Attached is the agenda packet for the October 30, 2023 Board Workshop Meeting. For those of you with Drop Box, the file will be placed in the Drop Box Folder.

The Village Board meeting will begin at 7:00 PM. All discussions and business will occur at the Village Board meeting. After consideration of the meeting minutes and accounts payable, the meeting will proceed to new and old business.

Please contact the Mayor if you have any questions or if you wish to attend the meeting electronically.

AGENDA
VILLAGE OF LAKE VILLA
BOARD OF TRUSTEES
WORKSHOP AGENDA
October 30, 2023
7:00 pm

1. Call to Order and Roll Call
2. Pledge of Allegiance
3. Public Comment
4. Discussion Items:
   a. Discussion: Lauterbach & Amen Actuarial Results for Police Pension Fund
   b. Discussion: Pavement Management Program Update
   c. Discussion: Water Tower Project Update
   d. Discussion: Potential Water Meter Replacement Program Update
   e. Discussion: Kayak Rentals at Lehman Park – Rent Fun
5. Adjournment

DATE: October 25, 2023

TO: Village Board of Trustees

FROM: Michael Strong
Village Administrator

RE: Agenda Transmittal – October 30, 2023 Village Board Workshop Meeting

Discussion Items:

a. **Discussion: Lauterbach & Amen Actuarial Results for Police Pension Fund**

Staff Contact: Christine McKinley, Finance Director

Lauterbach & Amen, LLP, the accounting firm responsible for preparing the Police Pension Fund annual financial statements will present the draft FY23/34 Lake Villa Police Pension Fund actuarial valuation for Village Board review. State law requires that the Village Board accept the Police Pension Fund's Report annually, a copy of which is included in the agenda packet.

Annually the Police Pension Board presents the Village Board with a recommended contribution amount under the selected Funding Policy along with an Alternative Contribution. These include the statutory or local pension funding policy contribution amounts that would achieve 90% or 100% funded by 2040.

	Contribution Amount	%Change YTY
Statutory Minimum (90% by 2040)	$833,421	9.89%
Village Policy (100% by 2040)	$993,759	8.96%
2022 Levy/FY2024 Contribution RECOMMENDED	$835,122	

Village staff requests direction from the Village Board on a preferred funding contribution that will be used to help determine the FY2024/2025 tax levy. Staff will present an overview of the tax levy process during the meeting on November 6, 2023.

b. Discussion: Pavement Management Program Update

Staff Contact(s): Michael Strong, Village Administrator & Ryan Horton, Superintendent of Public Works

In January, the Village of Lake Villa was awarded financial assistance through the Chicago Metropolitan Agency for Planning ("CMAP") to develop a pavement management plan for the community. The purposes of a pavement management plan are to outline pavement preservation techniques, understand the current condition of pavements, develop scenarios for evaluating costs, and recommend capital planning options based on a desired pavement condition and spending scenario.

As part of this project, Applied Pavement Technology, Inc. ("APT") was contracted through CMAP to evaluate the current condition of the Village of Lake Villa's pavement network and implement a pavement management system using PAVER™ software to forecast conditions, generate budget scenario planning, and recommend future maintenance and rehabilitation plans.

APT representatives will be present during the workshop meeting to provide an overview of the program, share data that has been collected on the Village's roadways and discuss opportunities for future maintenance and rehabilitation programs. A copy of the presentation is included in the agenda packet.

c. Discussion: Water Tower Project Update

Staff Contact: Jim Bowles, Superintendent of Public Works & Bob Doeringsfeld, Applied Technologies, Inc.

At the September 18, 2023 Village Board meeting a discussion was held concerning the Well No. 7 Booster Station Project and whether to pursue the project, or reject the bids and consider an alternative measure to address pressure transient issues occurring between the north and south sections of the water distribution system.

As discussed, the purpose of the booster station at Loffredo Park would be to transfer water form lower pressures in the south to the higher-pressure north sections that would all the Village full utilization of the northern water tower (Blue Tower) at Deep Lake Road and Grass Lake Road. However, since bids for this project came in nearly 60% over budget Village staff began to explore an alternative approach that includes lowering Tower B by approximately 12 feet to achieve the same result. Since the September meeting, Village staff has been in contact with contractors regarding the potential of this project, and at the Village Board's direction, has undergone new water modeling with Stanley Consultants to better understand the running scenarios to simulate water pressure needs should the tower be taken out of service for this approach.

Staff will present an update to the Village Board on the status of this alternative approach concept during the Workshop meeting, and will review a very preliminary schedule for next steps should the Village Board support pursuing this alternative approach.

d. Discussion: Potential Water Meter Replacement Program Update

Staff Contact: Jim Bowles, Superintendent of Public Works & Bob Doeringsfeld, Applied Technologies, Inc.

As a follow up to the July 7, 2023 Village Board Workshop meeting, staff have been in communication with additional water meter vendors relative to a proposed water meter replacement program. Staff will present a brief overview of additional provider and technology options the Village may consider for the program in the future. Staff will is seeking direction from the Village Board on a preferred procurement process for meter replacement program.

e. Discussion: Kayak Rentals at Lehman Park – Rent Fun

Staff Contact: Jake Litz, Assistant to the Village Administrator

Following discussions concerning the implementation of the Village's Comprehensive Plan and Downtown TOD Plan, staff will be presenting a proposal from a Kayak Rental Company, Rent Fun. Rent Fun provides kayak rentals for municipalities and park districts. Their company will provide 10' x 3.5' lockers with 4 kayaks available for rent. Lehman Park offers a fantastic opportunity for a product such as this.

At the March 21, 2022 Village Board meeting, the Village Board discussed a similar proposal. One of the Downtown Goals cited in the Downtown DOT Plan is to "Focus on sports and recreation as anchor uses in and around the Lake Villa Triangle to attract, customers, and prospective investors." Additionally, another goal focuses on expanding access to Cedar Lake to non-motorized sports. A potential non-motorized recreational opportunity fits well with the goals and objectives of both the Comprehensive Plan and the Downtown TOD Plan. Per the attached proposal, the activation fee for a 4-unit kayak locker is $18,000 for a 5-year term. The Village would be able to set the price point for each kayak rental and the Village would receive a 50% revenue share throughout the duration of the 5 years. Additionally, this service requires minimal staff resources and time as the lockers are self-service. Interested customers simply scan a QR Code located on the locker, pay through the Rent Fun app, enjoy their kayak for an allotted amount of time, and return when finished.

Staff will be seeking feedback from the Village Board to gauge the interest of engaging with Rent Fun.

