law |
| R35 | Assistant Director of Human Resources | Burke, Kevin | \$97,163.00 | Human Resources |
| R35 | Assistant Director of Tolls - Operations | Clarke, Larry | \$118,027.14 | Tolls |
| Q35 | Supervising Engineer | Hesslein, Daniel | \$110,000.00 | Maintenance |
| Q35 | Supervising Engineer | Navarro, Lisa | \$117,383.92 | Engineering |
| O35 | Administrative Manager | Zilinski, Dennis | \$112,875.49 | Human Resources |
| N35 | Secretary to the Authority | Schurman, Kim | \$87,974.80 | Executive |
| M35 | Benefits Manager | Mustillo, James | \$79,998.68 | Human Resources |
| M35 | Employment Manager | Kaleem, Rabia | \$79,998.68 | Human Resources |
| M35 | Assistant Secretary to the Authority | Burns, Lisa | \$70,079.10 | Executive |
| L35 | Administrative Assistant | Collins, Cheryl | \$62,899.59 | Law |
| K35 | Senior Human Resources Generalist | Carvajal, Kelly | \$50,330.00 | Human Resources |

| | | | | |
|-----|-----------------------------------|--------------------|-------------|-----------------|
| K35 | Senior Human Resources Generalist | Hecht, Lia | \$63,843.71 | Human Resources |
| K35 | Senior Human Resources Generalist | Maldonado, Leticia | \$50,330.00 | Human Resources |
| K35 | Senior Human Resources Generalist | McClamb, Kayla | \$50,330.00 | Human Resources |

Figure 132: Management Salaries

Appendix D: NJTA Non-Bargaining Salary Scale

| Pay Grade | 35 Hours/ week | 40 Hours/ week | Minimum Base Annual Salary | Maximum Base Annual Salary | Job Title |
|-----------|----------------|----------------|----------------------------|----------------------------|---|
| B | B35 | B40 | \$20,913 | \$32,938 | Confidential Aide |
| | | | | | Human Resources Aide |
| C | C35 | C40 | \$23,057 | \$36,314 | Senior Confidential Aide |
| | | | | | Senior Human Resources Aide |
| D | D35 | D40 | \$25,420 | \$40,036 | Confidential Clerk |
| | | | | | Human Resources Clerk |
| E | E35 | E40 | \$28,025 | \$44,140 | Senior Confidential Clerk |
| | | | | | Senior Human Resources Clerk |
| F | F35 | F40 | \$30,898 | \$48,644 | Confidential Secretarial Aide |
| | | | | | Human Resources Coordinator |
| G | G35 | G40 | \$34,065 | \$53,652 | Human Resources Floater |
| | | | | | Senior Confidential Secretarial Aide |
| | | | | | Senior Human Resources Coordinator |
| | | | | | Security Officer |
| H | H35 | H40 | \$37,557 | \$59,152 | Human Resources Assistant |
| | | | | | Legal Document Support Specialist |
| | | | | | Senior Security Officer |
| I | I35 | I40 | \$41,406 | \$65,215 | Confidential Secretary |
| | | | | | Security Inspector |
| | | | | | Senior Human Resources Assistant |
| J | J35 | J40 | \$45,650 | \$71,899 | Benefits Administrator |
| | | | | | Human Resources Generalist |
| | | | | | Human Resources Office Administrator |
| | | | | | Senior Confidential Secretary |
| K | K35 | K40 | \$50,330 | \$79,269 | Auditor |
| | | | | | Benefits Analyst |
| | | | | | Nurse |
| | | | | | Senior Benefits Administrator |
| | | | | | Senior Human Resources Generalist |
| | | | | | Senior Human Resources Office Administrator |
| | | | | | Senior Security Inspector |

| Pay Grade | 35 Hours/ week | 40 Hours/ week | Minimum Base Annual Salary | Maximum Base Annual Salary | Job Title |
|-----------|----------------|----------------|----------------------------|----------------------------|--|
| L | L35 | L40 | \$55,488 | \$87,394 | |
| | | | | | Administrative Assistant |
| | | | | | Benefits Supervisor |
| | | | | | Claims Specialist |
| | | | | | Employment Supervisor |
| | | | | | Human Resources Specialist |
| | | | | | Security Supervisor |
| | | | | | Tolls Investigation Supervisor |
| M | M35 | M40 | \$61,176 | \$96,352 | |
| | | | | | Assistant Secretary to the Authority |
| | | | | | Benefits Manager |
| | | | | | Claims Manager |
| | | | | | Compliance Manager |
| | | | | | Employment Manager |
| | | | | | Executive Assistant |
| | | | | | Manager - Safety Programs |
| | | | | | Security Manager |
| | | | | | Senior Auditor |
| | | | | | Senior Nurse |
| | | | | | Senior Payroll Manager |
| N | N35 | N40 | \$67,447 | \$106,366 | |
| | | | | | Audit Manager |
| | | | | | Case Manager |
| | | | | | Human Resources Manager |
| | | | | | Secretary to the Authority |
| | | | | | Senior Security Manager |
| | | | | | Tolls Investigation Manager |
| O | O35 | O40 | \$74,360 | \$117,117 | |
| | | | | | Administrative Manager |
| | | | | | Maintenance Administrative Manager |
| | | | | | Maintenance Automotive Manager |
| | | | | | Maintenance Financial and Office Manager |
| | | | | | Senior Audit Manager |
| P | P35 | P40 | \$81,982 | \$129,121 | |
| | | | | | Assistant Comptroller |
| | | | | | Manager of Business Admin Software |
| | | | | | Media Relations Coordinator |
| | | | | | Senior Benefits Manager |
| | | | | | Senior Human Resources Manager |

| Pay Grade | 35 Hours/ week | 40 Hours/ week | Minimum Base Annual Salary | Maximum Base Annual Salary | Job Title |
|-----------|----------------|----------------|----------------------------|----------------------------|---|
| Q | Q35 | Q40 | \$90,385 | \$135,577 | |
| | | | | | Comptroller |
| | | | | | Equal Employment Opportunity Officer |
| | | | | | Supervising Engineer |
| R | R35 | R40 | \$97,163 | \$142,356 | |
| | | | | | Assistant Director of Finance |
| | | | | | Assistant Director of Human Resources |
| | | | | | Assistant Director of HR Policy & Training |
| | | | | | Assistant Director ITS - Data and Performance Management Services |
| | | | | | Assistant Director ITS -- Software Engineering |
| | | | | | Assistant Director of Law |
| | | | | | Assistant Director of Maintenance -- Roadway |
| | | | | | Assistant Director of Maintenance -- Buildings |
| | | | | | Assistant Director of Tolls - Operations |
| | | | | | Assistant Director of Tolls - Training |
| | | | | | Senior Supervising Engineer |
| S | S35 | S40 | \$104,207 | \$149,474 | |
| | | | | | Chief of Staff |
| | | | | | Deputy Chief Engineer - Construction |
| | | | | | Deputy Chief Engineer - Design |
| | | | | | Deputy Chief Financial Officer |
| | | | | | Deputy Chief Information Officer |
| | | | | | Deputy Director of Human Resources |
| | | | | | Deputy Director of Internal Audit |
| | | | | | Deputy Director of Maintenance |
| | | | | | Deputy Director of Operations |
| | | | | | Deputy Director of Procurement & Materials Management |
| | | | | | Deputy Director of Tolls |
| | | | | | Deputy General Counsel |
| T | T35 | T40 | \$111,762 | \$156,948 | |
| | | | | | Deputy Executive Director |
| | | | | | Director of Human Resources |
| | | | | | Director of Internal Audit |
| | | | | | Director of Maintenance |
| | | | | | Director of Operations |
| | | | | | Director of Procurement & Materials Management |
| | | | | | Director of Tolls |

