Introduction

The New Jersey Turnpike Authority ("Authority") is a governmental agency charged with the ownership and operation of two toll roads in the State of New Jersey: the New Jersey Turnpike ("Turnpike") and the Garden State Parkway ("Parkway"). These two roadways run north to south and comprise a transportation network of over 300 centerline miles in length. On all sections of the roadway there are at least two lanes in each direction and in the northern corridors there are as many as six lanes in each direction. This road network includes 4,446 lane miles and over 1.100 bridges and overpasses to enter and exit the roads or to allow other state or local roads to pass over the toll roads without traffic signals. Both the basic road network and the bridges require continuous maintenance and repair and upgrading. Additionally, traffic congestion in many sectors of the toll road network requires capacity enhancement concepts to improve mobility and relieve congestion. The current Long-Range Capital Plan totals approximately $24 Billion and projects future capital improvement program funding needs for the two roads that equals approximately $10 billion over the next ten years. Additionally, the Authority spends over $150 million each year on maintenance, repair and smaller capital improvement projects.

Financial Background

The Authority issues its debt under a Bond Indenture adopted in 1991, and amended from time to time, which provides certain financial covenants as assurance to bondholders that the toll revenues after expenses generated by the Authority will be sufficient to pay for its debt payments. These bond covenants also are relied upon, together with actual financial performance, by the three bond rating services (Moody's Investor Service; Standard and Poor's; Fitch) in order to assess the financial strength of the Authority and assign a rating to the Authority's outstanding debt. Bond ratings can range from "AAA" to "BBB" within the investment grade category; anything less than "BBB" is considered non-investment grade and cannot be purchased by many institutional buyers. This rating is highly important as it is utilized by investors to determine both whether they are willing to purchase bonds of the Authority and also what interest rate they will require to pay for the risk associated with the credit status of the Authority as borrower. As of the date of this report, the Authority, which has over $11 Billion in outstanding debt, has maintained its ratings with the three rating services follows:

Moody's	A2
Standard and Poor's	A+
Fitch	A

These ratings take into account many factors including management skill at the Authority, condition of the roadways, capital planning initiatives, the local economy and most critically the financial strength of the Authority as reflected by its ability to have sufficient net revenues to meet debt service obligations. This financial strength is primarily measured by a metric known as the "debt service coverage ratio", which is the ratio generated by dividing the revenues available to pay for debt service by debt service due. Since revenues and debt service can vary widely from year to year, this metric must be measured over a multiyear period. This ratio is also one of the bond covenants that the Authority must comply with in its Bond Indenture.

Bond Covenants

The Authority has three Bond Covenants that are critical to its ability to maintain its ratings and have the power to issue new bonds for its capital needs, as follows:

1- Debt Service Coverage Ratio – Under the Bond Resolution, the Authority must maintain a debt service coverage ratio of 1.20, as measured by the calculation of Net Revenues (total revenues less operating expenses) divided by annual debt service due.

2- Total Requirements Coverage Ratio - Under the Bond Resolution, in addition to the Debt Service Coverage Ratio, the Authority must maintain a total requirements coverage ratio of 1.00, as measured by Net Revenues less the sum of debt service requirements plus required reserves, (including deposits to the Maintenance Reserve and Special Project Reserve Funds and the Charges Fund) divided by annual debt service due.

3- Additional Bonds Test – In the event the Authority must issue additional bonds, the Authority must meet three additional tests:

a. The two coverage tests must have been met for the prior 24-month period after considering any new toll increases

b. The projected debt service coverage ratio and the total requirements coverage ratio, as determined by the traffic engineer's projection, for at least five years following the issuance of the bonds must equal the required debt service coverage ratio of 1.20 and the total requirements coverage ratio of 1.0.

c. Net revenue in the fifth year must equal or exceed annual debt service requirements in any future year for non-refunding bonds

Covenants 1 and 2 above are referred to as the "Net Revenue Requirement" in the Bond Resolution. Covenant 3 is referred to as "Issuance of Non-Refunding Bonds" in the Bond Resolution.