Funding Actuarial Valuation
as of May 1, 2023

LAKE VILLA POLICE PENSION FUND

For the Contribution Year
May 1, 2023 to April 30, 2024

LAUTERBACH & AMEN, LLP

Actuarial Funding Report

Lauterbach & Amen, LLP

CERTIFIED PUBLIC ACCOUNTANTS

LAKE VILLA POLICE PENSION FUND

Contribution Year Ending: April 30, 2024
Actuarial Valuation Date: May 1, 2023
Data Date: April 30, 2023

Submitted by:

Lauterbach & Amen, LLP
668 N. River Road
Naperville, IL 60563
Phone: 630.393.1483
www.lauterbachamen.com

Contact:

Todd A. Schroeder
Partner
August 16, 2023

LAUTERBACH & AMEN, LLP

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ACTUARIAL CERTIFICATION

This report documents the results of the Actuarial Valuation for the Lake Villa Police Pension Fund. The information was prepared for use by the Lake Villa Police Pension Fund and the Village of Lake Villa, Illinois for determining the Recommended Contribution, under the selected Funding Policy, and the Alternative Contribution for the Contribution Year May 1, 2023 to April 30, 2024. It is not intended or suitable for other purposes. Determinations for purposes other than the Employer's Actuarial Recommended Contribution may be significantly different from the results herein.

The results in this report are based on the demographic data and financial information submitted by the Lake Villa Police Pension Fund, and may include results from the prior Actuary. We did not prepare the Actuarial Valuations for the years prior to May 1, 2020. Those valuations were prepared by the prior Actuary whose reports have been furnished to us, and our disclosures are based on those reports. An audit of the prior Actuary's results was not performed, but high-level reviews were completed for general reasonableness, as appropriate, based on the purpose of this valuation. The accuracy of the results is dependent on the precision and completeness of the underlying information.

In addition, the results of the Actuarial Valuation involve certain risks and uncertainty as they are based on future assumptions, market conditions, and events that may never materialize as assumed. For this reason, certain assumptions and future results may be materially different than those presented in this report. See the *Management Summary* section of this report for a more detailed discussion of the Defined Benefit Plan Risks, as well as the limitations of this Actuarial Valuation on assessing those risks. We are not aware of any known events subsequent to the Actuarial Valuation Date, which are not reflected in this report but should be valued, that may materially impact the results.

The valuation results summarized in this report involve actuarial calculations that require assumptions about future events. The Lake Villa Police Pension Fund selected certain assumptions, while others were the result of guidance and/or judgment from the Plan's Actuary or Advisors. We believe that the assumptions used in this valuation are reasonable and appropriate for the purposes for which they have been used. The selected assumptions represent our best estimate of the anticipated long-term experience of the Plan, and meet the guidelines set forth in the Actuarial Standards of Practice.

In preparing the results, our Actuaries used commercially available software (ProVal) developed by Winklevoss Technologies, LLC. This software is widely used for the purpose of performing Actuarial Valuations. Our Actuaries coded the plan provisions, assumptions, methods, and demographic data summarized in this report, and reviewed the liability and cost outputs for reasonableness. We are not aware of any material weaknesses or limitations in the software, and have determined it is appropriate for performing this valuation.

To the best of our knowledge, all calculations are in accordance with the applicable funding requirements, and the procedures followed and presentation of results conform to generally accepted actuarial principles and practices as prescribed by the Actuarial Standards Board. The undersigned consultants of Lauterbach & Amen, LLP, with actuarial credentials, meet the Qualification Standards of the American Academy of Actuaries to render this Actuarial Certification. There is no relationship between the Lake Villa Police Pension Fund and Lauterbach & Amen, LLP that impairs our objectivity.

Respectfully Submitted,

LAUTERBACH & AMEN, LLP

Todd A. Schroeder, ASA, FCA, EA, MAAA

Robert L. Rietz, Jr., FCA, EA, MAAA

MANAGEMENT SUMMARY

Recommended Contribution
Funded Status
Management Summary – Comments and Analysis
Actuarial Recommended Contribution – Reconciliation

RECOMMENDED CONTRIBUTION

	Prior Valuation	Current Valuation
Recommended Contribution	$912,021	$993,759
Expected Payroll	$1,402,012	$1,589,187
Recommended Contribution as a Percent of Expected Payroll	65.05%	62.53%

The Recommended Contribution has Increased by $81,738 from the Prior Valuation.

FUNDED STATUS

	Prior Valuation	Current Valuation
Normal Cost	$385,095	$424,985
Fair Value of Assets	$9,259,581	$9,834,151
Actuarial Value of Assets	$9,762,536	$10,454,869
Actuarial Accrued Liability	$18,280,849	$19,353,852
Unfunded Actuarial Accrued Liability/(Surplus)	$8,518,313	$8,898,983
<u>Percent Funded</u>		
Actuarial Value of Assets	53.40%	54.02%
Fair Value of Assets	50.65%	50.81%

The Percent Funded has Increased by 0.62% on an Actuarial Value of Assets Basis.

MANAGEMENT SUMMARY – COMMENTS AND ANALYSIS

Contribution Results

The Recommended Contribution is based on the selected Funding Policy and methods that are outlined in the *Actuarial Funding Policies* section of this report.

"Contribution Risk" is defined by the Actuarial Standards of Practice as the potential for actual future contributions to deviate from expected future contributions. For example, when actual contributions are not made in accordance to the Plan's Funding Policy, or when future experience deviates materially from assumed. While it is essential for the Actuary and Plan Sponsor to collaborate on implementing a sound and financially feasible Funding Policy, it is important to note that the Actuary is not required, and is not in the position to, evaluate the ability or willingness of the Plan Sponsor to make the Recommended Contribution under the selected Funding Policy.

As a result, while Contribution Risk may be a significant source of risk for the Plan, this Actuarial Valuation makes no attempt to assess the impact of future contributions falling short of those recommended under the selected Funding Policy. Notwithstanding the above, see the *Actuarial Recommended Contribution – Reconciliation* section of this report for the impact on the current Recommended Contribution of any contribution shortfalls or excesses from the prior year.

Defined Benefit Plan Risks

Asset Growth:

Pension funding involves preparing Fund assets to pay for benefits when Members retire. During their working careers, assets grow with contributions and investment earnings; and then, the Pension Fund distributes assets in retirement. Based on the Plan's current mix of Members and Funded Status, the Plan should experience positive asset growth, on average, if the Recommended Contributions are made and expected investment earnings come in. In the current year, the Fund asset growth was positive by approximately $574,600.

Asset growth is important in the long-term. Long-term cash flow out of the Pension Fund is primarily benefit payments, and expenses are a smaller portion. The Plan should monitor the impact of expected benefit payments on future asset growth. We assess and project all future benefit payments as part of the determination of liability. The assessment is made on all current Members of the Fund, both active and inactive. For active Members, the assessment includes the probability that Members terminate or retire and begin receiving benefits. In the next 5 years, benefit payments are anticipated to increase 40-45%, or approximately $312,100. In the next 10 years, the expected increase in benefit payments is 90-95%, or approximately $722,100. The estimated increase in benefit payments is being compared against the benefits paid to inactive Members during the fiscal year, excluding any refunds of Member Contributions.