| Pay Grade | 35 Hours/ week | 40 Hours/ week | Minimum Base Annual Salary | Maximum Base Annual Salary | Job Title |
|-----------|----------------|----------------|----------------------------|----------------------------|-------------------------------|
| U | U35 | U40 | \$119,865 | \$165,000 | |
| | | | | | Chief Engineer |
| | | | | | Chief Financial Officer |
| | | | | | Chief Information Officer |
| | | | | | Chief Operating Officer & DED |
| | | | | | General Counsel |
| V | V35 | V40 | \$128,555 | \$174,000 | |
| | | | | | Executive Director |

Figure 133: NJTA Non-Bargaining Salary Scale

- Pay Grades M and above are considered Management job titles.
- Pay Grades L and below are eligible to be compensated at overtime rate when they work beyond regularly scheduled shift or work on an unscheduled day.
- Pay Grades M, N, and O are eligible to be compensated at straight time rate when the employee works beyond his/her regularly scheduled shift or works on an unscheduled day according to the following:
 - A. work performed on non-scheduled days when excess hours are:
 - (1) mandatory; or
 - (2) pre-approved; or
 - (3) as the result of an emergency declared by the Executive Director of the Authority.
 - B. work performed on scheduled days when excess hours are:
 - (1) pre-approved by the Department Head; and
 - (2) exceed one (1) hour. In other words, employees shall be paid for all excess hours worked only if they work more than one (1) hour of excess time.
- Pay Grades P and above are ineligible to be compensated when they work beyond their regularly scheduled shift or work on an unscheduled day.
- No employee can earn an annual salary, with or without longevity, of more than \$174,000

Appendix E: Statistical Data

New Jersey State Highway System

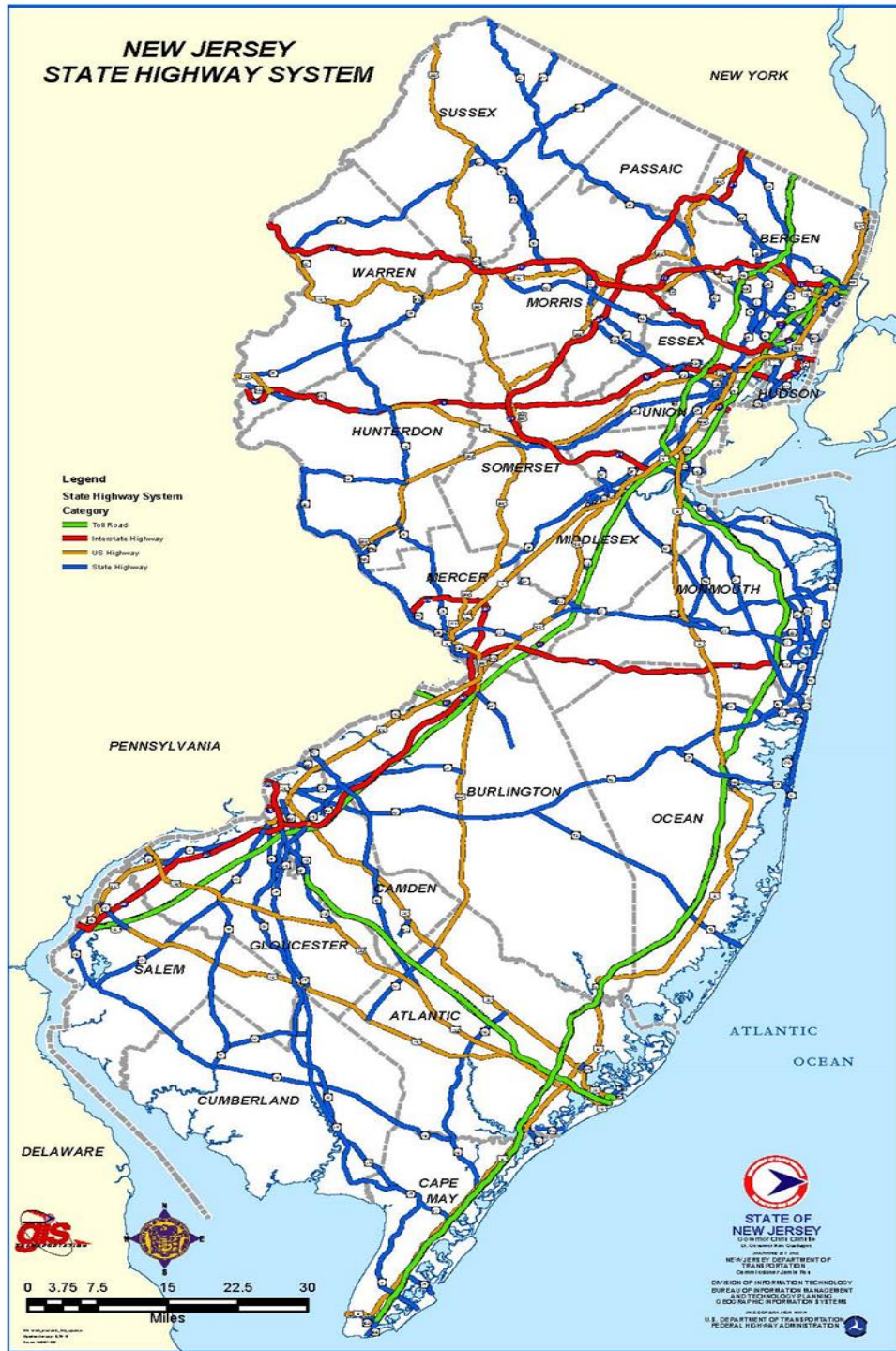


Figure 134: Map of New Jersey State Highway System

New Jersey Turnpike Authority

The Authority is a body of corporate and politic of the State of New Jersey organized and existing by virtue of the New Jersey Turnpike Act of 1948, and is a public instrumentality exercising essential governmental functions. The Authority is empowered to acquire, construct, maintain, repair, and operate projects at locations established by law, to fix and establish tolls for use of the turnpike system, and to issue revenue bonds for its purposes. The Authority operates the State's two busiest toll roads, two of the busiest in the United States -- the New Jersey Turnpike and the Garden State Parkway. These two roadways run through 15 of New Jersey's 21 counties. The two Roadways intersect in Woodbridge Township, Middlesex County and intersect with every interstate and many major roadways across the State. The highways effectively serve as links for the entire State, Air and Sea Ports, and the Northeast Corridor.