Rating Considerations

Pre- Great Recession the Authority often relied upon the provision of AAA rated bond insurance to help it access the marketplace, however since that time municipal bond investors have become more focused on the underlying borrowers credit, therefore making base financial strength more important to the most effective way to access the capital markets.

The Authority has been advised by the bond rating agencies that the minimum debt service coverage ratio of 1.20 as required by the Bond indenture is not adequate to maintain a bond rating in the "A" category and that a target ratio of 1.40 is required to maintain this rating. This increased target is to indicate to bondholders that the Authority, under most circumstances, has sufficient financial flexibility to meet all its needs, including emergency needs, from cash flow without borrowing. As a result, the Authority Board adopted financial management guidelines and principles which target a minimum of 1.40 debt service coverage or greater. t is important to note that bonds rated below "A" are considered to be on the verge of a rating downgrade below the "BBB" category. Bonds rated less than investment grade are often referred to as "junk bonds" and are not desirable from either a market access point of view or a cost of funds point of view. In the case of the Authority, it could also cause problems with its 15 interest rate exchange agreements ("swaps") since a rating lower than "A" could lead to a requirement for collateral posting or termination. The Authority maintains over $1.125 billion in interest rate exchange agreements.

The Authority's rating in the "A" category is bolstered by its status as a critical East Coast transportation corridor that will help assure usage due to the lack of efficient alternatives. If it did not have this edge, the ratings agencies would seek even higher debt service coverage as it does with other roads around the country where a typical "A" category road will produce coverage of between 1.50- and 2.00 times debt service.

Recent Financial Results

As a part of its bond financing in 2018 the Authority commissioned an investment grade traffic engineering report to project traffic growth, and thus revenue growth on both the Turnpike and the Parkway.

Through year end 2019 the traffic and revenue projections for both the Turnpike and the Parkway were generally consistent with projections of the traffic engineers. In conjunction with the planning of the Long-Range Capital Plan in late 2019 and early 2020, The Authority has had the traffic engineer update these findings to include the impact of the corona virus pandemic, as well as the toll increases. We have utilized these updated projections reflecting the corona virus impact in our analysis.

Need for Toll Increase

Under any circumstances, given the costs associated with the Long-Range Capital Plan, the Authority would need to undertake a toll increase at least sufficient to meet its bond covenant and rating maintenance obligations in order to comply with its promises to bondholders of its outstanding $11 Billion in debt, and assure that the Authority's bond rating continues to be in the "A" category.

We have undertaken the analysis of what a minimal toll increase would be to maintain these requirements for the full 10 year period of this projection and have determined that a toll increase of at least 74% on both roadways as a one-time increase in 2021 would be required in order to assure that the Authority does not fall below its coverage targets during the 10 year period. A full analysis of this option is provided in Appendix A.

Although this toll increase would allow the Authority to meet its bond covenant and rating agency obligations, its ability to maintain a rating in the "A" category will also be evaluated from a future capital needs point of view and if there were no plans to undertake, at least, the priority capital projects in the Authority's Long-Range Capital Plan it would be likely that its rating could fall below the "A" level due to concerns about poor state-of-good-repair, deteriorated road conditions and increases in traffic congestion that could impact revenues in the near future.

Funding of Priority Capital Improvement Program

The Authority has developed a 20-year Long-Range Capital Plan with an estimated cost of approximately $24 Billion. We have also evaluated the toll increases required to fully implement the expected priority projects from the Long-Range Capital Plan within the first ten- years forecast period used for this report, which is designed to keep both roadways in good repair and improve mobility. The Long-Range Capital Plan will be funded and implemented through a rolling five-year capital improvement program. It is estimated that over the next ten years, the priority projects included in the Long-Range Capital Plan will require approximately $10 billion in funding. The following projects are assumed to be included in the rolling five-year capital improvement program over the initial 10-year period:

New Jersey Turnpike Authority
Long-Range Capital Plan

Project	20-Year Cost Projection	Cost Incurred Within First 10 Years	Annual
Pavement Preservation	$ 550,000,000	$ 550,000,000	$ 55,000,000
Message Signs	$ 80,000,000	$ 80,000,000	$ 8,000,000
Lighting Upgrade	$ 50,000,000	$ 50,000,000	$ 5,000,000
Storage Tanks	$ 10,000,000	$ 10,000,000	$ 1,000,000
Median Barrier	$ 35,000,000	$ 35,000,000	$ 3,500,000
Fiber Optic	$ 100,000,000	$ 100,000,000	$ 10,000,000
Service Area Ramps	$ 20,000,000	$ 20,000,000	$ 2,000,000
ITS Infrastructure	$ 400,000,000	$ 400,000,000	$ 40,000,000
Over Height Detection	$ 25,000,000	$ 25,000,000	$ 2,500,000
Bridge Rehab/Replacement	$ 2,860,000,000	$ 2,860,000,000	$ 286,000,000
Culverts/Pipes	$ 250,000,000	$ 250,000,000	$ 25,000,000
Interchange 17 Bridge	$ 40,000,000	$ 40,000,000	$ 4,000,000
Mainline Crossover	$ 50,000,000	$ 50,000,000	$ 5,000,000
MSE Wall Replacement	$ 250,000,000	$ 125,000,000	$ 12,500,000
GSP Interchange Work	$ 300,000,000	$ 300,000,000	$ 30,000,000
NJT Exit 13	$ 270,000,000	$ 135,000,000	$ 13,500,000
All Electronic Tolls	$ 900,000,000	$ 225,000,000	$ 22,500,000
GSP Flood Remediation	$ 1,400,000,000	$ 350,000,000	$ 35,000,000
GSP Widening Projects	$ 5,400,000,000	$ 1,350,000,000	$ 135,000,000
NJT Widening Projects	$ 1,100,000,000	$ 550,000,000	$ 55,000,000
NJT Delaware River Bridge	$ 500,000,000	$ 500,000,000	$ 50,000,000
NJT Newark Bay Ext. Widening	$ 4,300,000,000	$ 1,075,000,000	$ 107,500,000
Trembley Point Exit 12	$ 200,000,000	$ 50,000,000	$ 5,000,000
NJT Western Widening	$ 5,050,000,000	$ 1,262,500,000	$ 126,250,000
TOTAL	**$ 24,140,000,000**	**$ 10,392,500,000**	**$ 1,039,250,000**

Toll Increase Program

Implementation of a schedule of toll increases over time will allow the Authority to both implement a multi-year bond financing program to raise the approximately $10 Billion needed for capital projects and to generate sufficient annual cash flow within 10 years to provide other funding needs as they arise.

The toll increase proposal presented at the recent public meetings proposed initial toll increases on each roadway and then an annual indexing of tolls in the future at an annual rate of 3.00%. The initial toll increases are proposed to be:

Impact of Initial Toll Hike on Average Passenger Car Toll

	New Jersey Turnpike		Garden State Parkway	
	Average Toll	Percentage	Average Toll	Percentage
Current Toll	$ 3.50		$ 1.11	
Proposed Increase	$ 1.25	35.7%	$ 0.30	27.0%
New Average Toll	$ 4.75		$ 1.41	

A full analysis of this option is provided in Appendix B.

Summary

To be financially prudent and continue to serve its customer base by providing low congestion, well maintained roads and affordable mobility the Authority's has planned a toll increase and capital program as described herein. These toll increases should allow the Authority to meet all of its bond covenants, maintain its current bond ratings and access the capital markets to secure the $10 billion in new funding needed over the next ten years for the priority projects included in the Long-Range Capital Plan.