Furthermore, plans with a large number of inactive Members have an increased "Longevity Risk". Longevity Risk is the possibility that inactive Members may live longer than projected by the Plan's mortality assumption. As shown in the previous paragraph, benefit payments are expected to increase over the next 5-year and 10-year horizons. The projected increases assume that current inactive Members pass away according to the Plan's mortality assumption. To the extent that current inactive Members live longer than expected, the future 5-year and 10-year benefit projections may be larger than the amounts disclosed in the previous paragraph. Higher levels of benefit payments, payable for a longer period of time, may cause a significant strain on the Plan's cash flow, future Recommended Contributions, and may lead to Plan insolvency.

Unfunded Liability:
Unfunded Liability represents the financial shortfall of the Actuarial Value of Assets compared to the Actuarial Accrued Liability. To the extent that Unfunded Liability exists, the Plan is losing potential investment earnings due to the financial shortfall. Contributions towards Unfunded Liability pay for the lost investment earnings, as well as the outstanding unfunded amount. If payments towards Unfunded Liability are not made, the Unfunded Liability will grow.

In the early 1990s, many Pension Funds in Illinois adopted an increasing payment towards Unfunded Liability due to a change in legislation. The initial payment decreased, and future payments are anticipated to increase annually after that. In many situations, payments early on were less than the interest on Unfunded Liability, which means that Unfunded Liability increased even though contributions were made at the recommended level.

The current Recommended Contribution includes a payment towards Unfunded Liability that is approximately $127,800 greater than the interest on Unfunded Liability. All else being equal, and contributions being made, Unfunded Liability is expected to decrease. The Employer and Fund should anticipate improvement in the current Percent Funded in the short-term. The Employer and Fund should understand this impact as we progress forward to manage expectations.

Actuarial Value of Assets:
The Pension Fund smooths investment returns that vary from expectations over a 5-year period. The intention over time is that investment returns for purposes of funding recommendations are a combination of several years. The impact is intended to smooth out the volatility of Recommended Contributions over time, but not necessarily increase or decrease the level of contributions over the long-term.

When investment returns are smoothed, there are always gains or losses on the Fair Value of Assets that are going to be deferred for current funding purposes, and recognized in future years. Currently, the Pension Fund is deferring approximately $620,700 in losses on the Fair Value of Assets. These are asset losses that will be recognized in upcoming periods, independent of the future performance of the Fair Value of Assets.

Cash Flow Risk:
Assets, liabilities, and Funded Status are good metrics to monitor over time to assess the progress of the Funding Policy. However, these metrics may provide limited forward-looking insights. Specifically, the

maturity of a Pension Fund can pose certain risks that often cannot be assessed with a point-in-time metric such as Percent Funded.

For example, two different Pension Funds could have the same Percent Funded, but have completely different risk profiles. One Fund might mostly cover active Members with little to no Members in pay status, whereas a second Fund might mostly cover inactive Members with a significant level of annual benefit payments. The latter Fund has a greater "Cash Flow Risk", i.e. a more significant chance that negative cash flows could lead to a deteriorating, rather than improving, Percent Funded over time.

It is important to note that, in general, positive net cash flows are good, but also need to be sufficient to cover the growth in the liabilities (i.e. the Normal Cost as well as interest on the Actuarial Accrued Liability). Typically, when cash flows are assumed to be insufficient to cover the growth in liabilities, the Percent Funded will decline, while future Recommended Contributions will increase.

For this Plan, the Fair Value of Assets is less than the Actuarial Accrued Liability for inactive Members. The Fund assets and anticipated investment earnings are not sufficient to cover the benefits payable to the current inactive Members. In addition, there is currently no money set aside for active Member liability. There are two consequences. First, we are limiting the impact of investment earnings on accruing money for the active Members due to utilizing those dollars to pay for the current inactive Members. Second, there is Cash Flow Risk that exists in that a higher portion of the assets is needed to keep up with cash flow out for benefit payments, and a higher relative investment return is required to keep cash flow positive in any given year.

Benefit Payment Risk:
Ideally, plans in a sound financial position will have the ratio of annual benefits payments to the Fair Value of Assets to be less than the Expected Rate of Return on Investments assumption (i.e. 6.50%). Theoretically, in this case it can be considered that investment returns will fully cover the annual benefit payments, and therefore, all Employer and Member Contributions made to the Fund will be used to pay for future benefit accruals and pay down the existing Unfunded Liability. To the extent that the ratio of the annual benefit payments to the Fair Value of Assets increases to above the Expected Rate of Return on Investments assumption, the Plan may experience some additional risks, such as the need to keep assets in more liquid investments, inability to pay down Unfunded Liability, and may lead to Plan insolvency.

As of the Valuation Date, the Lake Villa Police Pension Fund has a ratio of benefit payments to the Fair Value of Assets of 7.80%. In this case, a portion of the Employer Contributions are being used to pay the annual benefit payments creating Benefit Payment Risk and Cash Flow Risk. The Percent Funded of the Plan may not grow as quickly as expected under the current Funding Policy, since the amortization payment towards the Unfunded Liability is not being fully realized. As shown in the *Asset Growth* section of this report, the 5-year and 10-year horizons of future benefit payments are expected to increase. The Plan Sponsor should monitor the percentage of annual benefit payments to the Fair Value of Assets and consider changing the Funding Policy if this ratio continues to increase.

Fund Assets

The results in this report are based on the assets held in the Pension Fund. Assets consist of funds held for investment and for benefit payments as of the Actuarial Valuation Date. In addition, assets may be adjusted for other events representing dollars that are reasonably expected to be paid out from the Pension Fund or deposited into the Pension Fund after the Actuarial Valuation Date as well.

The current Fund assets are unaudited. As of the date of this report, the audit of the Fund assets is not complete, not available, or has not been provided.

The Fund Assets Used in this Report are Unaudited.

The current Fund assets are based on the year-end financials as prepared by the Pension Fund Accountant. The year-end financials represent a full accrual version of the fiduciary fund as of the end of the Fiscal Year, prepared in preparation for the audit. The changes to the fund cash balance as of the Fiscal Year End are non-cash items that can include accrued interest, due/unpaid expenses, prepaids, and other adjustments.

The Actuarial Value of Assets under the Funding Policy is equal to the Fair Value of Assets, with unexpected gains and losses smoothed over 5 years. More detail on the Actuarial Value of Assets can be found in the *Actuarial Funding Policies* section of this report.

<u>Demographic Data</u>
Demographic factors can change from year to year within the Pension Fund. Changes in this category include hiring new Members, Members retiring or becoming disabled, inactive Members passing away, and other changes. Demographic changes can cause an actuarial gain (contribution that is less than expected compared to the prior year) or an actuarial loss (contribution that is greater than expected compared to the prior year).

Demographic gains and losses occur when the assumptions over the one-year period for Member changes do not meet our long-term expectation. For example, if no Members become disabled during the year, we would expect a liability gain. If more Members become disabled than anticipated during the year, we would expect a liability loss. Generally, we expect short-term fluctuations in demographic experience to create gains or losses of 1%-3% of the Actuarial Accrued Liability in any given year, but to balance out in the long-term.