New Jersey Turnpike

The Turnpike was the first toll road in New Jersey and the third in the nation when it opened in 1951. It has grown over time from 118 linear miles to 148 linear miles with the addition of the Newark Bay Hudson County Extension (1956), the Pearl Harbor Memorial Turnpike Extension (1956), the Western Spur (1970) and the I-95 Extension (1992). The road has also grown wider over the years. Originally, it was four lanes for its full length. Today, it is as wide as 14 lanes in some areas and as of October 2017 includes approximately 2,418 lane miles. There are 28 toll interchanges and 375 toll lanes -- 145 entry lanes and 230 exit lanes.

This roadway serves as a major corridor for I-95 linking travel:

- 1) Between four states -- New Jersey, New York, Pennsylvania and Delaware;
- 2) Two major cities -- New York and Philadelphia;
- 3) Military roadway use for Joint Base McGuire-Dix-Lakehurst; and
- 4) Access to the port of New Jersey for use in transporting goods for global trade along the east coast.

Garden State Parkway

The Parkway, which opened to traffic in 1954, passes through 10 counties between the Cape May-Lewes Ferry in Cape May County and the New York State Thruway at the New York State line in Bergen County. Originally four lanes wide, the Parkway is now 12 lanes at its widest point in Monmouth and Middlesex counties and has approximately 2,028 lane miles. The Parkway has a total of 359 exit and entrance points.

The Parkway is a major commuter highway throughout the year and during the summer months is the principal travel route to the Jersey Shore. It also provides access to the Delmarva Peninsula via the Cape May – Lewes Ferry.

Population

The two roadways pass through 15 of New Jersey's 21 counties, they include: Atlantic, Bergen, Burlington, Camden, Cape May, Essex, Gloucester, Hudson, Mercer, Middlesex, Monmouth, Ocean, Passaic, Salem and Union. Population growth serves as one indicator of roadway usage. The chart below provides the official United States Census Bureau statistics from April 1, 2010 and its estimate as of July 1, 2016. Additionally, Monmouth, Ocean, Atlantic and Cape May counties experience seasonal population growth as the Jersey Shore is a popular destination site for vacationers from neighboring States and around the World. While the State has seen a population growth of 1.7% over the time period measured, the counties served by the Authority experienced above average growth rates with the counties that either roadway passes through increased in population by an average of 2.7%. Whereas counties that neither roadway passes through increased by an average of only 0.1%. These statistics demonstrate the importance of the roadways to the State's overall economic well-being.

| County | 2016 Population | 2010 Population | Increase/ (Decrease) | % Change |
|---------------------------------------|---|----------------------------|-------------------------|-------------|
| Atlantic | 270,991 | 274,549 | (3,558) | -1.3% |
| Bergen | 939,151 | 905,116 | 34,035 | 3.8% |
| Burlington | 449,284 | 448,734 | 550 | 0.1% |
| Camden | 510,150 | 513,657 | (3,507) | -0.7% |
| Cape May | 94,430 | 97,265 | (2,835) | -2.9% |
| Cumberland | 153,797 | 156,898 | (3,101) | -2.0% |
| Essex | 796,914 | 783,969 | 12,945 | 1.7% |
| Gloucester | 292,330 | 288,288 | 4,042 | 1.4% |
| Hudson | 677,983 | 634,266 | 43,717 | 6.9% |
| Hunterdon | 124,676 | 128,349 | (3,673) | -2.9% |
| Mercer | 371,023 | 366,513 | 4,510 | 1.2% |
| Middlesex | 837,073 | 809,858 | 27,215 | 3.4% |
| Monmouth | 625,846 | 630,380 | (4,534) | -0.7% |
| Morris | 498,423 | 492,276 | 6,147 | 1.2% |
| Ocean | 592,497 | 576,567 | 15,930 | 2.8% |
| Passaic | 507,945 | 501,226 | 6,719 | 1.3% |
| Salem | 63,436 | 66,083 | (2,647) | -4.0% |
| Somerset | 333,751 | 323,444 | 10,307 | 3.2% |
| Sussex | 142,522 | 149,265 | (6,743) | -4.5% |
| Union | 555,630 | 536,499 | 19,131 | 3.6% |
| Warren | 106,617 | 108,692 | (2,075) | -1.9% |
| Total | 8,944,469 | 8,791,894 | 152,575 | 1.7% |
| Counties Served by Parkway Only | 2,091,709 | 2,079,987 | 11,722 | 0.6% |
| All Counties Served by Parkway | 5,669,761 | 5,564,163 | 105,598 | 1.9% |
| Counties Served by Turnpike Only | 1,914,922 | 1,868,807 | 46,115 | 2.5% |
| All Counties Served by Turnpike | 5,492,974 | 5,352,983 | 139,991 | 2.6% |
| Counties Served by Both Roadways | 3,578,052 | 3,484,176 | 93,876 | 2.7% |
| Counties Not Served by Either Roadway | 1,359,786 | 1,358,924 | 862 | 0.1% |
| Dk Green Parkway | Light Green Turnpike and Parkway | Chartreuse Turnpike | | |

Figure 135: New Jersey Population by County

Employment

Employment growth is a key indicator of service and economic growth. The total number of residents who both reside and work in New Jersey is 3,553,070 and the number of residents who commute to work out of state is 554,658. According to the New Jersey Department of Labor and Workforce Development, Bergen, Essex, Hudson, Monmouth and Union counties have shown an increase in employment.