Appendix A

Exhibit A
New Jersey Turnpike Authority
10 Year Projected Results
May 21, 2020

	1 2021	2 2022	3 2023	4 2024	5 2025	6 2026	7 2027	8 2028	9 2029	10 2030
Proposed Toll Increases Effective 1.1.21										
Turnpike	74.00%									
Parkway	74.00%									
Revenues										
Toll Revenue										
	$ 2,105,186	$ 2,105,186	$ 2,105,186	$ 2,105,186	$ 2,105,186	$ 2,105,186	$ 2,105,186	$ 2,105,186	$ 2,105,186	$ 2,105,186
	$ 774,051	$ 774,051	$ 774,051	$ 774,051	$ 774,051	$ 774,051	$ 774,051	$ 774,051	$ 774,051	$ 774,051
EZ Pass Fees	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Federal Subsidy	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Concession Revenue	$ 30,000	$ 33,000	$ 36,000	$ 38,000	$ 38,760	$ 39,535	$ 40,326	$ 41,132	$ 41,955	$ 42,794
Other Revenue	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Total Revenues	$ 2,909,237	$ 2,912,237	$ 2,915,237	$ 2,917,237	$ 2,917,997	$ 2,918,772	$ 2,919,563	$ 2,920,370	$ 2,921,192	$ 2,922,031
Capital Funding due to COVID										
Operating Expenses	$ (613,953)	$ (629,302)	$ (645,034)	$ (661,160)	$ (677,689)	$ (694,631)	$ (711,997)	$ (729,797)	$ (748,042)	$ (766,743)
Total Revenues Available for Debt Service	$ 2,295,284	$ 2,282,935	$ 2,270,203	$ 2,256,077	$ 2,240,308	$ 2,224,141	$ 2,207,566	$ 2,190,572	$ 2,173,150	$ 2,155,288
Annual Debt Issuance	$ 1,000,000	$ 1,000,000	$ 1,000,000	$ 1,000,000	$ 1,000,000	$ 1,000,000	$ 1,000,000	$ 1,000,000	$ 1,000,000	$ 1,000,000
Cummulative Debt Issuance Program	$ 1,000,000	$ 2,000,000	$ 3,000,000	$ 4,000,000	$ 5,000,000	$ 6,000,000	$ 7,000,000	$ 8,000,000	$ 9,000,000	$ 10,000,000
New Debt Service	$ (86,745)	$ (144,575)	$ (202,405)	$ (260,235)	$ (318,066)	$ (375,896)	$ (433,726)	$ (491,556)	$ (549,386)	$ (607,216)
Existing Debt Service	$ (857,080)	$ (855,603)	$ (858,529)	$ (896,395)	$ (896,641)	$ (895,486)	$ (896,064)	$ (887,192)	$ (868,668)	$ (864,967)
Total Debt Service	$ (943,825)	$ (1,000,178)	$ (1,060,934)	$ (1,156,630)	$ (1,214,707)	$ (1,271,382)	$ (1,329,790)	$ (1,378,748)	$ (1,418,054)	$ (1,472,183)
Total Revenues Available After Debt Service	$ 1,351,459	$ 1,282,757	$ 1,209,268	$ 1,099,446	$ 1,025,601	$ 952,759	$ 877,776	$ 811,825	$ 755,096	$ 683,105
Net Revenues Available for Reserves	$ 1,351,459	$ 1,282,757	$ 1,209,268	$ 1,099,446	$ 1,025,601	$ 952,759	$ 877,776	$ 811,825	$ 755,096	$ 683,105
Maintainance Reserve Fund	$ (160,000)	$ (200,000)	$ (210,000)	$ (220,000)	$ (230,000)	$ (236,900)	$ (244,007)	$ (251,327)	$ (258,867)	$ (266,633)
Special Project Reserve Fund	$ (50,000)	$ (50,000)	$ (51,500)	$ (53,045)	$ (54,636)	$ (56,275)	$ (57,964)	$ (59,703)	$ (61,494)	$ (63,339)
Net Revenues Available for General Reserve Fund	$ 1,141,459	$ 1,032,757	$ 947,768	$ 826,401	$ 740,965	$ 659,584	$ 575,805	$ 500,795	$ 434,735	$ 353,134
General Reserve Fund										
Transfer to/from Supplemental Capital Fund		$ (75,000)	$ (75,000)	$ (75,000)	$ (75,000)	$ (75,000)	$ (75,000)	$ (75,000)	$ (75,000)	$ (75,000)
TTF Payments	$ (22,000)	$ (22,000)	$ (22,000)	$ (22,000)	$ (22,000)	$ (22,000)	$ (22,000)	$ (22,000)	$ (22,000)	$ (22,000)
Feeder Road	$ (2,500)	$ (2,500)	$ (2,500)	$ (2,500)	$ (2,500)	$ (2,500)	$ (2,500)	$ (2,500)	$ (2,500)	$ (2,500)
State Payment	$ (154,000)	$ (154,000)	$ (154,000)	$ (154,000)	$ (154,000)	$ (154,000)	$ (154,000)	$ (154,000)	$ (154,000)	$ (154,000)
Ending Balance From Cash Flow	$ 962,959	$ 779,257	$ 694,268	$ 572,901	$ 487,465	$ 406,084	$ 322,305	$ 247,295	$ 181,235	$ 99,634
Debt Service Coverage Ratio										
Net Revenues/Debt Service	2.43	2.28	2.14	1.95	1.84	1.75	1.66	1.59	1.53	1.46
Net Revenues/Debt Service and Reserves	1.99	1.83	1.72	1.58	1.49	1.42	1.35	1.30	1.25	1.20

