

New Jersey Turnpike Authority

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

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October 19, 2020

TO ALL PROPOSERS:

RE: Request for Quotation
Actuarial Services for OCIPs
RM-160288

Responses to Inquiries

Dear Sir/Madam:

Below are the New Jersey Turnpike Authority's ("Authority") responses to inquiries received with respect to the above-referenced Request for Quotation ("RFQ").

Responses to Inquiries:

1. When was the last actuarial valuation done (presumably it was for fiscal year ending 9/30/2019) as it relates to the services requested in RM-160288)?

ANSWER: It was completed as of 9/30/2019.

2. Are the actuarial fees as it relates to the most recent valuation year work something that can be provided to us?

ANSWER: See attached final report.

3. Who is the most recent actuarial service provider?

ANSWER: AMI Risk Consultants, Inc.

4. What firm is currently providing these services to the Authority?

ANSWER: AMI Risk Consultants, Inc. was awarded the most recent contract for these services, however, their contract has expired.

5. How long has the firm been providing these services?

ANSWER: Contract effective date was 12/1/2016.

6. What were the most recent annual fees paid to the incumbent firm?

ANSWER: See answer to # 2 above.

7. Is the Authority satisfied with the services provided by the incumbent firm?

ANSWER: AMI Risk Consultants' services were satisfactory.

8. Can we obtain a copy of the most recent actuarial report produced by the incumbent firm?

ANSWER: See answer to #2 above.

9. Is there any required format for the submission to the Authority, as long as the submission contains the price quotation, appropriate references and proof that the employees who will perform the work meet the Authority's conditions?

ANSWER: Please refer to the entire document which constitutes the bid document/ Request for Quotation.

10. If the Authority decides to extend the successful bidder's contract, is a fee increase for inflation acceptable? If so, should the submission list costs for the extension period?

ANSWER: The services agreement can only be extended pursuant to the terms in the bid document. The submission should list proposed prices for each year of the contract, if they are not the same.

11. Will the decision of the selected firm be based on the lowest price in total for both items, or is it possible, that two contracts will be offered to separate firms based on the relative pricing for each item?

ANSWER: Award will be made to the lowest responsible bidder for the total price, as stated in the Request for Quotation on page 3.

12. Section B.1 of the Scope Section states that the evaluation date for the analysis will be September 30, 2016. Is this a misprint, and if so, is the correct date September 30, 2020?

ANSWER: The date should be September 30, 2020.

13. Will the data used in the analysis be available in electronic format, such as Excel spreadsheets?

ANSWER: Yes.

14. What is the e-mail address to which the submission should be sent?

ANSWER: mcnally@njta.com

15. Will all bidders that submit questions receive the answers to all questions submitted?

ANSWER: Yes.

16. Can you please explain the liability structure of the OCIP programs?

ANSWER: General Liability and Workers Compensation programs for each OCIP have a self-insured retention of \$500,000 per claim and in the aggregate, which is borne by the Authority.

17. What portion of the total loss is the Authority financially responsible to cover?

ANSWER: See answer to #16 above.

18. Does the Authority wish to determine the ultimate loss for their portion of the total liability only?

ANSWER: The Authority wishes to determine the ultimate loss for their portion of the total liability. This information can be validated from the bid document previously provided and the last year's report attached.

19. Are the insurance coverages provided by Old Republic and AIG excess of a retention?

ANSWER: Yes. See answer to #16 above.

20. Has the Authority assumed tail coverage for the terminated programs?

ANSWER: The Authority continues to make payments for general liability and workers compensation claims which occurred prior to the termination dates of each OCIP to the extent of its SIR. Also, see answers to #16 above, and #21, below.

21. What were the initial effective dates for each OCIPs?

ANSWER: The 6-9 OCIP was effective as of July 15, 2009; the Rolling OCIP was effective as of June 1, 2009.

22. To assist us in gaining a better understanding of the amount of work required for this project, can you please provide the fees paid or the total level of effort (hours of work) by the prior consultant engaged to evaluate the OCIP liabilities?

ANSWER: See answer to # 2 above for the total fee paid for both reports.

23. Can you please provide a copy of the prior actuarial report?

ANSWER: See answer to #2 above.

24. Who is the incumbent actuarial firm providing this service?

ANSWER: See answer to #3 above.

25. How long has the current actuarial firm been providing actuarial services to the Authority?

ANSWER: See answer to #5 above.

26. Could you please provide an electronic copy of the prior actuarial report to the firm awarded the work? If not, will the Authority provide the prior actuarial report to the firm awarded the work?

27. What is the current annual fee for all services within the scope of this RFQ?

ANSWER: See answer to #6 above.

28. How many hours were billed for additional or incidental services (beyond report delivery) during the past three years? At what hourly rate(s)?

ANSWER: See answer to #2 above.

29. Could you please provide a copy of the proposal of the last successful proposer?

ANSWER: See attached proposal from AMI Risk Consultants, Inc.

30. Could you please provide the proposal scoring from the previous RFQ?

ANSWER: The prior RFQ award was based on price and awarded to the lowest responsible bidder.

31. Item B.1. of the scope of work says "The Actuary shall prepare and provide to the Authority with a valuation report as of September 30, 2016." Was this intended to be 2020 rather than 2016?

ANSWER: See answer to #12 above.

32. For what reasons has the Fund issued the current RFQ?

ANSWER: The reference to "Fund" is unclear. The Authority has issued this current proposal to provide support for its 2020 financial statements.

33. Is an on-site presentation of findings desired? If so, is it acceptable for there to be a separate fee for the travel expenses once the on-site meeting is requested?

ANSWER: It is unlikely that there will be an on-site presentation of findings. Should additional explanation or information be required, a phone and/or video conference will most likely be requested. However, should an on-site presentation be requested, no travel expenses will be reimbursed. The submitted price should include all expenses associated with providing the actuarial reports.

34. Will you share the evaluation sheet and perform a debriefing if requested at the end of the process?

ANSWER: This award will be based on price and adherence to the requirements of the bidding document. The bid sheet indicating each bidder's proposed price will be available to the public after all bids are opened, pursuant to public bidding requirements.

35. Could you please provide the number of open claims and dollar amount of case reserves for each OCIP within the scope of the RFQ?

ANSWER: Specific information as to number of open claims and dollar amounts of case reserves will be provided to the successful proposer.

36. What are the self-insured retentions (SIRs) for each coverage for each OCIP?

ANSWER: See answer to #16 above.

37. Is loss data available in Excel format?

ANSWER: Yes.

38. When will data be provided to the successful bidder?

ANSWER: The data will be provided in early to mid-November.

Proposals are due on Thursday, October 22, 2020 at 4:00 PM EST.

Very truly yours,



Dale Barnfield, Director
Procurement and Materials Management

New Jersey Turnpike Authority
Owner Controlled Insurance Program
Actuarial Review
As of December 31, 2019

Firm: **AMI Risk Consultants, Inc.**
1336 SW 146th Ct.
Miami, Florida 33184
(305) 273-1589

Contact: Aguedo M. Ingco, FCAS, MAAA, CPCU, ARM

Date: February 20, 2020

February 20, 2020

Ms. Mariann Zach
Attorney
New Jersey Turnpike Authority
P.O. Box 5042
Woodbridge, NJ 07095

VIA E-MAIL
MZACH@turnpike.state.nj.us

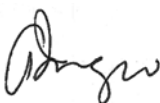
Dear Ms. Zach:

We are pleased to submit to you our final report on the Actuarial Review for New Jersey Turnpike Authority's Owner Controlled Insurance Programs as of December 31, 2019.

We appreciate the cooperation and courtesies extended to us during the course of the engagement. Should further questions about the report arise, please do not hesitate to contact us.

Thank you for the opportunity to work with you on this project.

Sincerely,



Aguedo M. Ingco, FCAS, MAAA, CPCU, ARM
President

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IV. GLOSSARY

Section I
Executive Summary

Owner Controlled Insurance Programs

Actuarial Review

December 31, 2019

Purpose

The New Jersey Turnpike Authority (“the NJTA”) has engaged the services of AMI Risk Consultants, Inc. (“AMI”) to perform the following for its owner controlled insurance programs (“OCIPs”):

- Estimate the funding requirement for *outstanding loss and loss adjustment expense (“LAE”) liabilities* at December 31, 2019 to comply with Government Accounting Standards Board Statement Number 10 (“GASB 10”).
 - Estimate the ultimate loss frequency and severity by coverage and by OCIP.
-

Terminology

The *funding requirement* for a policy period is the liability retained for claims that occur during that period. The funding requirement for *outstanding claim liabilities* includes:

- Retained case reserves for reported claims;
- Incurred but not reported (“IBNR”) reserves; and
- Loss conversion expense (8% of the sum of case and IBNR reserves).

For this report the term "*losses*" means losses and *allocated loss adjustment expense* (“ALAE”), unless otherwise indicated.

The term “*reserves*” or “*loss reserves*” is commonly used in the insurance industry to mean outstanding claim liability as of a given date, and may appear in this report with that meaning.

Discounting

Funding estimates are sometimes discounted to reflect expected investment income that will be earned on the assets backing claim liabilities before those liabilities are actually paid out.

Reserves estimates are shown both on a *discounted* and *undiscounted* basis.

**GASB 10
Affirmation**

We affirm the estimates contained in this report are consistent with GASB Statement No. 10.

**Statement of
Independence**

We are not aware of any relationship between AMI and the County that, in our professional judgment, might reasonably be thought to bear on our independence. No AMI employee has any relationship with the County that could impair our objectivity.

**Acknowledgment
of Qualifications**

Aguedo M. (Bob) Ingco is a consulting actuary and President of AMI Risk Consultants, Inc. He is a Fellow of the Casualty Actuarial Society and a Member of the American Academy of Actuaries. Mr. Ingco meets the qualification standards of the American Academy of Actuaries to provide the estimates in this report.

**Distribution
and
Use**

This report is for the internal use of the management of NJTA and their independent auditors as well as other vendors, consultants, and contractors of the NJTA. Under the New Jersey Freedom of Information Act, NJTA may also provide a copy of the final report to any member of the public who so requested it. We suggest that the user of this report review a complete copy as parts considered out of context might be misleading.

Conclusions***Funding for Outstanding Claim Liabilities at December 31, 2019***

To comply with GASB 10, we estimated the following funding for outstanding claim liabilities at December 31, 2019. This is the estimated amount needed to settle unpaid losses and LAE incurred on or before December 31, 2019. The estimates below are shown on a discounted and undiscounted bases. The discounted estimates have been reduced by anticipated investment income.

**Rolling OCIP
Funding for Outstanding Liabilities at Retention
As of December 31, 2019
('000s)**

Program	Undiscounted Loss Reserves	Loss Reserves Discounted at:		
		2.00%	3.00%	4.00%
Workers' Compensation	\$4,603	\$4,299	\$4,164	\$4,038
General Liability	1,631	1,455	1,386	1,325
TOTAL	\$6,233	\$5,754	\$5,550	\$5,363

**6-9 OCIP
Funding for Outstanding Liabilities at Retention
As of December 31, 2019
('000s)**

Program	Undiscounted Loss Reserves	Loss Reserves Discounted at:		
		2.00%	3.00%	4.00%
Workers' Compensation	\$3,146	\$2,682	\$2,486	\$2,309
General Liability	106	103	101	100
TOTAL	\$3,252	\$2,785	\$2,587	\$2,409

**Conclusions
(continued)**

Ultimate Frequency and Severity by OCIP

The tables below show our estimated ultimate loss frequency and severity by line of coverage and OCIP across all policy years. For more details, please see pages 13 and 14 of this report.

**Rolling OCIP
Ultimate Claim Frequency
Number of Claims per \$MM of Construction Value**

Workers' Compensation	General Liability	Total
0.288	0.316	0.604

**Rolling OCIP
Ultimate Claim Severity
Average Claim in Whole Dollars**

Workers' Compensation	General Liability	Total
\$37,700	\$10,251	\$23,325

**6-9 OCIP
Ultimate Claim Frequency
Number of Claims per \$MM of Payroll**

Workers' Compensation	General Liability	Total
1.521	0.838	2.359

**6-9 OCIP
Ultimate Claim Severity
Average Claim in Whole Dollars**

Workers' Compensation	General Liability	Total
\$24,329	\$13,011	\$20,309

**Section II
Actuarial Report**

Background

The New Jersey Turnpike Authority currently has two (2) owner controlled insurance programs (the "OCIPs"):

- 1) An OCIP, with insurance provided by Old Republic Insurance Company, Inc., that provides General Liability, Workers' Compensation, and other coverages to an approximate \$2.5 billion construction program which widened the New Jersey Turnpike ("NJT") between Exits 6 and 9. We shall call this OCIP the "6-9 OCIP". Construction is complete on this OCIP and enrollments ceased after March 31, 2014; and
- 2) An OCIP, underwritten by AIG, provides, among other coverages, Workers' Compensation and General Liability coverage. We called this OCIP the "Rolling OCIP" in the prior actuarial valuation and will continue to do so even though this was already terminated on July 15th, 2017 for consistency. The construction value of the Rolling OCIP is approximately \$2.2 billion, representing construction and maintenance work (other than work covered by the 6-9 OCIP) along the entire length of both NJT and the Garden State Parkway.

Both of these OCIPS commenced in 2009.

NJTA insurance protection consists of large deductible policies. NJTA reimburses insurance carriers up to \$500,000 on a per occurrence basis. An annual aggregate retention of \$4 million is also in place for General Liability exposures, while there is none for the Workers' Compensation.

All retentions apply to the cost of the loss and ALAE combined. Loss conversion expenses are based only on retained losses and ALAE, that is, losses and ALAE below applicable per occurrence and aggregate retentions. All insurance program information was provided by Aon and NJTA.

Reliance and Limitations

In performing the analysis, we relied without audit or verification on the information furnished by NJTA. We evaluated the data for reasonableness and consistency with prior valuations.

For the 6-9 OCIP:

- Incurred and paid losses for all claims as of December 31, 2019 for workers' compensation and general liability.

For the Rolling OCIP:

- Incurred and paid losses for all claims as of December 31, 2019 for workers' compensation and general liability.
- For the Rolling OCIP, NJTA provided construction value as of July 15, 2017 for the exposure.

While performing the review, we communicated with Atty. Mariann Zach of NJTA's Law Department.

Calculations of reserves are subject to potential errors of estimation because the ultimate liability for claims is subject to the outcome of events yet to occur, e.g., jury decisions and attitudes of claimants with respect to settlements. In projecting loss emergence, we assumed that historical loss development patterns are predictive of future patterns. We have not anticipated any extraordinary changes in the legal, social or economic environment that might affect the ultimate cost of claims.

We cannot reasonably estimate the uncertainties that ultimate liabilities are subject to. Therefore, while we believe our assumptions and methods are reasonable, we cannot guarantee that actual results will not differ, perhaps substantially, from our estimates.

Actuarial Approach

Funding for Outstanding Claim Liabilities at December 31, 2019

To estimate the total reserves as of December 31, 2019, we first estimated ultimate unlimited losses by policy period. Then, we calculated the ultimate retained losses. Cumulative limited paid losses were subtracted from ultimate retained losses to estimate case and IBNR reserves. Lastly, we added an additional eight percent (8%) loss conversion charge to the sum of the case and IBNR reserves to estimate the loss reserves.

To estimate ultimate unlimited losses we used the following actuarial approaches. These approaches were applied separately by policy period and by coverage.

Description of the methods we used to estimate the reserves as of December 31, 2019

- *Incurred Loss Development Approach (ILDA)*
- *Paid Loss Development Approach (PLDA)*
- *Bornhuetter-Ferguson Incurred Loss Approach (BFILA)*
- *Bornhuetter-Ferguson Paid Loss Approach (BFPLA)*

Incurred Loss Development Approach (ILDA)

Under the ILDA, we multiplied incurred losses to date by the appropriate loss development factors to estimate ultimate losses.

Paid Loss Development Approach (PLDA)

The PLDA is similar to the ILDA. Instead of multiplying incurred losses by loss development factors, we multiplied paid losses by the appropriate loss development factors to estimate ultimate losses.

Bornhuetter-Ferguson Incurred Loss Approach (BFILA)

Under the BFILA, we summed actual incurred losses and expected unreported losses to estimate projected ultimate losses.

Bornhuetter-Ferguson Paid Loss Approach (BFPLA)

Under the BFPLA, we summed actual paid losses and expected unpaid losses to estimate projected ultimate losses.

These approaches were applied to losses and ALAE net of salvage and subrogation.

**Actuarial
Approach
(continued)**

The initial ultimate loss assumptions for the BFILA and BFPLA were determined using a selected loss rate for each coverage. The loss rates were selected from those indicated by the ILDA and PLDA.

Loss Development Factors

Loss development factors for all coverages are based on NJTA's own history, supplemented by insurance industry loss development patterns.

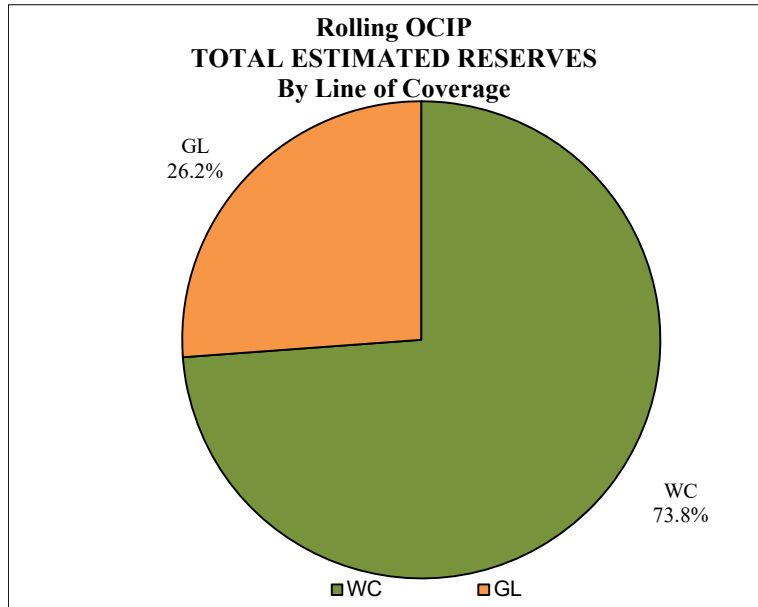
Future Investment Income

Because claims are not settled immediately, reserves used to fund future payments earn investment income before they are used to pay claims. In estimating the reserves at December 31, 2019, we reduced estimated liabilities by future investment income. For discounting purposes, we assumed three different average annual rate of return on invested assets over the lifetime of the current claim liabilities: 2.0%, 3.0% and 4.0%. These projected annual rates of return are based on risk-free rate of return. Other investment securities might show higher rates of return but involves higher risk, and consequently, needs to be discounted.

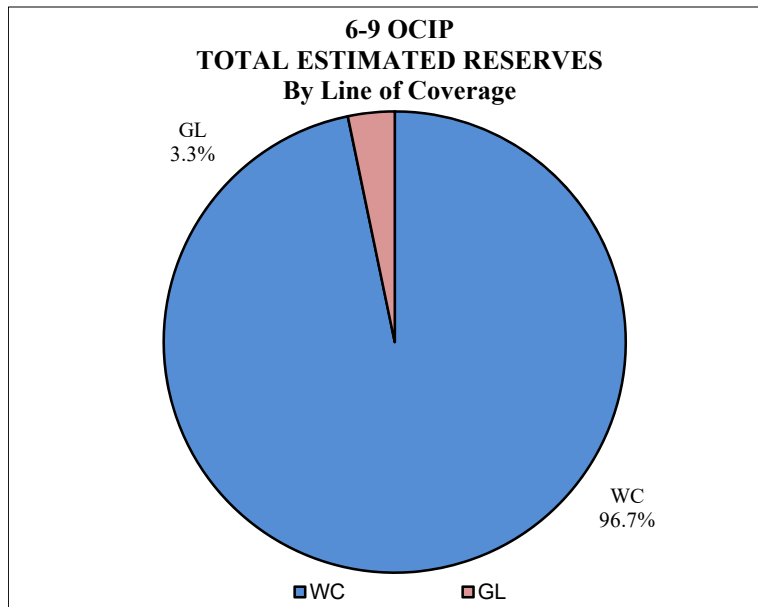
Graphs

For additional perspective, we prepared the pie chart below to show the proportion of the estimated reserves (prior to the credit for investment income and margin for adverse deviation) of each OCIP, by coverage:

73.8% of the \$6.2 million in reserves for the Rolling OCIP as of December 31, 2019, are for workers' compensation.

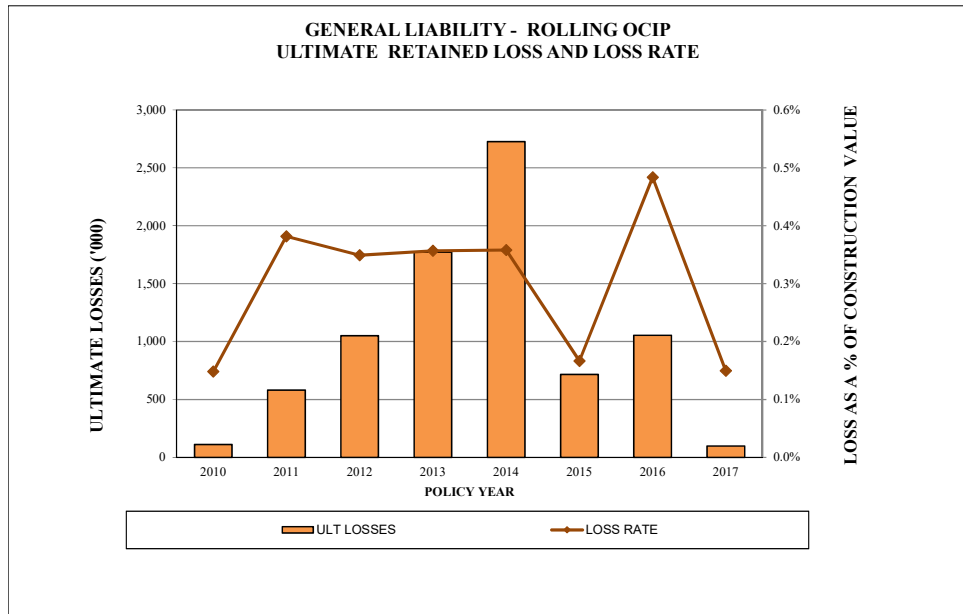
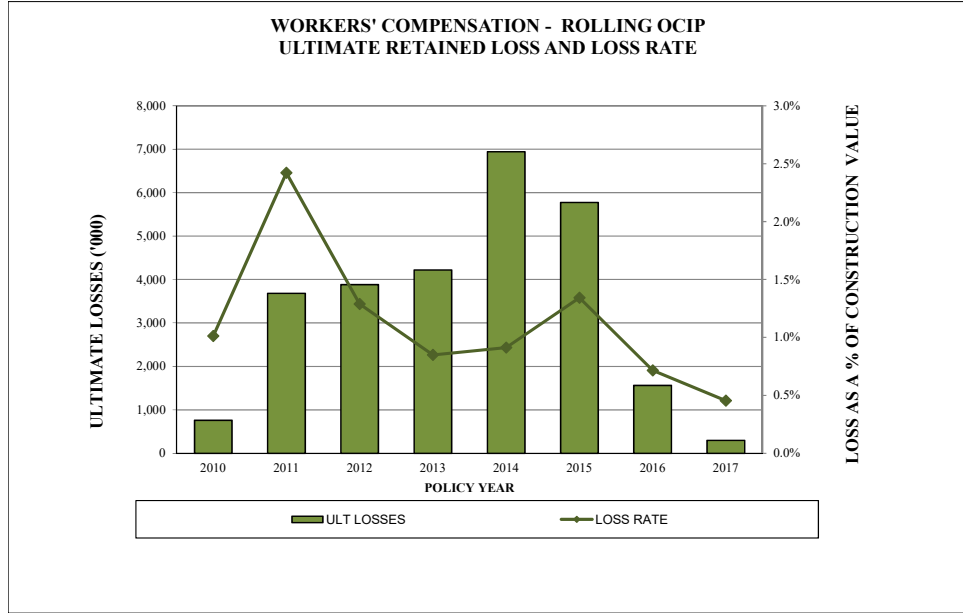


96.7% of the \$3.3 million in reserves for the 6-9 OCIP as of December 31, 2019, are for workers' compensation.

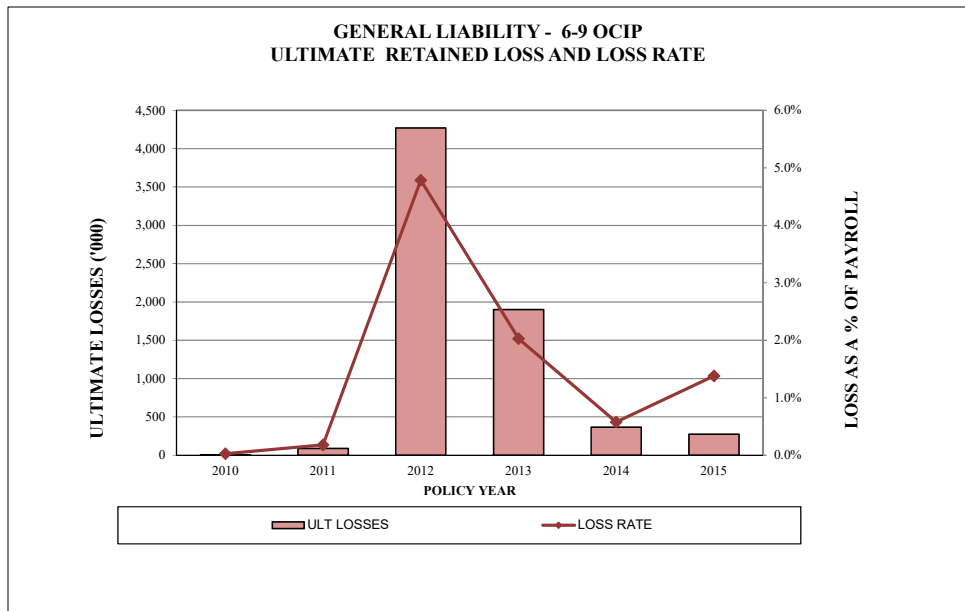
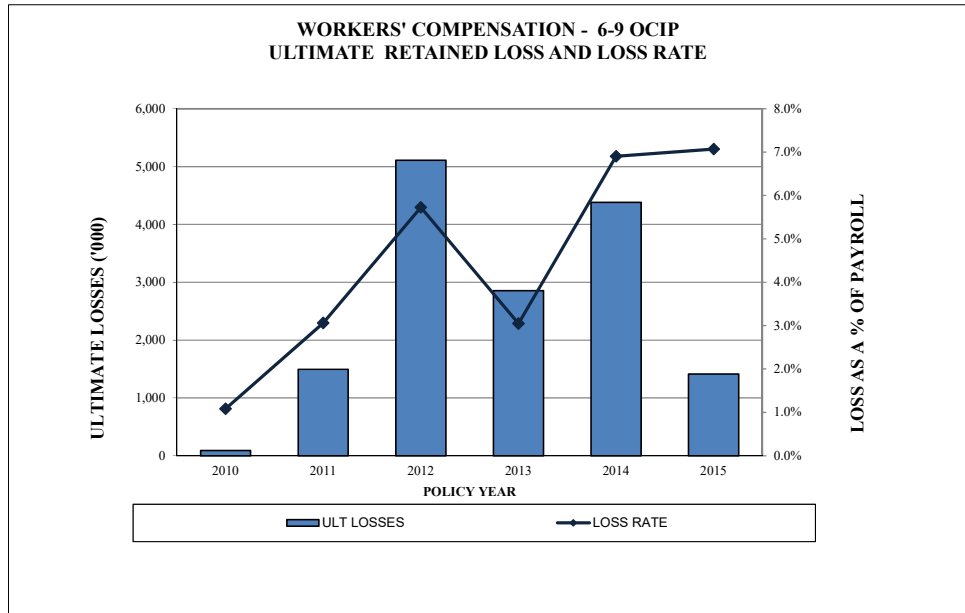


**Graphs
(continued)**

To give perspective on the prospective funding levels relative to the trend in loss rates, we prepared the following exhibits by type of coverage.