The importance of the Authority's roadways in providing key connections to neighboring states is highlighted by the percentage of residents who work out of state. The chart below indicates the 2009-2013 five year average of where the residences of each county are employed as reported by the New Jersey State Data Center. Overall, 13.5% of New Jersey state workers are employed out of state while more than 79% of employees working out of state are living in counties served by the New Jersey Turnpike. Further, only 7.1% of employees residing in counties that are not directly served by either roadway work out of state.

| County | In State | Out of State | % in State | % Out of State |
|---------------------------------------|---|----------------------------|--------------|----------------|
| Atlantic | 119,725 | 4,075 | 96.7% | 3.3% |
| Bergen | 339,069 | 99,542 | 77.3% | 22.7% |
| Burlington | 187,535 | 30,777 | 85.9% | 14.1% |
| Camden | 187,407 | 46,332 | 80.2% | 19.8% |
| Cape May | 40,540 | 2,170 | 94.9% | 5.1% |
| Cumberland | 57,746 | 1,873 | 96.9% | 3.1% |
| Essex | 294,344 | 46,334 | 86.4% | 13.6% |
| Gloucester | 109,309 | 27,399 | 80.0% | 20.0% |
| Hudson | 223,100 | 96,430 | 69.8% | 30.2% |
| Hunterdon | 58,387 | 4,840 | 92.3% | 7.7% |
| Mercer | 156,274 | 16,575 | 90.4% | 9.6% |
| Middlesex | 340,858 | 45,150 | 88.3% | 11.7% |
| Monmouth | 263,740 | 35,323 | 88.2% | 11.8% |
| Morris | 227,443 | 18,688 | 92.4% | 7.6% |
| Ocean | 226,019 | 9,522 | 96.0% | 4.0% |
| Passaic | 203,593 | 17,134 | 92.2% | 7.8% |
| Salem | 23,562 | 4,553 | 83.8% | 16.2% |
| Somerset | 150,450 | 11,855 | 92.7% | 7.3% |
| Sussex | 68,709 | 5,266 | 92.9% | 7.1% |
| Union | 227,680 | 26,555 | 89.6% | 10.4% |
| Warren | 47,580 | 4,265 | 91.8% | 8.2% |
| Total | 3,553,070 | 554,658 | 86.5% | 13.5% |
| Counties Served by Parkway Only | 733,892 | 64,149 | 92.0% | 8.0% |
| All Counties Served by Parkway | 2,243,103 | 316,582 | 87.6% | 12.4% |
| Counties Served by Turnpike Only | 699,652 | 191,289 | 78.5% | 21.5% |
| All Counties Served by Turnpike | 2,089,138 | 439,647 | 82.6% | 17.4% |
| Counties Served by Both Roadways | 1,389,486 | 248,358 | 84.8% | 15.2% |
| Counties Not Served by Either Roadway | 610,315 | 46,787 | 92.9% | 7.1% |
| Dk Green Parkway | Light Green Turnpike and Parkway | Chartreuse Turnpike | | |

Figure 136: New Jersey In/Out of State Employment by County

With the increase in employment reported by the New Jersey Department of Labor, the State has experienced a steady decline in unemployment since 2012.

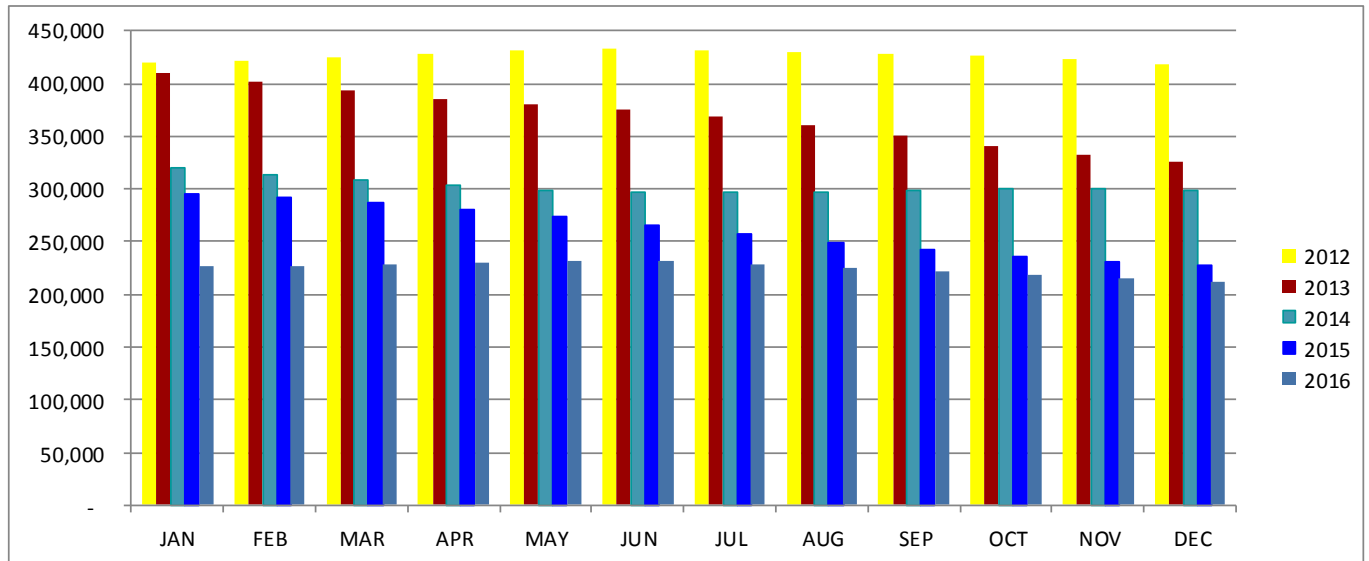


Figure 137: New Jersey Employment Totals (2012-2016)

Employment in the 21 counties in New Jersey increased 80,700 and unemployment decreased by 38,300 between 2015 and 2016. The county reporting the largest increase in employment was Middlesex, which reported an increase of 5,700 jobs. Middlesex was followed by Monmouth at 4,300, Ocean 3,400 and Camden 3,200. The top 5 counties reporting a decrease in unemployment were Essex, which reported a decrease of 3,700 unemployed, followed by Middlesex at 3,200, Atlantic at 3,000 and Bergen and Union at 2,600.