Appendix B

Exhibit B
New Jersey Turnpike Authority
10 Year Projected Results
May 21,2020

		1	2	3	4	5	6	7	8	9	10
	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
Proposed Toll Increases Effective	9.13.20										
Turnpike		35.70%	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%
Parkway		27.00%	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%
Revenues											
Toll Revenue											
Turnpike Per CDM	$ 1,026,280	$ 1,485,754	$ 1,595,667	$ 1,688,912	$ 1,773,255	$ 1,841,849	$ 1,913,216	$ 1,983,160	$ 2,061,848	$ 2,128,590	$ 2,201,824
Parkway Per CDM	$ 354,078	$ 518,968	$ 552,749	$ 581,426	$ 607,634	$ 628,638	$ 649,727	$ 671,647	$ 695,705	$ 716,660	$ 738,480
EZ Pass Fees	$ 79,050	$ 79,050	$ 80,631	$ 82,244	$ 83,888	$ 85,566	$ 87,278	$ 89,023	$ 90,804	$ 92,620	$ 94,472
Federal Subsidy	$ 76,602	$ 76,602	$ 76,602	$ 76,602	$ 76,602	$ 76,602	$ 76,602	$ 76,602	$ 76,602	$ 76,602	$ 76,602
Concession Revenue	$ 30,000	$ 30,000	$ 33,000	$ 36,000	$ 38,000	$ 38,760	$ 39,535	$ 40,326	$ 41,132	$ 41,955	$ 42,794
Other Revenue	$ 34,300	$ 34,986	$ 35,686	$ 36,399	$ 37,127	$ 37,870	$ 38,627	$ 39,400	$ 40,188	$ 40,992	$ 41,812
Total Revenues	$ 1,600,310	$ 2,225,360	$ 2,374,335	$ 2,501,583	$ 2,616,507	$ 2,709,285	$ 2,804,985	$ 2,900,158	$ 3,006,279	$ 3,097,418	$ 3,195,984
Capital Funding due to COVID	$ 200,000										
Operating Expenses	$ (598,971)	$ (613,945)	$ (629,294)	$ (645,026)	$ (661,152)	$ (677,681)	$ (694,623)	$ (711,988)	$ (729,788)	$ (748,033)	$ (766,734)
Total Revenues Available for Debt Service	$ 1,201,339	$ 1,611,415	$ 1,745,041	$ 1,856,556	$ 1,955,355	$ 2,031,605	$ 2,110,362	$ 2,188,170	$ 2,276,491	$ 2,349,386	$ 2,429,250
Annual Debt Issuance	$ 500,000	$ 1,000,000	$ 1,000,000	$ 1,000,000	$ 1,000,000	$ 1,000,000	$ 1,000,000	$ 1,000,000	$ 1,000,000	$ 1,000,000	$ 1,000,000
Cummulative Debt Issuance Program		$ 1,500,000	$ 2,500,000	$ 3,500,000	$ 4,500,000	$ 5,500,000	$ 6,500,000	$ 7,500,000	$ 8,500,000	$ 9,500,000	$ 10,500,000
New Debt Service		$ (86,745)	$ (144,575)	$ (202,405)	$ (260,235)	$ (318,066)	$ (375,896)	$ (433,726)	$ (491,556)	$ (549,386)	$ (607,216)