**Graphs
(continued)**

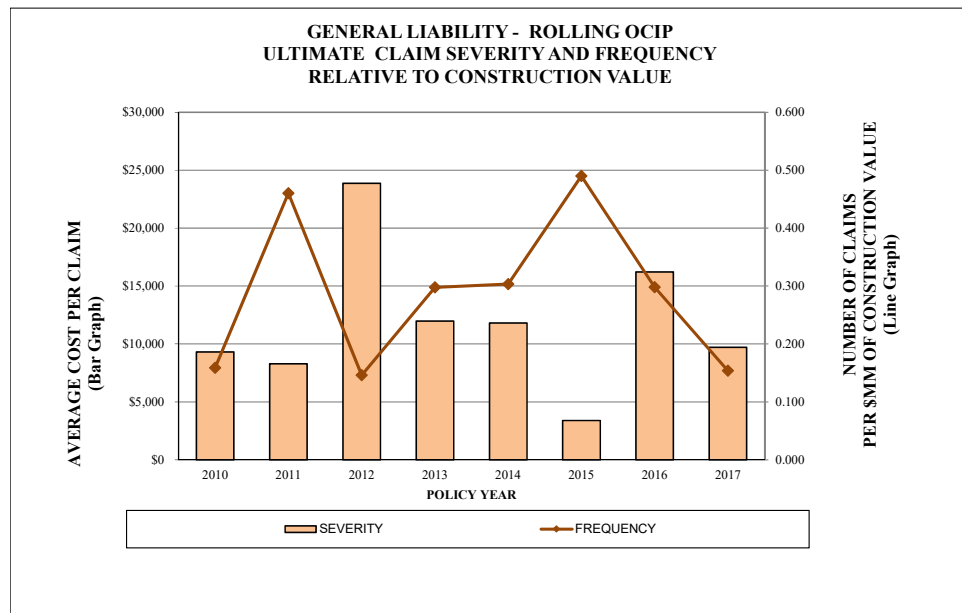
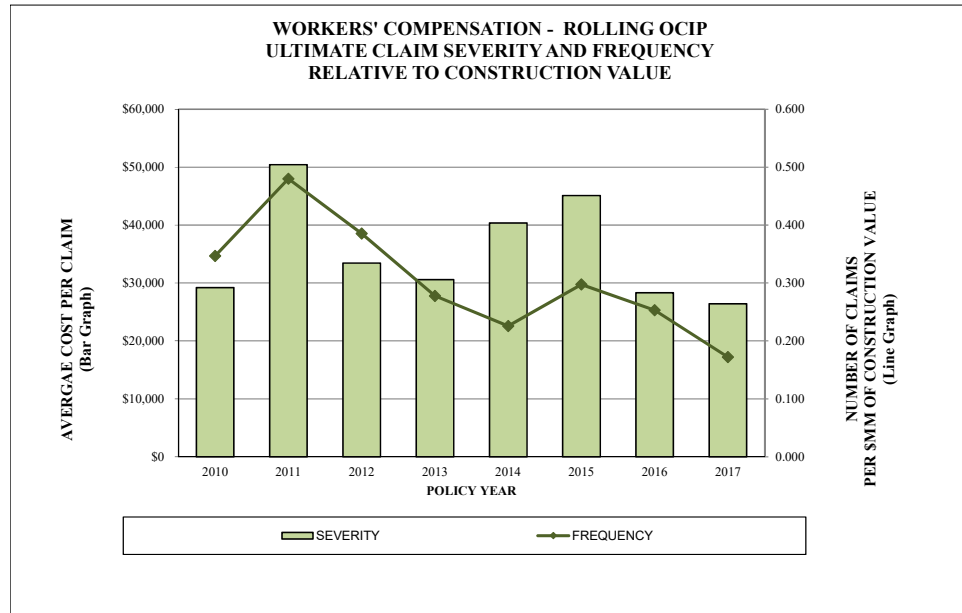


**Graphs
(continued)**

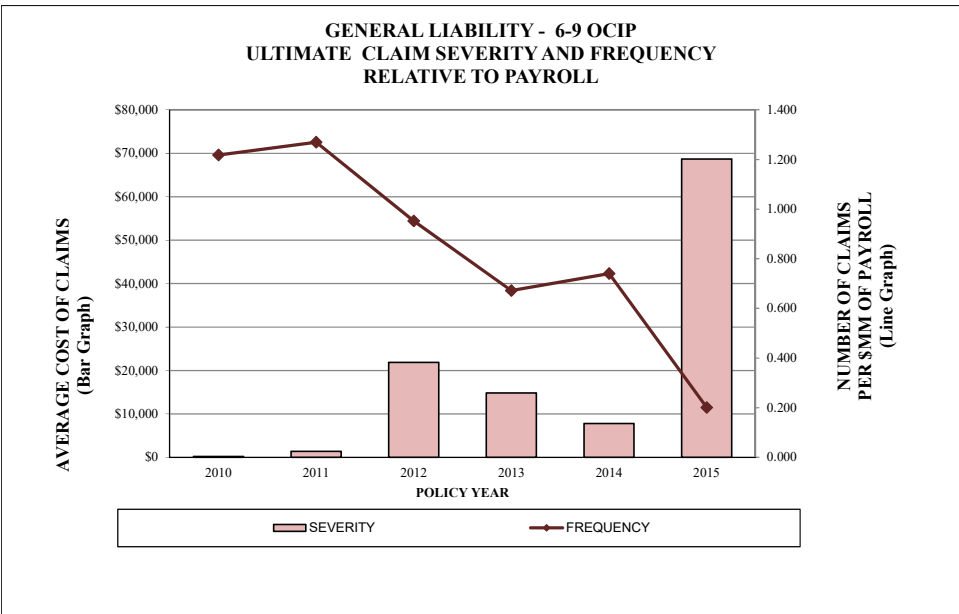
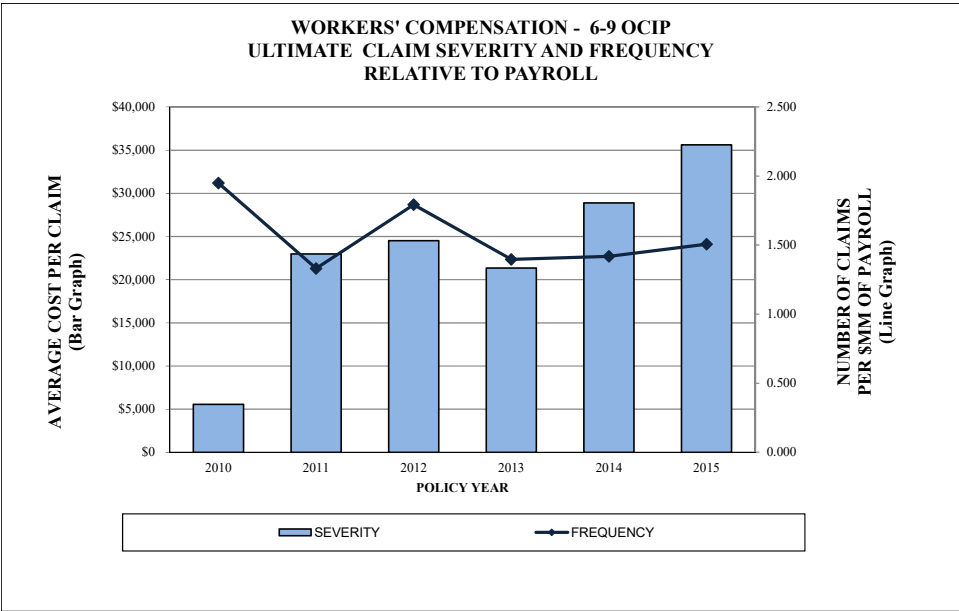
Graphs of Ultimate Claim Frequency and Ultimate Claim Severity

To give perspective on claim frequency and claim severity, we prepared the following graphs by OCIP and by type of coverage.

For each graph the **bar graph** shows the average cost per claim (*ultimate claim severity*). Values are read from the *left-hand vertical axis*. The **line graph**, on the other hand, indicates the number of claims per unit of exposure (*claim frequency*) with values and description read from the *right-hand vertical axis*.



**Graphs
(continued)**



Attached Exhibits

A Summary Exhibit has been prepared for each OCIP. Each Summary Exhibit has five pages.

- Page 1 shows the summary of discounted funding at December 31, 2019 using 2% interest rate.
- Page 2 shows the summary of discounted funding at December 31, 2019 using 3% interest rate.
- Page 3 shows the summary of discounted funding at December 31, 2019 using 4% interest rate.
- Page 4 shows the summary of ultimate claim frequency.
- Page 5 shows the summary of ultimate claim severity.

We also prepared the following exhibits:

Rolling OCIP:

Exhibit I - Workers' Compensation
Exhibit II - General Liability

6-9 OCIP:

Exhibit III - Workers' Compensation
Exhibit IV - General Liability

Exhibits I to IV have 10 pages each. Each page relates to the following:

- Page 1 shows the calculation of loss reserves discounted at various interest rates.
 - Page 2 shows the calculation of undiscounted loss reserves.
 - Page 3 shows the selection of ultimate retained losses and a list of large open claims over \$200,000.
 - Page 4 shows the calculation of reinsurance recoverables from claims exceeding the retention.
 - Page 5 shows the selection of ultimate losses.
 - Page 6 shows calculation of ultimate losses using the ILDA and PLDA.
-

**Attached
Exhibits
(continued)**

- Page 7 shows the calculation of ultimate losses using the BFILA and BFPLA.
- Page 8 shows the selection of initial loss rate for the Bornhuetter-Ferguson Approaches.
- Pages 9A shows the calculation of historical incurred loss development factors; pages 9B shows the calculation of historical paid loss development factors; 9C shows the calculation of historical reported claim count development factors.
- Page 10 shows the calculation of ultimate claim frequency and ultimate claim severity.

Appendices

We prepared Appendices A-D to show the calculation of discount factors using the average “risk-free” rate of return (2%, 3% and 4%) for investments maturing during the expected claim payout period.

- *Appendix A – Rolling OCIP - Workers’ Compensation*
- *Appendix B – Rolling OCIP - General Liability*
- *Appendix C – 6-9 OCIP - Workers’ Compensation*
- *Appendix D – 6-9 OCIP - General Liability*

Comparison of Loss Reserves at December 31, 2019 to Loss Reserves at December 31, 2018

Appendices E - H reconcile the undiscounted reserves as of December 31, 2019 with the undiscounted reserves as of December 31, 2018. It quantifies each component that impacts the change in reserve between periods, and thereby allows you to easily analyze what caused reserve increases or decreases. The components shown are: (1) payments made against the prior reserve, (2) any change in the estimate of ultimate losses for prior years, (3) any change in the reserve for loss conversion expenses.

- *Appendix E – Rolling OCIP - Workers’ Compensation*
 - *Appendix F – Rolling OCIP - General Liability*
 - *Appendix G – 6-9 OCIP - Workers’ Compensation*
 - *Appendix H – 6-9 OCIP - General Liability*
-

**Attached
Exhibits
(continued)**

Comparison of Ultimate Losses at December 31, 2019 to Ultimate Losses at December 31, 2018

Appendices I - L shows the comparison of ultimate losses between December 31, 2019 and December 31, 2018 by policy year.

- *Appendix I – Rolling OCIP - Workers' Compensation*
- *Appendix J – Rolling OCIP - General Liability*
- *Appendix K – 6-9 OCIP - Workers' Compensation*
- *Appendix L – 6-9 OCIP - General Liability*

Comparison of Paid Losses at December 31, 2019 to Paid Losses at December 31, 2018

Appendices I and J shows the comparison of paid losses between December 31, 2019 and December 31, 2018 by policy year.

- *Appendix M – Rolling OCIP - Workers' Compensation*
 - *Appendix N – Rolling OCIP - General Liability*
 - *Appendix O – 6-9 OCIP - Workers' Compensation*
 - *Appendix P – 6-9 OCIP - General Liability*
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**Section III
Actuarial Exhibits**

NEW JERSEY TURNPIKE AUTHORITY
OWNER CONTROLLED INSURANCE PROGRAM ACTUARIAL REVIEW
ESTIMATED RESERVES AS OF DECEMBER 31, 2019
ALL LINES COMBINED - ROLLING OCIP
(\$AMTS IN THOUSANDS)
LIMITED TO RETENTION

Funding for Outstanding Claim Liabilities (Loss Reserves) Discounted at 2% Interest Rate

Coverage	Undiscounted Reserves	Credit for Investment Income	Estimated Funding
	(1)	(2)	(3) = (1) - (2)
Workers' Compensation (WC)	\$4,603	\$304	\$4,299
General Liability (GL)	1,631	175	1,455
Total	\$6,233	\$479	\$5,754

Notes:

- (1) - From Exhibits I and II respectively - Page 1, Column (1).
- (2) - From Exhibits I and II respectively - Page 1, Column (1) less Column (3).
- (3) = (1) - (2).

NEW JERSEY TURNPIKE AUTHORITY
OWNER CONTROLLED INSURANCE PROGRAM ACTUARIAL REVIEW
ESTIMATED RESERVES AS OF DECEMBER 31, 2019
ALL LINES COMBINED - ROLLING OCIP
(\$AMTS IN THOUSANDS)
LIMITED TO RETENTION

Funding for Outstanding Claim Liabilities (Loss Reserves) Discounted at 3% Interest Rate

Coverage	Undiscounted Reserves	Credit for Investment Income	Estimated Funding
	(1)	(2)	(3) = (1) - (2)
Workers' Compensation (WC)	\$4,603	\$439	\$4,164
General Liability (GL)	1,631	245	1,386
Total	\$6,233	\$684	\$5,550

Notes:

- (1) - From Exhibits I and II respectively - Page 1, Column (1).
- (2) - From Exhibits I and II respectively - Page 1, Column (1) less Column (5).
- (3) = (1) - (2).

NEW JERSEY TURNPIKE AUTHORITY
OWNER CONTROLLED INSURANCE PROGRAM ACTUARIAL REVIEW
ESTIMATED RESERVES AS OF DECEMBER 31, 2019
ALL LINES COMBINED - ROLLING OCIP
(\$AMTS IN THOUSANDS)
LIMITED TO RETENTION

Funding for Outstanding Claim Liabilities (Loss Reserves) Discounted at 4% Interest Rate

Coverage	Undiscounted Reserves	Credit for Investment Income	Estimated Funding
	(1)	(2)	(3) = (1) - (2)
Workers' Compensation (WC)	\$4,603	\$564	\$4,038
General Liability (GL)	1,631	305	1,325
Total	\$6,233	\$870	\$5,363

Notes:

- (1) - From Exhibits I and II respectively - Page 1, Column (1).
- (2) - From Exhibits I and II respectively - Page 1, Column (1) less Column (7).
- (3) = (1) - (2).

NEW JERSEY TURNPIKE AUTHORITY
OWNER CONTROLLED INSURANCE PROGRAM ACTUARIAL REVIEW
ULTIMATE CLAIM FREQUENCY
ALL LINES COMBINED - ROLLING OCIP

Number of Claims per \$MM of Construction Value (Frequency)

Policy Year*	Workers' Compensation	General Liability	Total
	(1)	(2)	(3) = (1) + (2)
2010	0.347	0.159	0.506
2011	0.480	0.460	0.940
2012	0.386	0.146	0.532
2013	0.278	0.298	0.576
2014	0.226	0.303	0.529
2015	0.297	0.490	0.788
2016	0.253	0.298	0.551
2017	0.172	0.154	0.326
Total	0.288	0.316	0.604

NOTES:

(1) - From Exhibits I and II - Page 10, Column (6).

(3) = (1) + (2).

*Policy years are 12-month periods ending 7/14 of the stated year, except for 2017 which ends at 7/15/2017.

NEW JERSEY TURNPIKE AUTHORITY
OWNER CONTROLLED INSURANCE PROGRAM ACTUARIAL REVIEW
 ULTIMATE CLAIM SEVERITY
 ALL LINES COMBINED - ROLLING OCIP
 LIMITED TO RETENTION

Average Claim (Severity) - in Whole Dollars

Policy Year*	Workers' Compensation	General Liability	Total
	(1)	(2)	(3)
2010	\$29,201	\$9,316	\$22,951
2011	50,432	8,294	18,967
2012	33,452	23,865	27,734
2013	30,586	11,973	20,286
2014	40,376	11,801	19,227
2015	45,124	3,394	13,139
2016	28,310	16,221	22,179
2017	26,404	9,712	20,004
Total	\$37,700	\$10,251	\$23,325

NOTES:

(1) - From Exhibits I and II - Page 10, Column (7).

(3) - Weighted Average of (1) and (2)

*Policy years are 12-month periods ending 7/14 of the stated year, except for 2017 which ends at 7/15/2017.

NEW JERSEY TURNPIKE AUTHORITY
OWNER CONTROLLED INSURANCE PROGRAM ACTUARIAL REVIEW
ESTIMATED RESERVES AS OF DECEMBER 31, 2019
ALL LINES COMBINED - 6-9 OCIP
(\$AMTS IN THOUSANDS)
LIMITED TO RETENTION

Funding for Outstanding Claim Liabilities (Loss Reserves) Discounted at 2% Interest Rate

Coverage	Undiscounted Reserves	Credit for Investment Income	Estimated Funding
	(1)	(2)	(3) = (1) - (2)
Workers' Compensation (WC)	\$3,146	\$463	\$2,682
General Liability (GL)	106	3	103
Total	\$3,252	\$466	\$2,785

Notes:

- (1) - From Exhibits III and IV respectively - Page 2, Column (1).
- (2) - From Exhibits III and IV respectively - Page 2, Column (1) less Column (3).
- (3) = (1) - (2).

NEW JERSEY TURNPIKE AUTHORITY
OWNER CONTROLLED INSURANCE PROGRAM ACTUARIAL REVIEW
ESTIMATED RESERVES AS OF DECEMBER 31, 2019
ALL LINES COMBINED - 6-9 OCIP
(\$AMTS IN THOUSANDS)
LIMITED TO RETENTION

Funding for Outstanding Claim Liabilities (Loss Reserves) Discounted at 3% Interest Rate

Coverage	Undiscounted Reserves	Credit for Investment Income	Estimated Funding
	(1)	(2)	(3) = (1) - (2)
Workers' Compensation (WC)	\$3,146	\$660	\$2,486
General Liability (GL)	106	5	101
Total	\$3,252	\$665	\$2,587

Notes:

- (1) - From Exhibits III and IV respectively - Page 2, Column (1).
- (2) - From Exhibits III and IV respectively - Page 2, Column (1) less Column (5).
- (3) = (1) - (2).

NEW JERSEY TURNPIKE AUTHORITY
OWNER CONTROLLED INSURANCE PROGRAM ACTUARIAL REVIEW

ESTIMATED RESERVES AS OF DECEMBER 31, 2019

ALL LINES COMBINED - 6-9 OCIP

(SAMTS IN THOUSANDS)

LIMITED TO RETENTION

Funding for Outstanding Claim Liabilities (Loss Reserves) Discounted at 4% Interest Rate

Coverage	Undiscounted Reserves	Credit for Investment Income	Estimated Funding
	(1)	(2)	(3) = (1) - (2)
Workers' Compensation (WC)	\$3,146	\$837	\$2,309
General Liability (GL)	106	6	100
Total	\$3,252	\$843	\$2,409

Notes:

- (1) - From Exhibits III and IV respectively - Page 2, Column (1).
- (2) - From Exhibits III and IV respectively - Page 2, Column (1) less Column (7).
- (3) = (1) - (2).

NEW JERSEY TURNPIKE AUTHORITY
OWNER CONTROLLED INSURANCE PROGRAM ACTUARIAL REVIEW
ULTIMATE CLAIM FREQUENCY
ALL LINES COMBINED - 6-9 OCIP

Number of Claims per \$MM of Payroll (Frequency)

Policy Year*	Workers' Compensation	General Liability	Total
	(1)	(2)	(3) = (1) + (2)
2010	1.949	1.218	3.167
2011	1.331	1.270	2.601
2012	1.793	0.953	2.746
2013	1.397	0.672	2.069
2014	1.418	0.741	2.159
2015	1.506	0.200	1.707
Total	1.521	0.838	2.359

NOTES:

(1) & (2) - From Exhibits III and IV - Page 11, Column (6).

(3) = (1) + (2).

*Policy years are 12-month periods ending 5/31 of the stated year.

NEW JERSEY TURNPIKE AUTHORITY
OWNER CONTROLLED INSURANCE PROGRAM ACTUARIAL REVIEW
ULTIMATE CLAIM SEVERITY
EXCLUDING INVESTMENT INCOME AND MARGIN
ALL LINES COMBINED - 6-9 OCIP
LIMITED TO RETENTION

Average Claim (Severity) - in Whole Dollars

Policy Year*	Workers' Compensation	General Liability	Total
	(1)	(2)	(3)
2010	\$5,547	\$200	\$3,491
2011	22,979	1,410	3,527
2012	24,520	21,891	11,217
2013	21,346	14,852	8,569
2014	28,879	7,778	6,313
2015	35,608	68,681	12,964
Total	\$24,329	\$13,011	\$20,309

NOTES:

(1) & (2) - From Exhibits III and IV - Page 11, Column (7).

(3) - Weighted Average of (1) and (2)

*Policy years are 12-month periods ending 5/31 of the stated year.

NEW JERSEY TURNPIKE AUTHORITY
OWNER CONTROLLED INSURANCE PROGRAM ACTUARIAL REVIEW
CALCULATION OF DISCOUNTED NET RESERVES
WORKERS' COMPENSATION - ROLLING OCIP
AS OF DECEMBER 31, 2019
(AMTS IN THOUSANDS)
LIMITED TO RETENTION

DISCOUNTED LOSS RESERVES AT VARIOUS INTEREST RATES

ACCIDENT YEAR*	NET LOSS RESERVES	NET LOSS RESERVES DISCOUNTED AT:					
		DISCOUNT FACTORS	2.00%	DISCOUNT FACTORS	3.00%	DISCOUNT FACTORS	4.00%
	(1)	(2)	(3)	(4)	(5)	(6)	(7)
2010	\$190	0.970	\$184	0.957	\$182	0.945	\$180
2011	389	0.957	372	0.937	365	0.919	358
2012	392	0.945	370	0.920	361	0.897	351
2013	974	0.936	912	0.907	884	0.881	858
2014	936	0.928	869	0.896	838	0.866	810
2015	1,095	0.924	1,012	0.891	976	0.860	942
2016	361	0.923	333	0.889	320	0.857	309
2017	266	0.928	247	0.896	238	0.867	230
TOTAL	\$4,603		\$4,299		\$4,164		\$4,038

Notes:

(1) - Exhibit I, Page 2, Column (4).

(2), (4) & (6) - Per AMI calculations, see Appendix A.

(3) = (1) x (2), (5) = (1) x (4), (7) = (1) x (6).

*Policy years are 12-month periods ending 7/14 of the stated year, except for 2017 which ends at 7/15/2017.

NEW JERSEY TURNPIKE AUTHORITY
OWNER CONTROLLED INSURANCE PROGRAM ACTUARIAL REVIEW
CALCULATION OF TOTAL NET RESERVES
WORKERS' COMPENSATION - ROLLING OCIP
AS OF DECEMBER 31, 2019
(AMTS IN THOUSANDS)
LIMITED TO RETENTION

UNDISCOUNTED LOSS RESERVES

ACCIDENT YEAR*	RETAINED ULTIMATE LOSSES	RETAINED PAID LOSSES @12/31/2019	LOSS CONVERSION CHARGE	NET LOSS RESERVES @12/31/2019
	(1)	(2)	(3)	(4)
2010	\$759	\$583	0.08	\$190
2011	3,682	3,321	0.08	389
2012	3,880	3,518	0.08	392
2013	4,221	3,319	0.08	974
2014	6,945	6,078	0.08	936
2015	5,776	4,762	0.08	1,095
2016	1,562	1,228	0.08	361
2017	296	50	0.08	266
TOTAL	\$27,120	\$22,858		\$4,603

Notes:

(1) - Exhibit I, Page 3, Column (8).

(2) & (3) - Per NEW JERSEY TURNPIKE AUTHORITY.

(4) = ((1) - (2)) x (1 + (3)).

*Policy years are 12-month periods ending 7/14 of the stated year, except for 2017 which ends at 7/15/2017.

NEW JERSEY TURNPIKE AUTHORITY
OWNER CONTROLLED INSURANCE PROGRAM ACTUARIAL REVIEW
CALCULATION OF RETAINED ULTIMATE LOSSES
WORKERS' COMPENSATION - ROLLING OCIP
AS OF DECEMBER 31, 2019
(AMTS IN THOUSANDS)
LIMITED TO RETENTION

SELECTION OF RETAINED ULTIMATE LOSSES

ACCIDENT YEAR*	AGGREGATE RETENTION	SELECTED GROSS ULTIMATE LOSSES	EXCESS INCURRED	LOSS FROM OPEN "LARGE" CLAIMS	NO. OF EXCESS CLAIMS	NO. OF OPEN "LARGE" CLAIMS	EXCESS IBNR	SELECTED RETAINED ULTIMATE LOSSES
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
2010	None	\$759	\$0	\$355	0	1	\$0	\$759
2011	None	9,402	5,456	1,825	2	5	265	3,682
2012	None	4,641	711	279	1	1	50	3,880
2013	None	4,688	392	1,131	1	3	75	4,221
2014	None	10,805	3,442	1,666	4	5	419	6,945
2015	None	8,026	1,872	1,432	4	4	377	5,776
2016	None	2,955	1,235	351	1	1	158	1,562
2017	None	296	0	0	0	0	0	296
TOTAL		\$41,572	\$13,108	\$7,040	13	20	\$1,344	\$27,120

LIST OF OPEN CLAIMS OVER \$200K

ACCIDENT YEAR*	RETENTION	CASE NUMBER	PAID LOSSES	INCURRED LOSSES
	(9)	(10)	(11)	(12)
2010	\$500	837582	\$323	\$355
2011	500	880216	318	331
2011	500	893304	132	307
2011	500	896128	455	481
2011	500	043616	372	490
2011	500	943852	175	217
2012	500	978831	237	279
2013	500	087355	248	259
2013	500	090404	416	449
2013	500	092591	421	423
2014	500	105282	371	392
2014	500	112598	368	419
2014	500	204465	162	210
2014	500	133505	239	255
2014	500	156015	176	390
2015	500	159666	335	364
2015	500	164894	258	272
2015	500	169412	187	321
2015	500	181274	304	476
2016	500	208557	190	351
TOTAL			\$5,686	\$7,040

Notes:

(1), (4), (6), (9), (10), (11), (12) - Per NEW JERSEY TURNPIKE AUTHORITY.

(2) - From Exhibit I, Page 5, Column (5).

(3) - From Exhibit I, Page 4, Column (6).

(5) - From Exhibit I, Page 4, Column (2).

(7) - Based on AMI calculations.

(8) = If (2) - (3) - (7) exceeds aggregate, limit, we used the aggregate limit, else we used (2) - (3) - (7).

*Policy years are 12-month periods ending 7/14 of the stated year, except for 2017 which ends at 7/15/2017.

NEW JERSEY TURNPIKE AUTHORITY
OWNER CONTROLLED INSURANCE PROGRAM ACTUARIAL REVIEW
CALCULATION OF REINSURANCE RECOVERABLE
WORKERS' COMPENSATION - ROLLING OCIP
AS OF DECEMBER 31, 2019
(AMTS IN THOUSANDS)

SUMMARY OF RECOVERABLE FROM CLAIMS EXCEEDING THE RETENTION

ACCIDENT YEAR*	SPECIFIC RETENTION	NO. OF EXCESS CLAIMS	PAID LOSSES @12/31/2019	INCURRED LOSSES @12/31/2019	PAID EXCESS OF RETENTION	INCURRED EXCESS OF RETENTION	RESERVES EXCESS OF RETENTION
	(1)	(2)	(3)	(4)	(5)	(6)	(7)
2010	\$500	0	\$0	\$0	\$0	\$0	\$0
2011	500	2	4,016	6,456	3,016	5,456	2,440
2012	500	1	557	1,211	57	711	654
2013	500	1	749	892	249	392	143
2014	500	4	3,085	5,442	1,149	3,442	2,293
2015	500	4	1,571	3,872	23	1,872	1,849
2016	500	1	572	1,735	72	1,235	1,163
2017	500	0	0	0	0	0	0
TOTAL		13	\$10,550	\$19,608	\$4,566	\$13,108	\$8,541

LIST OF INDIVIDUAL EXCESS CLAIMS

ACCIDENT YEAR*	SPECIFIC RETENTION	CASE NUMBER	PAID LOSSES	INCURRED LOSSES	PAID EXCESS OF RETENTION	INCURRED EXCESS OF RETENTION	RESERVES EXCESS OF RETENTION
	(8)	(9)	(10)	(11)	(12)	(13)	(14)
2011	\$500	895184	\$1,010	\$1,647	\$510	\$1,147	\$637
2011	500	919692	3,006	4,808	2,506	4,308	1,802
2012	500	028602	557	1,211	57	711	654
2013	500	088298	749	892	249	392	143
2014	500	115779	851	1,892	351	1,392	1,041
2014	500	116539	436	1,013	0	513	513
2014	500	142509	589	601	89	101	12
2014	500	142624	1,209	1,936	709	1,436	727
2015	500	144391	471	1,649	0	1,149	1,149
2015	500	144547	523	578	23	78	55
2015	500	149242	157	618	0	118	118
2015	500	178666	420	1,028	0	528	528
2016	500	184641	572	1,735	72	1,235	1,163
TOTAL			\$10,550	\$19,608	\$4,566	\$13,108	\$8,541

Notes:

(1), (2), (3), (4), (8), (9), (10) & (11) - Per NEW JERSEY TURNPIKE AUTHORITY.