"Demographic Risk" occurs when Plan demographic experience differs significantly from expected. Similar to Longevity Risk discussed previously, additional risk is created when demographic experience differs from the assumed rates of disability, retirement, or termination. Under the chosen assumptions, actuarial gains and/or losses will always occur, as the assumptions will never be exactly realized. However, the magnitude of the gain and/or loss and its influence on the Recommended Contribution largely depends on the size of the Plan.

A key Demographic Risk is mortality improvement differing from expected. While the actuarial assumptions reflect small, continuous improvements in mortality experience and these assumptions are refined upon the completion of each actuarial experience study, the risk arises because there is a possibility of a sudden shift in mortality experience. This report reflects the impact of COVID-19 experience that has been accounted for in the underlying demographic data. This report does not reflect the ongoing impact of COVID-19, which is likely to influence demographic and economic experience, at least in the short-term. We will continue to monitor these developments and their impact on the Plan. Actual future experience will be reflected in each subsequent Actuarial Valuation, as experience emerges.

Based on the number of active Members in the Plan, the Recommended Contribution has a moderate risk of having a significant increase due to demographic experience. For example, 1 new disabled Member would typically generate a substantial increase to the Actuarial Accrued Liability, which in turn, may increase the Recommended Contribution.

In the current report, the key demographic changes were as follows:

New Hires: There were 3 Members of the Fund who were hired during the year. When a Member is admitted to the Pension Fund, the Employer Contribution will increase to reflect the new Member. The increase in the Recommended Contribution in the current year due to the new Member experience is approximately $39,700.

Retirement: There was 1 Member of the Fund who retired during the year. When a Member retires, the Normal Cost will decrease. Any change in the Actuarial Accrued Liability will be considered when determining the amount to pay towards Unfunded Liability each year. The decrease in the Recommended Contribution in the current year due to the retirement experience is approximately $15,700.

Mortality: As inactive Members age and continue to collect benefits, the Fund liability will increase. In the current year, there were 14 inactive Members who maintained their benefit collection status throughout the year. The increase in the Recommended Contribution in the current year due to the mortality experience is approximately $8,900.

Salary Increases: Salary increases were greater than anticipated in the current year. This caused an increase in the Recommended Contribution in the current year of approximately $530.

Assumption Changes

The assumptions were not changed from the prior valuation.

Plan Changes

Public Act 102-0811 passed on May 13, 2022 and is effective as of January 1, 2023 for Article 3 Pension Funds. The Act establishes that a surviving spouse of a deceased police retiree may be eligible for a survivor's pension of up to 15 years of benefit payments if (a) the surviving spouse has attained age 62 and (b) if the police officer was married to the surviving spouse after retirement, and for at least 5 years prior to the officer's death. Previously, there was no survivor's pension for spouses married after retirement. In our opinion, under a prudent interpretation of the provisions, we believe the impact to be de minimis. The legal community has suggested some uncertainty about multiple provisions contained in the Act, and the IDOI Public Pension Division has not provided an interpretation. The client has not made an administrative interpretation as to how the provisions of the Act will impact future surviving spouses. Due to the uncertainty around the interpretation and the expected *de minimis* impact, we have not valued this contingency separately for active Members. However, for any current retirees who were married after retirement and have been married for at least 5 years, as well as any surviving spouses currently in receipt of benefits under this provision, we have valued the liability of the benefit granted.

Late in 2022, the IDOI Public Pension Division issued an unofficial opinion that Tier II disabled Members are entitled to an initial COLA increase on the later of the January 1st after the pensioner turns age 60 or the January 1st after the benefit date anniversary equal to the lesser of 3% of the original benefit or ½ CPI-U. The prior interpretation from the IDOI Public Pension Division was that Tier II disabled members were entitled to an initial COLA increase on the later of the January 1st after the pensioner turns age 60 or the January 1st after the benefit date anniversary equal to 3% of the original monthly benefit for each full year that has passed since the pension began. In accordance with the new opinion, we have included a change in liability due to a change in the substantive plan, which includes written provisions as well as administrative interpretations. See the *Actuarial Recommended Contribution – Reconciliation* section of this report for the impact of this change on the current valuation.

Funding Policy Changes

The Funding Policy was not changed from the prior valuation.

Output Smoothing

Contributions are determined annually by allocating dollars over a specified period of time. Procedures that are used to allocate contributions over a period of time may include asset smoothing, amortization period, and output smoothing. Each procedure becomes part of the Actuarial Methodology. Output smoothing involves measuring the impact of a specific result on a contribution and recognizing the result. The final contribution should maintain a reasonable relationship to the full Actuarially Determined Contribution.

The current results shown throughout the report reflect the full Actuarially Determined Contribution.

ACTUARIAL RECOMMENDED CONTRIBUTION – RECONCILIATION

Actuarial Accrued Liability is expected to increase each year for both interest for the year and as active Members earn additional service years towards retirement. Similarly, Actuarial Accrued Liability is expected to decrease when the Fund pays benefits to inactive Members.

Contributions are expected to increase as expected pay increases under the Funding Policy for the Fund.

	Actuarial Liability	Recommended Contribution
Prior Valuation	$ 18,280,849	$ 912,021
Expected Changes	800,931	29,639
Initial Expected Current Valuation	$ 19,081,780	$ 941,660

Other increases or decreases in Actuarial Accrued Liability (key changes noted below) will increase or decrease the amount of Unfunded Liability in the Plan. To the extent that Unfunded Liability increases or decreases unexpectedly, the contribution towards Unfunded Liability will also change unexpectedly.

	Actuarial Liability	Recommended Contribution
Salary Increases Greater than Expected	$ (25,638)	$ 526
Actuarial Experience	303,161	40,679
Plan Changes	(5,451)	(4,637)
Investment Return Less than Expected*	-	16,096
Contributions Greater than Expected	-	(565)
Total Increase/(Decrease)	$ 272,072	$ 52,099
Current Valuation	$ 19,353,852	$ 993,759

*Impact on the Recommended Contribution due to investment return is on an Actuarial Value of Assets basis.

The Actuarial Experience can be attributable to several factors including, but not limited to, demographic changes and benefit payment experience compared to expectation. Key demographic changes were discussed in the *Demographic Data* section of this report.

VALUATION OF FUND ASSETS

Fair Value of Assets
Fair Value of Assets (Gain)/Loss
Development of the Actuarial Value of Assets
Actuarial Value of Assets (Gain)/Loss
Historical Asset Performance

FAIR VALUE OF ASSETS

Statement of Assets

	Prior Valuation	Current Valuation
Cash and Cash Equivalents	$ 633,947	$ 1,222,995
Money Market	320,240	154
Illinois Funds	1,205,512	1,243,133
Fixed Income	3,257,950	214,584
Pooled Investment Accounts	-	7,134,222
Stock Equities	180,859	-
Mutual Funds	3,286,764	-
Receivables (Net of Payables)	374,309	19,063
Total Fair Value of Assets	$ 9,259,581	$ 9,834,151

The Total Fair Value of Assets has Increased by Approximately $574,600 from the Prior Valuation.