| County | 2015 | 2016 | Change | 2015 | 2016 | Change |
|--------------------|------------------|------------------|---------------|----------------|----------------|-----------------|
| | Employed | Employed | | Unemployed | Unemployed | |
| Atlantic County | 115,400 | 115,100 | (300) | 12,200 | 9,200 | (3,000) |
| Bergen County | 460,900 | 464,000 | 3,100 | 22,800 | 20,200 | (2,600) |
| Burlington County | 219,700 | 222,700 | 3,000 | 12,400 | 10,300 | (2,100) |
| Camden County | 238,400 | 241,600 | 3,200 | 16,500 | 14,000 | (2,500) |
| Cape May County | 43,000 | 42,600 | (400) | 5,400 | 4,600 | (800) |
| Cumberland County | 61,700 | 62,200 | 500 | 6,000 | 5,000 | (1,000) |
| Essex County | 348,600 | 348,800 | 200 | 26,000 | 22,300 | (3,700) |
| Gloucester County | 140,500 | 142,500 | 2,000 | 9,100 | 7,600 | (1,500) |
| Hudson County | 342,600 | 344,900 | 2,300 | 19,500 | 16,900 | (2,600) |
| Hunterdon County | 62,700 | 62,700 | - | 2,800 | 2,500 | (300) |
| Mercer County | 188,200 | 191,100 | 2,900 | 9,900 | 8,600 | (1,300) |
| Middlesex County | 417,200 | 422,900 | 5,700 | 22,700 | 19,500 | (3,200) |
| Monmouth County | 312,200 | 316,500 | 4,300 | 17,100 | 14,700 | (2,400) |
| Morris County | 250,200 | 250,300 | 100 | 11,500 | 10,200 | (1,300) |
| Ocean County | 251,400 | 254,800 | 3,400 | 16,600 | 14,100 | (2,500) |
| Passaic County | 231,100 | 232,600 | 1,500 | 17,600 | 15,200 | (2,400) |
| Salem County | 28,700 | 28,700 | - | 2,300 | 1,900 | (400) |
| Somerset County | 166,100 | 166,200 | 100 | 8,000 | 7,000 | (1,000) |
| Sussex County | 72,400 | 72,400 | - | 4,200 | 3,600 | (600) |
| Union County | 262,900 | 263,100 | 200 | 16,900 | 14,300 | (2,600) |
| Warren County | 54,000 | 54,300 | 300 | 3,100 | 2,600 | (500) |
| Grand Total | 4,267,900 | 4,300,000 | 32,100 | 262,600 | 224,300 | (38,300) |

Figure 138: New Jersey Employment by County

Economic Indicators

The latest estimates of state and national GDP growth released by the Bureau of Economic Analysis are for 2016. New Jersey has now seen five consecutive years of growth in the state's gross domestic product since contractions in 2011. However, New Jersey's GDP growth continues to lag behind that at the national level since emerging from the recent recession at the end of 2009.

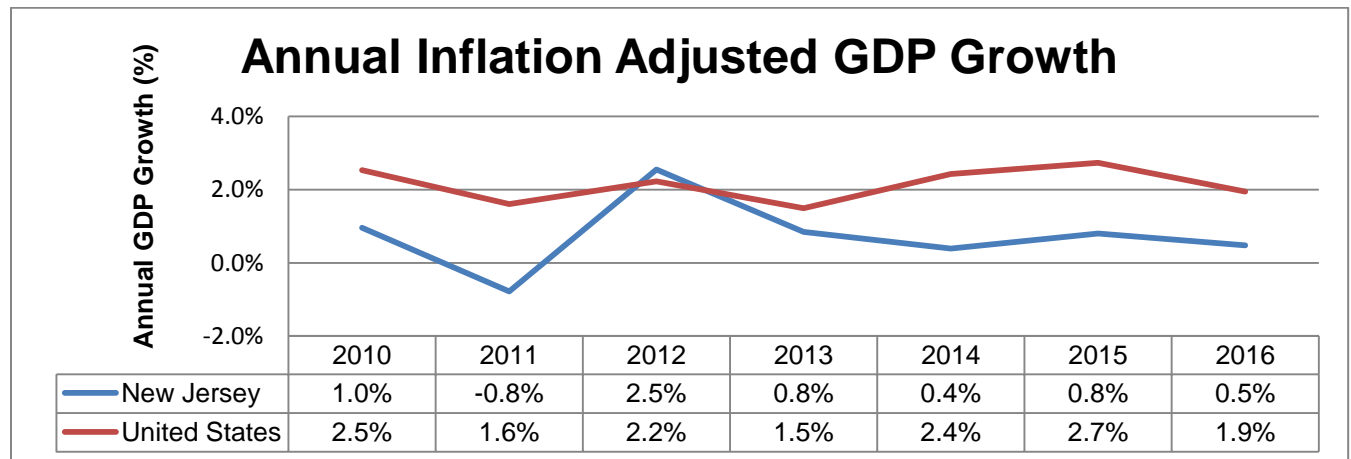
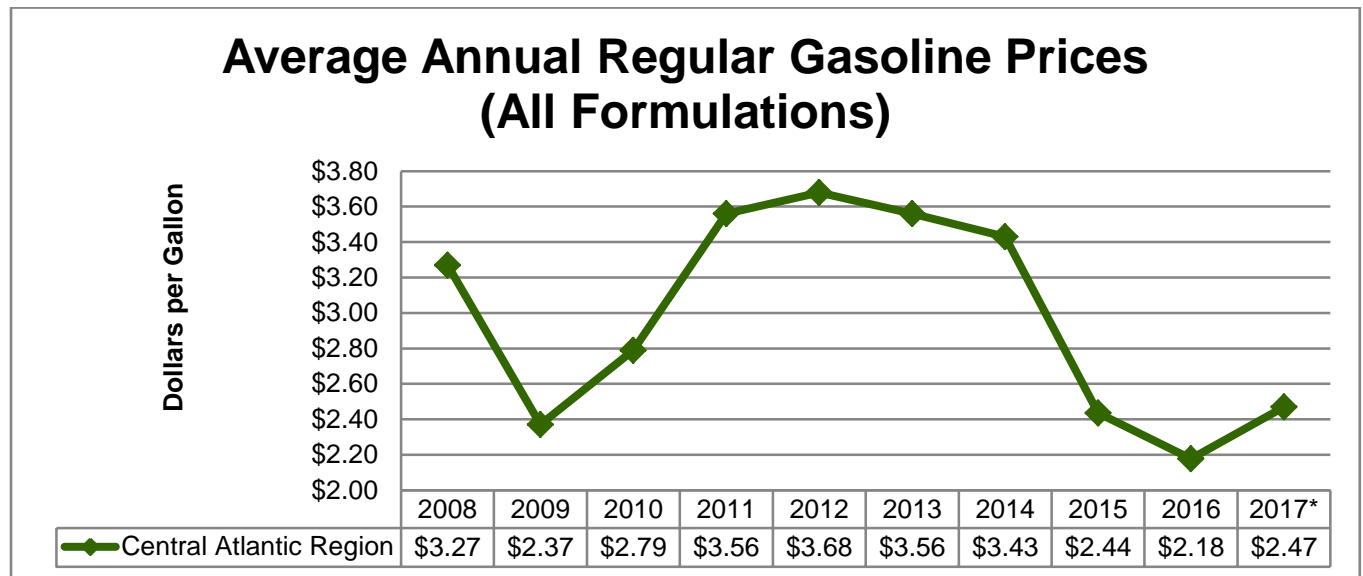


Figure 139: Annual Inflation Adjusted GDP Growth (2010-2016)

The average price for regular grade gasoline reached a 10 year low in 2016. According to projections from the U.S. Energy Information Administration (EIA) the average annual price for regular grade gas will rise to a national average of \$2.35 per gallon in 2018. New Jersey is included in the EIA’s Central Atlantic Region (PADD 1B), where gas prices have closely tracked the national average for the past 10 years. Even if fuel prices rise to \$2.36 they will still be lower than any period in the last ten years other than last year.