(5) & (6) - Based from (12) & (13).

(7) = (6) - (5), (14) = (13) - (12).

(12) = (10) - (8) if (10) > (8), 0 otherwise.

(13) = (11) - (8).

*Policy years are 12-month periods ending 7/14 of the stated year, except for 2017 which ends at 7/15/2017.

NEW JERSEY TURNPIKE AUTHORITY
OWNER CONTROLLED INSURANCE PROGRAM ACTUARIAL REVIEW
CALCULATION OF ULTIMATE LOSSES
WORKERS' COMPENSATION - ROLLING OCIP
AS OF DECEMBER 31, 2019
(AMTS IN THOUSANDS)
UNLIMITED LOSSES

ALL APPROACHES COMBINED

ACCIDENT YEAR*	ILDA ULTIMATE LOSSES	PLDA ULTIMATE LOSSES	BFILA ULTIMATE LOSSES	BFPLA ULTIMATE LOSSES	SELECTED ULTIMATE LOSSES
	(1)	(2)	(3)	(4)	(5)
2010	\$684	\$677	\$778	\$898	\$759
2011	9,833	9,178	9,419	9,178	9,402
2012	4,730	4,369	4,829	4,637	4,641
2013	4,286	4,471	4,680	5,314	4,688
2014	11,427	10,169	11,455	10,169	10,805
2015	8,690	7,546	8,320	7,546	8,026
2016	3,225	2,727	3,139	2,727	2,955
2017	111	89	229	363	296
TOTAL	\$42,986	\$39,227	\$42,850	\$40,832	\$41,572

Notes:

(1), (2), (3) & (4) - Ultimate incurred losses calculated from Exhibit I, Pages 6 and 7.

(5) = Selected based on (1), (2), (3) & (4).

*Policy years are 12-month periods ending 7/14 of the stated year, except for 2017 which ends at 7/15/2017.

NEW JERSEY TURNPIKE AUTHORITY
OWNER CONTROLLED INSURANCE PROGRAM ACTUARIAL REVIEW
CALCULATION OF ULTIMATE LOSSES - LOSS DEVELOPMENT APPROACH
WORKERS' COMPENSATION - ROLLING OCIP
AS OF DECEMBER 31, 2019
(AMTS IN THOUSANDS)
UNLIMITED LOSSES

INCURRED LOSS DEVELOPMENT APPROACH

ACCIDENT YEAR*	INCURRED LOSSES @12/31/2019	LOSS DEVELOPMENT FACTORS	ULTIMATE INCURRED LOSSES	CONSTRUCTION VALUE (IN \$000'S)	ESTIMATED LOSS RATE
	(1)	(2)	(3)	(4)	(5)
2010	\$643	1.064	\$684	\$75,000	0.009
2011	9,178	1.071	9,833	152,052	0.065
2012	4,369	1.083	4,730	300,884	0.016
2013	3,899	1.099	4,286	496,748	0.009
2014	10,169	1.124	11,427	761,210	0.015
2015	7,546	1.152	8,690	430,440	0.020
2016	2,727	1.183	3,225	217,978	0.015
2017	89	1.242	111	65,084	0.002
TOTAL	\$38,621		\$42,986		

PAID LOSS DEVELOPMENT APPROACH

ACCIDENT YEAR*	PAID LOSSES @12/31/2019	LOSS DEVELOPMENT FACTORS	ULTIMATE INCURRED LOSSES	CONSTRUCTION VALUE (IN \$000'S)	ESTIMATED LOSS RATE
	(6)	(7)	(8)	(9)	(10)
2010	\$583	1.161	\$677	\$75,000	0.009
2011	6,337	1.184	9,178	152,052	0.060
2012	3,575	1.213	4,369	300,884	0.015
2013	3,568	1.253	4,471	496,748	0.009
2014	7,227	1.299	10,169	761,210	0.013
2015	4,785	1.378	7,546	430,440	0.018
2016	1,300	1.497	2,727	217,978	0.013
2017	50	1.777	89	65,084	0.001
TOTAL	\$27,425		\$39,227		

Notes:

(1), (4), (6) & (9) - Per NEW JERSEY TURNPIKE AUTHORITY.

(2) & (7) - Per NEW JERSEY TURNPIKE AUTHORITY's historical loss patterns.

(3) = (1) x (2); (8) = (6) x (7). If ultimate incurred losses in (8) are less than the incurred losses in (1), we used the losses in (1).

(5) = (3) / (4), (10) = (8) / (9).

*Policy years are 12-month periods ending 7/14 of the stated year, except for 2017 which ends at 7/15/2017.

**NEW JERSEY TURNPIKE AUTHORITY
OWNER CONTROLLED INSURANCE PROGRAM ACTUARIAL REVIEW
CALCULATION OF ULTIMATE LOSSES - BORNHUETTER-FERGUSON APPROACH
WORKERS' COMPENSATION - ROLLING OCIP
AS OF DECEMBER 31, 2019
(AMTS IN THOUSANDS)
UNLIMITED LOSSES**

BORNHUETTER-FERGUSON INCURRED LOSS APPROACH

ACCIDENT YEAR*	ESTIMATED LOSS RATE	CONSTRUCTION VALUE (\$ '000s)	EXPECTED ULTIMATE LOSSES	EXPECTED % OF LOSSES UNREPORTED	IBNR RESERVES	INCURRED LOSSES @12/31/2019	ULTIMATE INCURRED LOSSES
	(1)	(2)	(3)	(4)	(5)	(6)	(7)
2010	0.030	\$75,000	\$2,267	6.0%	\$136	\$643	\$778
2011	0.024	152,052	3,621	6.7%	241	9,178	9,419
2012	0.020	300,884	6,038	7.6%	460	4,369	4,829
2013	0.017	496,748	8,647	9.0%	780	3,899	4,680
2014	0.015	761,210	11,681	11.0%	1,286	10,169	11,455
2015	0.014	430,440	5,880	13.2%	774	7,546	8,320
2016	0.012	217,978	2,667	15.4%	412	2,727	3,139
2017	0.011	65,084	716	19.5%	140	89	229
TOTAL			\$41,517		\$4,229	\$38,621	\$42,850

BORNHUETTER-FERGUSON PAID LOSS APPROACH

ACCIDENT YEAR*	ESTIMATED LOSS RATE	CONSTRUCTION VALUE (\$ '000s)	EXPECTED ULTIMATE LOSSES	EXPECTED % OF LOSSES UNPAID	LOSS RESERVES	PAID LOSSES @12/31/2019	ULTIMATE INCURRED LOSSES
	(8)	(9)	(10)	(11)	(12)	(13)	(14)
2010	0.030	\$75,000	\$2,267	13.9%	\$314	\$583	\$898
2011	0.024	152,052	3,621	15.6%	564	6,337	9,178
2012	0.020	300,884	6,038	17.6%	1,062	3,575	4,637
2013	0.017	496,748	8,647	20.2%	1,746	3,568	5,314
2014	0.015	761,210	11,681	23.0%	2,687	7,227	10,169
2015	0.014	430,440	5,880	27.5%	1,614	4,785	7,546
2016	0.012	217,978	2,667	33.2%	886	1,300	2,727
2017	0.011	65,084	716	43.7%	313	50	363
TOTAL			\$41,517		\$9,186	\$27,425	\$40,832

Notes:

(1) & (8) - See Exhibit I, Page 8, Column (5).

(2), (6), (9) & (13) - Per NEW JERSEY TURNPIKE AUTHORITY.

(3) = (1) x (2); (10) = (8) x (9).

(4) = (1 - (1/ILDF)); (11) = (1 - (1/PLDF)).

(5) = (3) x (4); (12) = (10) x (11).

(7) = (5) + (6); (14) = (12) + (13). If ultimate incurred losses in (14) are less than the incurred losses in (6), we used the incurred losses in (6).

*Policy years are 12-month periods ending 7/14 of the stated year, except for 2017 which ends at 7/15/2017.

NEW JERSEY TURNPIKE AUTHORITY
OWNER CONTROLLED INSURANCE PROGRAM ACTUARIAL REVIEW
SELECTION OF INTIAL LOSS RATE FOR BORNHUETTER-FERGUSON APPROACHES
WORKERS' COMPENSATION - ROLLING OCIP
AS OF DECEMBER 31, 2019
(AMTS IN THOUSANDS)
UNLIMITED LOSSES

ACCIDENT YEAR*	ULTIMATE LOSSES PER ILDA	ULTIMATE LOSSES PER PLDA	CONSTRUCTION VALUE (IN \$000'S)	LOSS RATE AT CURRENT RETENTION	FITTED LOSS RATE
	(1)	(2)	(3)	(4)	(5)
2010	\$684	\$677	\$75,000	0.91%	3.02%
2011	9,833	9,178	152,052	6.25%	2.38%
2012	4,730	4,369	300,884	1.51%	2.01%
2013	4,286	4,471	496,748	0.88%	1.74%
2014	11,427	10,169	761,210	1.42%	1.53%
2015	8,690	7,546	430,440	1.89%	1.37%
2016	3,225	2,727	217,978	1.37%	1.22%
2017	111	89	65,084	0.15%	1.10%

Average	1.80%
Weighted Average	1.64%
Selected	based on fitted

Notes:

(1) - Per Exhibit I, Page 6, Column (3).

(2) - Per Exhibit I, Page 6, Column (8).

(3) - Per NEW JERSEY TURNPIKE AUTHORITY.

(4) = [Average of (1) & (2)] / (3).

(5) - Per AMI calculation.

*Policy years are 12-month periods ending 7/14 of the stated year, except for 2017 which ends at 7/15/2017.

NEW JERSEY TURNPIKE AUTHORITY
OWNER CONTROLLED INSURANCE PROGRAM ACTUARIAL REVIEW
CALCULATION OF THE LOSS DEVELOPMENT FACTORS
WORKERS' COMPENSATION - ROLLING OCIP
AS OF DECEMBER 31, 2019
(AMTS IN THOUSANDS)
UNLIMITED LOSSES

INCURRED LOSS DEVELOPMENT

ACCIDENT YEAR*	DEVELOPMENT MONTHS											
	4.5	16.5	28.5	40.5	52.5	64.5	76.5	88.5	100.5	112.5	124.5	136.5
2010			9	12	720	658	560	560	588	630	642	
2011		2,841	3,961	6,709	6,968	7,467	7,383	8,920	9,141	9,175		
2012	239	3,093	4,267	4,286	4,134	4,417	4,727	4,639	4,368			
2013	212	2,664	3,695	3,965	3,849	3,717	3,785	3,888				
2014	792	9,001	9,499	9,850	10,123	9,636	10,160					
2015	3,301	4,728	5,141	6,630	6,993	7,429						
2016	763	1,637	2,194	2,497	2,706							
2017	0	67	78	89								

LOSS DEVELOPMENT FACTORS

ACCIDENT YEAR*	4.5	16.5	28.5	40.5	52.5	64.5	76.5	88.5	100.5	112.5	124.5	136.5
	TO	TO	TO	TO	TO	TO	TO	TO	TO	TO	TO	TO
	16.5	28.5	40.5	52.5	64.5	76.5	88.5	100.5	112.5	124.5	136.5	ULT
2010			1.272	62.593	0.914	0.851	1.000	1.050	1.072	1.020		
2011		1.394	1.694	1.039	1.072	0.989	1.208	1.025	1.004			
2012	12.960	1.380	1.005	0.964	1.068	1.070	0.982	0.942				
2013	12.562	1.387	1.073	0.971	0.966	1.018	1.027					
2014	11.360	1.055	1.037	1.028	0.952	1.054						
2015	1.432	1.087	1.290	1.055	1.062							
2016	2.144	1.340	1.138	1.084								
2017	139.443	1.165	1.145									
AVERAGE	8.092	1.258	1.207	9.819	1.006	0.996	1.054	1.006	1.038			
3 YR AVG.	47.673	1.197	1.155	1.018	0.995	1.026	1.063					
AVERAGE EXCL HI LO	9.757	1.272	1.159	1.035	1.012	1.020	1.014					
INDUSTRY FACTORS		1.244	1.096	1.053	1.033	1.025	1.020	1.016	1.011	1.007	1.006	
PRIOR SELECTED	5.728	1.241	1.134	1.053	1.030	1.025	1.021	1.016	1.011	1.007	1.006	
SELECTED	6.048	1.241	1.138	1.053	1.027	1.025	1.023	1.016	1.011	1.007	1.006	
CUMULATIVE	10.655	1.762	1.419	1.248	1.185	1.154	1.126	1.101	1.083	1.072	1.064	1.058

*Policy years are 12-month periods ending 7/14 of the stated year, except for 2017 which ends at 7/15/2017.

NEW JERSEY TURNPIKE AUTHORITY
OWNER CONTROLLED INSURANCE PROGRAM ACTUARIAL REVIEW
CALCULATION OF THE LOSS DEVELOPMENT FACTORS
WORKERS' COMPENSATION - ROLLING OCIP
AS OF DECEMBER 31, 2019
(AMTS IN THOUSANDS)
UNLIMITED LOSSES

PAID LOSS DEVELOPMENT

ACCIDENT YEAR*	DEVELOPMENT MONTHS											
	4.5	16.5	28.5	40.5	52.5	64.5	76.5	88.5	100.5	112.5	124.5	136.5
2010			9	12	441	485	529	548	560	564	583	
2011		1,116	2,007	3,712	4,451	4,949	5,094	5,415	5,938	6,292		
2012	78	1,570	2,288	2,618	3,061	3,237	3,537	3,525	3,570			
2013	64	1,182	2,003	2,486	3,041	3,119	3,433	3,561				
2014	213	2,947	4,605	5,245	5,971	6,672	7,205					
2015	545	2,104	2,843	3,835	4,238	4,760						
2016	296	670	955	1,092	1,278							
2017	0	44	45	49								

LOSS DEVELOPMENT FACTORS

ACCIDENT YEAR*	4.5	16.5	28.5	40.5	52.5	64.5	76.5	88.5	100.5	112.5	124.5	136.5
	TO	TO	TO	TO	TO	TO	TO	TO	TO	TO	TO	TO
	16.5	28.5	40.5	52.5	64.5	76.5	88.5	100.5	112.5	124.5	136.5	ULT
2010			1.272	38.372	1.100	1.089	1.036	1.022	1.008	1.033		
2011		1.799	1.849	1.199	1.112	1.029	1.063	1.097	1.060			
2012	20.126	1.457	1.144	1.169	1.057	1.093	0.997	1.013				
2013	18.596	1.695	1.241	1.223	1.026	1.101	1.037					
2014	13.829	1.563	1.139	1.138	1.117	1.080						
2015	3.864	1.351	1.349	1.105	1.123							
2016	2.261	1.425	1.143	1.170								
2017	91.710	1.014	1.105									
AVERAGE	11.735	1.472	1.280	6.482	1.089	1.078	1.033	1.044	1.034			
3 YR AVG.	32.612	1.263	1.210	1.155	1.067	1.074	1.032					
AVERAGE EXCL HI LO	14.104	1.498	1.215	1.180	1.097	1.087	1.037					
INDUSTRY FACTORS		1.694	1.222	1.117	1.073	1.049	1.037	1.030	1.025	1.020	1.017	
PRIOR SELECTED	7.842	1.552	1.243	1.195	1.089	1.062	1.037	1.032	1.025	1.020	1.017	
SELECTED	8.350	1.538	1.242	1.195	1.088	1.064	1.037	1.033	1.025	1.020	1.017	
CUMULATIVE	28.756	3.444	2.239	1.802	1.508	1.385	1.303	1.256	1.216	1.186	1.163	1.143

*Policy years are 12-month periods ending 7/14 of the stated year, except for 2017 which ends at 7/15/2017.

**NEW JERSEY TURNPIKE AUTHORITY
OWNER CONTROLLED INSURANCE PROGRAM ACTUARIAL REVIEW
CALCULATION OF THE REPORTED CLAIM COUNT DEVELOPMENT FACTORS
WORKERS' COMPENSATION - ROLLING OCIP
AS OF DECEMBER 31, 2019**

REPORTED CLAIM COUNT DEVELOPMENT

ACCIDENT YEAR*	DEVELOPMENT MONTHS											
	4.5	16.5	28.5	40.5	52.5	64.5	76.5	88.5	100.5	112.5	124.5	136.5
2010			23	23	25	25	25	25	26	26	26	
2011		66	68	69	72	73	73	73	73	73		
2012	38	109	111	117	116	116	116	116	116			
2013	29	131	134	134	137	138	138	138				
2014	57	156	162	170	173	172	172					
2015	70	118	125	126	127	128						
2016	18	52	53	53	55							
2017	3	10	10	11								

CLAIM COUNT DEVELOPMENT FACTORS

ACCIDENT YEAR*	4.5	16.5	28.5	40.5	52.5	64.5	76.5	88.5	100.5	112.5	124.5	136.5
	TO	TO	TO	TO	TO	TO	TO	TO	TO	TO	TO	TO
	16.5	28.5	40.5	52.5	64.5	76.5	88.5	100.5	112.5	124.5	136.5	ULT
2010			1.000	1.087	1.000	1.000	1.000	1.040	1.000	1.000		
2011		1.030	1.015	1.043	1.014	1.000	1.000	1.000	1.000			
2012	2.868	1.018	1.054	0.991	1.000	1.000	1.000	1.000				
2013	4.517	1.023	1.000	1.022	1.007	1.000	1.000					
2014	2.737	1.038	1.049	1.018	0.994	1.000						
2015	1.686	1.059	1.008	1.008	1.008							
2016	2.889	1.019	1.000	1.038								
2017	3.333	1.000										
AVERAGE	3.005	1.027	1.018	1.030	1.004	1.000	1.000	1.013	1.000			
3 YR AVG.	2.636	1.026	1.019	1.016	1.000	1.000	1.000					
EXCL HI LO	2.957	1.026	1.014	1.026	1.004	1.000	1.000					
PRIOR SELECTED	2.761	1.034	1.025	1.019	1.003	1.000	1.000	1.000	1.000	1.000	1.000	
SELECTED	2.771	1.033	1.024	1.020	1.003	1.000	1.000	1.000	1.000	1.000	1.000	
CUMULATIVE	2.999	1.082	1.048	1.023	1.003	1.000	1.000	1.000	1.000	1.000	1.000	1.000

*Policy years are 12-month periods ending 7/14 of the stated year, except for 2017 which ends at 7/15/2017.

NEW JERSEY TURNPIKE AUTHORITY
OWNER CONTROLLED INSURANCE PROGRAM ACTUARIAL REVIEW
CALCULATION OF ULTIMATE CLAIM FREQUENCY AND ULTIMATE CLAIM SEVERITY
WORKERS' COMPENSATION - ROLLING OCIP
AS OF DECEMBER 31, 2019
LIMITED TO RETENTION

ACCIDENT YEAR*	CLAIMS REPORTED @12/31/2019	DEVELOPMENT FACTORS	ULTIMATE CLAIM COUNT	RETAINED ULTIMATE LOSS	CONSTRUCTION VALUE (\$000'S)	NUMBER OF CLAIMS PER \$MM OF CONSTRUCTION VALUE (FREQUENCY)	AVERAGE CLAIM (SEVERITY) (WHOLE DOLLARS)
	(1)	(2)	(3)	(4)	(5)	(6)	(7)
2010	26	1.000	26	\$759	\$75,000	0.347	\$29,201
2011	73	1.000	73	3,682	152,052	0.480	50,432
2012	116	1.000	116	3,880	300,884	0.386	33,452
2013	138	1.000	138	4,221	496,748	0.278	30,586
2014	172	1.000	172	6,945	761,210	0.226	40,376
2015	128	1.000	128	5,776	430,440	0.297	45,124
2016	55	1.003	55	1,562	217,978	0.253	28,310
2017	11	1.018	11	296	65,084	0.172	26,404
TOTAL	719		719	\$27,120		0.288	\$37,700

Notes:

(1) & (5) - Per NEW JERSEY TURNPIKE AUTHORITY.

(2) - Per NEW JERSEY TURNPIKE AUTHORITY's historical loss patterns.

(3) = (1) x (2)

(4) = Exhibit I, Page 3, Column (8).

(6) = [(3) / (5)] x 1000.

(7) = [(4) / (3)] x 1000.

*Policy years are 12-month periods ending 7/14 of the stated year, except for 2017 which ends at 7/15/2017.

NEW JERSEY TURNPIKE AUTHORITY
OWNER CONTROLLED INSURANCE PROGRAM ACTUARIAL REVIEW
CALCULATION OF DISCOUNTED NET RESERVES
GENERAL LIABILITY - ROLLING OCIP
AS OF DECEMBER 31, 2019
(AMTS IN THOUSANDS)
LIMITED TO RETENTION

DISCOUNTED LOSS RESERVES AT VARIOUS INTEREST RATES

POLICY YEAR*	NET LOSS RESERVES	NET LOSS RESERVES DISCOUNTED AT:					
		DISCOUNT FACTORS	2.00%	DISCOUNT FACTORS	3.00%	DISCOUNT FACTORS	4.00%
	(1)	(2)	(3)	(4)	(5)	(6)	(7)
2010	\$19	0.855	\$16	0.798	\$15	0.747	\$14
2011	24	0.849	20	0.788	19	0.736	18
2012	86	0.860	74	0.804	69	0.756	65
2013	128	0.867	111	0.815	105	0.769	99
2014	381	0.877	334	0.828	316	0.786	300
2015	385	0.893	344	0.851	328	0.814	313
2016	505	0.912	461	0.877	443	0.847	427
2017	103	0.926	95	0.896	92	0.869	89
TOTAL	\$1,631		\$1,455		\$1,386		\$1,325

Notes:

(1) - Exhibit II, Page 2, Column (4).

(2), (4) & (6) - Per AMI calculations, see Appendix B.

(3) = (1) x (2), (5) = (1) x (4), (7) = (1) x (6).

*Policy years are 12-month periods ending 7/14 of the stated year, except for 2017 which ends at 7/15/2017.

**NEW JERSEY TURNPIKE AUTHORITY
OWNER CONTROLLED INSURANCE PROGRAM ACTUARIAL REVIEW
CALCULATION OF TOTAL NET RESERVES
GENERAL LIABILITY - ROLLING OCIP
AS OF DECEMBER 31, 2019
(AMTS IN THOUSANDS)
LIMITED TO RETENTION**

UNDISCOUNTED LOSS RESERVES

POLICY YEAR*	RETAINED ULTIMATE LOSSES	RETAINED PAID LOSSES @12/31/2019	LOSS CONVERSION CHARGE	NET LOSS RESERVES @12/31/2019
	(1)	(2)	(3)	(4)
2010	\$111	\$94	0.08	\$19
2011	581	558	0.08	24
2012	1,050	970	0.08	86
2013	1,772	1,653	0.08	128
2014	2,726	2,373	0.08	381
2015	716	360	0.08	385
2016	1,055	587	0.08	505
2017	97	2	0.08	103
TOTAL	\$8,108	\$6,598		\$1,631

Notes:

(1) - Exhibit II, Page 3, Column (8).

(2) & (3) - Per NEW JERSEY TURNPIKE AUTHORITY.

(4) = ((1) - (2)) x (1 + (3)).

*Policy years are 12-month periods ending 7/14 of the stated year, except for 2017 which ends at 7/15/2017.

NEW JERSEY TURNPIKE AUTHORITY
OWNER CONTROLLED INSURANCE PROGRAM ACTUARIAL REVIEW
CALCULATION OF RETAINED ULTIMATE LOSSES
GENERAL LIABILITY - ROLLING OCIP
AS OF DECEMBER 31, 2019
(AMTS IN THOUSANDS)
LIMITED TO RETENTION

SELECTION OF RETAINED ULTIMATE LOSSES

POLICY YEAR*	AGGREGATE RETENTION	SELECTED GROSS ULTIMATE LOSSES	EXCESS INCURRED	LOSS FROM OPEN "LARGE" CLAIMS	NO. OF EXCESS CLAIMS	NO. OF OPEN "LARGE" CLAIMS	EXCESS IBNR	SELECTED RETAINED ULTIMATE LOSSES
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
2010	\$4,000	\$111	\$0	\$0	0	0	\$0	\$111
2011	4,000	904	280	0	1	0	44	581
2012	4,000	1,665	542	0	1	0	73	1,050
2013	4,000	3,951	1,920	0	2	0	258	1,772
2014	4,000	6,283	3,046	0	3	0	511	2,726
2015	4,000	716	0	0	0	0	0	716
2016	4,000	2,092	668	0	1	0	369	1,055
2017	4,000	97	0	0	0	0	0	97
TOTAL		\$15,819	\$6,457	\$0	8	0	\$1,255	\$8,108

Notes:

(1), (4), (6), (9), (10), (11), (12) - Per NEW JERSEY TURNPIKE AUTHORITY.

(2) - From Exhibit II, Page 5, Column (5).

(3) - From Exhibit II, Page 4, Column (6).

(5) - From Exhibit II, Page 4, Column (2).

(7) - Based on AMI calculations.

(8) = If (2) - (3) - (7) exceeds aggregate, limit, we used the aggregate limit, else we used (2) - (3) - (7).

*Policy years are 12-month periods ending 7/14 of the stated year, except for 2017 which ends at 7/15/2017.

NEW JERSEY TURNPIKE AUTHORITY
OWNER CONTROLLED INSURANCE PROGRAM ACTUARIAL REVIEW
CALCULATION OF REINSURANCE RECOVERABLE
GENERAL LIABILITY - ROLLING OCIP
AS OF DECEMBER 31, 2019
(AMTS IN THOUSANDS)

SUMMARY OF RECOVERABLE FROM CLAIMS EXCEEDING THE RETENTION

POLICY YEAR*	SPECIFIC RETENTION	NO. OF EXCESS CLAIMS	PAID LOSSES @12/31/2019	INCURRED LOSSES @12/31/2019	PAID EXCESS OF RETENTION	INCURRED EXCESS OF RETENTION	RESERVES EXCESS OF RETENTION
	(1)	(2)	(3)	(4)	(5)	(6)	(7)
2010	\$500	0	\$0	\$0	\$0	\$0	\$0
2011	500	1	780	780	280	280	0
2012	500	1	1,042	1,042	542	542	0
2013	500	2	2,920	2,920	1,920	1,920	0
2014	500	3	4,106	4,546	2,897	3,046	149
TOTAL		8	\$8,991	\$10,457	\$5,640	\$6,457	\$817

LIST OF INDIVIDUAL EXCESS CLAIMS

POLICY YEAR*	SPECIFIC RETENTION	CASE NUMBER	PAID LOSSES	INCURRED LOSSES	PAID EXCESS OF RETENTION	INCURRED EXCESS OF RETENTION	RESERVES EXCESS OF RETENTION
	(8)	(9)	(10)	(11)	(12)	(13)	(14)
2011	\$500	369988	\$780	\$780	\$280	\$280	\$0
2012	500	592689	1,042	1,042	542	542	0
2013	500	590769	1,648	1,648	1,148	1,148	0
2013	500	059459	1,272	1,272	772	772	0
2014	500	034643	2,077	2,077	1,577	1,577	0
2014	500	592210	1,820	1,827	1,320	1,327	7
2014	500	065360	208	642	0	142	142
2016	500	212164	143	1,168	0	668	668
TOTAL			\$8,991	\$10,457	\$5,640	\$6,457	\$817

Notes:

(1), (2), (3), (4), (8), (9), (10) & (11) - Per NEW JERSEY TURNPIKE AUTHORITY.

(5) & (6) - Based from (12) & (13).

(7) = (6) - (5), (14) = (13) - (12).

(12) = (10) - (8) if (10) > (8), 0 otherwise.

(13) = (11) - (8).

*Policy years are 12-month periods ending 7/14 of the stated year, except for 2017 which ends at 7/15/2017.

**NEW JERSEY TURNPIKE AUTHORITY
OWNER CONTROLLED INSURANCE PROGRAM ACTUARIAL REVIEW
CALCULATION OF ULTIMATE LOSSES
GENERAL LIABILITY - ROLLING OCIP
AS OF DECEMBER 31, 2019
(AMTS IN THOUSANDS)
UNLIMITED LOSSES**

ALL APPROACHES COMBINED

POLICY YEAR*	ILDA ULTIMATE LOSSES	PLDA ULTIMATE LOSSES	BFILA ULTIMATE LOSSES	BFPLA ULTIMATE LOSSES	SELECTED ULTIMATE LOSSES
	(1)	(2)	(3)	(4)	(5)
2010	\$98	\$104	\$112	\$130	\$111
2011	885	934	879	918	904
2012	1,618	1,725	1,613	1,703	1,665
2013	3,890	4,184	3,782	3,947	3,951
2014	6,506	6,406	6,248	5,970	6,283
2015	611	523	848	883	716
2016	2,468	1,875	2,150	1,875	2,092
2017	48	32	146	162	97
TOTAL	\$16,125	\$15,784	\$15,778	\$15,589	\$15,819

Notes:

(1), (2), (3) & (4) - Ultimate incurred losses calculated from Exhibit II, Pages 6 and 7.