Statement of Changes in Assets

Total Fair Value of Assets - Prior Valuation	$ 9,259,581
Plus - Employer Contributions	828,598
Plus - Member Contributions	227,258
Plus - Return on Investments	329,092
Less - Benefit Payments and Refunds	(779,046)
Less - Other Expenses	(31,332)
Total Fair Value of Assets - Current Valuation	$ 9,834,151

The Rate of Return on Investments on a Fair Value of Assets Basis for the Fund was Approximately 3.17% Net of Administrative Expense.

The Rate of Return on Investments shown above has been determined as a percent of the average of the prior and current Fair Value of Assets on the Statement of Changes in Assets. The Return on Investments is net of Other Expenses, and has been excluded from the Total Fair Value of Assets at the end of the Fiscal Year for this calculation.

FAIR VALUE OF ASSETS (GAIN)/LOSS

Current Year (Gain)/Loss on Fair Value of Assets

Total Fair Value of Assets - Prior Valuation	$ 9,259,581
Employer and Member Contributions	1,055,856
Benefit Payments and Refunds	(779,046)
Expected Return on Investments	610,869
Expected Total Fair Value of Assets - Current Valuation	10,147,260
Actual Total Fair Value of Assets - Current Valuation	9,834,151
Current Fair Value of Assets (Gain)/Loss	$ 313,109

Expected Return on Investments	$ 610,869
Actual Return on Investments (Net of Expenses)	297,760
Current Fair Value of Assets (Gain)/Loss	$ 313,109

The Actual Return on Investments on a Fair Value of Assets Basis was Less than Expected for the Current Year.

The (Gain)/Loss on the current Fair Value of Assets has been determined based on the Expected Rate of Return on Investments as shown in the *Actuarial Assumptions* section of this report.

DEVELOPMENT OF THE ACTUARIAL VALUE OF ASSETS

Total Fair Value of Assets - Current Valuation		$ 9,834,151
Adjustment for Prior (Gains)/Losses		
	Full Amount	Deferral
FYE 4/30/2023	$ 313,109	250,487
FYE 4/30/2022	1,029,065	617,439
FYE 4/30/2021	(784,493)	(313,797)
FYE 4/30/2020	332,945	66,589
Total Deferred (Gain)/Loss		620,718
Initial Actuarial Value of Assets - Current Valuation		$ 10,454,869
Less Contributions for the Current Year and Interest		-
Adjustment for the Corridor		-
Total Actuarial Value of Assets - Current Valuation		$ 10,454,869

The Actuarial Value of Assets is Equal to the Fair Value of Assets with Unanticipated (Gains)/Losses Recognized Over 5 Years. The Actuarial Value of Assets is 106.31% of the Fair Value of Assets.

ACTUARIAL VALUE OF ASSETS (GAIN)/LOSS

Total Actuarial Value of Assets - Prior Valuation	$ 9,762,536
Plus - Employer Contributions	828,598
Plus - Member Contributions	227,258
Plus - Return on Investments	446,855
Less - Benefit Payments and Refund	(779,046)
Less - Other Expenses	(31,332)
Total Actuarial Value of Assets - Current Valuation	$ 10,454,869

The Rate of Return on Investments on an Actuarial Value of Assets Basis for the Fund was Approximately 4.20% Net of Administrative Expense.

The Actuarial Value of Assets incorporates portions of gains and losses over multiple years.

HISTORICAL ASSET PERFORMANCE

The chart below shows the historical Rates of Return on Investments for both Fair Value of Assets and Actuarial Value of Assets.

	Fair Value of Assets	Actuarial Value of Assets
FYE 4/30/2023	3.17%	4.20%
FYE 4/30/2022	(4.27%)	4.97%
FYE 4/30/2021	16.31%	6.58%
FYE 4/30/2020	2.31%	4.06%
4-Year Arithmetic Average	4.38%	4.95%
4-Year Geometric Average	4.12%	4.95%

The historical Rates of Return on Investments shown above were calculated based on the annual Return on Investments, as a percentage of the average value of the assets for the year. The historical Rates of Return on Investments shown above may not reflect the current investment allocation of the Pension Fund.

For purposes of determining the average value of assets for the year, the ending Fair Value of Assets has been adjusted to net out to the portion related to the Return on Investments themselves. All other cash flows are included.

For purposes of determining the annual Return on Investments we have adjusted the figures shown on the preceding pages. The figures shown on the preceding pages are net of Investment Expenses. We have made an additional adjustment to net out Administrative Expenses. Netting out Administrative Expenses allows us to capture returns for the year that can be used to make benefit payments as part of the ongoing actuarial process.

The adjustments we made are for actuarial reporting purposes only. By netting out Administrative Expenses and capturing Return on Investments that are available to pay benefits, it provides us a comparison to the Expected Rate of Return on Investments, but does not provide a figure that would be consistent with the rates of return that are determined by other parties. Therefore, this calculated Return on Investments should not be used to analyze investment performance of the Fund or the performance of the investment professionals.

<u>Expected Rate of Return on Investments Assumption</u>

The Expected Rate of Return on Investments for this valuation is 6.50%. Lauterbach & Amen, LLP does not provide investment advice. We look at a variety of factors when reviewing the Expected Rate of Return on Investments assumption selected by the client. These factors include: historical Rates of Return on Investments, capital market projections performed by the Consolidated Board's investment advisors, the Consolidated Board's investment policy, capital market forward-looking benchmark expected returns by independent investment companies, rates used by comparable pension systems, and other factors identified in the Actuarial Standards of Practice.

Generally speaking, the ideal assumption for Expected Rate of Return on Investments is one that has a 50% chance of being met over the long-term. Recently, we have observed the following factors that impact Expected Rate of Return on Investments:

- Volatility in the market has been high which drags down long-term geometric returns.

- Similar pension systems are looking to reduce future expectations. We generally see about 95% of similar pension systems using an Expected Rate of Return on Investments that is between 6.00% and 7.25%.

- We have reviewed studies conducted by Firms who gather information from multiple investment advisors who provide models and opinions on capital market returns. Those studies help guide us to see if the assumption is expected to have a 50% chance of being met over the long-term. Plans are generally aiming towards 40^{th} to 60^{th} percentile returns, which can help define a range of reasonableness.

- We have reviewed an index of high-quality fixed income rates that takes into consideration the pattern of your benefit payments. The purpose of the review is to provide additional disclosure in Funding Actuarial Valuations for the Low-Default-Risk Obligation Measure. The rates in this measure are low-risk and are being used as an approximate for risk-free rates. Investment funds that incorporate diversified investments which build in more risk would be expected to earn a positive risk premium, over and above the risk-free rates.

If actual returns going forward come in less than expected, the pension system risks deferring contributions to the future that should be made today and creating additional contribution volatility. Below is a chart detailing the impact on the Recommended Contribution by decreasing or increasing the Expected Rate of Return on Investments by 25 basis points:

	0.25% Decrease (6.25%)	Current Expected Rate of Return on Investments (6.50%)	0.25% Increase (6.75%)
Recommended Contribution	$1,058,139	$993,759	$931,909

Currently, the client has selected an Expected Rate of Return assumption that falls within a reasonable range. We recommend the client review the Expected Rate of Return on Investments annually to ensure the selected rate remains within a reasonable range as market conditions change year-to-year.