*2017 is through September

Figure 140: Average Annual Regular Gasoline Prices (2008-2017)

Weather

Snowfall can have a major effect on the Authority’s Operating Budget for the fiscal year. In 2017, the Authority spent approximately \$25 million on snow removal. In 2015 spending of \$46 million was the highest amount in Authority history, while 2016 and 2017 were a comparably lighter years in both snowfall totals and spending. The 2016-2017 winter was the 6th mildest winter in New Jersey history with an average winter temperature of 37.5. According to annual snowfall totals compiled by the New Jersey State Climatologist, snowfall has varied wildly over the previous five winter seasons. The Authority changed its method of calculating the snow removal budget in 2016 in an effort to account for the high variance in snow removal costs.

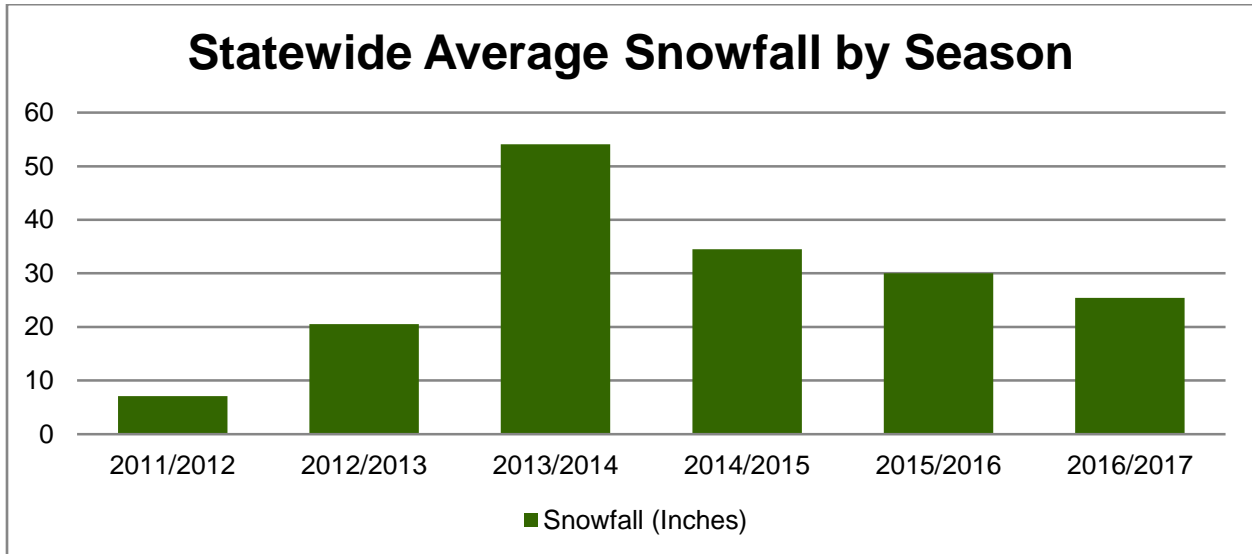


Figure 141: Statewide Average Snowfall by Season (2011-2017)

Glossary

ACCRETION – Accumulation of capital gains on discount bonds.

ACCRUAL BASIS – Accounting practice in which expenses and income are accounted for as they are earned or incurred.

AMORTIZATION – Gradual repayment of debt over a period of time.

ANNUAL BUDGET – Includes the Authority's Revenue Budget, Operating Budget, Debt Service Fund budget, Charges Fund Budget, Maintenance Reserve Fund Budget, Special Project Reserve Fund Budget, General Reserve Fund Budget, and Supplemental Capital Fund Budget.

ANNUAL PROCUREMENT PLAN – Active document listing all of the Authority's procurement contracts necessitating board approval for the current fiscal year.

APPROPRIATIONS – A sum of money or total of assets devoted to a specific purpose.

ARBITRAGE – The simultaneous purchase and sale of an asset in order to profit from a difference in price.

AUCTION AGENT – A financial institution responsible for conducting the auction used in connection with the periodic interest rate reset and remarketing of the Authority's bonds.

AUDITED YEAR-END FINANCIAL STATEMENTS – The Authority's end of fiscal year financial statements reviewed and audited by an independent auditor.

BASIS OF ACCOUNTING – The method of accounting used to track and report revenues and expenses, for example, cash or accrual.

BONDS – A written guarantee to pay a principal amount and/or interest at a specified date or dates known as the maturity date(s).

BOND COVENANTS – The Authority's contractual obligations set forth in issued bond contracts.

BOND INSURANCE – Insurance purchased by a bond issuer that guarantees the repayment of principal and all associated interest payments to the bondholders in the event of a default.

BOND RATING – An assessment of the credit risk with respect to a specific bond issue.

BOND RESOLUTION – The agreement that defines the Authority's obligations and requirements when issuing new-money bonds.

BROKER/DEALER – A financial institution responsible for both buying and selling securities for the Authority.

BUDGET – Plan of coordinating estimated expenses and income for a given period of time.

CALL – An option contract giving the owner the right to buy a specified amount of an underlying security at a specified price within a specified time.

CALL OPTION VALUE – The present value of a call option in light of present market conditions.

CAPITAL ASSETS – Land and improvements, easements, building and improvements, vehicles, machinery, equipment, infrastructure, and all other tangible and intangible assets that are used in operations and that have initial useful lives extending beyond a single reporting period.

CAPITAL EXPENDITURE – The costs in the acquisition of fixed assets and the non-recurring expenditures for the preservation, replacement, repair, renewal, reconstruction, modification or expansion of the roadway.

CAPITAL IMPROVEMENT PROGRAM – The Authority's 10 year, \$7 billion program to increase investment in projects focused on capacity, state of good repair, safety and security. The program is funded by the issuance of Turnpike Revenue Bonds, of which \$6.75 billion worth of bonds have been issued.

CAPITALIZED INTEREST – A portion of the proceeds from the issue of Turnpike Revenue Bonds set aside to pay interest on those bonds for a set period of time.

CAPITALIZATION – Recordation of a cost as an asset, rather than an expense. This approach is used when a cost is not expected to be entirely consumed in the current period, but rather over an extended period of time. The asset is recorded on the Authority's balance sheet and depreciated over its useful life.

CAPITALIZATION POLICY – The Authority's policy on allowable levels of asset capitalization.

CASH FLOW – The net amount of cash and cash-equivalents moving into and out of the Authority.

CHARGES FUND – Fund held for the purpose of paying accrued fees and charges of any credit issuer, remarketing agent, and tender agent not otherwise paid as an operating expense.