(5) = Selected based on (1), (2), (3) & (4).

*Policy years are 12-month periods ending 7/14 of the stated year, except for 2017 which ends at 7/15/2017.

NEW JERSEY TURNPIKE AUTHORITY
OWNER CONTROLLED INSURANCE PROGRAM ACTUARIAL REVIEW
CALCULATION OF ULTIMATE LOSSES - LOSS DEVELOPMENT APPROACH
GENERAL LIABILITY - ROLLING OCIP
AS OF DECEMBER 31, 2019
(AMTS IN THOUSANDS)
UNLIMITED LOSSES

INCURRED LOSS DEVELOPMENT APPROACH

POLICY YEAR*	INCURRED LOSSES @12/31/2019	LOSS DEVELOPMENT FACTORS	ULTIMATE INCURRED LOSSES	CONSTRUCTION VALUE (IN \$000'S)	ESTIMATED LOSS RATE
	(1)	(2)	(3)	(4)	(5)
2010	\$94	1.049	\$98	\$75,000	0.001
2011	838	1.056	885	152,052	0.006
2012	1,513	1.070	1,618	300,884	0.005
2013	3,573	1.089	3,890	496,748	0.008
2014	5,849	1.112	6,506	761,210	0.009
2015	523	1.169	611	430,440	0.001
2016	1,875	1.316	2,468	217,978	0.011
2017	32	1.495	48	65,084	0.001
TOTAL	\$14,298		\$16,125		

PAID LOSS DEVELOPMENT APPROACH

POLICY YEAR*	PAID LOSSES @12/31/2019	LOSS DEVELOPMENT FACTORS	ULTIMATE INCURRED LOSSES	CONSTRUCTION VALUE (IN \$000'S)	ESTIMATED LOSS RATE
	(6)	(7)	(8)	(9)	(10)
2010	\$94	1.107	\$104	\$75,000	0.001
2011	838	1.115	934	152,052	0.006
2012	1,513	1.141	1,725	300,884	0.006
2013	3,573	1.171	4,184	496,748	0.008
2014	5,270	1.215	6,406	761,210	0.008
2015	360	1.303	523	430,440	0.001
2016	587	1.490	1,875	217,978	0.009
2017	2	1.871	32	65,084	0.000
TOTAL	\$12,238		\$15,784		

Notes:

(1), (4), (6) & (9) - Per NEW JERSEY TURNPIKE AUTHORITY.

(2) & (7) - Per NEW JERSEY TURNPIKE AUTHORITY's historical loss patterns.

'(3) = (1) x (2); (8) = (6) x (7). If ultimate incurred losses in (8) are less than the incurred losses in (1), we used the losses in (1).

'(5) = (3) / (4), (10) = (8) / (9).

*Policy years are 12-month periods ending 7/14 of the stated year, except for 2017 which ends at 7/15/2017.

NEW JERSEY TURNPIKE AUTHORITY
OWNER CONTROLLED INSURANCE PROGRAM ACTUARIAL REVIEW
CALCULATION OF ULTIMATE LOSSES - BORNHUETTER-FERGUSON APPROACH
GENERAL LIABILITY - ROLLING OCIP
AS OF DECEMBER 31, 2019
(AMTS IN THOUSANDS)
UNLIMITED LOSSES

BORNHUETTER-FERGUSON INCURRED LOSS APPROACH

POLICY YEAR*	ESTIMATED LOSS RATE	CONSTRUCTION VALUE (\$ '000s)	EXPECTED ULTIMATE LOSSES	EXPECTED % OF LOSSES UNREPORTED	IBNR RESERVES	INCURRED LOSSES @12/31/2019	ULTIMATE INCURRED LOSSES
	(1)	(2)	(3)	(4)	(5)	(6)	(7)
2010	0.005	\$75,000	\$380	4.7%	\$18	\$94	\$112
2011	0.005	152,052	776	5.3%	41	838	879
2012	0.005	300,884	1,544	6.5%	100	1,513	1,613
2013	0.005	496,748	2,563	8.1%	208	3,573	3,782
2014	0.005	761,210	3,950	10.1%	399	5,849	6,248
2015	0.005	430,440	2,246	14.5%	325	523	848
2016	0.005	217,978	1,144	24.0%	275	1,875	2,150
2017	0.005	65,084	343	33.1%	114	32	146
TOTAL			\$12,946		\$1,480	\$14,298	\$15,778

BORNHUETTER-FERGUSON PAID LOSS APPROACH

POLICY YEAR*	ESTIMATED LOSS RATE	CONSTRUCTION VALUE (\$ '000s)	EXPECTED ULTIMATE LOSSES	EXPECTED % OF LOSSES UNPAID	LOSS RESERVES	PAID LOSSES @12/31/2019	ULTIMATE INCURRED LOSSES
	(8)	(9)	(10)	(11)	(12)	(13)	(14)
2010	0.005	\$75,000	\$380	9.7%	\$37	\$94	\$130
2011	0.005	152,052	776	10.3%	80	838	918
2012	0.005	300,884	1,544	12.3%	190	1,513	1,703
2013	0.005	496,748	2,563	14.6%	374	3,573	3,947
2014	0.005	761,210	3,950	17.7%	700	5,270	5,970
2015	0.005	430,440	2,246	23.3%	523	360	883
2016	0.005	217,978	1,144	32.9%	376	587	1,875
2017	0.005	65,084	343	46.6%	160	2	162
TOTAL			\$12,946		\$2,440	\$12,238	\$15,589

Notes:

(1) & (8) - See Exhibit II, Page 8, Column (5).

(2), (6), (9) & (13) - Per NEW JERSEY TURNPIKE AUTHORITY.

(3) = (1) x (2); (10) = (8) x (9).

(4) = (1 - (1/ILDF)); (11) = (1 - (1/PLDF)).

(5) = (3) x (4); (12) = (10) x (11).

(7) = (5) + (6); (14) = (12) + (13). If ultimate incurred losses in (14) are less than the incurred losses in (6), we used the incurred losses in (6).

*Policy years are 12-month periods ending 7/14 of the stated year, except for 2017 which ends at 7/15/2017.

NEW JERSEY TURNPIKE AUTHORITY
OWNER CONTROLLED INSURANCE PROGRAM ACTUARIAL REVIEW
SELECTION OF INTIAL LOSS RATE FOR BORNHUETTER-FERGUSON APPROACHES
GENERAL LIABILITY - ROLLING OCIP
AS OF DECEMBER 31, 2019
(AMTS IN THOUSANDS)
UNLIMITED LOSSES

POLICY YEAR*	ULTIMATE LOSSES PER ILDA	ULTIMATE LOSSES PER PLDA	CONSTRUCTION VALUE (IN \$000'S)	LOSS RATE AT CURRENT RETENTION	FITTED LOSS RATE
	(1)	(2)	(3)	(4)	(5)
2010	\$98	\$104	\$75,000	0.13%	0.51%
2011	885	934	152,052	0.60%	0.51%
2012	1,618	1,725	300,884	0.56%	0.51%
2013	3,890	4,184	496,748	0.81%	0.52%
2014	6,506	6,406	761,210	0.85%	0.52%
2015	611	523	430,440	0.13%	0.52%
2016	2,468	1,875	217,978	1.00%	0.52%
2017	48	32	65,084	0.06%	0.53%

Average	0.52%
Weighted Average	0.64%
Selected	based on fitted

Notes:

(1) - Per Exhibit II, Page 6, Column (3).

(2) - Per Exhibit II, Page 6, Column (8).

(3) - Per NEW JERSEY TURNPIKE AUTHORITY.

(4) = [Average of (1) & (2)] / (3).

(5) - Per AMI calculation.

*Policy years are 12-month periods ending 7/14 of the stated year, except for 2017 which ends at 7/15/2017.

NEW JERSEY TURNPIKE AUTHORITY
OWNER CONTROLLED INSURANCE PROGRAM ACTUARIAL REVIEW
CALCULATION OF THE LOSS DEVELOPMENT FACTORS
GENERAL LIABILITY - ROLLING OCIP
AS OF DECEMBER 31, 2019
(AMTS IN THOUSANDS)
UNLIMITED LOSSES

INCURRED LOSS DEVELOPMENT

POLICY YEAR*	DEVELOPMENT MONTHS											
	4.5	16.5	28.5	40.5	52.5	64.5	76.5	88.5	100.5	112.5	124.5	136.5
2010			6	11	171	94	94	94	94	94	94	
2011		128	166	190	552	838	838	838	838	838		
2012	6	188	128	139	1,241	1,508	1,508	1,513	1,513			
2013	12	85	236	833	2,406	2,557	3,598	3,573				
2014	19	255	695	1,641	3,559	4,365	5,849					
2015	71	445	503	469	563	523						
2016	68	155	341	720	1,033							
2017	0	2	2	32								

LOSS DEVELOPMENT FACTORS

POLICY YEAR*	4.5	16.5	28.5	40.5	52.5	64.5	76.5	88.5	100.5	112.5	124.5	136.5
	TO	TO	TO	TO	TO	TO	TO	TO	TO	TO	TO	TO
	16.5	28.5	40.5	52.5	64.5	76.5	88.5	100.5	112.5	124.5	136.5	ULT
2010			1.969	15.130	0.546	1.001	1.000	1.000	1.000	1.000		
2011		1.294	1.146	2.911	1.517	1.000	1.000	1.000	1.000			
2012	31.050	0.683	1.083	8.943	1.215	1.000	1.003	1.000				
2013	6.996	2.766	3.532	2.888	1.063	1.407	0.993					
2014	13.355	2.727	2.361	2.170	1.226	1.340						
2015	6.257	1.130	0.933	1.199	0.930							
2016	2.282	2.195	2.110	1.435								
AVERAGE	11.988	1.799	1.876	4.954	1.083	1.150	0.999	1.000	1.000			
3 YR AVG.	7.298	2.017	1.801	2.086	1.168	1.136	1.001					
AVERAGE EXCL HI LO	8.869	1.837	1.734	3.669	1.109	1.114	1.000					
PRIOR SELECTED	7.298	1.854	1.364	1.136	1.133	1.045	1.025	1.020	1.013	1.007	1.003	
SELECTED	7.298	1.857	1.408	1.136	1.132	1.054	1.022	1.018	1.013	1.007	1.003	
CUMULATIVE	28.818	3.949	2.127	1.510	1.329	1.174	1.114	1.090	1.071	1.057	1.050	1.047

*Policy years are 12-month periods ending 7/14 of the stated year, except for 2017 which ends at 7/15/2017.

NEW JERSEY TURNPIKE AUTHORITY
OWNER CONTROLLED INSURANCE PROGRAM ACTUARIAL REVIEW
CALCULATION OF THE LOSS DEVELOPMENT FACTORS
GENERAL LIABILITY - ROLLING OCIP
AS OF DECEMBER 31, 2019
(AMTS IN THOUSANDS)
UNLIMITED LOSSES

PAID LOSS DEVELOPMENT

POLICY YEAR*	DEVELOPMENT MONTHS											
	4.5	16.5	28.5	40.5	52.5	64.5	76.5	88.5	100.5	112.5	124.5	136.5
2010			6	6	8	94	94	94	94	94	94	
2011		40	58	78	137	838	838	838	838	838		
2012	3	53	57	90	1,210	1,508	1,508	1,513	1,513			
2013	11	71	190	299	2,301	2,429	3,300	3,573				
2014	8	99	260	496	942	3,425	3,752					
2015	18	132	227	247	292	358						
2016	12	31	107	396	581							
2017	0	2	2	2								

LOSS DEVELOPMENT FACTORS

POLICY YEAR*	4.5	16.5	28.5	40.5	52.5	64.5	76.5	88.5	100.5	112.5	124.5	136.5
	TO	TO	TO	TO	TO	TO	TO	TO	TO	TO	TO	TO
	16.5	28.5	40.5	52.5	64.5	76.5	88.5	100.5	112.5	124.5	136.5	ULT
2010			1.100	1.237	11.957	1.001	1.000	1.000	1.000	1.000		
2011		1.435	1.348	1.753	6.104	1.000	1.000	1.000	1.000			
2012	20.861	1.074	1.580	13.407	1.246	1.000	1.003	1.000				
2013	6.602	2.685	1.578	7.696	1.056	1.358	1.083					
2014	12.230	2.629	1.906	1.899	3.635	1.096						
2015	7.414	1.716	1.090	1.181	1.226							
2016	2.519	3.502	3.702	1.466								
AVERAGE	9.925	2.174	1.758	4.091	4.204	1.091	1.022	1.000	1.000			
3 YR AVG.	7.388	2.616	2.233	3.592	1.979	1.119	1.001					
AVERAGE EXCL HI LO	8.749	2.116	1.502	2.810	3.053	1.032	1.002					
PRIOR SELECTED	7.388	2.094	1.578	1.265	1.149	1.075	1.042	1.030	1.025	1.007	1.005	
SELECTED	7.388	2.115	1.603	1.265	1.149	1.075	1.039	1.027	1.025	1.007	1.005	
CUMULATIVE	47.712	6.458	3.053	1.905	1.506	1.311	1.219	1.173	1.143	1.116	1.108	1.102

*Policy years are 12-month periods ending 7/14 of the stated year, except for 2017 which ends at 7/15/2017.

NEW JERSEY TURNPIKE AUTHORITY
OWNER CONTROLLED INSURANCE PROGRAM ACTUARIAL REVIEW
CALCULATION OF THE REPORTED CLAIM COUNT DEVELOPMENT FACTORS
GENERAL LIABILITY - ROLLING OCIP
AS OF DECEMBER 31, 2019

REPORTED CLAIM COUNT DEVELOPMENT

POLICY YEAR*	DEVELOPMENT MONTHS											
	4.5	16.5	28.5	40.5	52.5	64.5	76.5	88.5	100.5	112.5	124.5	136.5
2010			12	13	13	13	13	13	13	13	13	
2011		66	66	70	70	70	70	70	70	70		
2012	9	39	43	44	44	44	44	44	44			
2013	16	129	138	147	148	148	148	148				
2014	43	209	221	230	230	231	231					
2015	49	205	207	210	210	211						
2016	30	58	65	65	65							
2017	1	8	9	10								

CLAIM COUNT DEVELOPMENT FACTORS

POLICY YEAR*	4.5	16.5	28.5	40.5	52.5	64.5	76.5	88.5	100.5	112.5	124.5	136.5
	TO	TO	TO	TO	TO	TO	TO	TO	TO	TO	TO	TO
	16.5	28.5	40.5	52.5	64.5	76.5	88.5	100.5	112.5	124.5	136.5	ULT
2010			1.083	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	
2011		1.000	1.061	1.000	1.000	1.000	1.000	1.000	1.000			
2012	4.333	1.103	1.023	1.000	1.000	1.000	1.000	1.000				
2013	8.063	1.070	1.065	1.007	1.000	1.000	1.000					
2014	4.860	1.057	1.041	1.000	1.004	1.000						
2015	4.184	1.010	1.014	1.000	1.005							
2016	1.933	1.121	1.000	1.000								
AVERAGE	4.675	1.060	1.041	1.001	1.002	1.000	1.000	1.000	1.000			
3 YR AVG.	3.659	1.063	1.018	1.002	1.001	1.000	1.000					
EXCL HI LO	4.459	1.060	1.041	1.000	1.001	1.000	1.000					
PRIOR SELECTED	4.302	1.052	1.042	1.001	1.000	1.000	1.000	1.000	1.000	1.000	1.000	
SELECTED	4.298	1.052	1.041	1.001	1.000	1.000	1.000	1.000	1.000	1.000	1.000	
CUMULATIVE	4.717	1.097	1.043	1.002	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000

*Policy years are 12-month periods ending 7/14 of the stated year, except for 2017 which ends at 7/15/2017.

NEW JERSEY TURNPIKE AUTHORITY
OWNER CONTROLLED INSURANCE PROGRAM ACTUARIAL REVIEW
CALCULATION OF ULTIMATE CLAIM FREQUENCY AND ULTIMATE CLAIM SEVERITY
GENERAL LIABILITY - ROLLING OCIP
AS OF DECEMBER 31, 2019
LIMITED TO RETENTION

POLICY YEAR*	CLAIMS REPORTED @12/31/2019	DEVELOPMENT FACTORS	ULTIMATE CLAIM COUNT	RETAINED ULTIMATE LOSS	CONSTRUCTION VALUE (\$000'S)	NUMBER OF CLAIMS PER \$MM OF CONSTRUCTION VALUE (FREQUENCY)	AVERAGE CLAIM (SEVERITY) (WHOLE DOLLARS)
	(1)	(2)	(3)	(4)	(5)	(6)	(7)
2010	13	0.917	12	\$111	\$75,000	0.159	\$9,316
2011	70	1.000	70	581	152,052	0.460	8,294
2012	44	1.000	44	1,050	300,884	0.146	23,865
2013	148	1.000	148	1,772	496,748	0.298	11,973
2014	231	1.000	231	2,726	761,210	0.303	11,801
2015	211	1.000	211	716	430,440	0.490	3,394
2016	65	1.000	65	1,055	217,978	0.298	16,221
2017	10	1.001	10	97	65,084	0.154	9,712
TOTAL	792		791	\$8,108		0.316	\$10,251

Notes:

(1) & (5) - Per NEW JERSEY TURNPIKE AUTHORITY.

(2) - Per NEW JERSEY TURNPIKE AUTHORITY's historical loss patterns.

(3) = (1) x (2).

(4) = Exhibit II, Page 3, Column (8).

(6) = [(3) / (5)] x 1000.

(7) = [(4) / (3)] x 1000.

*Policy years are 12-month periods ending 7/14 of the stated year, except for 2017 which ends at 7/15/2017.

NEW JERSEY TURNPIKE AUTHORITY
OWNER CONTROLLED INSURANCE PROGRAM ACTUARIAL REVIEW
CALCULATION OF DISCOUNTED NET RESERVES
WORKERS' COMPENSATION - 6-9 OCIP
AS OF DECEMBER 31, 2019
(AMTS IN THOUSANDS)
LIMITED TO RETENTION

DISCOUNTED LOSS RESERVES AT VARIOUS INTEREST RATES

POLICY YEAR*	NET LOSS RESERVES	NET LOSS RESERVES DISCOUNTED AT:					
		DISCOUNT FACTORS	2.00%	DISCOUNT FACTORS	3.00%	DISCOUNT FACTORS	4.00%
	(1)	(2)	(3)	(4)	(5)	(6)	(7)
2010	\$24	0.885	\$21	0.834	\$20	0.787	\$19
2011	266	0.871	231	0.815	217	0.764	203
2012	787	0.859	676	0.798	628	0.743	585
2013	1,136	0.848	963	0.783	890	0.725	824
2014	605	0.841	509	0.775	469	0.715	433
2015	328	0.859	282	0.801	263	0.749	246
TOTAL	\$3,146		\$2,682		\$2,486		\$2,309

Notes:

(1) - Exhibit III, Page 2, Column (4).

(2), (4) & (6) - Per AMI calculations, see Appendix C.

(3) = (1) x (2), (5) = (1) x (4), (7) = (1) x (6).

*Policy years are 12-month periods ending 5/31 of the stated year.

NEW JERSEY TURNPIKE AUTHORITY
OWNER CONTROLLED INSURANCE PROGRAM ACTUARIAL REVIEW
CALCULATION OF TOTAL NET RESERVES
WORKERS' COMPENSATION - 6-9 OCIP
AS OF DECEMBER 31, 2019
(AMTS IN THOUSANDS)
LIMITED TO RETENTION

UNDISCOUNTED LOSS RESERVES

POLICY YEAR*	RETAINED ULTIMATE LOSSES	RETAINED PAID LOSSES @12/31/2019	LOSS CONVERSION CHARGE	NET LOSS RESERVES @12/31/2019
	(1)	(2)	(3)	(4)
2010	\$89	\$67	8.0%	\$24
2011	1,494	1,248	8.0%	266
2012	3,923	3,194	8.0%	787
2013	2,796	1,745	8.0%	1,136
2014	2,599	2,039	8.0%	605
2015	1,070	766	8.0%	328
TOTAL	\$11,971	\$9,058		\$3,146

Notes:

(1) - Exhibit III, Page 3, Column (8).

(2) & (3) - Per NEW JERSEY TURNPIKE AUTHORITY.

(4) = ((1) - (2)) x (1 + (3)).

*Policy years are 12-month periods ending 5/31 of the stated year.

NEW JERSEY TURNPIKE AUTHORITY
OWNER CONTROLLED INSURANCE PROGRAM ACTUARIAL REVIEW
CALCULATION OF RETAINED ULTIMATE LOSSES
WORKERS' COMPENSATION - 6-9 OCIP
AS OF DECEMBER 31, 2019
(AMTS IN THOUSANDS)
LIMITED TO RETENTION

SELECTION OF RETAINED ULTIMATE LOSSES

POLICY YEAR*	AGGREGATE RETENTION	SELECTED GROSS ULTIMATE LOSSES	EXCESS INCURRED	LOSS FROM OPEN "LARGE" CLAIMS	NO. OF EXCESS CLAIMS	NO. OF OPEN "LARGE" CLAIMS	EXCESS IBNR	SELECTED RETAINED ULTIMATE LOSSES
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
2010	None	\$89	\$0	\$0	0	0	\$0	\$89
2011	None	1,494	0	336	0	1	0	1,494
2012	None	5,108	1,157	442	2	1	28	3,923
2013	None	2,855	52	914	1	3	8	2,796
2014	None	4,382	1,740	0	2	0	42	2,599
2015	None	1,410	320	0	1	0	20	1,070
TOTAL		\$15,338	\$3,268	\$1,692	6	5	\$98	\$11,971

LIST OF OPEN CLAIMS OVER \$200K

POLICY YEAR*	RETENTION	CASE NUMBER	PAID LOSSES	INCURRED LOSSES
	(9)	(10)	(11)	(12)
2011	\$500	003759-000110-WC-01	\$108	\$336
2012	500	003759-000268-WC-01	198	442
2013	500	003759-000373-WC-01	262	487
2013	500	003759-000397-WC-01	105	221
2013	500	003759-000569-WC-01	112	206
TOTAL			\$785	\$1,692

Notes:

- (1), (4), (6), (9), (10), (11), (12) - Per NEW JERSEY TURNPIKE AUTHORITY.
 - (2) - From Exhibit III, Page 5, Column (5).
 - (3) - From Exhibit III, Page 4, Column (6).
 - (5) - From Exhibit III, Page 4, Column (2).
 - (7) - Based on AMI calculations.
 - (8) = If (2) - (3) - (7) exceeds aggregate, limit, we used the aggregate limit, else we used (2) - (3) - (7).
- *Policy years are 12-month periods ending 5/31 of the stated year.

NEW JERSEY TURNPIKE AUTHORITY
OWNER CONTROLLED INSURANCE PROGRAM ACTUARIAL REVIEW
CALCULATION OF REINSURANCE RECOVERABLE
WORKERS' COMPENSATION - 6-9 OCIP
AS OF DECEMBER 31, 2019
(AMTS IN THOUSANDS)

SUMMARY OF RECOVERABLE FROM CLAIMS EXCEEDING THE RETENTION

POLICY YEAR*	SPECIFIC RETENTION	NO. OF EXCESS CLAIMS	PAID LOSSES @12/31/2019	INCURRED LOSSES @12/31/2019	PAID EXCESS OF RETENTION	INCURRED EXCESS OF RETENTION	RESERVES EXCESS OF RETENTION
	(1)	(2)	(3)	(4)	(5)	(6)	(7)
2010	\$500	0	\$0	\$0	\$0	\$0	\$0
2011	500	0	0	0	0	0	0
2012	500	2	1,465	2,157	741	1,157	415
2013	500	1	79	552	0	52	52
2014	500	2	1,097	2,740	310	1,740	1,430
2015	500	1	341	820	0	320	320
TOTAL		6	\$2,982	\$6,268	\$1,051	\$3,268	\$2,217

LIST OF INDIVIDUAL EXCESS CLAIMS

POLICY YEAR*	SPECIFIC RETENTION	CASE NUMBER	PAID LOSSES	INCURRED LOSSES	PAID EXCESS OF RETENTION	INCURRED EXCESS OF RETENTION	RESERVES EXCESS OF RETENTION
	(8)	(9)	(10)	(11)	(12)	(13)	(14)
2012	500	003759-000217-WC-01	223	544	\$0	\$44	\$44
2012	500	003759-000313-WC-01	1,241	1,612	741	1,112	371
2013	500	003759-000702-WC-01	79	552	0	52	52
2014	500	003759-000574-WC-01	288	594	0	94	94
2014	500	003759-000566-WC-01	810	2,146	310	1,646	1,336
2015	500	003759-000682-WC-01	341	820	0	320	320
TOTAL			\$2,982	\$6,268	\$1,051	\$3,268	\$2,217

Notes:

(1), (2), (3), (4), (8), (9), (10) & (11) - Per NEW JERSEY TURNPIKE AUTHORITY.

(5) & (6) - Based from (12) & (13).

(7) = (6) - (5), (14) = (13) - (12).

(12) = (10) - (8) if (10) > (8), 0 otherwise.

(13) = (11) - (8).

*Policy years are 12-month periods ending 5/31 of the stated year.

NEW JERSEY TURNPIKE AUTHORITY
OWNER CONTROLLED INSURANCE PROGRAM ACTUARIAL REVIEW
CALCULATION OF ULTIMATE LOSSES
WORKERS' COMPENSATION - 6-9 OCIP
AS OF DECEMBER 31, 2019
(AMTS IN THOUSANDS)
UNLIMITED LOSSES

ALL APPROACHES COMBINED

POLICY YEAR*	ILDA ULTIMATE LOSSES	PLDA ULTIMATE LOSSES	BFILA ULTIMATE LOSSES	BFPLA ULTIMATE LOSSES	SELECTED ULTIMATE LOSSES
	(1)	(2)	(3)	(4)	(5)
2010	\$90	\$87	\$91	\$87	\$89
2011	1,513	1,476	1,510	1,476	1,494
2012	5,184	5,053	5,142	5,053	5,108
2013	2,882	2,804	2,931	2,804	2,855
2014	4,452	4,319	4,436	4,319	4,382
2015	1,445	1,376	1,445	1,376	1,410
TOTAL	\$15,565	\$15,116	\$15,553	\$15,116	\$15,338

Notes:

(1), (2), (3) & (4) - Ultimate incurred losses calculated from Exhibit III, Pages 6 and 7.

(5) = Selected based on (1), (2), (3) & (4).

*Policy years are 12-month periods ending 5/31 of the stated year.

NEW JERSEY TURNPIKE AUTHORITY
OWNER CONTROLLED INSURANCE PROGRAM ACTUARIAL REVIEW
CALCULATION OF ULTIMATE LOSSES - LOSS DEVELOPMENT APPROACH
WORKERS' COMPENSATION - 6-9 OCIP
AS OF DECEMBER 31, 2019
(AMTS IN THOUSANDS)
UNLIMITED LOSSES

INCURRED LOSS DEVELOPMENT APPROACH

POLICY YEAR*	INCURRED LOSSES @12/31/2019	LOSS DEVELOPMENT FACTORS	ULTIMATE INCURRED LOSSES	PAYROLL (IN \$000'S)	ESTIMATED LOSS RATE
	(1)	(2)	(3)	(4)	(5)
2010	\$87	1.024	\$90	\$8,210	0.011
2011	1,476	1.025	1,513	48,831	0.031
2012	5,053	1.026	5,184	89,219	0.058
2013	2,804	1.028	2,882	93,751	0.031
2014	4,319	1.031	4,452	63,458	0.070
2015	1,376	1.050	1,445	19,951	0.072
TOTAL	\$15,116		\$15,565		

PAID LOSS DEVELOPMENT APPROACH

POLICY YEAR*	PAID LOSSES @12/31/2019	LOSS DEVELOPMENT FACTORS	ULTIMATE INCURRED LOSSES	PAYROLL (IN \$000'S)	ESTIMATED LOSS RATE
	(6)	(7)	(8)	(9)	(10)
2010	\$67	1.069	\$87	\$8,210	0.011
2011	1,248	1.071	1,476	48,831	0.030
2012	3,936	1.074	5,053	89,219	0.057
2013	1,745	1.077	2,804	93,751	0.030
2014	2,349	1.082	4,319	63,458	0.068
2015	766	1.105	1,376	19,951	0.069
TOTAL	\$10,109		\$15,116		

Notes:

(1), (4), (6) & (9) - Per NEW JERSEY TURNPIKE AUTHORITY.

(2) & (7) - Per NEW JERSEY TURNPIKE AUTHORITY's historical loss patterns.

(3) = (1) x (2); (8) = (6) x (7). If ultimate incurred losses in (8) are less than the incurred losses in (1), we used the losses in (1).

(5) = (3) / (4), (10) = (8) / (9).

*Policy years are 12-month periods ending 5/31 of the stated year.