"Investment Risk" is the potential that the actual Return on Investments will be different from what is expected. The selected Expected Rate of Return on Investments assumption is chosen to be a long-term assumption, producing a return that, on average, would produce a stable rate of return over a long-term horizon. Actual investment returns in the short-term may deviate from this long-term assumption due to current market conditions. Furthermore, establishing the Expected Rate of Return on Investments assumption may be dependent on the Illinois State Statutes pertaining to the limitations on types of investments Plan Sponsors may use. If the actual annual rates of return are less than the Expected Rate of Return on Investments, actuarial losses will be produced, thus increasing the Plan's Unfunded Liability and, subsequently, future Recommended Contributions.

"Asset/Liability Mismatch" risk is a similar concept as Investment Risk, as it relates to setting the Expected Rate of Return on Investments assumption compared to the actual Return on Investments achieved. The Interest Rate used to discount future Plan liabilities is set equal to the Expected Rate of Return on Investments. It is expected that the selected Interest Rate be a rate that is reasonably expected to be achieved over the long-term. To the extent that the selected Interest Rate to value Plan liabilities is unreasonable, or significantly different than the actual Return on Investments earned over an extended period of time, additional Interest Rate risk is created. For example, determining Plan liabilities at an Interest Rate higher than what is expected to be achieved through investment returns results in Unfunded Liability that is not a true representation of the Plan's condition and Percent Funded. As a result, the Actuarial Accrued Liability determined is an amount smaller than the liability that would be produced with an Interest Rate more indicative of future Expected Rate of Return on Investments. Therefore, the Recommended Contributions under the established Funding Policy may not be sufficient to appropriately meet the true pension obligations.

RECOMMENDED CONTRIBUTION DETAIL

ACTUARIAL ACCRUED LIABILITY

	Prior Valuation	Current Valuation
Active Members	$ 5,120,669	$ 5,130,792
Inactive Members		
Terminated Members	879,827	923,768
Retired Members	9,302,907	10,337,678
Disabled Members	2,606,339	2,597,728
Other Beneficiaries	371,107	363,886
Total Inactive Members	13,160,180	14,223,060
Total Actuarial Accrued Liability	$ 18,280,849	$ 19,353,852

The Total Actuarial Accrued Liability has Increased by Approximately $1,073,000 from the Prior Valuation.

FUNDED STATUS

	Prior Valuation	Current Valuation
Total Actuarial Accrued Liability	$ 18,280,849	$ 19,353,852
Total Actuarial Value of Assets	9,762,536	10,454,869
Unfunded Actuarial Accrued Liability	$ 8,518,313	$ 8,898,983
Total Fair Value of Assets	$ 9,259,581	$ 9,834,151
Percent Funded		
Actuarial Value of Assets	53.40%	54.02%
Fair Value of Assets	50.65%	50.81%

The Percent Funded as of the Actuarial Valuation Date is Subject to Volatility on Assets and Liability in the Short-Term.

RECOMMENDED CONTRIBUTION DETAIL

DEVELOPMENT OF THE EMPLOYER NORMAL COST

	Prior Valuation	Current Valuation
Total Normal Cost	$ 385,095	$ 424,985
Estimated Member Contributions	(136,718)	(154,970)
Employer Normal Cost	$ 248,377	$ 270,015

At a 100% Funding Level, the Normal Cost Contribution is Still Required.

NORMAL COST AS A PERCENTAGE OF EXPECTED PAYROLL

	Prior Valuation	Current Valuation
Expected Payroll	$ 1,402,012	$ 1,589,187
Member Normal Cost Rate	9.910%	9.910%
Employer Normal Cost Rate	17.56%	16.83%
Total Normal Cost Rate	27.47%	26.74%

Ideally, the Employer Normal Cost Rate will Remain Stable.

RECOMMENDED CONTRIBUTION BREAKDOWN

	Prior Valuation	Current Valuation
Employer Normal Cost*	$ 264,522	$ 287,566
Amortization of Unfunded Accrued Liability/(Surplus)	647,499	706,193
Recommended Contribution	$ 912,021	$ 993,759

The Recommended Contribution has Increased by 8.96% from the Prior Valuation.

*Employer Normal Cost Contribution includes interest through the end of the Fiscal Year.

SCHEDULE OF AMORTIZATION – UNFUNDED ACTUARIAL ACCRUED LIABILITY

Below is the schedule of remaining amortization balances for the Unfunded Liability.

Unfunded Liability Base	Initial Balance	Date Established	Current Balance	Years Remaining	Payment
Investment (Gain)/Loss	$ 202,828	4/30/2023	$ 202,828	17	$ 16,096
Actuarial (Gain)/Loss	206,397	4/30/2023	206,397	17	16,378
Contribution Experience	70,706	4/30/2023	70,706	17	5,611
Plan Changes	(5,451)	4/30/2023	(5,451)	17	(433)
Investment (Gain)/Loss	118,506	4/30/2022	117,201	17	9,301
Actuarial (Gain)/Loss	(49,424)	4/30/2022	(48,880)	17	(3,879)
Investment (Gain)/Loss	(26,432)	4/30/2021	(25,931)	17	(2,058)
Actuarial (Gain)/Loss	929,617	4/30/2021	911,997	17	72,374
Investment (Gain)/Loss	189,083	4/30/2020	184,506	17	14,642
Actuarial (Gain)/Loss	(251,249)	4/30/2020	(245,168)	17	(19,455)
Contribution Experience	6,167	4/30/2020	6,017	17	477
Assumption Changes	2,104,733	4/30/2020	2,053,794	17	162,982
Plan Changes	39,154	4/30/2020	38,206	17	3,032
Initial Unfunded Liability	$ 5,567,510	4/30/2020	$ 5,432,761	17	$ 431,125
Total	**$ 9,102,145**		**$ 8,898,983**		**$ 706,193**

The Actuarial (Gain)/Loss can be attributable to several factors including, but not limited to, demographic changes, Employer Contribution timing, Member Contribution experience, benefit payment experience, and salary increase experience compared to expectation.

ACTUARIAL METHODS – RECOMMENDED CONTRIBUTION

Actuarial Valuation Date	May 1, 2023
Data Collection Date	April 30, 2023
Actuarial Cost Method	Entry Age Normal (Level % Pay)
Amortization Method	Level % Pay (Closed)
Amortization Target	100% Funded Over 17 Years
Asset Valuation Method	5-Year Smoothed Fair Value

The above methods constitute a sound Actuarially Determined Contribution under the parameters of Actuarial Standards of Practice.

The contributions and benefit values of the Pension Fund are calculated by applying actuarial assumptions to the benefit provisions and demographic data furnished, using the Actuarial Cost Method described. The Actuarial Cost and Amortization Methods allocate the projected obligations of the Plan over the working lifetimes of the Plan Members.