COMMISSIONERS – The eight members of the Authority's governing Board of Commissioners. Commissioners are appointed by the Governor of New Jersey.

CONSTRUCTION FUND – Fund created for the purpose of paying all costs of acquiring or constructing new projects and for the capital improvements of the roadway.

COUPONS – The interest rate stated on a bond when it is issued.

CREDIT QUALITY – An assessment of the credit risk with respect to a specific investment.

CREDIT RATING AGENCY – A company that assigns credit ratings for debt financed securities, assessing their credit quality.

CURRENT PAY INTEREST BOND – A bond that pays interest at regular intervals.

DEBT COVERAGE COVENANTS – The Authority's debt coverage obligations as defined by its Bond Resolution.

DEBT FINANCING – Raising money for working capital or capital expenditures by selling bonds.

DEBT ISSUANCE – The process of raising funds through the issue of bonds.

DEBT RESERVE FUND – Fund created to hold an amount equal to the greatest amount of interest accruing on all outstanding bonds in a calendar year to ensure full and timely payments to bond holders.

DEBT RESERVE REQUIREMENT – The amount required to be held in the Debt Reserve Fund under the Authority's Bond Resolution.

DEBT SERVICE – Payment of principal, interest and other obligations associated with the retirement of debt.

DEBT SERVICE BUDGET – Amounts held to pay the principal and accrued interest due on all outstanding bonds.

DEBT SERVICE COVERAGE RATIO – A measure of the Authority's cash flow available to pay current debt obligations; the ratio of cash available for debt servicing to interest, principal and lease payments.

DEPARTMENT – A major administrative division of the Authority that has overall management responsibility for an operation or group of related operations within a functional area.

DEPARTMENTAL REQUEST – This request represents the various departmental budgets to be presented to the budget section of the Finance Department.

DEPRECIATION – Allocation of the cost of a tangible asset over its useful life.

ELECTRONIC TOLL COLLECTION – An electronic means for motorists to pay toll charges without using coins or currency. Motorists attach an electronic signal device, known as a transponder, on their windshield to automatically deduct the toll charge as they drive through a toll plaza.

ENTERPRISE FUND – A government-owned fund that sells goods and services to the general public.

E-ZPASS – Brand name by which the New Jersey Turnpike Authority collects toll electronically.

FAIR MARKET VALUE – The accurate valuation or assessment of an asset's worth.

FEDERAL SUBSIDY FOR BUILD AMERICA BONDS – A federal subsidy of payable interest on bonds issued by state or local government agencies to raise necessary capital to pursue infrastructure improvements.

FIDUCIARIES – A party legally appointed and authorized to hold assets in a trust for another party.

FISCAL YEAR – The New Jersey Turnpike's fiscal year is January 1 through December 31. This is the period used for the annual operating budget and the reporting of financial position and results of operations of the Authority. The State of New Jersey's fiscal year is July 1 through June 30.

FIXED CREDIT SPREAD – The fixed spread between a benchmark interest rate and floating rate notes.

FIXED RATE – An interest rate that does not change over the life of a credit security.

FIXED SWAP RATE – The fixed rate that the receiver of floating rate notes demands in an interest rate swap.

FLOATING RATE NOTES – A debt instrument with a variable interest rate tied to a benchmark interest rate.

FULL-TIME EMPLOYEE – A full-time employee's work is based on a 35 hour or a 40-hour work week for 52 weeks depending on job title and function.

FUND – An account established to hold money for specific programs, activities or objectives.

FUND BALANCE – Represents the difference between fund assets and fund liabilities at year-end. For budgetary presentation purposes, fund balance excludes capitalized assets.

GENERAL RESERVE FUND – Used to make payments under any agreements with the State of New Jersey or for any other corporate purpose. The General Reserve Fund includes the Supplemental Capital Fund, which was established only for budgetary purposes.

GOVERNMENTAL ACCOUNTING STANDARDS BOARD (GASB) – The source of generally accepted accounting principles (GAAP) used by State and Local governments in the United States.

HEADCOUNT – A statement or description of the number of employees for a specific time period in each department.

INELASTIC – Insensitive to changes in price or income.

INFRASTRUCTURE – The roads and facilities needed for daily operation.

INTERCHANGE– A road junction that uses one or more ramps to allow traffic on one highway to pass through a junction without directly crossing any other traffic stream.

INTEREST INCOME – The Authority's income from interest and investments.

INTEREST RATE SWAP – An agreement between two parties where one stream of future interest payments is exchanged for another based on a specified principal amount.

LANE MILES – The total length of a road multiplied by the number of lanes. For example a 6-lane road that is 10 miles long has a total of 60 lane miles.

LIMITED ACCESS TOLL ROAD – A toll highway system in which the user pays tolls at plazas along the toll road.

MAINTENANCE RESERVE FUND – Used to pay for the cost of major resurfacing, replacement or reconstruction of the Turnpike System and major or extraordinary repairs, renewals or replacements of the Turnpike System necessary to restore or prevent physical damage to the Turnpike System, for the safe and efficient operation of the Turnpike system or to prevent loss of Pledged Revenues.

MILE POSTS – A marker set up to indicate a distance from a particular point.

NET REVENUE REQUIREMENT – The minimum net revenue level allowed under the Authority's Bond Resolution.

NET REVENUE – The Authority's total revenue less its operating expenses for the fiscal year, interest paid, depreciation and taxes.

NEW JERSEY TURNPIKE AUTHORITY ACT – 1948 Act enacted by the State of New Jersey creating the New Jersey Turnpike Authority and bestowing ownership and operational authority over the New Jersey Turnpike upon the Authority.

OPERATING BUDGET – The Authority's Operating Budget consists of funds for Maintenance, Engineering, Toll Collection, State Police and Traffic Control operations, Integrated Technology Services, and General and Administrative Services.

OTHER POSTEMPLOYMENT BENIFITS (OPEB) – are benefits (other than pensions) that the Authority provides to retired employees. These benefits principally involve health care benefits.

OUTSTANDING DEBT – The as-of-yet unpaid portion of the Authority's previously issued Turnpike Revenue Bonds.

PAYING AGENT – An agent who accepts payment from the Authority and then distributes those payments to the holders of the Authority's bonds.

PLEDGED REVENUES – Includes, among other things, all toll revenues, fees, rents, charges and other income and receipts derived from the operation of the Turnpike System.

PNC BANK ARTS CENTER – an outdoor amphitheater in Holmdel, NJ. Owned by the Authority, and leased and operated by Live Nation.

POLLUTION REMEDIATION LIABILITY RESERVE – Fund maintained to meet the obligations of the Government Accounting Standards Board's pollution remediation policy.