NEW JERSEY TURNPIKE AUTHORITY
OWNER CONTROLLED INSURANCE PROGRAM ACTUARIAL REVIEW
CALCULATION OF ULTIMATE LOSSES - BORNHUETTER-FERGUSON APPROACH
WORKERS' COMPENSATION - 6-9 OCIP
AS OF DECEMBER 31, 2019
(AMTS IN THOUSANDS)
UNLIMITED LOSSES

BORNHUETTER-FERGUSON INCURRED LOSS APPROACH

POLICY YEAR*	ESTIMATED		EXPECTED	EXPECTED %	IBNR RESERVES	INCURRED	ULTIMATE
	LOSS RATE	PAYROLL (\$ '000s)	ULTIMATE LOSSES	OF LOSSES UNREPORTED		LOSSES @12/31/2019	INCURRED LOSSES
	(1)	(2)	(3)	(4)	(5)	(6)	(7)
2010	0.017	\$8,210	\$140	2.4%	\$3	\$87	\$91
2011	0.028	48,831	1,376	2.4%	34	1,476	1,510
2012	0.039	89,219	3,504	2.5%	89	5,053	5,142
2013	0.050	93,751	4,721	2.7%	127	2,804	2,931
2014	0.061	63,458	3,899	3.0%	116	4,319	4,436
2015	0.073	19,951	1,447	4.8%	69	1,376	1,445
TOTAL			\$15,087		\$438	\$15,116	\$15,553

BORNHUETTER-FERGUSON PAID LOSS APPROACH

POLICY YEAR*	ESTIMATED		EXPECTED	EXPECTED %	LOSS RESERVES	PAID	ULTIMATE
	LOSS RATE	PAYROLL (\$ '000s)	ULTIMATE LOSSES	OF LOSSES UNPAID		LOSSES @12/31/2019	INCURRED LOSSES
	(8)	(9)	(10)	(11)	(12)	(13)	(14)
2010	0.017	\$8,210	\$140	6.5%	\$9	\$67	\$87
2011	0.028	48,831	1,376	6.7%	92	1,248	1,476
2012	0.039	89,219	3,504	6.9%	241	3,936	5,053
2013	0.050	93,751	4,721	7.2%	338	1,745	2,804
2014	0.061	63,458	3,899	7.6%	296	2,349	4,319
2015	0.073	19,951	1,447	9.5%	137	766	1,376
TOTAL			\$15,087		\$1,113	\$10,109	\$15,116

Notes:

- (1) & (8) - See Exhibit III, Page 8, Column (5).
(2), (6), (9) & (13) - Per NEW JERSEY TURNPIKE AUTHORITY.
(3) = (1) x (2); (10) = (8) x (9).
(4) = (1 - (1/ILDF)); (11) = (1 - (1/PLDF)).
(5) = (3) x (4); (12) = (10) x (11).
(7) = (5) + (6); (14) = (12) + (13). If ultimate incurred losses in (14) are less than the incurred losses in (6), we used the incurred losses in (6).
*Policy years are 12-month periods ending 5/31 of the stated year.

NEW JERSEY TURNPIKE AUTHORITY
OWNER CONTROLLED INSURANCE PROGRAM ACTUARIAL REVIEW
SELECTION OF INTIAL LOSS RATE FOR BORNHUETTER-FERGUSON APPROACHES
WORKERS' COMPENSATION - 6-9 OCIP
AS OF DECEMBER 31, 2019
(AMTS IN THOUSANDS)
UNLIMITED LOSSES

POLICY YEAR*	ULTIMATE LOSSES PER ILDA	ULTIMATE LOSSES PER PLDA	PAYROLL (IN \$000'S)	LOSS RATE AT CURRENT RETENTION	FITTED LOSS RATE
	(1)	(2)	(3)	(4)	(5)
2010	\$90	\$87	\$8,210	1.08%	1.71%
2011	1,513	1,476	48,831	3.06%	2.82%
2012	5,184	5,053	89,219	5.74%	3.93%
2013	2,882	2,804	93,751	3.03%	5.04%
2014	4,452	4,319	63,458	6.91%	6.14%
2015	1,445	1,376	19,951	7.07%	7.25%

Average	4.48%
Weighted Average	4.74%
Selected	based on fitted

Notes:

- (1) - Per Exhibit III, Page 6, Column (3).
- (2) - Per Exhibit III, Page 6, Column (8).
- (3) - Per NEW JERSEY TURNPIKE AUTHORITY.
- (4) = [Average of (1) & (2)] / (3).
- (5) - Per AMI calculation.

*Policy years are 12-month periods ending 5/31 of the stated year.

NEW JERSEY TURNPIKE AUTHORITY
OWNER CONTROLLED INSURANCE PROGRAM ACTUARIAL REVIEW
CALCULATION OF THE LOSS DEVELOPMENT FACTORS
WORKERS' COMPENSATION - 6-9 OCIP
AS OF DECEMBER 31, 2019
(AMTS IN THOUSANDS)
UNLIMITED LOSSES

INCURRED LOSS DEVELOPMENT

POLICY YEAR*	DEVELOPMENT MONTHS											
	12	24	36	48	60	72	84	96	108	120	132	144
2010	45	75	69	69	64	64	64					
2011	1,037	1,195	1,146	1,186	1,370	1,476						
2012	2,576	2,947	3,713	4,237	5,007							
2013	1,151	1,728	1,694	1,835								
2014	1,851	2,601	3,273									
2015	992	979										

LOSS DEVELOPMENT FACTORS

POLICY YEAR*	12	24	36	48	60	72	84	96	108	120	132	144
	TO 24	TO 36	TO 48	TO 60	TO 72	TO 84	TO 96	TO 108	TO 120	TO 132	TO 144	TO ULT
2010	1.678	0.913	1.001	0.932	1.000	1.003						
2011	1.152	0.960	1.034	1.155	1.078							
2012	1.144	1.260	1.141	1.182								
2013	1.502	0.981	1.083									
2014	1.405	1.259										
2015	0.986											
AVERAGE	1.311	1.075	1.065	1.090	1.039	1.003						
3 YR AVG.	1.298	1.167	1.086	1.090								
AVERAGE EXCL HI LO	1.301	1.067	1.059	1.155								
INDUSTRY FACTORS	1.401	1.136	1.069	1.041	1.027	1.022	1.018	1.012	1.008	1.006	1.006	
SELECTED	1.313	1.106	1.070	1.061	1.038	1.005	1.002	1.001	1.001	1.001	1.001	
CUMULATIVE	1.768	1.346	1.217	1.138	1.073	1.034	1.029	1.027	1.026	1.025	1.024	1.024

*Policy years are 12-month periods ending 5/31 of the stated year.

NEW JERSEY TURNPIKE AUTHORITY
OWNER CONTROLLED INSURANCE PROGRAM ACTUARIAL REVIEW
CALCULATION OF THE LOSS DEVELOPMENT FACTORS
WORKERS' COMPENSATION - 6-9 OCIP
AS OF DECEMBER 31, 2019
(AMTS IN THOUSANDS)
UNLIMITED LOSSES

PAID LOSS DEVELOPMENT

POLICY YEAR*	DEVELOPMENT MONTHS											
	12	24	36	48	60	72	84	96	108	120	132	144
2010	27	52	69	69	64	64	64					
2011	410	812	924	1,079	1,119	1,204						
2012	1,043	1,809	2,179	2,846	3,330							
2013	791	1,343	1,439	1,498								
2014	898	1,518	1,916									
2015	272	412										

LOSS DEVELOPMENT FACTORS

POLICY YEAR*	12	24	36	48	60	72	84	96	108	120	132	144
	TO 24	TO 36	TO 48	TO 60	TO 72	TO 84	TO 96	TO 108	TO 120	TO 132	TO 144	TO ULT
2010	1.945	1.311	1.001	0.932	1.000	1.003						
2011	1.978	1.139	1.167	1.037	1.076							
2012	1.733	1.205	1.306	1.170								
2013	1.698	1.072	1.041									
2014	1.690	1.262										
2015	1.512											
AVERAGE	1.759	1.198	1.129	1.046	1.038	1.003						
3 YR AVG.	1.633	1.180	1.171	1.046								
AVERAGE EXCL HI LO	1.767	1.202	1.104	1.037								
INDUSTRY FACTORS	2.172	1.319	1.154	1.092	1.061	1.043	1.034	1.027	1.022	1.019	1.017	
SELECTED	1.633	1.206	1.137	1.047	1.040	1.007	1.003	1.003	1.002	1.002	1.002	
CUMULATIVE	2.649	1.622	1.345	1.183	1.130	1.087	1.079	1.076	1.073	1.070	1.068	1.066

*Policy years are 12-month periods ending 5/31 of the stated year.

NEW JERSEY TURNPIKE AUTHORITY
OWNER CONTROLLED INSURANCE PROGRAM ACTUARIAL REVIEW
CALCULATION OF THE REPORTED CLAIM COUNT DEVELOPMENT FACTORS
WORKERS' COMPENSATION - 6-9 OCIP
AS OF DECEMBER 31, 2019

REPORTED CLAIM COUNT DEVELOPMENT

POLICY YEAR*	DEVELOPMENT MONTHS											
	12	24	36	48	60	72	84	96	108	120	132	144
2010	13	15	15	15	15	15	15					
2011	56	57	58	60	61	64						
2012	138	148	153	155	156							
2013	104	120	124	125								
2014	75	79	81									
2015	22	25										

CLAIM COUNT DEVELOPMENT FACTORS

POLICY YEAR*	12	24	36	48	60	72	84	96	108	120	132	144
	TO	TO	TO	TO	TO	TO	TO	TO	TO	TO	TO	TO
	24	36	48	60	72	84	96	108	120	132	144	ULT
2010	1.154	1.000	1.000	1.000	1.000	1.000						
2011	1.018	1.018	1.034	1.017	1.049							
2012	1.072	1.034	1.013	1.006								
2013	1.154	1.033	1.008									
2014	1.053	1.025										
2015	1.136											
AVERAGE	1.098	1.022	1.014	1.008	1.025	1.000						
3 YR AVG.	1.114	1.031	1.018	1.008								
EXCL HI LO	1.104	1.025	1.011	1.006								
SELECTED	1.105	1.026	1.014	1.008	1.004	1.000	1.000	1.000	1.000	1.000	1.000	
CUMULATIVE	1.164	1.053	1.026	1.012	1.004	1.000	1.000	1.000	1.000	1.000	1.000	1.000

*Policy years are 12-month periods ending 5/31 of the stated year.

NEW JERSEY TURNPIKE AUTHORITY
OWNER CONTROLLED INSURANCE PROGRAM ACTUARIAL REVIEW
CALCULATION OF ULTIMATE CLAIM FREQUENCY AND ULTIMATE CLAIM SEVERITY
WORKERS' COMPENSATION - 6-9 OCIP
AS OF DECEMBER 31, 2019
LIMITED TO RETENTION

POLICY YEAR*	CLAIMS REPORTED @12/31/2019	DEVELOPMENT FACTORS	ULTIMATE CLAIM COUNT	RETAINED ULTIMATE LOSS	PAYROLL (\$000'S)	NUMBER OF CLAIMS PER \$MM OF PAYROLL (FREQUENCY)	AVERAGE CLAIM (SEVERITY) (WHOLE DOLLARS)
	(1)	(2)	(3)	(4)	(5)	(6)	(7)
2010	16	1.000	16	\$89	\$8,210	1.949	\$5,547
2011	65	1.000	65	1,494	48,831	1.331	22,979
2012	160	1.000	160	3,923	89,219	1.793	24,520
2013	131	1.000	131	2,796	93,751	1.397	21,346
2014	90	1.000	90	2,599	63,458	1.418	28,879
2015	30	1.002	30	1,070	19,951	1.506	35,608
TOTAL	492		492	\$11,971		1.521	\$24,329

Notes:

- (1) & (5) - Per NEW JERSEY TURNPIKE AUTHORITY.
 - (2) - Per NEW JERSEY TURNPIKE AUTHORITY's historical loss patterns.
 - (3) = (1) x (2).
 - (4) = Exhibit III, Page 3, Column (8).
 - (6) = [(3) / (5)] x 1000.
 - (7) = [(4) / (3)] x 1000.
- *Policy years are 12-month periods ending 5/31 of the stated year.

NEW JERSEY TURNPIKE AUTHORITY
OWNER CONTROLLED INSURANCE PROGRAM ACTUARIAL REVIEW
CALCULATION OF DISCOUNTED NET RESERVES
GENERAL LIABILITY - 6-9 OCIP
AS OF DECEMBER 31, 2019
(AMTS IN THOUSANDS)
LIMITED TO RETENTION

DISCOUNTED LOSS RESERVES AT VARIOUS INTEREST RATES

POLICY YEAR*	NET LOSS RESERVES	NET LOSS RESERVES DISCOUNTED AT:					
		DISCOUNT FACTORS	2.00%	DISCOUNT FACTORS	3.00%	DISCOUNT FACTORS	4.00%
	(1)	(2)	(3)	(4)	(5)	(6)	(7)
2010	\$0	0.993	\$0	0.989	\$0	0.985	\$0
2011	1	0.985	1	0.977	1	0.970	1
2012	2	0.979	2	0.969	2	0.959	2
2013	2	0.974	2	0.962	2	0.950	2
2014	95	0.970	92	0.956	91	0.942	89
2015	6	0.968	6	0.953	6	0.938	6
TOTAL	\$106		\$103		\$101		\$100

Notes:

(1) - Exhibit IV, Page 2, Column (4).

(2), (4) & (6) - Per AMI calculations, see Appendix D.

(3) = (1) x (2), (5) = (1) x (4), (7) = (1) x (6).

*Policy years are 12-month periods ending 5/31 of the stated year.

NEW JERSEY TURNPIKE AUTHORITY
OWNER CONTROLLED INSURANCE PROGRAM ACTUARIAL REVIEW
CALCULATION OF TOTAL NET RESERVES
GENERAL LIABILITY - 6-9 OCIP
AS OF DECEMBER 31, 2019
(AMTS IN THOUSANDS)
LIMITED TO RETENTION

UNDISCOUNTED LOSS RESERVES

POLICY YEAR*	RETAINED ULTIMATE LOSSES	RETAINED PAID LOSSES @12/31/2019	LOSS CONVERSION CHARGE	NET LOSS RESERVES @12/31/2019
	(1)	(2)	(3)	(4)
2010	\$2	\$2	8.0%	\$0
2011	87	86	8.0%	1
2012	1,861	1,859	8.0%	2
2013	936	934	8.0%	2
2014	366	278	8.0%	95
2015	275	269	8.0%	6
TOTAL	\$3,526	\$3,428		\$106

Notes:

(1) - Exhibit IV, Page 3, Column (8).

(2) & (3) - Per NEW JERSEY TURNPIKE AUTHORITY.

(4) = ((1) - (2)) x (1 + (3)).

*Policy years are 12-month periods ending 5/31 of the stated year.

NEW JERSEY TURNPIKE AUTHORITY
OWNER CONTROLLED INSURANCE PROGRAM ACTUARIAL REVIEW
CALCULATION OF RETAINED ULTIMATE LOSSES
GENERAL LIABILITY - 6-9 OCIP
AS OF DECEMBER 31, 2019
(AMTS IN THOUSANDS)
LIMITED TO RETENTION

SELECTION OF RETAINED ULTIMATE LOSSES

POLICY YEAR*	AGGREGATE RETENTION	SELECTED GROSS ULTIMATE LOSSES	EXCESS INCURRED	LOSS FROM OPEN "LARGE" CLAIMS	NO. OF EXCESS CLAIMS	NO. OF OPEN "LARGE" CLAIMS	EXCESS IBNR	SELECTED RETAINED ULTIMATE LOSSES
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
2010	\$4,000	\$2	\$0	\$0	0	0	\$0	\$2
2011	4,000	87	0	0	0	0	0	87
2012	4,000	4,271	2,391	0	3	0	19	1,861
2013	4,000	1,901	954	0	1	0	11	936
2014	4,000	366	0	0	0	0	0	366
2015	4,000	275	0	0	0	0	0	275
TOTAL		\$6,902	\$3,345	\$0	4	0	\$30	\$3,526

LIST OF OPEN CLAIMS OVER \$200K

POLICY YEAR*	RETENTION	CASE NUMBER	PAID LOSSES	INCURRED LOSSES
	(9)	(10)	(11)	(12)
TOTAL			\$0	\$0

Notes:

- (1), (4), (6), (9), (10), (11), (12) - Per NEW JERSEY TURNPIKE AUTHORITY.
- (2) - From Exhibit IV, Page 5, Column (5).
- (3) - From Exhibit IV, Page 4, Column (6).
- (5) - From Exhibit IV, Page 4, Column (2).
- (7) - Based on AMI calculations.
- (8) = If (2) - (3) - (7) exceeds aggregate, limit, we used the aggregate limit, else we used (2) - (3) - (7).
- *Policy years are 12-month periods ending 5/31 of the stated year.

NEW JERSEY TURNPIKE AUTHORITY
OWNER CONTROLLED INSURANCE PROGRAM ACTUARIAL REVIEW
CALCULATION OF REINSURANCE RECOVERABLE
GENERAL LIABILITY - 6-9 OCIP
AS OF DECEMBER 31, 2019
(AMTS IN THOUSANDS)

SUMMARY OF RECOVERABLE FROM CLAIMS EXCEEDING THE RETENTION

POLICY YEAR*	SPECIFC RETENTION	NO. OF EXCESS CLAIMS	PAID LOSSES @12/31/2019	INCURRED LOSSES @12/31/2019	PAID EXCESS OF RETENTION	INCURRED EXCESS OF RETENTION	RESERVES EXCESS OF RETENTION
	(1)	(2)	(3)	(4)	(5)	(6)	(7)
2010	\$500	0	\$0	\$0	\$0	\$0	\$0
2011	500	0	0	0	0	0	0
2012	500	3	3,891	3,891	2,391	2,391	0
2013	500	1	1,454	1,454	954	954	0
2014	500	0	0	0	0	0	0
2015	500	0	0	0	0	0	0
TOTAL		4	\$5,345	\$5,345	\$3,345	\$3,345	\$0

LIST OF INDIVIDUAL EXCESS CLAIMS

POLICY YEAR*	SPECIFC RETENTION	CASE NUMBER	PAID LOSSES	INCURRED LOSSES	PAID EXCESS OF RETENTION	INCURRED EXCESS OF RETENTION	RESERVES EXCESS OF RETENTION
	(8)	(9)	(10)	(11)	(12)	(13)	(14)
2012	\$500	003759-000149-GB-01	\$955	\$955	\$455	\$455	\$0
2012	500	003759-000239-GB-01	916	916	416	416	0
2012	500	003759-000312-GB-01	2,021	2,021	1,521	1,521	0
2013	500	003759-000509-GB-01	1,454	1,454	954	954	0
TOTAL			\$5,345	\$5,345	\$3,345	\$3,345	\$0

Notes:

(1), (2), (3), (4), (8), (9), (10) & (11) - Per NEW JERSEY TURNPIKE AUTHORITY.

(5) & (6) - Based from (12) & (13).

(7) = (6) - (5), (14) = (13) - (12).

(12) = (10) - (8) if (10) > (8), 0 otherwise.

(13) = (11) - (8).

*Policy years are 12-month periods ending 5/31 of the stated year.

NEW JERSEY TURNPIKE AUTHORITY
OWNER CONTROLLED INSURANCE PROGRAM ACTUARIAL REVIEW
CALCULATION OF ULTIMATE LOSSES
GENERAL LIABILITY - 6-9 OCIP
AS OF DECEMBER 31, 2019
(AMTS IN THOUSANDS)
UNLIMITED LOSSES

ALL APPROACHES COMBINED

POLICY YEAR*	ILDA ULTIMATE LOSSES	PLDA ULTIMATE LOSSES	BFILA ULTIMATE LOSSES	BFPLA ULTIMATE LOSSES	SELECTED ULTIMATE LOSSES
	(1)	(2)	(3)	(4)	(5)
2010	\$2	\$2	\$2	\$2	\$2
2011	87	87	88	89	87
2012	4,265	4,277	4,255	4,258	4,271
2013	1,899	1,907	1,896	1,902	1,901
2014	366	362	372	362	366
2015	272	275	274	278	275
TOTAL	\$6,890	\$6,910	\$6,886	\$6,891	\$6,902

Notes:

(1), (2), (3) & (4) - Ultimate incurred losses calculated from Exhibit IV, Pages 6 and 7.

(5) = Selected based on (1), (2), (3) & (4).

*Policy years are 12-month periods ending 5/31 of the stated year.

NEW JERSEY TURNPIKE AUTHORITY
OWNER CONTROLLED INSURANCE PROGRAM ACTUARIAL REVIEW
CALCULATION OF ULTIMATE LOSSES - LOSS DEVELOPMENT APPROACH
GENERAL LIABILITY - 6-9 OCIP
AS OF DECEMBER 31, 2019
(AMTS IN THOUSANDS)
UNLIMITED LOSSES

INCURRED LOSS DEVELOPMENT APPROACH

POLICY YEAR*	INCURRED LOSSES @12/31/2019	LOSS DEVELOPMENT FACTORS	ULTIMATE INCURRED LOSSES	PAYROLL (IN \$000'S)	ESTIMATED LOSS RATE
	(1)	(2)	(3)	(4)	(5)
2010	\$2	1.001	\$2	\$8,210	0.000
2011	86	1.002	87	48,831	0.002
2012	4,250	1.003	4,265	89,219	0.048
2013	1,888	1.006	1,899	93,751	0.020
2014	362	1.009	366	63,458	0.006
2015	269	1.014	272	19,951	0.014
TOTAL	\$6,858		\$6,890		

PAID LOSS DEVELOPMENT APPROACH

POLICY YEAR*	PAID LOSSES @12/31/2019	LOSS DEVELOPMENT FACTORS	ULTIMATE INCURRED LOSSES	PAYROLL (IN \$000'S)	ESTIMATED LOSS RATE
	(6)	(7)	(8)	(9)	(10)
2010	\$2	1.002	\$2	\$8,210	0.000
2011	86	1.004	87	48,831	0.002
2012	4,250	1.006	4,277	89,219	0.048
2013	1,888	1.010	1,907	93,751	0.020
2014	278	1.015	362	63,458	0.006
2015	269	1.024	275	19,951	0.014
TOTAL	\$6,773		\$6,910		

Notes:

(1), (4), (6) & (9) - Per NEW JERSEY TURNPIKE AUTHORITY.

(2) & (7) - Per NEW JERSEY TURNPIKE AUTHORITY's historical loss patterns.

(3) = (1) x (2); (8) = (6) x (7). If ultimate incurred losses in (8) are less than the incurred losses in (1), we used the losses in (1).

(5) = (3) / (4), (10) = (8) / (9).

*Policy years are 12-month periods ending 5/31 of the stated year.

NEW JERSEY TURNPIKE AUTHORITY
OWNER CONTROLLED INSURANCE PROGRAM ACTUARIAL REVIEW
CALCULATION OF ULTIMATE LOSSES - BORNHUETTER-FERGUSON APPROACH
GENERAL LIABILITY - 6-9 OCIP
AS OF DECEMBER 31, 2019
(AMTS IN THOUSANDS)
UNLIMITED LOSSES

BORNHUETTER-FERGUSON INCURRED LOSS APPROACH

POLICY YEAR*	ESTIMATED		EXPECTED	EXPECTED %	IBNR RESERVES	INCURRED	ULTIMATE
	LOSS RATE	PAYROLL (\$ '000s)	ULTIMATE LOSSES	OF LOSSES UNREPORTED		LOSSES @12/31/2019	INCURRED LOSSES
	(1)	(2)	(3)	(4)	(5)	(6)	(7)
2010	0.011	\$8,210	\$92	0.1%	\$0	\$2	\$2
2011	0.013	48,831	621	0.2%	1	86	88
2012	0.014	89,219	1,267	0.3%	4	4,250	4,255
2013	0.016	93,751	1,470	0.6%	8	1,888	1,896
2014	0.017	63,458	1,089	0.9%	10	362	372
2015	0.019	19,951	372	1.3%	5	269	274
TOTAL			\$4,911		\$29	\$6,858	\$6,886

BORNHUETTER-FERGUSON PAID LOSS APPROACH

POLICY YEAR*	ESTIMATED		EXPECTED	EXPECTED %	LOSS RESERVES	PAID	ULTIMATE
	LOSS RATE	PAYROLL (\$ '000s)	ULTIMATE LOSSES	OF LOSSES UNPAID		LOSSES @12/31/2019	INCURRED LOSSES
	(8)	(9)	(10)	(11)	(12)	(13)	(14)
2010	0.011	\$8,210	\$92	0.2%	\$0	\$2	\$2
2011	0.013	48,831	621	0.4%	2	86	89
2012	0.014	89,219	1,267	0.6%	8	4,250	4,258
2013	0.016	93,751	1,470	1.0%	14	1,888	1,902
2014	0.017	63,458	1,089	1.5%	16	278	362
2015	0.019	19,951	372	2.3%	9	269	278
TOTAL			\$4,911		\$50	\$6,773	\$6,891

Notes:

- (1) & (8) - See Exhibit IV, Page 8, Column (5).
(2), (6), (9) & (13) - Per NEW JERSEY TURNPIKE AUTHORITY.
(3) = (1) x (2); (10) = (8) x (9).
(4) = (1 - (1/ILDF)); (11) = (1 - (1/PLDF)).
(5) = (3) x (4); (12) = (10) x (11).
(7) = (5) + (6); (14) = (12) + (13). If ultimate incurred losses in (14) are less than the incurred losses in (6), we used the incurred losses in (6).
*Policy years are 12-month periods ending 5/31 of the stated year.

NEW JERSEY TURNPIKE AUTHORITY
OWNER CONTROLLED INSURANCE PROGRAM ACTUARIAL REVIEW
SELECTION OF INTIAL LOSS RATE FOR BORNHUETTER-FERGUSON APPROACHES
GENERAL LIABILITY - 6-9 OCIP
AS OF DECEMBER 31, 2019
(AMTS IN THOUSANDS)
UNLIMITED LOSSES

POLICY YEAR*	ULTIMATE LOSSES PER ILDA	ULTIMATE LOSSES PER PLDA	PAYROLL (IN \$000'S)	LOSS RATE AT CURRENT RETENTION	FITTED LOSS RATE
	(1)	(2)	(3)	(4)	(5)
2010	\$2	\$2	\$8,210	0.02%	1.12%
2011	87	87	48,831	0.18%	1.27%
2012	4,265	4,277	89,219	4.79%	1.42%
2013	1,899	1,907	93,751	2.03%	1.57%
2014	366	362	63,458	0.57%	1.72%
2015	272	275	19,951	1.37%	1.86%

Average	1.49%
Weighted Average	2.13%
Selected	based on fitted

Notes:

- (1) - Per Exhibit IV, Page 6, Column (3).
- (2) - Per Exhibit IV, Page 6, Column (8).
- (3) - Per NEW JERSEY TURNPIKE AUTHORITY.
- (4) = [Average of (1) & (2)] / (3).
- (5) - Per AMI calculation.

*Policy years are 12-month periods ending 5/31 of the stated year.

NEW JERSEY TURNPIKE AUTHORITY
OWNER CONTROLLED INSURANCE PROGRAM ACTUARIAL REVIEW
CALCULATION OF THE LOSS DEVELOPMENT FACTORS
GENERAL LIABILITY - 6-9 OCIP
AS OF DECEMBER 31, 2019
(AMTS IN THOUSANDS)
UNLIMITED LOSSES

INCURRED LOSS DEVELOPMENT

POLICY YEAR*	DEVELOPMENT MONTHS											
	12	24	36	48	60	72	84	96	108	120	132	144
2010	4	4	2	2	2	2	2					
2011	35	49	68	79	86	86						
2012	404	891	3,486	4,163	4,110							
2013	57	284	528	2,033								
2014	119	237	395									
2015	206	72										

LOSS DEVELOPMENT FACTORS

POLICY YEAR*	12	24	36	48	60	72	84	96	108	120	132	144
	TO 24	TO 36	TO 48	TO 60	TO 72	TO 84	TO 96	TO 108	TO 120	TO 132	TO 144	TO ULT
2010	1.025	0.504	0.909	1.000	1.000	1.000						
2011	1.371	1.397	1.161	1.098	1.000							
2012	2.207	3.913	1.194	0.987								
2013	4.964	1.858	3.850									
2014	1.986	1.666										
2015	0.350											
AVERAGE	1.984	1.868	1.779	1.028	1.000	1.000						
3 YR AVG.	2.433	2.479	2.068	1.028								
AVERAGE EXCL HI LO	1.647	1.640	1.178	1.000								
INDUSTRY FACTORS	1.840	1.336	1.184	1.107	1.059	1.038	1.025	1.023	1.010	1.008	1.007	
SELECTED	1.666	1.610	1.178	1.036	1.006	1.004	1.002	1.002	1.001	1.001	1.001	
CUMULATIVE	3.331	1.999	1.241	1.054	1.017	1.011	1.007	1.005	1.002	1.001	1.001	1.000

*Policy years are 12-month periods ending 5/31 of the stated year.