Existing Debt Service	$ (837,697)	$ (857,080)	$ (855,603)	$ (858,529)	$ (896,395)	$ (896,641)	$ (895,486)	$ (896,064)	$ (887,192)	$ (868,668)	$ (864,967)
Total Debt Service	$ (837,697)	$ (943,825)	$ (1,000,178)	$ (1,060,934)	$ (1,156,630)	$ (1,214,707)	$ (1,271,382)	$ (1,329,790)	$ (1,378,748)	$ (1,418,054)	$ (1,472,183)
Total Revenues Available After Debt Service	$ 363,642	$ 667,589	$ 744,863	$ 795,622	$ 798,724	$ 816,898	$ 838,981	$ 858,380	$ 897,743	$ 931,332	$ 957,067
Net Revenues Available for Reserves	$ 363,642	$ 667,589	$ 744,863	$ 795,622	$ 798,724	$ 816,898	$ 838,981	$ 858,380	$ 897,743	$ 931,332	$ 957,067
Maintainance Reserve Fund	$ (135,000)	$ (160,000)	$ (200,000)	$ (210,000)	$ (220,000)	$ (230,000)	$ (236,900)	$ (244,007)	$ (251,327)	$ (258,867)	$ (266,633)
Special Project Reserve Fund	$ (43,000)	$ (50,000)	$ (50,000)	$ (51,500)	$ (53,045)	$ (54,636)	$ (56,275)	$ (57,964)	$ (59,703)	$ (61,494)	$ (63,339)
Net Revenues Available for General Reserve Fund	$ 185,642	$ 457,589	$ 494,863	$ 534,122	$ 525,679	$ 532,262	$ 545,805	$ 556,409	$ 586,713	$ 610,971	$ 627,096
General Reserve Fund											
Transfer to/from Supplemental Capital Fund			$ (75,000)	$ (75,000)	$ (75,000)	$ (75,000)	$ (75,000)	$ (75,000)	$ (75,000)	$ (75,000)	$ (75,000)
TTF Payments	$ (22,000)	$ (22,000)	$ (22,000)	$ (22,000)	$ (22,000)	$ (22,000)	$ (22,000)	$ (22,000)	$ (22,000)	$ (22,000)	$ (22,000)
Feeder Road	$ (2,500)	$ (2,500)	$ (2,500)	$ (2,500)	$ (2,500)	$ (2,500)	$ (2,500)	$ (2,500)	$ (2,500)	$ (2,500)	$ (2,500)
State Payment	$ (154,000)	$ (154,000)	$ (154,000)	$ (154,000)	$ (154,000)	$ (154,000)	$ (154,000)	$ (154,000)	$ (154,000)	$ (154,000)	$ (154,000)
Ending Balance From Cash Flow	$ 7,142	$ 279,089	$ 241,363	$ 280,622	$ 272,179	$ 278,762	$ 292,305	$ 302,909	$ 333,213	$ 357,471	$ 373,596
Debt Service Coverage Ratio											
Net Revenues/Debt Service	1.43	1.71	1.74	1.75	1.69	1.67	1.66	1.65	1.65	1.66	1.65
Net Revenues/Debt Service and Reserves	1.18	1.40	1.40	1.40	1.37	1.35	1.35	1.34	1.35	1.35	1.35