The Recommended Contribution amount shown in this report is based on the methods summarized above. The *Actuarial Funding Policies* section of this report includes a more detailed description of the Actuarial Funding Methods being used.

The Actuarial Funding Methods are meant to provide a systematic process for determining contributions on an annual basis. The methods do not impact the expectation of future benefit payments. The methods only impact the way contributions are made towards future benefit payments.

Different Actuarial Funding Methods may achieve funding goals with differing levels of success. Certain methods are more efficient and more stable on an annual basis.

In the current valuation, the Plan Sponsor has elected to use a 10% corridor in the determination of the Actuarial Value of Assets for both the Recommended and Alternative Contributions. In the event that the Actuarial Value of Assets exceeds 110% of the Fair Value of Assets or falls below 90% of the Fair Value of Assets, the excess gains or losses will be recognized immediately.

ALTERNATIVE CONTRIBUTION

Alternative Contribution
Funded Status – Alternative Contribution
Actuarial Methods – Alternative Contribution

ALTERNATIVE CONTRIBUTION

	Prior Valuation	Current Valuation
Alternative Contribution	$758,223	$833,421
Expected Payroll	$1,402,012	$1,589,187
Alternative Contribution as a Percent of Expected Payroll	54.08%	52.44%

FUNDED STATUS – ALTERNATIVE CONTRIBUTION

	Prior Valuation	Current Valuation
Normal Cost	$341,652	$379,602
Fair Value of Assets	$9,259,581	$9,834,151
Actuarial Value of Assets	$9,762,536	$10,454,869
Actuarial Accrued Liability	$18,740,249	$19,936,042
Unfunded Actuarial Accrued Liability/(Surplus)	$8,977,713	$9,481,173
Percent Funded		
Actuarial Value of Assets	52.09%	52.44%
Fair Value of Assets	49.41%	49.33%

ALTERNATIVE CONTRIBUTION

The Alternative Contribution is based on Actuarial Funding Methods and funding parameters outlined in the Illinois State Statutes for pension funding. The resulting contribution is lower than the Recommended Contribution for the current year. The Alternative Contribution amount is not recommended because it represents only a deferral of contributions when compared to the Recommended Contribution method.

Actuarial Funding Methods for pensions are best applied to provide a balance between the long-term goals of a variety of stakeholders:

1. Members – the Members are interested in benefit security and having the funds available to pay benefits when retired

2. Employers – cost control and cost stability over the long-term

3. Taxpayers – paying for the services they are receiving from active Members

The Alternative Contribution methods are not intended to provide a better system in any of the above categories long-term. The parameters are not recommended for a long-term funding strategy.

The funding methods and parameters put into place in the Illinois State Statutes in 2011 were intended to provide short-term budget relief for Employer Contributions. An Employer using the parameters outlined in the Illinois State Statutes for current funding should view the contributions as short-term relief. Our recommendation in this situation is for a Pension Fund and an Employer to work towards a long-term funding strategy that better achieves the long-term funding goals, over a period that does not exceed 3-5 years.

The Securities and Exchange Commission in 2013 used the phrase "Statutory Underfunding" to describe situations where contributions appear to be more manageable in the short-term, but set up future Recommended Contributions that are less likely to be manageable.

ACTUARIAL METHODS – ALTERNATIVE CONTRIBUTION

Actuarial Valuation Date	May 1, 2023
Data Collection Date	April 30, 2023
Actuarial Cost Method	Projected Unit Credit
Amortization Method	Level % Pay (Closed)
Amortization Target	90% Funded Over 17 Years
Asset Valuation Method	5-Year Smoothed Fair Value

The contribution and benefit values of the Pension Fund are calculated by applying actuarial assumptions to the benefit provisions and demographic data furnished, using the Actuarial Cost Method described. The Actuarial Cost and Amortization methods allocate the projected obligations of the Plan over the working lifetimes of the Plan Members.

The Actuarial Funding Methods are meant to provide a systematic process for determining contributions on an annual basis. The methods do not impact the expectation of future benefit payments. The methods only impact the way contributions are made towards future benefit payments.

Different Actuarial Funding Methods may achieve funding goals with differing levels of success. Certain methods are more efficient and more stable on an annual basis.

The guidelines in the Illinois State Statutes for pension funding are silent on the use of a corridor on the Fair Value of Assets in determination of the Actuarial Value of Assets. In the current valuation, the Plan Sponsor has elected to use a 10% corridor in the determination of the Actuarial Value of Assets for both the Alternative Contribution and the Recommended Contribution. In the event that the Actuarial Value of Assets exceeds 110% of the Fair Value of Assets or falls below 90% of the Fair Value of Assets, the excess gains or losses will be recognized immediately.

ACTUARIAL VALUATION DATA

Active Members
Inactive Members
Summary of Monthly Benefit Payments
Age and Service Distribution

Active Members

	Prior Valuation	Current Valuation
Tier I	8	9
Tier II	8	9
Total Active Members	16	18
Total Payroll	$ 1,379,594	$ 1,563,776

Inactive Members

	Prior Valuation	Current Valuation
Terminated Members	5	4
Retired Members	9	10
Disabled Members	4	4
Other Beneficiaries	1	1
Total Inactive Members	19	19

Summary Of Monthly Benefit Payments

	Prior Valuation	Current Valuation
Retired Members	$ 41,908	$ 47,861
Disabled Members	16,332	16,677
Other Beneficiaries	2,822	2,822
Total Inactive Members	$ 61,062	$ 67,360

AGE AND SERVICE DISTRIBUTION

5/1/2023 Age and Service Distribution - Tier 1|Tier 2 Active Members											
	Service	Under 1	1 to 4	5 to 9	10 to 14	15 to 19	20 to 24	25 to 29	30 to 34	35 to 39	40 & up	Total
Age												
Under 25												
25 to 29		0|1	0|3									0|4
30 to 34			0|1	0|1								0|2
35 to 39			0|1									0|1
40 to 44						1|0						1|0
45 to 49			1|0	0|1			3|0					4|1
50 to 54		1|0	1|0		1|0							3|0
55 to 59			0|1			1|0						1|1
60 to 64												
65 to 69												
70 & up												
Total		1|1	2|6	0|2	1|0	2|0	3|0					9|9

ACTUARIAL FUNDING POLICIES

Actuarial Cost Method
Financing Unfunded Actuarial Accrued Liability
Actuarial Value of Assets

ACTUARIAL COST METHOD

The Actuarial Cost Method allocates the projected obligations of the Plan over the working lifetimes of the Plan Members.

In accordance with the Pension Fund's Funding Policy, the Actuarial Cost Method for the Recommended Contribution basis is Entry Age Normal (Level Percent of Pay). The Entry Age Normal Cost Method is a method under which the Actuarial Present Value of the projected benefits of each individual included in an Actuarial Valuation is allocated on a level basis over the earnings or service of the individual between entry age and assumed exit age. The portion of this Actuarial Present Value allocated to a valuation year is called Normal Cost. The portion of the Actuarial Present Value not provided at an Actuarial Valuation Date by the Actuarial Present Value of future Normal Costs is called the Actuarial Accrued Liability.