NEW JERSEY TURNPIKE AUTHORITY
OWNER CONTROLLED INSURANCE PROGRAM ACTUARIAL REVIEW
CALCULATION OF THE LOSS DEVELOPMENT FACTORS
GENERAL LIABILITY - 6-9 OCIP
AS OF DECEMBER 31, 2019
(AMTS IN THOUSANDS)
UNLIMITED LOSSES

PAID LOSS DEVELOPMENT

POLICY YEAR*	DEVELOPMENT MONTHS											
	12	24	36	48	60	72	84	96	108	120	132	144
2010	0	1	1	2	2	2	2					
2011	18	39	45	75	86	86						
2012	131	388	699	953	3,495							
2013	30	59	109	1,573								
2014	36	184	240									
2015	7	18										

LOSS DEVELOPMENT FACTORS

POLICY YEAR*	12	24	36	48	60	72	84	96	108	120	132	144
	TO 24	TO 36	TO 48	TO 60	TO 72	TO 84	TO 96	TO 108	TO 120	TO 132	TO 144	TO ULT
2010	8.846	1.009	2.078	1.000	1.000	1.000						
2011	2.084	1.164	1.672	1.152	1.000							
2012	2.970	1.802	1.364	3.667								
2013	1.967	1.833	14.447									
2014	5.123	1.307										
2015	2.638											
AVERAGE	3.938	1.423	4.890	1.940	1.000	1.000						
3 YR AVG.	3.243	1.647	5.828	1.940								
AVERAGE EXCL HI LO	3.204	1.424	1.875	1.152								
INDUSTRY FACTORS	2.567	1.621	1.353	1.207	1.113	1.066	1.044	1.031	1.021	1.082	1.014	
SELECTED	3.158	1.645	1.502	1.157	1.011	1.007	1.004	1.003	1.002	1.001	1.001	
CUMULATIVE	9.303	2.946	1.791	1.193	1.031	1.019	1.013	1.008	1.005	1.003	1.001	1.000

*Policy years are 12-month periods ending 5/31 of the stated year.

NEW JERSEY TURNPIKE AUTHORITY
OWNER CONTROLLED INSURANCE PROGRAM ACTUARIAL REVIEW
CALCULATION OF THE REPORTED CLAIM COUNT DEVELOPMENT FACTORS
GENERAL LIABILITY - 6-9 OCIP
AS OF DECEMBER 31, 2019

REPORTED CLAIM COUNT DEVELOPMENT

POLICY YEAR*	DEVELOPMENT MONTHS											
	12	24	36	48	60	72	84	96	108	120	132	144
2010	5	10	10	10	10	10	10					
2011	51	60	62	62	62	62						
2012	64	81	85	85	85							
2013	35	61	62	63								
2014	39	44	47									
2015	3	4										

CLAIM COUNT DEVELOPMENT FACTORS

POLICY YEAR*	12	24	36	48	60	72	84	96	108	120	132	144
	TO	TO	TO	TO	TO	TO	TO	TO	TO	TO	TO	TO
	24	36	48	60	72	84	96	108	120	132	144	ULT
2010	2.000	1.000	1.000	1.000	1.000	1.000						
2011	1.176	1.033	1.000	1.000	1.000							
2012	1.266	1.049	1.000	1.000								
2013	1.743	1.016	1.016									
2014	1.128	1.068										
2015	1.333											
AVERAGE	1.441	1.033	1.004	1.000	1.000	1.000						
3 YR AVG.	1.401	1.044	1.005	1.000								
EXCL HI LO	1.380	1.033	1.000	1.000								
SELECTED	1.407	1.037	1.003	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	
CUMULATIVE	1.464	1.040	1.003	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000

*Policy years are 12-month periods ending 5/31 of the stated year.

NEW JERSEY TURNPIKE AUTHORITY
OWNER CONTROLLED INSURANCE PROGRAM ACTUARIAL REVIEW
CALCULATION OF ULTIMATE CLAIM FREQUENCY AND ULTIMATE CLAIM SEVERITY
GENERAL LIABILITY - 6-9 OCIP
AS OF DECEMBER 31, 2019
LIMITED TO RETENTION

POLICY YEAR*	CLAIMS REPORTED @12/31/2019	DEVELOPMENT FACTORS	ULTIMATE CLAIM COUNT	RETAINED ULTIMATE LOSS	PAYROLL (\$000'S)	NUMBER OF CLAIMS PER \$MM OF PAYROLL (FREQUENCY)	AVERAGE CLAIM (SEVERITY) (WHOLE DOLLARS)
	(1)	(2)	(3)	(4)	(5)	(6)	(7)
2010	10	1.000	10	\$2	\$8,210	1.218	\$200
2011	62	1.000	62	87	48,831	1.270	1,410
2012	85	1.000	85	1,861	89,219	0.953	21,891
2013	63	1.000	63	936	93,751	0.672	14,852
2014	47	1.000	47	366	63,458	0.741	7,778
2015	4	1.000	4	275	19,951	0.200	68,681
TOTAL	271		271	\$3,526		0.838	\$13,011

Notes:

- (1) & (5) - Per NEW JERSEY TURNPIKE AUTHORITY.
- (2) - Per NEW JERSEY TURNPIKE AUTHORITY's historical loss patterns.
- (3) = (1) x (2).
- (4) = Exhibit IV, Page 3, Column (8).
- (6) = [(3) / (5)] x 1000.
- (7) = [(4) / (3)] x 1000.

*Policy years are 12-month periods ending 5/31 of the stated year.

NEW JERSEY TURNPIKE AUTHORITY
OWNER CONTROLLED INSURANCE PROGRAM ACTUARIAL REVIEW
CALCULATION OF DISCOUNT FACTORS (2% INTEREST RATE)
WORKERS' COMPENSATION - ROLLING OCIP
AS OF DECEMBER 31, 2019

(1) <i>Payment Year</i>	(2) <i>Cumulative Payment Pattern</i>	(3) <i>Incremental payments</i>	(4) <i>Remaining Payments at Beginning of Period</i>	(5) <i>Discount Factor</i>	(6) <i>Present Value of Remaining Payments</i>	(7) <i>Present Value Discount Factor</i>
1	3.8%	3.8%	100.0%	0.995	92.0%	0.920
2	29.9%	26.2%	96.2%	0.981	90.1%	0.936
3	45.4%	15.5%	70.1%	0.962	65.2%	0.930
4	56.3%	10.9%	54.6%	0.943	50.6%	0.928
5	66.8%	10.5%	43.7%	0.925	40.6%	0.928
6	72.5%	5.8%	33.2%	0.906	30.7%	0.923
7	77.0%	4.5%	27.5%	0.889	25.4%	0.924
8	79.8%	2.8%	23.0%	0.871	21.3%	0.928
9	82.4%	2.6%	20.2%	0.854	18.9%	0.936
10	84.4%	2.0%	17.6%	0.837	16.6%	0.945
11	86.1%	1.7%	15.6%	0.821	14.9%	0.957
12	88.3%	2.2%	13.9%	0.805	13.5%	0.970
13	98.8%	10.5%	11.7%	0.789	11.5%	0.984
14	98.9%	0.2%	1.2%	0.774	1.1%	0.856
15	99.1%	0.1%	1.1%	0.759	0.9%	0.851
16	99.2%	0.1%	0.9%	0.744	0.8%	0.847
17	99.3%	0.1%	0.8%	0.729	0.7%	0.844
18	99.3%	0.1%	0.7%	0.715	0.6%	0.842
19	99.4%	0.1%	0.7%	0.701	0.6%	0.840
20	99.4%	0.1%	0.6%	0.687	0.5%	0.840
21	99.5%	0.0%	0.6%	0.674	0.5%	0.840
22	99.5%	0.0%	0.5%	0.660	0.4%	0.841
23	99.6%	0.0%	0.5%	0.647	0.4%	0.844
24	99.6%	0.0%	0.4%	0.635	0.4%	0.847
25	99.6%	0.0%	0.4%	0.622	0.3%	0.851
26	99.7%	0.0%	0.4%	0.610	0.3%	0.856
27	99.7%	0.0%	0.3%	0.598	0.3%	0.862
28	99.7%	0.0%	0.3%	0.586	0.3%	0.869
29	99.7%	0.0%	0.3%	0.575	0.3%	0.877
30	99.7%	0.0%	0.3%	0.564	0.2%	0.886
31	99.8%	0.0%	0.3%	0.553	0.2%	0.896
32	99.8%	0.0%	0.2%	0.542	0.2%	0.907
33	99.8%	0.0%	0.2%	0.531	0.2%	0.919
34	99.8%	0.0%	0.2%	0.521	0.2%	0.933
35	99.8%	0.0%	0.2%	0.510	0.2%	0.948
36	99.9%	0.1%	0.2%	0.500	0.2%	0.961
37	99.9%	0.0%	0.1%	0.491	0.1%	0.945
38	99.9%	0.0%	0.1%	0.481	0.1%	0.964
39	99.9%	0.0%	0.1%	0.472	0.1%	0.983
40	100.0%	0.1%	0.1%	0.462	0.1%	1.001
41	100.0%	0.0%	0.0%	0.453	0.0%	1.000

Notes:

- (2) - Per NEW JERSEY TURNPIKE AUTHORITY's historical paid loss development factors.
(3) - Cumulative Payment Pattern for current year less Cumulative Payment Pattern for prior year.
(4) = 1 - Cumulative Payment Pattern for prior year.
(5) & (6) - Per AMI calculations.
(7) = (6) / (4).

Assumptions:

Rate of Return:	2.0%
Starting Year:	0
Ending Year:	41

NEW JERSEY TURNPIKE AUTHORITY
OWNER CONTROLLED INSURANCE PROGRAM ACTUARIAL REVIEW
CALCULATION OF DISCOUNT FACTORS (3% INTEREST RATE)
WORKERS' COMPENSATION - ROLLING OCIP
AS OF DECEMBER 31, 2019

(1) <i>Payment Year</i>	(2) <i>Cumulative Payment Pattern</i>	(3) <i>Incremental payments</i>	(4) <i>Remaining Payments at Beginning of Period</i>	(5) <i>Discount Factor</i>	(6) <i>Present Value of Remaining Payments</i>	(7) <i>Present Value Discount Factor</i>
1	3.8%	3.8%	100.0%	0.993	88.5%	0.885
2	29.9%	26.2%	96.2%	0.972	87.4%	0.908
3	45.4%	15.5%	70.1%	0.944	63.0%	0.899
4	56.3%	10.9%	54.6%	0.916	48.9%	0.896
5	66.8%	10.5%	43.7%	0.890	39.2%	0.896
6	72.5%	5.8%	33.2%	0.864	29.5%	0.889
7	77.0%	4.5%	27.5%	0.839	24.5%	0.891
8	79.8%	2.8%	23.0%	0.814	20.6%	0.896
9	82.4%	2.6%	20.2%	0.790	18.3%	0.907
10	84.4%	2.0%	17.6%	0.767	16.2%	0.920
11	86.1%	1.7%	15.6%	0.745	14.6%	0.937
12	88.3%	2.2%	13.9%	0.723	13.3%	0.957
13	98.8%	10.5%	11.7%	0.702	11.4%	0.978
14	98.9%	0.2%	1.2%	0.682	1.0%	0.800
15	99.1%	0.1%	1.1%	0.662	0.9%	0.793
16	99.2%	0.1%	0.9%	0.643	0.7%	0.787
17	99.3%	0.1%	0.8%	0.624	0.7%	0.783
18	99.3%	0.1%	0.7%	0.606	0.6%	0.779
19	99.4%	0.1%	0.7%	0.588	0.5%	0.777
20	99.4%	0.1%	0.6%	0.571	0.5%	0.776
21	99.5%	0.0%	0.6%	0.554	0.4%	0.776
22	99.5%	0.0%	0.5%	0.538	0.4%	0.777
23	99.6%	0.0%	0.5%	0.523	0.4%	0.780
24	99.6%	0.0%	0.4%	0.507	0.3%	0.783
25	99.6%	0.0%	0.4%	0.493	0.3%	0.789
26	99.7%	0.0%	0.4%	0.478	0.3%	0.795
27	99.7%	0.0%	0.3%	0.464	0.3%	0.803
28	99.7%	0.0%	0.3%	0.451	0.3%	0.812
29	99.7%	0.0%	0.3%	0.438	0.2%	0.823
30	99.7%	0.0%	0.3%	0.425	0.2%	0.835
31	99.8%	0.0%	0.3%	0.412	0.2%	0.849
32	99.8%	0.0%	0.2%	0.400	0.2%	0.865
33	99.8%	0.0%	0.2%	0.389	0.2%	0.883
34	99.8%	0.0%	0.2%	0.377	0.2%	0.902
35	99.8%	0.0%	0.2%	0.366	0.2%	0.923
36	99.9%	0.1%	0.2%	0.356	0.2%	0.943
37	99.9%	0.0%	0.1%	0.345	0.1%	0.919
38	99.9%	0.0%	0.1%	0.335	0.1%	0.946
39	99.9%	0.0%	0.1%	0.326	0.1%	0.974
40	100.0%	0.1%	0.1%	0.316	0.1%	1.001
41	100.0%	0.0%	0.0%	0.307	0.1%	1.000

Notes:

- (2) - Per NEW JERSEY TURNPIKE AUTHORITY's historical paid loss development factors.
(3) - Cumulative Payment Pattern for current year less Cumulative Payment Pattern for prior year.
(4) = 1 - Cumulative Payment Pattern for prior year.
(5) & (6) - Per AMI calculations.
(7) = (6) / (4).

Assumptions:

Rate of Return:	3.0%
Starting Year:	0
Ending Year:	41

NEW JERSEY TURNPIKE AUTHORITY
OWNER CONTROLLED INSURANCE PROGRAM ACTUARIAL REVIEW
CALCULATION OF DISCOUNT FACTORS (4% INTEREST RATE)
WORKERS' COMPENSATION - ROLLING OCIP
AS OF DECEMBER 31, 2019

(1) <i>Payment Year</i>	(2) <i>Cumulative Payment Pattern</i>	(3) <i>Incremental payments</i>	(4) <i>Remaining Payments at Beginning of Period</i>	(5) <i>Discount Factor</i>	(6) <i>Present Value of Remaining Payments</i>	(7) <i>Present Value Discount Factor</i>
1	3.8%	3.8%	100.0%	0.991	85.3%	0.853
2	29.9%	26.2%	96.2%	0.963	84.9%	0.882
3	45.4%	15.5%	70.1%	0.926	61.0%	0.871
4	56.3%	10.9%	54.6%	0.890	47.3%	0.867
5	66.8%	10.5%	43.7%	0.856	37.9%	0.867
6	72.5%	5.8%	33.2%	0.823	28.5%	0.857
7	77.0%	4.5%	27.5%	0.792	23.6%	0.860
8	79.8%	2.8%	23.0%	0.761	19.9%	0.866
9	82.4%	2.6%	20.2%	0.732	17.8%	0.881
10	84.4%	2.0%	17.6%	0.704	15.8%	0.897
11	86.1%	1.7%	15.6%	0.677	14.3%	0.919
12	88.3%	2.2%	13.9%	0.651	13.1%	0.945
13	98.8%	10.5%	11.7%	0.626	11.4%	0.972
14	98.9%	0.2%	1.2%	0.602	0.9%	0.752
15	99.1%	0.1%	1.1%	0.578	0.8%	0.743
16	99.2%	0.1%	0.9%	0.556	0.7%	0.736
17	99.3%	0.1%	0.8%	0.535	0.6%	0.730
18	99.3%	0.1%	0.7%	0.514	0.5%	0.726
19	99.4%	0.1%	0.7%	0.494	0.5%	0.722
20	99.4%	0.1%	0.6%	0.475	0.4%	0.720
21	99.5%	0.0%	0.6%	0.457	0.4%	0.720
22	99.5%	0.0%	0.5%	0.440	0.4%	0.721
23	99.6%	0.0%	0.5%	0.423	0.3%	0.724
24	99.6%	0.0%	0.4%	0.406	0.3%	0.728
25	99.6%	0.0%	0.4%	0.391	0.3%	0.733
26	99.7%	0.0%	0.4%	0.376	0.3%	0.741
27	99.7%	0.0%	0.3%	0.361	0.3%	0.750
28	99.7%	0.0%	0.3%	0.347	0.2%	0.761
29	99.7%	0.0%	0.3%	0.334	0.2%	0.774
30	99.7%	0.0%	0.3%	0.321	0.2%	0.789
31	99.8%	0.0%	0.3%	0.309	0.2%	0.807
32	99.8%	0.0%	0.2%	0.297	0.2%	0.826
33	99.8%	0.0%	0.2%	0.286	0.2%	0.848
34	99.8%	0.0%	0.2%	0.275	0.2%	0.873
35	99.8%	0.0%	0.2%	0.264	0.2%	0.900
36	99.9%	0.1%	0.2%	0.254	0.2%	0.926
37	99.9%	0.0%	0.1%	0.244	0.1%	0.893
38	99.9%	0.0%	0.1%	0.235	0.1%	0.929
39	99.9%	0.0%	0.1%	0.226	0.1%	0.966
40	100.0%	0.1%	0.1%	0.217	0.1%	1.002
41	100.0%	0.0%	0.0%	0.209	0.1%	1.000

Notes:

- (2) - Per NEW JERSEY TURNPIKE AUTHORITY's historical paid loss development factors.
(3) - Cumulative Payment Pattern for current year less Cumulative Payment Pattern for prior year.
(4) = 1 - Cumulative Payment Pattern for prior year.
(5) & (6) - Per AMI calculations.
(7) = (6) / (4).

Assumptions:

Rate of Return:	4.0%
Starting Year:	0
Ending Year:	41

NEW JERSEY TURNPIKE AUTHORITY
OWNER CONTROLLED INSURANCE PROGRAM ACTUARIAL REVIEW
CALCULATION OF DISCOUNT FACTORS (2% INTEREST RATE)
GENERAL LIABILITY - ROLLING OCIP
AS OF DECEMBER 31, 2019

(1) <i>Payment Year</i>	(2) <i>Cumulative Payment Pattern</i>	(3) <i>Incremental payments</i>	(4) <i>Remaining Payments at Beginning of Period</i>	(5) <i>Discount Factor</i>	(6) <i>Present Value of Remaining Payments</i>	(7) <i>Present Value Discount Factor</i>
1	2.3%	2.3%	100.0%	0.995	91.2%	0.912
2	16.2%	13.9%	97.7%	0.981	90.7%	0.928
3	33.8%	17.6%	83.8%	0.962	78.3%	0.935
4	53.4%	19.6%	66.2%	0.943	61.9%	0.935
5	67.1%	13.7%	46.6%	0.925	43.1%	0.926
6	76.7%	9.6%	32.9%	0.906	30.0%	0.912
7	82.3%	5.5%	23.3%	0.889	20.8%	0.893
8	85.4%	3.1%	17.7%	0.871	15.5%	0.877
9	87.7%	2.3%	14.6%	0.854	12.7%	0.867
10	89.7%	2.0%	12.3%	0.837	10.6%	0.860
11	90.3%	0.6%	10.3%	0.821	8.7%	0.849
12	90.8%	0.5%	9.7%	0.805	8.3%	0.855
13	91.9%	1.1%	9.2%	0.789	7.9%	0.865
14	92.8%	0.9%	8.1%	0.774	7.0%	0.864
15	93.5%	0.8%	7.2%	0.759	6.2%	0.864
16	94.2%	0.7%	6.5%	0.744	5.6%	0.864
17	94.8%	0.6%	5.8%	0.729	5.0%	0.865
18	95.3%	0.5%	5.2%	0.715	4.5%	0.867
19	95.8%	0.5%	4.7%	0.701	4.1%	0.869
20	96.2%	0.4%	4.2%	0.687	3.7%	0.872
21	96.6%	0.4%	3.8%	0.674	3.3%	0.875
22	96.9%	0.3%	3.4%	0.660	3.0%	0.879
23	97.2%	0.3%	3.1%	0.647	2.7%	0.883
24	97.5%	0.3%	2.8%	0.635	2.5%	0.887
25	97.8%	0.3%	2.5%	0.622	2.2%	0.892
26	98.0%	0.2%	2.2%	0.610	2.0%	0.897
27	98.2%	0.2%	2.0%	0.598	1.8%	0.902
28	98.4%	0.2%	1.8%	0.586	1.6%	0.908
29	98.6%	0.2%	1.6%	0.575	1.4%	0.914
30	98.8%	0.2%	1.4%	0.564	1.3%	0.920
31	98.9%	0.2%	1.2%	0.553	1.1%	0.927
32	99.1%	0.2%	1.1%	0.542	1.0%	0.934
33	99.2%	0.1%	0.9%	0.531	0.9%	0.941
34	99.4%	0.1%	0.8%	0.521	0.7%	0.949
35	99.5%	0.1%	0.6%	0.510	0.6%	0.956
36	99.6%	0.1%	0.5%	0.500	0.5%	0.964
37	99.7%	0.1%	0.4%	0.491	0.4%	0.972
38	99.8%	0.1%	0.3%	0.481	0.3%	0.982
39	99.9%	0.1%	0.2%	0.472	0.2%	0.991
40	100.0%	0.1%	0.1%	0.462	0.1%	1.001
41	100.0%	0.0%	0.0%	0.453	0.1%	1.000

Notes:

- (2) - Per NEW JERSEY TURNPIKE AUTHORITY's historical paid loss development factors.
(3) - Cumulative Payment Pattern for current year less Cumulative Payment Pattern for prior year.
(4) = 1 - Cumulative Payment Pattern for prior year.
(5) & (6) - Per AMI calculations.
(7) = (6) / (4).

Assumptions:

Rate of Return:	2.0%
Starting Year:	0
Ending Year:	41

NEW JERSEY TURNPIKE AUTHORITY
OWNER CONTROLLED INSURANCE PROGRAM ACTUARIAL REVIEW
CALCULATION OF DISCOUNT FACTORS (3% INTEREST RATE)
GENERAL LIABILITY - ROLLING OCIP
AS OF DECEMBER 31, 2019

(1) <i>Payment Year</i>	(2) <i>Cumulative Payment Pattern</i>	(3) <i>Incremental payments</i>	(4) <i>Remaining Payments at Beginning of Period</i>	(5) <i>Discount Factor</i>	(6) <i>Present Value of Remaining Payments</i>	(7) <i>Present Value Discount Factor</i>
1	2.3%	2.3%	100.0%	0.993	87.5%	0.875
2	16.2%	13.9%	97.7%	0.972	87.8%	0.898
3	33.8%	17.6%	83.8%	0.944	76.0%	0.907
4	53.4%	19.6%	66.2%	0.916	60.1%	0.909
5	67.1%	13.7%	46.6%	0.890	41.7%	0.896
6	76.7%	9.6%	32.9%	0.864	28.8%	0.877
7	82.3%	5.5%	23.3%	0.839	19.8%	0.851
8	85.4%	3.1%	17.7%	0.814	14.7%	0.828
9	87.7%	2.3%	14.6%	0.790	11.9%	0.815
10	89.7%	2.0%	12.3%	0.767	9.9%	0.804
11	90.3%	0.6%	10.3%	0.745	8.1%	0.788
12	90.8%	0.5%	9.7%	0.723	7.7%	0.798
13	91.9%	1.1%	9.2%	0.702	7.4%	0.810
14	92.8%	0.9%	8.1%	0.682	6.6%	0.809
15	93.5%	0.8%	7.2%	0.662	5.8%	0.809
16	94.2%	0.7%	6.5%	0.643	5.2%	0.809
17	94.8%	0.6%	5.8%	0.624	4.7%	0.811
18	95.3%	0.5%	5.2%	0.606	4.2%	0.813
19	95.8%	0.5%	4.7%	0.588	3.8%	0.815
20	96.2%	0.4%	4.2%	0.571	3.4%	0.819
21	96.6%	0.4%	3.8%	0.554	3.1%	0.823
22	96.9%	0.3%	3.4%	0.538	2.8%	0.827
23	97.2%	0.3%	3.1%	0.523	2.6%	0.833
24	97.5%	0.3%	2.8%	0.507	2.3%	0.839
25	97.8%	0.3%	2.5%	0.493	2.1%	0.845
26	98.0%	0.2%	2.2%	0.478	1.9%	0.852
27	98.2%	0.2%	2.0%	0.464	1.7%	0.859
28	98.4%	0.2%	1.8%	0.451	1.6%	0.867
29	98.6%	0.2%	1.6%	0.438	1.4%	0.876
30	98.8%	0.2%	1.4%	0.425	1.2%	0.884
31	98.9%	0.2%	1.2%	0.412	1.1%	0.894
32	99.1%	0.2%	1.1%	0.400	1.0%	0.904
33	99.2%	0.1%	0.9%	0.389	0.8%	0.914
34	99.4%	0.1%	0.8%	0.377	0.7%	0.925
35	99.5%	0.1%	0.6%	0.366	0.6%	0.936
36	99.6%	0.1%	0.5%	0.356	0.5%	0.947
37	99.7%	0.1%	0.4%	0.345	0.4%	0.959
38	99.8%	0.1%	0.3%	0.335	0.3%	0.973
39	99.9%	0.1%	0.2%	0.326	0.2%	0.987
40	100.0%	0.1%	0.1%	0.316	0.1%	1.001
41	100.0%	0.0%	0.0%	0.307	0.1%	1.000

Notes:

- (2) - Per NEW JERSEY TURNPIKE AUTHORITY's historical paid loss development factors.
(3) - Cumulative Payment Pattern for current year less Cumulative Payment Pattern for prior year.
(4) = 1 - Cumulative Payment Pattern for prior year.
(5) & (6) - Per AMI calculations.
(7) = (6) / (4).

Assumptions:

Rate of Return:	3.0%
Starting Year:	0
Ending Year:	41

NEW JERSEY TURNPIKE AUTHORITY
OWNER CONTROLLED INSURANCE PROGRAM ACTUARIAL REVIEW
CALCULATION OF DISCOUNT FACTORS (4% INTEREST RATE)
GENERAL LIABILITY - ROLLING OCIP
AS OF DECEMBER 31, 2019

(1) <i>Payment Year</i>	(2) <i>Cumulative Payment Pattern</i>	(3) <i>Incremental payments</i>	(4) <i>Remaining Payments at Beginning of Period</i>	(5) <i>Discount Factor</i>	(6) <i>Present Value of Remaining Payments</i>	(7) <i>Present Value Discount Factor</i>
1	2.3%	2.3%	100.0%	0.991	84.1%	0.841
2	16.2%	13.9%	97.7%	0.963	85.1%	0.871
3	33.8%	17.6%	83.8%	0.926	74.0%	0.883
4	53.4%	19.6%	66.2%	0.890	58.6%	0.885
5	67.1%	13.7%	46.6%	0.856	40.5%	0.869
6	76.7%	9.6%	32.9%	0.823	27.8%	0.847
7	82.3%	5.5%	23.3%	0.792	18.9%	0.814
8	85.4%	3.1%	17.7%	0.761	13.9%	0.786
9	87.7%	2.3%	14.6%	0.732	11.2%	0.769
10	89.7%	2.0%	12.3%	0.704	9.3%	0.756
11	90.3%	0.6%	10.3%	0.677	7.6%	0.736
12	90.8%	0.5%	9.7%	0.651	7.2%	0.747
13	91.9%	1.1%	9.2%	0.626	7.0%	0.763
14	92.8%	0.9%	8.1%	0.602	6.2%	0.761
15	93.5%	0.8%	7.2%	0.578	5.5%	0.760
16	94.2%	0.7%	6.5%	0.556	4.9%	0.761
17	94.8%	0.6%	5.8%	0.535	4.4%	0.762
18	95.3%	0.5%	5.2%	0.514	4.0%	0.764
19	95.8%	0.5%	4.7%	0.494	3.6%	0.767
20	96.2%	0.4%	4.2%	0.475	3.2%	0.771
21	96.6%	0.4%	3.8%	0.457	2.9%	0.776
22	96.9%	0.3%	3.4%	0.440	2.7%	0.782
23	97.2%	0.3%	3.1%	0.423	2.4%	0.788
24	97.5%	0.3%	2.8%	0.406	2.2%	0.795
25	97.8%	0.3%	2.5%	0.391	2.0%	0.802
26	98.0%	0.2%	2.2%	0.376	1.8%	0.811
27	98.2%	0.2%	2.0%	0.361	1.6%	0.820
28	98.4%	0.2%	1.8%	0.347	1.5%	0.830
29	98.6%	0.2%	1.6%	0.334	1.3%	0.840
30	98.8%	0.2%	1.4%	0.321	1.2%	0.851
31	98.9%	0.2%	1.2%	0.309	1.1%	0.863
32	99.1%	0.2%	1.1%	0.297	0.9%	0.875
33	99.2%	0.1%	0.9%	0.286	0.8%	0.888
34	99.4%	0.1%	0.8%	0.275	0.7%	0.902
35	99.5%	0.1%	0.6%	0.264	0.6%	0.916
36	99.6%	0.1%	0.5%	0.254	0.5%	0.931
37	99.7%	0.1%	0.4%	0.244	0.4%	0.946
38	99.8%	0.1%	0.3%	0.235	0.3%	0.965
39	99.9%	0.1%	0.2%	0.226	0.2%	0.983
40	100.0%	0.1%	0.1%	0.217	0.1%	1.002
41	100.0%	0.0%	0.0%	0.209	0.1%	1.000

Notes:

- (2) - Per NEW JERSEY TURNPIKE AUTHORITY's historical paid loss development factors.
(3) - Cumulative Payment Pattern for current year less Cumulative Payment Pattern for prior year.
(4) = 1 - Cumulative Payment Pattern for prior year.
(5) & (6) - Per AMI calculations.
(7) = (6) / (4).