PRELIMINARY BUDGET – The draft of the Authority's fiscal year budget of operating expenses and reserves submitted to the Trustee for examination and approval.

PROCUREMENT – The buying of supplies and materials as needed for project completion.

REGISTRAR – An institution responsible for keeping records of the Authority's bondholders.

REMARKETING – A formal underwriting of the Authority's Revenue Bonds for which the form or structure is being changed.

RESERVE – Funds set aside to pay future liabilities.

REVENUE FUND – General operating fund of the Authority. The fund is used to account for all pledged revenues and operating expenses.

REVENUE REQUIREMENT – Requirement under the Authority's Bond Resolution establishing Net Revenue Requirements.

REVENUES – All tolls, fees, charges, rents and other income and receipts derived from the operation of the Turnpike and Parkway. Revenues also include investment income from any monies or securities and the Federal Subsidy for Build America Bonds.

SERIAL BONDS – A bond issue in which a portion of the outstanding bonds matures at regular intervals until eventually all the bonds eventually mature.

SHORT TERM INTEREST RATES – The interest rates on loan contract or other debt instruments with a maturity of less than one year.

SPECIAL PROJECT RESERVE FUND – Used to pay for any major resurfacing, renewals or replacements of the Turnpike System and for studies, surveys, estimates and investigations.

STANDBY AGREEMENT – An agreement between the Authority and its Revenue Bond underwriters that the underwriters are responsible for any unsold portion of a bond issue.

SUBORDINATE BOND ANTICIPATION NOTES – A short-term interest-bearing security issued by the Authority in advance of a larger bond issue.

SUPPLEMENTAL CAPITAL FUND – For budgeting purposes only, the Authority has established a 'Supplemental Capital Fund' within the General Reserve Fund that is used to fund short to medium term projects not financed through bond proceeds. The Supplemental Capital Fund is not a legal fund, is not recognized under the Bond Resolution, and its activity is reported as General Reserve Fund activity in the Authority's financial statements.

SWAP DEALER – An individual who acts as a counterparty in a swap agreement for a fee.

TENDER AGENT – The financial institution responsible for coordinating the process of soliciting bondholders for the issue of the Authority's bonds.

TERMINUS – The end of the roadway.

TOLL – A fee for usage or passage over a toll roadway.

TOLL BOOTH – A booth on a highway where tolls are taken.

TOLL COLLECTOR – An employee hired to take tolls manually from customers.

TOLL REVENUE – The revenue from the tolls collected by the Authority. It is the main source of revenue for the Authority.

TOLL TRANSACTION – A passenger or commercial vehicle that passes through a toll plaza causing a toll to be collected.

TOTAL DEBT SERVICE – The total cash amount required to repay the interest and principal due on the Authority's issued bonds for the fiscal year.

TOTAL REQUIREMENTS COVERAGE RATIO – A measure of the Authority's cash flow available to meet all financial requirements for the fiscal year, including debt service, debt reserve and revenue requirements.

TOTAL REVENUE – Includes the Authority's Toll Revenue, E-Z Pass Fees, Concessions Revenue, Miscellaneous Revenue, Federal Subsidies, Interest Income, and Arts Center Revenues.

TRANSPONDER – An electronic device placed in a vehicle to communicate through radio signals with the toll plaza collection equipment as the vehicle passes through the lane, making a record of a paid toll.

TRUE INTEREST COST – The actual cost of issuing a bond including all ancillary fees and costs.

TRUSTEE – The Authority's Trustee is Bank of New York Mellon. The Authority's Co-Trustee is US Bank.

USEFUL LIFE – The period of time for which the asset will be economically feasible for use.

VARIABLE RATE DEBT – A tax-exempt short-term investment instrument based on the Authority's long-term bonds.

Acronyms

AASHTO American Association of State Highway and Transportation Officials
ACM Automatic Coin Machine
ADA Americans with Disabilities Act
AIX Advanced Interactive Executive
APD Annual Pavement Distress
ARC Annual Required Contribution
ATMP Advanced Traffic Management Program
CAAD Computer Aided Architecture Design
CAFR Comprehensive Annual Report
CEA Commodity Exchange Act
CFTC Commodities Futures Trading Commission
CIP Capital Improvement Program
CQI Continuous Quality Initiative
CSC Customer Service Center
CVI Commercial Vehicle Inspection
DED Deputy Executive Director
DF Dodd-Frank Act
DWDM Dense Wavelength Division Multiplexing (fiber optic communications)
EEO Equal Employment Opportunity
EGIS Enterprise Geographic Information System
ERP Enterprise Resource Planning
ESW Emergency Safety Warnings
ETC Electronic Toll Collection
FHWA Federal Highway Administration
FTE Full Time Employees
GAAP Generally Accepted Accounting Principles
GASB Government Accounting Standards Board
GDP Gross Domestic Product
GFOA Government Finance Officers Association
GIS Geospatial Information System
GSAC Garden State Arts Center
GSOR General Staff Operational Requirements
GSP Garden State Parkway
GWB George Washington Bridge
HCM Human Capital Management
HMS Host Marriot Services
HR Human Resources
HVAC Heating, Ventilation, and Cooling
IP Internet Phone
IRI International Roughness Index
IRS Internal Revenue Service
ISDA International Swap and Derivatives Association
ITS Information Technology Services
LAN Local Area Network
LED Light Emitting Diode

MP Milepost
MPT Maintenance and Protection of Traffic
NBHCE Newark Bay Hudson County Extension
NCGAS National Council on Governmental Accounting Statements
NJDOT New Jersey Department of Transportation
NJSP New Jersey State Police
NJTA New Jersey Turnpike Authority
OCIP Owner Controlled Insurance Program
OPEB Other Post-Employment Benefits
OPRA Open Public Records Act
OPS Order for Professional Services
PANYNJ Port Authority of New York and New Jersey
PDQ Portable Dock Scissor Lift
PERS Public Employees Retirement System
PMM Procurement and Materials Management
PNC Pittsburgh National Corporation
PTC Pennsylvania Turnpike Commission
QIR Qualified Independent Representative
QPL Quality Products List
RFP Request for Proposal
RFQ Request for Quotation
ROW Right of Way
RWIS Road Weather Information System
SAN Storage Area Network
SBE Small Business Enterprise
SDI Surface Distress Index
SEC Securities and Exchange Commission
STMC State Transportation Management Center
TIC True Interest Cost
TCO Total Cost of Ownership
TCP Transportation Capital Program
TOC Traffic Operations Center
TPA Third Party Administrator
TPK Turnpike
TMC Transportation Management Center
UPS Uninterruptible Power Supply
UST Underground Storage Tanks
VMS Variable Messaging System
VPC Vehicle Processing Center
VRLA Valve-Regulated Lead-Acid
WAN Wide Area Network
WMS Warehouse Management System