Assumptions:

Rate of Return:	4.0%
Starting Year:	0
Ending Year:	41

NEW JERSEY TURNPIKE AUTHORITY
OWNER CONTROLLED INSURANCE PROGRAM ACTUARIAL REVIEW
CALCULATION OF DISCOUNT FACTORS (2% INTEREST RATE)
WORKERS' COMPENSATION - 6-9 OCIP
AS OF DECEMBER 31, 2019

(1)	(2)	(3)	(4)	(5)	(6)	(7)
<i>Payment Year</i>	<i>Cumulative Payment Pattern</i>	<i>Incremental payments</i>	<i>Remaining Payments at Beginning of Period</i>	<i>Discount Factor</i>	<i>Present Value of Remaining Payments</i>	<i>Present Value Discount Factor</i>
1	34.4%	34.4%	100.0%	0.994	94.9%	0.949
2	48.8%	14.4%	65.6%	0.979	61.9%	0.944
3	68.5%	19.7%	51.2%	0.960	48.5%	0.947
4	80.0%	11.5%	31.5%	0.941	29.4%	0.933
5	86.8%	6.8%	20.0%	0.922	18.3%	0.913
6	90.5%	3.7%	13.2%	0.904	11.7%	0.886
7	92.4%	1.9%	9.5%	0.887	8.2%	0.859
8	92.8%	0.5%	7.6%	0.869	6.4%	0.841
9	93.1%	0.3%	7.2%	0.852	6.1%	0.848
10	93.3%	0.2%	6.9%	0.835	5.9%	0.859
11	93.5%	0.2%	6.7%	0.819	5.8%	0.871
12	93.7%	0.2%	6.5%	0.803	5.7%	0.885
13	93.9%	0.2%	6.3%	0.787	5.7%	0.899
14	94.1%	0.2%	6.1%	0.772	5.6%	0.914
15	94.7%	0.6%	5.9%	0.757	5.5%	0.930
16	95.6%	0.9%	5.3%	0.742	4.9%	0.940
17	96.5%	0.8%	4.4%	0.727	4.1%	0.946
18	97.2%	0.7%	3.5%	0.713	3.4%	0.953
19	97.8%	0.6%	2.8%	0.699	2.7%	0.960
20	98.4%	0.6%	2.2%	0.685	2.1%	0.968
21	98.9%	0.5%	1.6%	0.672	1.6%	0.976
22	99.4%	0.5%	1.1%	0.659	1.1%	0.985
23	99.8%	0.4%	0.6%	0.646	0.6%	0.993
24	100.0%	0.2%	0.2%	0.633	0.2%	0.998
25	100.0%	0.0%	0.0%	0.621	0.0%	1.000

Notes:

- (2) - Per NEW JERSEY TURNPIKE AUTHORITY's historical paid loss development factors.
(3) - Cumulative Payment Pattern for current year less Cumulative Payment Pattern for prior year.
(4) = 1 - Cumulative Payment Pattern for prior year.
(5) & (6) - Per AMI calculations.
(7) = (6) / (4).

Assumptions:

Rate of Return:	2.0%
Starting Year:	0
Ending Year	25

NEW JERSEY TURNPIKE AUTHORITY
OWNER CONTROLLED INSURANCE PROGRAM ACTUARIAL REVIEW
CALCULATION OF DISCOUNT FACTORS (3% INTEREST RATE)
WORKERS' COMPENSATION - 6-9 OCIP
AS OF DECEMBER 31, 2019

(1)	(2)	(3)	(4)	(5)	(6)	(7)
<i>Payment Year</i>	<i>Cumulative Payment Pattern</i>	<i>Incremental payments</i>	<i>Remaining Payments at Beginning of Period</i>	<i>Discount Factor</i>	<i>Present Value of Remaining Payments</i>	<i>Present Value Discount Factor</i>
1	34.4%	34.4%	100.0%	0.991	92.7%	0.927
2	48.8%	14.4%	65.6%	0.968	60.3%	0.919
3	68.5%	19.7%	51.2%	0.940	47.3%	0.924
4	80.0%	11.5%	31.5%	0.913	28.5%	0.905
5	86.8%	6.8%	20.0%	0.886	17.6%	0.877
6	90.5%	3.7%	13.2%	0.860	11.1%	0.840
7	92.4%	1.9%	9.5%	0.835	7.6%	0.801
8	92.8%	0.5%	7.6%	0.811	5.9%	0.775
9	93.1%	0.3%	7.2%	0.787	5.6%	0.783
10	93.3%	0.2%	6.9%	0.765	5.5%	0.798
11	93.5%	0.2%	6.7%	0.742	5.4%	0.815
12	93.7%	0.2%	6.5%	0.721	5.4%	0.834
13	93.9%	0.2%	6.3%	0.700	5.4%	0.855
14	94.1%	0.2%	6.1%	0.679	5.3%	0.876
15	94.7%	0.6%	5.9%	0.659	5.3%	0.898
16	95.6%	0.9%	5.3%	0.640	4.8%	0.912
17	96.5%	0.8%	4.4%	0.622	4.0%	0.921
18	97.2%	0.7%	3.5%	0.604	3.3%	0.931
19	97.8%	0.6%	2.8%	0.586	2.6%	0.941
20	98.4%	0.6%	2.2%	0.569	2.1%	0.953
21	98.9%	0.5%	1.6%	0.552	1.6%	0.965
22	99.4%	0.5%	1.1%	0.536	1.1%	0.977
23	99.8%	0.4%	0.6%	0.521	0.6%	0.990
24	100.0%	0.2%	0.2%	0.505	0.2%	0.998
25	100.0%	0.0%	0.0%	0.491	0.0%	1.000

Notes:

- (2) - Per NEW JERSEY TURNPIKE AUTHORITY's historical paid loss development factors.
(3) - Cumulative Payment Pattern for current year less Cumulative Payment Pattern for prior year.
(4) = 1 - Cumulative Payment Pattern for prior year.
(5) & (6) - Per AMI calculations.
(7) = (6) / (4).

Assumptions:

Rate of Return:	3.0%
Starting Year:	0
Ending Year:	25

NEW JERSEY TURNPIKE AUTHORITY
OWNER CONTROLLED INSURANCE PROGRAM ACTUARIAL REVIEW
CALCULATION OF DISCOUNT FACTORS (4% INTEREST RATE)
WORKERS' COMPENSATION - 6-9 OCIP
AS OF DECEMBER 31, 2019

(1) <i>Payment Year</i>	(2) <i>Cumulative Payment Pattern</i>	(3) <i>Incremental payments</i>	(4) <i>Remaining Payments at Beginning of Period</i>	(5) <i>Discount Factor</i>	(6) <i>Present Value of Remaining Payments</i>	(7) <i>Present Value Discount Factor</i>
1	34.4%	34.4%	100.0%	0.989	90.6%	0.906
2	48.8%	14.4%	65.6%	0.958	58.9%	0.897
3	68.5%	19.7%	51.2%	0.922	46.3%	0.904
4	80.0%	11.5%	31.5%	0.886	27.7%	0.880
5	86.8%	6.8%	20.0%	0.852	16.9%	0.846
6	90.5%	3.7%	13.2%	0.819	10.6%	0.798
7	92.4%	1.9%	9.5%	0.788	7.1%	0.749
8	92.8%	0.5%	7.6%	0.757	5.4%	0.715
9	93.1%	0.3%	7.2%	0.728	5.2%	0.725
10	93.3%	0.2%	6.9%	0.700	5.1%	0.743
11	93.5%	0.2%	6.7%	0.673	5.1%	0.764
12	93.7%	0.2%	6.5%	0.647	5.1%	0.787
13	93.9%	0.2%	6.3%	0.623	5.1%	0.813
14	94.1%	0.2%	6.1%	0.599	5.1%	0.839
15	94.7%	0.6%	5.9%	0.576	5.1%	0.868
16	95.6%	0.9%	5.3%	0.553	4.7%	0.886
17	96.5%	0.8%	4.4%	0.532	3.9%	0.898
18	97.2%	0.7%	3.5%	0.512	3.2%	0.910
19	97.8%	0.6%	2.8%	0.492	2.6%	0.922
20	98.4%	0.6%	2.2%	0.473	2.1%	0.938
21	98.9%	0.5%	1.6%	0.455	1.5%	0.953
22	99.4%	0.5%	1.1%	0.437	1.1%	0.970
23	99.8%	0.4%	0.6%	0.421	0.6%	0.986
24	100.0%	0.2%	0.2%	0.404	0.2%	0.997
25	100.0%	0.0%	0.0%	0.389	0.0%	1.000

Notes:

- (2) - Per NEW JERSEY TURNPIKE AUTHORITY's historical paid loss development factors.
(3) - Cumulative Payment Pattern for current year less Cumulative Payment Pattern for prior year.
(4) = 1 - Cumulative Payment Pattern for prior year.
(5) & (6) - Per AMI calculations.
(7) = (6) / (4).

Assumptions:

Rate of Return:	4.0%
Starting Year:	0
Ending Year:	25

NEW JERSEY TURNPIKE AUTHORITY
OWNER CONTROLLED INSURANCE PROGRAM ACTUARIAL REVIEW
CALCULATION OF DISCOUNT FACTORS (2% INTEREST RATE)
GENERAL LIABILITY - 6-9 OCIP
AS OF DECEMBER 31, 2019

(1)	(2)	(3)	(4)	(5)	(6)	(7)
<i>Payment Year</i>	<i>Cumulative Payment Pattern</i>	<i>Incremental payments</i>	<i>Remaining Payments at Beginning of Period</i>	<i>Discount Factor</i>	<i>Present Value of Remaining Payments</i>	<i>Present Value Discount Factor</i>
1	7.8%	7.8%	100.0%	0.994	94.5%	0.945
2	17.9%	10.1%	92.2%	0.979	88.5%	0.960
3	44.0%	26.1%	82.1%	0.960	80.0%	0.974
4	69.3%	25.3%	56.0%	0.941	55.0%	0.983
5	91.0%	21.7%	30.7%	0.922	30.3%	0.989
6	97.7%	6.6%	9.0%	0.904	8.8%	0.985
7	98.5%	0.8%	2.3%	0.887	2.3%	0.968
8	99.0%	0.5%	1.5%	0.869	1.5%	0.970
9	99.4%	0.4%	1.0%	0.852	1.0%	0.974
10	99.6%	0.3%	0.6%	0.835	0.6%	0.979
11	99.8%	0.2%	0.4%	0.819	0.4%	0.985
12	99.9%	0.1%	0.2%	0.803	0.2%	0.993
13	100.0%	0.1%	0.1%	0.787	0.1%	0.998
14	100.0%	0.0%	0.0%	0.772	0.0%	1.000

Notes:

- (2) - Per NEW JERSEY TURNPIKE AUTHORITY's historical paid loss development factors.
(3) - Cumulative Payment Pattern for current year less Cumulative Payment Pattern for prior year.
(4) = 1 - Cumulative Payment Pattern for prior year.
(5) & (6) - Per AMI calculations.
(7) = (6) / (4).

Assumptions:

Rate of Return:	2.0%
Starting Year:	0
Ending Year:	14

NEW JERSEY TURNPIKE AUTHORITY
OWNER CONTROLLED INSURANCE PROGRAM ACTUARIAL REVIEW
CALCULATION OF DISCOUNT FACTORS (3% INTEREST RATE)
GENERAL LIABILITY - 6-9 OCIP
AS OF DECEMBER 31, 2019

(1)	(2)	(3)	(4)	(5)	(6)	(7)
<i>Payment Year</i>	<i>Cumulative Payment Pattern</i>	<i>Incremental payments</i>	<i>Remaining Payments at Beginning of Period</i>	<i>Discount Factor</i>	<i>Present Value of Remaining Payments</i>	<i>Present Value Discount Factor</i>
1	7.8%	7.8%	100.0%	0.991	92.0%	0.920
2	17.9%	10.1%	92.2%	0.968	86.8%	0.941
3	44.0%	26.1%	82.1%	0.940	79.0%	0.962
4	69.3%	25.3%	56.0%	0.913	54.6%	0.974
5	91.0%	21.7%	30.7%	0.886	30.2%	0.984
6	97.7%	6.6%	9.0%	0.860	8.8%	0.979
7	98.5%	0.8%	2.3%	0.835	2.2%	0.953
8	99.0%	0.5%	1.5%	0.811	1.4%	0.956
9	99.4%	0.4%	1.0%	0.787	0.9%	0.962
10	99.6%	0.3%	0.6%	0.765	0.6%	0.969
11	99.8%	0.2%	0.4%	0.742	0.4%	0.977
12	99.9%	0.1%	0.2%	0.721	0.2%	0.989
13	100.0%	0.1%	0.1%	0.700	0.1%	0.998
14	100.0%	0.0%	0.0%	0.679	0.0%	1.000

Notes:

- (2) - Per NEW JERSEY TURNPIKE AUTHORITY's historical paid loss development factors.
(3) - Cumulative Payment Pattern for current year less Cumulative Payment Pattern for prior year.
(4) = 1 - Cumulative Payment Pattern for prior year.
(5) & (6) - Per AMI calculations.
(7) = (6) / (4).

Assumptions:

Rate of Return:	3.0%
Starting Year:	0
Ending Year:	14

NEW JERSEY TURNPIKE AUTHORITY
OWNER CONTROLLED INSURANCE PROGRAM ACTUARIAL REVIEW
CALCULATION OF DISCOUNT FACTORS (4% INTEREST RATE)
GENERAL LIABILITY - 6-9 OCIP
AS OF DECEMBER 31, 2019

(1)	(2)	(3)	(4)	(5)	(6)	(7)
<i>Payment Year</i>	<i>Cumulative Payment Pattern</i>	<i>Incremental payments</i>	<i>Remaining Payments at Beginning of Period</i>	<i>Discount Factor</i>	<i>Present Value of Remaining Payments</i>	<i>Present Value Discount Factor</i>
1	7.8%	7.8%	100.0%	0.989	89.5%	0.895
2	17.9%	10.1%	92.2%	0.958	85.1%	0.923
3	44.0%	26.1%	82.1%	0.922	78.1%	0.951
4	69.3%	25.3%	56.0%	0.886	54.1%	0.966
5	91.0%	21.7%	30.7%	0.852	30.0%	0.979
6	97.7%	6.6%	9.0%	0.819	8.7%	0.972
7	98.5%	0.8%	2.3%	0.788	2.2%	0.938
8	99.0%	0.5%	1.5%	0.757	1.4%	0.942
9	99.4%	0.4%	1.0%	0.728	0.9%	0.950
10	99.6%	0.3%	0.6%	0.700	0.6%	0.959
11	99.8%	0.2%	0.4%	0.673	0.4%	0.970
12	99.9%	0.1%	0.2%	0.647	0.2%	0.985
13	100.0%	0.1%	0.1%	0.623	0.1%	0.997
14	100.0%	0.0%	0.0%	0.599	0.0%	1.000

Notes:

- (2) - Per NEW JERSEY TURNPIKE AUTHORITY's historical paid loss development factors.
(3) - Cumulative Payment Pattern for current year less Cumulative Payment Pattern for prior year.
(4) = 1 - Cumulative Payment Pattern for prior year.
(5) & (6) - Per AMI calculations.
(7) = (6) / (4).

Assumptions:

Rate of Return:	4.0%
Starting Year:	0
Ending Year:	14

NEW JERSEY TURNPIKE AUTHORITY
OWNER CONTROLLED INSURANCE PROGRAM ACTUARIAL REVIEW
ANALYSIS OF RESERVE CHANGE
WORKERS' COMPENSATION - ROLLING OCIP
AS OF DECEMBER 31, 2019
(AMTS IN THOUSANDS)
LIMITED TO RETENTION

1. Estimated net undiscounted reserves at 12/31/2018	\$6,346
2. Loss payments in 2019 for policy years 2018 and prior	(\$1,334)
3. Change in estimated ultimate losses for policy years 2018 and prior due to re-evaluation at 12/31/2019	(\$273)
4. Loss conversion charge at 11/30/2018.	(\$478)
5. Loss conversion charge at 12/31/2019.	\$341
6. Estimated net undiscounted reserves at 12/31/2019	\$4,603

Notes:

- (1) - Per AMI Actuarial Study as of 12/31/2018.
- (2) - Total from Appendix I, Column (3).
- (3) - Total from Appendix G, Column (3).
- (4) - Per NEW JERSEY TURNPIKE AUTHORITY.
- (5) - 8% of the sum of (1) through (4).
- (6) - Sum of (1) through (5).

NEW JERSEY TURNPIKE AUTHORITY
OWNER CONTROLLED INSURANCE PROGRAM ACTUARIAL REVIEW
ANALYSIS OF RESERVE CHANGE
GENERAL LIABILITY - ROLLING OCIP
AS OF DECEMBER 31, 2019
(AMTS IN THOUSANDS)
LIMITED TO RETENTION

1. Estimated net undiscounted reserves at 12/31/2018	\$1,790
2. Loss payments in 2019 for policy years 2018 and prior	(\$728)
3. Change in estimated ultimate losses for policy years 2018 and prior due to re-evaluation at 12/31/2019	\$585
4. Loss conversion charge at 11/30/2018.	(\$137)
5. Loss conversion charge at 12/31/2019.	\$121
6. Estimated net undiscounted reserves at 12/31/2019	\$1,631

Notes:

- (1) - Per AMI Actuarial Study as of 12/31/2018.
- (2) - Total from Appendix J, Column (3).
- (3) - Total from Appendix H, Column (3).
- (4) - Per NEW JERSEY TURNPIKE AUTHORITY.
- (5) - 8% of the sum of (1) through (4).
- (6) - Sum of (1) through (5).

NEW JERSEY TURNPIKE AUTHORITY
OWNER CONTROLLED INSURANCE PROGRAM ACTUARIAL REVIEW
ANALYSIS OF RESERVE CHANGE
WORKERS' COMPENSATION - 6-9 OCIP
AS OF DECEMBER 31, 2019
(AMTS IN THOUSANDS)
LIMITED TO RETENTION

1. Estimated net undiscounted reserves at 12/31/2018	\$2,412
2. Loss payments in 2019 for policy years 2015 and prior	(\$359)
3. Change in estimated ultimate losses for policy years 2015 and prior due to re-evaluation at 12/31/2019	\$860
4. Loss conversion charge at 12/31/2019.	\$233
5. Estimated net undiscounted reserves at 12/31/2019	\$3,146

Notes:

- (1) - Per AMI Actuarial Study as of 12/31/2018.
- (2) - Total from Appendix O, Column (3).
- (3) - Total from Appendix K, Column (3).
- (4) - 8% of the sum of (1) through (3).
- (5) - Sum of (1) through (4).

NEW JERSEY TURNPIKE AUTHORITY
OWNER CONTROLLED INSURANCE PROGRAM ACTUARIAL REVIEW
ANALYSIS OF RESERVE CHANGE
GENERAL LIABILITY - 6-9 OCIP
AS OF DECEMBER 31, 2019
(AMTS IN THOUSANDS)
LIMITED TO RETENTION

1. Estimated net undiscounted reserves at 12/31/2018	\$127
2. Loss payments in 2019 for policy years 2015 and prior	(\$9)
3. Change in estimated ultimate losses for policy years 2015 and prior due to re-evaluation at 12/31/2019	(\$19)
4. Loss conversion charge at 12/31/2019.	\$8
5. Estimated net undiscounted reserves at 12/31/2019	\$106

Notes:

- (1)- Per AMI Actuarial Study as of 12/31/2018.
- (2) - Total from Appendix P, Column (3).
- (3) - Total from Appendix L, Column (3).
- (4) - 8% of the sum of (1) through (3).
- (5) - Sum of (1) through (4).

NEW JERSEY TURNPIKE AUTHORITY
OWNER CONTROLLED INSURANCE PROGRAM ACTUARIAL REVIEW
COMPARISON OF ESTIMATED ULTIMATE LOSSES
AS OF DECEMBER 31, 2019
WORKERS' COMPENSATION - ROLLING OCIP
(AMTS IN THOUSANDS)
LIMITED TO RETENTION

ACCIDENT YEAR*	ESTIMATED ULTIMATE LOSSES		INCREASE OR DECREASE
	@12/31/2018	@12/31/2019	
	(1)	(2)	(3)
2010	\$763	\$759	(\$4)
2011	3,712	3,682	(31)
2012	4,149	3,880	(269)
2013	4,312	4,221	(92)
2014	6,920	6,945	25
2015	5,809	5,776	(33)
2016	1,375	1,562	187
2017	352	296	(56)
TOTAL	\$27,393	\$27,120	(\$273)

Notes:

(1) - Per AMI Actuarial Study as of 12/31/2018.

(2) - Exhibit I, Page 3, Column (8).

(3) = (2) - (1).

*Policy years are 12-month periods ending 7/14 of the stated year, except for 2017 which ends at 7/15/2017.

NEW JERSEY TURNPIKE AUTHORITY
OWNER CONTROLLED INSURANCE PROGRAM ACTUARIAL REVIEW
COMPARISON OF ESTIMATED ULTIMATE LOSSES
AS OF DECEMBER 31, 2019
GENERAL LIABILITY - ROLLING OCIP
(AMTS IN THOUSANDS)
LIMITED TO RETENTION

POLICY YEAR*	ESTIMATED ULTIMATE LOSSES		INCREASE OR DECREASE
	@12/31/2018	@12/31/2019	
	(1)	(2)	(3)
2010	\$114	\$111	(\$3)
2011	586	581	(5)
2012	1,061	1,050	(11)
2013	1,692	1,772	80
2014	2,362	2,726	364
2015	768	716	(51)
2016	883	1,055	172
2017	58	97	39
TOTAL	\$7,523	\$8,108	\$585

Notes:

(1) - Per AMI Actuarial Study as of 12/31/2018.

(2) - Exhibit II, Page 3, Column (8).

(3) = (2) - (1).

*Policy years are 12-month periods ending 7/14 of the stated year, except for 2017 which ends at 7/15/2017.

NEW JERSEY TURNPIKE AUTHORITY
OWNER CONTROLLED INSURANCE PROGRAM ACTUARIAL REVIEW
COMPARISON OF ESTIMATED ULTIMATE LOSSES
AS OF DECEMBER 31, 2019
WORKERS' COMPENSATION - 6-9 OCIP
(AMTS IN THOUSANDS)
LIMITED TO RETENTION

POLICY YEAR*	ESTIMATED ULTIMATE LOSSES		INCREASE OR DECREASE
	12/31/2018	@12/31/2019	
	(1)	(2)	(3)
2010	\$89	\$89	(\$0)
2011	1,356	1,494	138
2012	3,703	3,923	220
2013	2,634	2,796	163
2014	2,316	2,599	283
2015	1,015	1,070	55
TOTAL	\$11,111	\$11,971	\$860

Notes:

(1) - Per AMI Actuarial Study as of 12/31/2018.

(2) - Exhibit III, Page 3, Column (8).

(3) = (2) - (1).

*Policy years are 12-month periods ending 5/31 of the stated year.

NEW JERSEY TURNPIKE AUTHORITY
OWNER CONTROLLED INSURANCE PROGRAM ACTUARIAL REVIEW
COMPARISON OF ESTIMATED ULTIMATE LOSSES
AS OF DECEMBER 31, 2019
GENERAL LIABILITY - 6-9 OCIP
(AMTS IN THOUSANDS)
LIMITED TO RETENTION

POLICY YEAR*	ESTIMATED ULTIMATE LOSSES		INCREASE OR DECREASE
	12/31/2018	@12/31/2019	
	(1)	(2)	(3)
2010	\$2	\$2	(\$0)
2011	89	87	(1)
2012	1,859	1,861	2
2013	938	936	(2)
2014	368	366	(2)
2015	290	275	(15)
TOTAL	\$3,546	\$3,526	(\$19)

Notes:

(1) - Per AMI Actuarial Study as of 12/31/2018.

(2) - Exhibit IV, Page 3, Column (8).

(3) = (2) - (1).

*Policy years are 12-month periods ending 5/31 of the stated year.

NEW JERSEY TURNPIKE AUTHORITY
OWNER CONTROLLED INSURANCE PROGRAM ACTUARIAL REVIEW
COMPARISON OF PAID LOSSES
AS OF DECEMBER 31, 2019
WORKERS' COMPENSATION - ROLLING OCIP
(AMTS IN THOUSANDS)
LIMITED TO RETENTION

ACCIDENT YEAR*	ESTIMATED PAID LOSSES		INCREASE OR DECREASE
	@12/31/2018	@12/31/2019	
	(1)	(2)	(3)
2010	\$566	\$583	\$17
2011	3,228	3,321	93
2012	3,513	3,518	5
2013	3,210	3,319	108
2014	5,619	6,078	459
2015	4,263	4,762	499
2016	1,069	1,228	159
2017	56	50	(6)
TOTAL	\$21,525	\$22,858	\$1,334

Notes:

(1) - Per AMI Actuarial Study as of 12/31/2018.

(2) - Exhibit I, Page 2, Column (2).

(3) = (2) - (1).

*Policy years are 12-month periods ending 7/14 of the stated year, except for 2017 which ends at 7/15/2017.

NEW JERSEY TURNPIKE AUTHORITY
OWNER CONTROLLED INSURANCE PROGRAM ACTUARIAL REVIEW
COMPARISON OF PAID LOSSES
AS OF DECEMBER 31, 2019
GENERAL LIABILITY - ROLLING OCIP
(AMTS IN THOUSANDS)
LIMITED TO RETENTION

POLICY YEAR*	ESTIMATED PAID LOSSES		INCREASE OR DECREASE
	@12/31/2018	@12/31/2019	
	(1)	(2)	(3)
2010	\$94	\$94	(\$0)
2011	559	558	(0)
2012	972	970	(2)
2013	1,654	1,653	(1)
2014	1,861	2,373	512
2015	312	360	48
2016	412	587	175
2017	5	2	(3)
TOTAL	\$5,869	\$6,598	\$728

Notes:

(1) - Per AMI Actuarial Study as of 12/31/2018.

(2) - Exhibit II, Page 2, Column (2).

(3) = (2) - (1).

*Policy years are 12-month periods ending 7/14 of the stated year, except for 2017 which ends at 7/15/2017.

NEW JERSEY TURNPIKE AUTHORITY
OWNER CONTROLLED INSURANCE PROGRAM ACTUARIAL REVIEW
COMPARISON OF PAID LOSSES
AS OF DECEMBER 31, 2019
WORKERS' COMPENSATION - 6-9 OCIP
(AMTS IN THOUSANDS)
LIMITED TO RETENTION

POLICY YEAR*	PAID LOSSES		INCREASE OR DECREASE
	12/31/2018	@12/31/2019	
	(1)	(2)	(3)
2010	\$65	\$67	\$2
2011	1,236	1,248	11
2012	3,080	3,194	115
2013	1,565	1,745	180
2014	2,012	2,039	27
2015	742	766	24
TOTAL	\$8,700	\$9,058	\$359

Notes:

(1) - Per AMI Actuarial Study as of 12/31/2018.

(2) - Exhibit III, Page 2, Column (2).

(3) = (2) - (1).

*Policy years are 12-month periods ending 5/31 of the stated year.

NEW JERSEY TURNPIKE AUTHORITY
OWNER CONTROLLED INSURANCE PROGRAM ACTUARIAL REVIEW
COMPARISON OF PAID LOSSES
AS OF DECEMBER 31, 2019
GENERAL LIABILITY - 6-9 OCIP
(AMTS IN THOUSANDS)
LIMITED TO RETENTION

POLICY YEAR*	PAID LOSSES		INCREASE OR DECREASE
	12/31/2018	@12/31/2019	
	(1)	(2)	(3)
2010	\$2	\$2	\$0
2011	86	86	0
2012	1,859	1,859	0
2013	934	934	0
2014	271	278	7
2015	267	269	2
TOTAL	\$3,418	\$3,428	\$9

Notes:

(1) - Per AMI Actuarial Study as of 12/31/2018.

(2) - Exhibit IV, Page 2, Column (2).

(3) = (2) - (1).

*Policy years are 12-month periods ending 5/31 of the stated year.

Section IV
Glossary of Terms

Glossary of Terms

<i>Bornhuetter-Ferguson Approach (BFA)</i>	Approach which combines reported and paid losses with the expected unreported and unpaid losses to estimate ultimate losses.
<i>Case Reserve</i>	Estimate of unpaid loss on reported claims.
<i>Discount Reserve</i>	The present value, calculated at selected interest rates and payout patterns, of the payment of outstanding losses.
<i>Expected Loss</i>	Exposures multiplied by the pure premium.
<i>Exposure</i>	Extent of risk and/or possibility of loss (for general liability the exposure is expenditure in thousands, and for auto liability it is the number of vehicles).
<i>Frequency</i>	The average number of claims per unit of exposure.
<i>Incurred Loss</i>	Paid loss plus the case reserve.
<i>IBNR Reserve</i>	Reserve for claims incurred but not reported and for future changes to the case reserves.
<i>Loss Adjustment Expenses (LAE)</i>	Loss adjustment expenses may be broken down into: Allocated and Unallocated loss adjustment expenses (ALAE and ULAE). ALAE expenses are expenses (other than in-house administrative) for claims handling which can be identified as pertaining to a specific claim (such as outside legal expense). ULAE expenses are general administrative expenses such as salaries of employees.
<i>Loss Development Approach (LDA)</i>	Methods under which historical claim data are recorded and used to estimate the future development of existing claims. Loss development is the change in value of a body of claims from one valuation date to another valuation date.

Glossary of Terms
(continued)

Paid Loss Amount paid on open and closed claims.

Policy Year Attributing to a given year the total cost of losses which occur in that year.

Pure Premium The value of losses per unit of exposure.

Severity The average value of losses per claim.

Ultimate Loss The incurred loss plus the IBNR reserve. The ultimate loss is the estimate of the total cost to settle all claims in the accident year.

New Jersey Turnpike Authority

**Proposal to Provide
Actuarial Services for OCIPS**

RFQ RM-127785

Firm: AMI Risk Consultants, Inc.
1336 SW 146th Ct.
Miami, FL 33184

Contact: Aguedo (Bob) Ingco, FCAS, MAAA, CPCU, ARM

Telephone: (305) 273-1589

Fax: (702) 359-0926

Date: October 28, 2016

AMI Risk Consultants, Inc.

1396 SW. 146th Ct.,
Miami, Florida 33184

Tel: (305) 278-1589
Fax: (305) 330-5427

2878 Loveland Dr. #2208
Las Vegas, NV 89109

Tel: (702) 478-6924

October 28, 2016

Ms. Angela McNally
Procurement and Materials Management Dept.
New Jersey Turnpike Authority
P.O. Box 5042
Woodbridge, NJ 07095-5042

Sent via E-mail:
mcnally@turnpike.state.nj.us

RE: Request for Quote (RFQ) RM-127785 – Actuarial Services for OCIPS

Dear Ms. McNally:

Thank you for the opportunity to submit our price quotation to perform the actuarial services for the New Jersey Turnpike Authority's (the "*Authority*") Owner Controlled Insurance Programs.

AMI understands the requirements of the Authority and the services to be provided to meet the requirements of the project as stated in the RFQ. AMI agrees to comply with the Government Accounting Standards Board Statement 10 (GASB 10) as they relate to this service.

Background on AMI Risk Consultants, Inc. (AMI)

AMI is a property/casualty actuarial and risk management consulting firm that specializes in performing actuarial reviews of Loss and Loss Adjustment Expense (LAE) reserves for the following: self-insurance programs and funds, property/casualty insurance companies, pools and risk retention groups. For more information about AMI, please visit our website at <http://www.amirisk.com>.

Advantages of Engaging with AMI

- *Expert Staff*

Including myself, our staff includes two (3) Fellows of the Casualty Actuarial Society (FCAS) and members of the American Academy of Actuaries (MAAA) with over a hundred (100) years of combined actuarial experience. Our background and experience is broad, covering such areas as loss reserving, forecasting, pricing, statutory accounting, risk management, claims administration, and reinsurance.

- *Experience and Knowledge of Insurance Programs of Government Entities Particularly Transit Authorities*

We have performed numerous engagements for government entities, particularly transit authorities including New Jersey Turnpike Authority, Chicago Transit Authority, Oregon-Metro, Massachusetts Port Authority, Hampton Roads Transit, Jacksonville Transportation Authority, Alameda-Contra Costa Transit District, and the Hillsborough Area Regional Transit Authority. Consequently, we understand and appreciate the issues and the intricacies involved in managing public self-insurance programs.

- *Prompt and Responsive Service*

Our clients have engaged us because they know we fully commit our resources to deliver prompt and responsive service. We pride ourselves in our ability to not only identify and communicate potential problems but to aid in their resolution. We always take the effort to understand the client's business and its objectives so we can make better judgments regarding the appropriate methods and assumptions to use in performing the calculations.

- *Clear and Concise Communication*

The Authority will be well informed of project status. We are committed to working closely with the Authority to assure that project findings and subsequent recommendations are consistent with the City's objectives, concerns, and considerations.

- *Reasonable Cost*

Due to our relentless efforts to improve our productivity, we manage to maintain low overhead costs. Consequently, you can be assured of a better quality product and service at very competitive rates.

Scope of Services

AMI will prepare and provide to the Authority a valuation report as of September 30, 2016. The valuations will include:

- A. Ultimate loss frequency and severity by line of coverage, by each of the years for each of the OCIPs;
- B. Ultimate loss frequency by line in the aggregate for each of the OCIPs; and
- C. Ultimate loss frequency across both lines in the aggregate, for each OCIP.

AMI will also provide forecasts at 5% confidence intervals ranging from 5% to 95% for losses by line in the aggregate. The valuations will be conducted in accordance with the requirements of GASB 10. Moreover, AMI will provide the trend and development factors that will be used including loss triangles by line and in the aggregate.

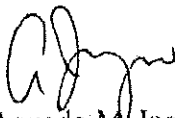
AMI will prepare and submit a draft report, on or before December 1, 2016, to summarize our estimates and conclusions and to describe the methods and assumptions we used to reach those conclusions. After discussing the draft report with the Authority and agreeing on the necessary changes, we will prepare and submit a final report not later than December 31, 2016.

Timing

AMI is prepared to begin the study at the Authority's earliest convenience. Draft reports are normally completed within three weeks after all the required data are submitted to us.

We certainly hope you will choose AMI Risk Consultants, Inc. to perform the actuarial consulting services. Rest assured that we are committed to providing you with prompt, responsive, and highest-quality service. Please give me a call at (305) 273-1589 if you have any question regarding our proposal.

Sincerely,



Aguedo M. Ingco, FCAS, MAAA, CPCU, ARM
President, AMI Risk Consultants, Inc.
1336 Sw 146th Ct.
Miami, FL 33184
Tel. (305) 273-1589
Fax. (702) 359-0926
Email: bobingco@amirisk.com

Attachments:

Bid Summary Sheet
References
AMI's Qualifications
AMI's Project Team
Resumés and Certifications
Aguedo Ingco, FCAS, MAAA, CPCU, ARM
Gail Flannery, FCAS, MAAA
Niño Joseph Páz, FCAS, ASA, MAAA
Comments on the Draft Agreement

ATTACHMENTS

NEW JERSEY TURNPIKE AUTHORITY

Procurement and Materials Management Department

P.O. Box 5042

Woodbridge, NJ 07095-5042

Tel. 732-750-5300 Ext. 8628

Fax. 732-750-5399

mcnally@turnpike.state.nj.us

Contact: Angela McNally
Requisition # RM-127785

Date: October 13, 2016

REQUEST FOR QUOTATION
THIS IS NOT AN ORDER

SUBJECT: ACTUARIAL SERVICES FOR OCIPS

PLEASE RETURN BY: OCTOBER 28, 2016 VIA FAX OR E-MAIL

TO: ALL BIDDERS:

THIS SOLICITATION IS BEING CONDUCTED PURSUANT TO NJSA 27:23-6.1, NJAC 19:9-2.1 et seq., AND THE AUTHORITY'S INSTRUCTIONS TO BIDDERS WHICH PROVIDE THE APPLICABLE TERMS AND CONDITIONS FOR THE RESULTING CONTRACT. (SEE ATTACHED INSTRUCTIONS TO BIDDERS AVAILABLE ONLINE AT: http://www.state.nj.us/turnpike/purchasing.html)

Please print your information requested below with submission of price quote.

Company Name: AMI Risk Consultants, Inc.

Address: 1336 SW 146th Ct.
Miami, FL 33184

AREA CODE & TELEPHONE NO: (305) 273-1589 AREA CODE & FAX NO: (702) 359-0926

E-MAIL ADDRESS: bobingco@amirisk.com

65-0339007
FEDERAL TAX I.D NO: or TAXPAYER I.D. NO:

BUSINESS CORPORATION PARTNERSHIP INDIVIDUAL

Requisition # RM-127785

DIVISION OF REVENUE REGISTRATION:

DIVISION OF REVENUE REGISTRATION-Pursuant to the terms of N.J.S.A. 52:32-44, bidders are required to submit to the Authority proof of valid business registration with the New Jersey Division of Revenue in the Department of Treasury, prior to entering into a contract with the Authority. No contract shall be entered into by the Authority unless the bidder first provides proof of valid business registration. In addition, bidders are required to provide to the Authority proof of valid business registration with the Division of Revenue for any and all subcontractors that will be used to provide goods or services under the contract. A copy of the bidder's and any subcontractor's valid Certificate of Registration should be included with the bid submission and must be in effect prior to the contract award.

All questions regarding this requirement should be referred to the Division of Revenue hotline at (609)-292-9292 or/online: <http://www.nj.gov/treasury/revenue/forms/njreg.pdf>

SMALL BUSINESS ENTERPRISE / MINORITY BUSINESS / WOMAN OWNED BUSINESS:

If your firm is registered with the State of New Jersey as a Small Business Enterprise (SBE), Certified as a Woman Business Enterprise (WBE) or Minority Business Enterprise (MBE) you must send a copy of the Registration / Certification Form with your quotation. Please check off the gross receipt category of your business if registered as an SBE

SBE CATAGORY 1	\$0- \$500,000	_____
SBE CATAGORY 2	\$500,001 thru \$5,000,000	_____
SBE CATAGORY 3	\$5,000,001 thru \$33,500,000	_____
NOT APPLICABLE	_____ ✓ _____	
SBE Registration #	_____	

Please check below if applicable:

Woman Business Enterprise _____ Minority Business Enterprise _____

Code of Ethical Standards:

The Proposers are advised that the Authority has adopted the New Jersey Uniform Code of Ethics, a copy of which can be viewed by going to the following web site: <http://nj.gov/ethics/docs/ethics/uniformcode.pdf> By submitting a Bid, the Proposer agrees to be subject to the intent and purpose of said Code and to the requirements of the Division on Ethical Standards of the State of New Jersey.

INTENTION:

It is the intention of the Authority to issue a one year Price Agreement for the procurement of Actuarial Services. Items purchased under this Agreement will be delivered as directed by the Authority. The term of the contract shall be for one year with the option to extend for three additional one-year terms at the Authority's discretion and Vendor's concurrence.

ANY INQUIRIES CONCERNING THIS SOLICITATION MUST BE SENT VIA FAX OR EMAIL NO LATER THAN THREE (3) BUSINESS DAYS BEFORE RECEIPT OF QUOTATIONS.

BID SUMMARY SHEET

ACTUARIAL SERVICES FOR OCIPS

LINE #	QUANTITY	DESCRIPTION	TOTAL
1	1	OCIP with insurance provided by Old Republic Insurance Company, as per the attached Specifications	\$ 5,800.00
2	1	Rolling OCIP underwritten by AIG, as per the attached Specifications	\$ 5,800.00
		Grand Total	\$ 11,600.00

Award will be made to the lowest, responsible bidder for the total price.

The Fee shall include all professional, administrative and clerical services and all out-of-pocket expenses incurred in connection with the completion of the Services required herein. Travel time or costs are not reimbursable.

CONTRACT PERIOD: The contract shall be for term of one (1) year. At the expiration of this contract, providing the consultant services have been satisfactorily performed in the sole opinion of the Authority and the consultant is willing to continue under the same terms and conditions, the Authority reserves the right to make three (3) extensions of this contract for not more than one year each. Quotation should not include Federal Excise Tax or N.J. State Sales & Use Tax as the Authority is exempt from payment of same.

BIDS WILL BE CONSIDERED FIRM FOR A PERIOD OF SIXTY (60) BUSINESS DAYS FOLLOWING THE RETURN DATE

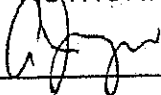
PLEASE FAX OR EMAIL YOUR QUOTATION, DO NOT MAIL.

NEW ELECTRONIC PAYMENT: The successful vendor will be required to receive their payment(s) electronically via automatic deposit from the Authority, see Exhibit M in the Instructions to Bidders on the Authority's website. <http://www.state.nj.us/turnpike/purchasing.html>

DELIVERY DATE: December 31, 2016 (final report)

DATE: October 28, 2016

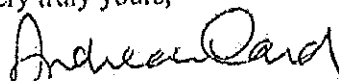
AUTHORIZED SIGNATURE



(ALSO PRINT NAME)

Aguedo M. Ingco, President,
AMI Risk Consultants, Inc.

Very truly yours,



Andrea E. Ward, Director
Procurement and Materials Management

AEW/am

References

Experience in certifying loss reserves and evaluating compliance with GASB 10 for Owner Controlled Insurance Programs and others.

Massachusetts Port Authority (MA)

One Harborside Drive
East Boston, MA 02128
Mr. Frank Rivera
Acting Director
Tel. 617-568-3966
Email: FRivera@massport.com

- Estimated and certified the self-insurance reserves and owner controlled insurance reserves since 2010. Coverage's include workers' compensation, port & stevedores liability, aviation liability, longshoremen's workers' compensation, property, directors & officers.

Agrinational Insurance Company

76 St. Paul Street, Suite 500
Burlington, VT 05401-4497
Mr. Andrew Hamme, CPA
Account Executive—Aon Insurance Managers (USA), Inc.
Tel. 1.802.264.4592
Email: Andrew.Hamme@aon.com

- Estimated and certified loss and loss adjustment reserves for the Agrinational Insurance Company. Policy groups include Owner Controlled Insurance Programs for workers' compensation and general liability.

Chicago Transit Authority (IL)

Chicago Transit Authority
P.O. Box 7565
Chicago, IL 60680
Ms. Sharon Weiler, CPA
General Manager Financial Reporting
Tel. (240) 777-8911
Email: Sweiler@transitchicago.com

- AMI has completed the actuarial study and certification of the loss reserves for its Workers' Compensation Self-Insurance Program since 2012.

AMI's Qualifications

AMI's qualifications and expertise gained through our extensive experience can be summarized as follows:

Fellows of the Casualty Actuarial Society

AMI has three (3) Fellows of the Casualty Actuarial Society (CAS) employed to perform the actuarial services that meet all appropriate standards of practice established by the CAS. Aguedo Ingco, who will lead the engagement team, is a Fellow of the Casualty Actuarial Society (FCAS) and will be responsible for coordinating all the appropriate resources of AMI for an effective and efficient execution of the required tasks.

Gail Flannery, FCAS, will be the technical manager. *Most services for the Authority will be performed by her or will be under her direct supervision.*

Niño Joseph Paz, FCAS, will perform some of the actuarial calculations that may need to be done.

Members of American Academy of Actuaries (MAAA)

All key personnel assigned to the project are Members of the American Academy of Actuaries (MAAA). All of them have completed an average of 12 credit hours per year of activities obtained over a two year period necessary to satisfy the continuing education requirement.

Chartered Property/Casualty Underwriter

Aguedo Ingco is a certified Chartered Property/Casualty Underwriter.

Continuing Education

AMI's goal is to offer quality service by using qualified and experienced people. AMI pursues this goal by emphasizing and requiring all actuarial staff to continuing education and knowledge of emerging issues from the National Association of Insurance Commissionaires (NAIC) and the Casualty Actuarial Society (CAS). As an example of compliance, we make it a point to attend 2 to 3 NAIC conventions a year, the annual CAS Conference and numerous actuarial and risk management conventions.

Prior Knowledge of the Authority's Accounting Systems and Reserving Methods

AMI has already provided actuarial services to the Authority. Because of this, we are familiar with the Authority's accounting systems and reserving methods. Consequently, we do not see any difficulty in updating our knowledge and perspective of the Authority's accounting systems and reserving methods.

AMI's Qualifications

(Continued)

AMI's Expertise in Workers' Compensation Insurance

By successfully assisting various Municipalities, State Insurance Department, Insurance Companies, Self-Insured Programs, and State Agencies, we have demonstrated working knowledge and understanding of workers' compensation claims, workers' compensation law and practices, and workers' compensation claims handling and auditing. AMI's extensive experience in workers' compensation can be summarized as follows:

- AMI has estimated workers' compensation funding requirements for various municipalities and other government entities to comply with GASB 10 requirements.
- AMI has assisted several state insurance departments in its examination of workers' compensation insurance companies domiciled in their respective states.
- AMI completed the actuarial review of the Oregon State Accident Insurance Fund (SAIF) on behalf of the Oregon Insurance Division.
- AMI had performed the actuarial analysis of the State of Wisconsin Self-Insurance Program.
- AMI has assisted the California Department of Insurance in the financial examination of the State Compensation Insurance Fund (SCIF) since 1996 up to present.
- AMI has performed the annual actuarial analysis of the Arizona Special Workers' Compensation Fund since 1999.
- AMI performed the actuarial study of the State of Maine Workers' Compensation Self-

Insurance Program.

- AMI performed the actuarial review of the Texas Subsequent Injury Fund (SIF) for the purpose of analyzing its long term solvency and in evaluating future funding requirements.
- AMI performed the actuarial review of the Pennsylvania State Workmen's Insurance Fund (SWIF) as of December 31, 1995.
- AMI has worked as a subcontractor of William Mercer, Inc. in performing workers' compensation loss reserves evaluation for the Pennsylvania Catastrophic Fund and the Workers' Compensation Security Fund.
- AMI has certified workers' compensation reserves of captive insurance companies, pools, and self-insurance programs.
- AMI assisted the California Insurance Department in evaluating the effect of the Open Rating by evaluating the profitability of its two largest workers' compensation specialty companies.

We "live" and "breathe" workers' compensation loss reserve reviews. In the past years, we have performed loss reserve reviews for the following: 6 State Funds, 10 companies on behalf of 3 State Insurance Departments, 5 insurance companies whose reserves we certified, 50 government entities, and 20 corporate self-insurance funds. Total amount-\$7.5 billion.

This total immersion to workers' compensation makes us uniquely qualified to assist the Authority.

AMI's Qualifications

(Continued)

AMI's Extensive Expertise in Property and Casualty Insurance

- AMI has estimated funding requirements for various municipalities and other government entities to comply with GASB 10 requirements. *Clients include Miami-Dade County (FL), Miami-Dade School Board (FL), Hidalgo County (TX), Lake County (FL), Orange County (FL), Palm Beach County (FL), Bay County (MI), Collier County (FL), Baltimore County (MD), Anne Arundel County (MD), Montgomery County (MD), City of Chesapeake (VA), Hampton Roads Transit (VA), School Boards of Broward, Dade, City of Hollywood (FL), City of Ocala (FL), City of Bridgeport (CT), City of Coral Gables (FL), City of Sparks (NV), Jacksonville Transportation Authority (FL), Newark Housing Authority (NJ), Navajo Housing Authority (AZ), etc.*
- AMI has performed loss reserve review of self-insured programs for non-government entities. *Clients include Burger King Corporation, Performance Food Group, Applied Industrial Technologies, Inc., Broyhill Furniture, Blue Cross Blue Shield of Florida, Ikon Office Solutions, etc.*
- AMI performed the actuarial review of several State Insurance Funds including: *the Wisconsin Self-Insurance Program, the Maine Self-Insurance Fund, the Texas Subsequent Injury Fund, the Arizona Special Workers' Compensation Fund, the California State Compensation Insurance Fund, the Pennsylvania State Workers' Insurance Fund, and the Oregon State Accident Insurance Fund.*
- AMI is the appointed consultant for several auto insurance companies.
- AMI has certified loss reserves of captive insurance companies, pools and self-insurance programs.
- AMI has assisted several state insurance departments in their examination of property and casualty insurance companies in evaluating the reasonableness of loss reserves and rates used.
- AMI assisted the California Department of Insurance (CDI) evaluate the effect of Open Rating by evaluating the profitability of its two largest workers' compensation specialty companies.
- AMI reviewed the rate filings for the Oklahoma Insurance Department and the Texas Department of Insurance.

Because of our experience working for government self-insurance programs, and on loss reserves expertise in property and casualty lines of insurance, we are uniquely qualified to assist the Authority.

AMI's Project Team

***Project Director & Peer Reviewer -
Aguedo Ingco, FCAS, MAAA, CPCU, ARM***

Aguedo will be responsible for coordinating all the appropriate resources of AMI for an effective and efficient execution of the required tasks. He is the President and the Lead Actuary of AMI. *He will lead the engagement team and will directly supervise all services to be performed.* He has estimated and certified loss reserves for various state funds, municipalities, self-insurance programs, captive insurance companies, and associations. He has performed allocation of the cost of risk and other risk management consultancy services for various entities. He will also perform the peer review for this engagement. He will check the appropriateness of the methods, assumptions and selections we

Technical Manager - Gail Flannery, FCAS, MAAA

Gail will act as the technical manager for this engagement. She will help in developing an effective strategy and approach for this engagement. She will work closely with the Authority's contacts. She has worked extensively in the rate-making and reserving of property and casualty lines of insurance. She has more than 10 years of first-hand experience performing actuarial services for AMI's self-insured clients. *Most services for the Authority will be performed by her or will be under her direct supervision.*

Consulting Actuary - Niño Joseph Paz, FCAS, ASA, MAAA

Nino will perform some of the actuarial calculations that may need to be done. He has been actively providing actuarial support and assistance in our engagements with several counties, cities, self-insurance funds, state insurance departments, and insurance companies regarding review of loss reserves and rate settings.

Aguedo Ingco, FCAS, MAAA, CPCU, ARM

Professional and Business Experience

Mr. Aguedo Ingco has over forty-one years of actuarial and risk management experience. His expertise is in estimating and analyzing loss reserves for government and non-government entities. *He has demonstrated working knowledge and understanding of GASB 10 requirements.* He has first hand experience in the evaluation and assessment of the reserving practices of governmental entities. He has audited the reserves of various State Funds. He has also performed insurance effectiveness and claims administrative reviews. *He has extensive experience in developing self-insurance funding requirements for such lines of business as workers' compensation, automobile liability, general liability, auto physical damage, property losses, etc.*

Education and Professional Certifications

B.S. Mathematics and Physics
United States Naval Academy
Annapolis, MD

Fellow, Casualty Actuarial Society (FCAS)

Member, American Academy of Actuaries
(MAAA)

Chartered Property Casualty Underwriter
(CPCU)

Associate in Risk Management (ARM)

Member, South Florida Chapter of the CPCU

Professional and Business History

AMI Risk Consultants, Inc., Miami, FL

1992 to Present: President and Consulting Actuary. Currently provides actuarial and risk management consulting services to self-insurance funds, insurance regulators, and captive insurance companies.

Price Waterhouse, Miami, FL

1984-1992: Actuary and Director. For eight years, provided actuarial support and assistance regarding audits of and consulting services for insurance companies, Workers' Compensation State Funds, HMO's, and other self-insurance funds.

Booke & Co. (McNeary Risk Management) Charlotte, NC

1981-1984: Vice President and Actuary. Performed rate filings, loss reserve reviews, and certifications. Developed medical malpractice insurance rates for several State Medical Association sponsored medical malpractice companies.

Fireman's Fund Insurance Co., San Francisco, CA

1978-1981: Associate Actuary. Developed Commercial and Personal Auto rates for the Company.

American International Group Insurance, New York, NY

1974-1978: Assistant Actuary.



Megan Chase
Actuaries' Resource Representative

**100 Years of Expertise,
Insight & Solutions**

February 10, 2015

To Whom It May Concern,

This letter is verification that Mr. Aguedo M. Ingco is a Fellow Member of the Casualty Actuarial Society (CAS) and that his membership is current and in good standing. Mr. Aguedo M. Ingco has been a Fellow member with CAS since 1981. He obtained his FCAS designation by examination.

If you need additional information please call me at (703)276-3100x745 or email me at mchase@casact.org.

Sincerely,

Megan Chase
Actuaries' Resource Center Representative

Casualty Actuarial Society 4350 North Fairfax Drive, Suite 250, Arlington, VA 22203
mhagner@casact.org 703.276.3100x746 tel 703.276.3108 fax
www.casact.org

Gail Flannery, FCAS, MAAA

Professional and Business Experience

Ms. Gail Flannery has worked extensively in property/casualty insurance ratemaking and reserving for over thirty-five years. Before joining AMI, she was Vice President and Actuary for American Bankers Insurance Group. She was responsible for the ratemaking and rate filing support for American Bankers' products in various states. She also supervised statistical reporting for over ten years. She has expertise in estimating and analyzing loss reserves for government and non-government entities. *She has demonstrated working knowledge and understanding of self-insured programs and compliance of GASB 10 requirements.* As the Technical Manager for most of the projects of AMI, *she has demonstrated working knowledge and understanding of self-insured programs and compliance of GASB 10 requirements.*

Education and Professional Certifications

M.S. Statistics
Florida State University
Tallahassee, FL

B.A. Mathematics
Hollins College
Roanoke, VA

Fellow, Casualty Actuarial Society (FCAS)

Member, American Academy of Actuaries (MAAA)

Professional and Business History

AMI Risk Consultants, Inc., Miami, FL

1997 to Present: Actuarial Consultant. Acts as Technical Manager for most of the current actuarial consulting work of AMI.

American Bankers Insurance Group, Miami, FL

1992-1996: Vice President and Actuary. Responsible for 20 actuaries, actuarial students, and statistical reporting staff. Provided ratemaking and reserving support to American Bankers Insurance Company and six P&C subsidiaries (three Foreign). Rendered reserve opinions for nine companies. Prepared annual business plan.

1980-1991: Actuarial Analyst/Senior Actuarial Assistant/Assistant Actuary. Progressive responsibilities over the years including the following: rate reviews and rate filing support of specialty products, including Automobile Liability, Auto Warranty, Force-Placed Auto/ Antique, and Collectible Auto. Proposed rates and rating plans. Filed rates. Wrote system specifications to capture necessary data and to alter statistical calls to include product. Set quarterly reserves for all product lines. Wrote and maintained loss reserving software used from 1981-1995.

1978-1979: Project Team Member. Part of a four-member "user team" that tested "Policy Management System" (PMS) software. Designed statistical coding for 25 insurance products. Assisted with conversion of in-force policies and open claims to new system.

Florida Department of Commerce, FL

1976-1978: Labor Market Analyst. Conducted employer surveys.



Megan Chase
Actuaries' Resource Representative

100 Years of Expertise,
Insight & Solutions

February 10, 2015

To Whom It May Concern,

This letter is verification that Ms. Nancy Gail Flannery is a Fellow Member of the Casualty Actuarial Society (CAS) and that her membership is current and in good standing. Ms. Nancy Gail Flannery has been a Fellow member with CAS since 1992. She obtained her FCAS designation by examination.

If you need additional information please call me at (703)276-3100x745 or email me at mchase@casact.org.

Sincerely,

Megan Chase
Actuaries' Resource Center Representative

Niño Joseph Paz, FCAS, ASA, MAAA

Professional and Business Experience

Mr. Paz is a recent addition to the team and has been actively providing actuarial support and assistance in our engagements with several counties, cities, state insurance departments, self-insurance funds, and insurance companies regarding review of loss reserves and rate settings. He has gained extensive computer and statistical skills which includes proficiency in Excel (including PivotTable and macro programming), Word, Access (including SQL programming), Visual Basic, SAS, SQL Server, SPSS, EViews, and Stata throughout his previous engagements as an undergraduate student and current projects at AMI.

Education and Professional Certifications

B.S. Statistics, *Summa cum Laude*
University of the Philippines, Diliman

Fellow, Casualty Actuarial Society (FCAS)

Associate, Society of Actuaries (ASA)

Member, American Academy of Actuaries
(MAAA)

Professional and Business History

AMI Risk Consultants, Inc.

May 2011-Present: Actuarial Supervisor. Assists actuaries in a wide variety of property/casualty insurance projects including review of loss reserves, rate setting for local insurance companies, and audits of insurance entities.



Meaghan Hagner
Actuaries' Resource Representative

**100 Years of Expertise,
Insight & Solutions**

July 17, 2014

To Whom It May Concern,

This letter is verification that Mr. Nino Paz is a Fellow Member of the Casualty Actuarial Society (CAS) and that his membership is current and in good standing. Mr. Nino Paz has been a Fellow member with CAS since 2014. He obtained his FCAS designation by examination.

If you need additional information please call me at (703)276-3100 or email me at mhagner@casact.org.

Sincerely,

Meaghan Hagner

Casualty Actuarial Society 4350 North Fairfax Drive, Suite 250, Arlington, VA 22203
mhagner@casact.org 703.276.3100x746 tel 703.276.3108 fax
www.casact.org

Comments on the Draft Agreement

A MI agrees with the terms and conditions set in the draft agreement provided by the Authority with the RFQ.