The Entry Age Normal method attempts to create a level cost pattern. In contrast to other Actuarial Cost Methods which inherently lead to uneven or less predictable cost patterns, the Entry Age Normal method is generally understood to be less risky in terms of contribution stability from year to year.

The Conference of Consulting Actuaries Public Plans Community produced a "white paper" detailing Funding Policy model practices for public sector pension plans. Under the Level Cost Actuarial Methodology ("LCAM"), one of the principal elements to a Funding Policy is the Actuarial Cost Method. When deciding which Actuarial Cost Method to use, several objectives may be considered, such as the following:

- Each Member's benefit should be funded under a reasonable allocation method by the expected retirement date
- Pay-related benefit costs should reflect anticipated pay at retirement
- The expected cost of each year of service (i.e. Normal Cost) for each active Member should be reasonably related to the expected cost of that Member's benefit
- The Member's Normal Cost should emerge as a level percent of Member compensation
- No gains or losses should occur if all assumptions are met.

Following these criteria, the use of the Entry Age Normal Cost Method (Level Percent of Pay) is a model practice.

FINANCING UNFUNDED ACTUARIAL ACCRUED LIABILITY

The Unfunded Actuarial Accrued Liability may be amortized over a period either in level dollar amounts or as a level percentage of payroll.

When amortizing the Unfunded Actuarial Accrued Liability as a level percentage of payroll, additional risk is incurred since the amortization payments in the early years of the payment period may not be large enough to cover the interest accrued on the existing Unfunded Liability. As a result, the Unfunded Liability may increase initially, before the amortization payments grow large enough to cover all interest accruals. Generally speaking, the Plan Sponsor will be required to contribute a larger total contribution amount over the course of the funding period under a level percentage of payroll basis as compared to a level dollar payroll schedule.

The Government Finance Officers Association notes that best practices in public pension finance include utilizing amortization periods that do not exceed 20 years. Longer amortization periods elevate the risk of failing to reduce any Unfunded Liability. For example, when the amortization payment in full only covers interest on the Unfunded Liability, but does not reduce the existing Unfunded Liability, the required contribution will increase in future years.

A second principal element under the Level Cost Actuarial Methodology described above is to establish an Amortization Policy that determines the length of time and the structure of the increase or decrease in contributions required to systematically fund the Unfunded Actuarial Accrued Liability. When deciding on the Amortization Policy, several objectives may be considered, such as the following:

- Variations in the source of liability changes (i.e. gains or losses, Plan changes, assumption changes) should be funded over periods consistent with an appropriate balance between the policy objectives of demographic matching and volatility management
- The cost changes in Unfunded Actuarial Accrued Liability should emerge as a level percentage of Member compensation

The LCAM model practices for the Amortization Policy include the following:

- Layered fixed period amortization by source
- Level percent of pay amortization
- An amortization period ranging from 15-20 years for experience gains or losses
- An amortization period of 15-25 years for assumption changes

In accordance with the Pension Fund's Funding Policy for the Recommended Contribution, the Unfunded Actuarial Accrued Liability is amortized by level percent of payroll contributions to a 100% funding target over the remaining 17 years. See the *Actuarial Methods – Recommended Contribution* section of this report for more detail.

We believe that the amortization period is appropriate for the purpose of this valuation.

ACTUARIAL VALUE OF ASSETS

The Pension Fund is an ongoing plan. The Employer wishes to smooth the effect of volatility in the Fair Value of Assets on the annual contribution. Therefore, the Actuarial Value of Assets is equal to the Fair Value of Assets with unanticipated gains/losses recognized over a five-year period.

The Asset Valuation Method is intended to create an Actuarial Value of Assets that remains reasonable in relation to the Fair Value of Assets over time. The method produces results that can fall either above or below the Fair Value of Assets. The period of recognition is short.

It is intended that the period of recognition is short enough to keep the Actuarial Value of Assets within a decent range of the Fair Value of Assets. In the event that the Actuarial Value of Assets exceeds or falls below a 10% corridor of the Fair Value of Assets, the additional gain or loss will be recognized immediately.

ACTUARIAL ASSUMPTIONS

NATURE OF ACTUARIAL CALCULATIONS

The results documented in this report are estimates based on data that may be imperfect and on assumptions about future events. Certain Plan Provisions may be approximated or deemed immaterial, and, therefore, are not valued. Assumptions may be made about demographic data or other factors. Reasonable efforts were made in this valuation to ensure that significant items in the context of the Actuarial Accrued Liability or costs are treated appropriately, and not excluded or included inappropriately.

Actual future experience will differ from the assumptions used in the calculations. As these differences arise, the expense for accounting purposes will be adjusted in future valuations to reflect such actual experience.

A range of results different from those presented in this report could be considered reasonable. The numbers are not rounded, but this is for convenience only and should not imply precision which is not inherent in actuarial calculations.

SELECTION OF ACTUARIAL ASSUMPTIONS

Actuaries and other service providers provide guidance to their clients in the selection of assumptions used in the Actuarial Valuation based on their industry-specific training and experience. The Actuaries' expertise is used in the determination of demographic assumptions as it relates to future expectations of Plan demographic activity, such as mortality, termination, and retirement rates. The selection of economic assumptions, such as Expected Rate of Return on Investments or the assumed inflation rate, is more subjective. Investment advisors and other services providers utilize their expertise and knowledge of capital markets to model future expectations. Some assumptions may have an influence on other assumptions. The role of the Actuary in the selection of the economic assumptions is to review available market information including historical economic information and forward-looking capital market projections from investment professionals and to assess whether or not sufficient backup exists to deem the assumption reasonable. The selection of economic assumptions is the responsibility of the client. For example, the inflation rate (an economic assumption) may directly correlate to the active member salary increase assumption (a demographic assumption). Once all demographic and economic assumptions have been determined, the Actuary will create various sets of assumptions which take into account the proposed assumptions individually and in the aggregate. The client will then make the final decision of which assumption set to use.

ACTUARIAL ASSUMPTIONS IN THE VALUATION PROCESS

The contributions and benefit values of the Pension Fund are calculated by applying actuarial assumptions to the benefit provisions and demographic data furnished, using the Actuarial Cost Method described in the *Actuarial Funding Policies* section of this report.

The principal areas of financial risk which require assumptions about future experience are:

- Expected Rate of Return on Investments
- Patterns of Pay Increases for Members
- Rates of Mortality Among Active and Inactive Members
- Rates of Termination Among Active Members
- Rates of Disability Among Active Members
- Age Patterns of Actual Retirements

Actual experience of the Pension Fund will not coincide exactly with assumed experience. Each valuation provides a complete recalculation of assumed future experience and takes into account all past differences between assumed and actual experience. The result is a continual series of adjustments to the computed Recommended Contribution.

Details behind the selection of the actuarial assumptions can be found in the Actuarial Assumption Summary document provided to the client upon request. The client has reviewed and approved the assumptions as a reasonable expectation of the future anticipated experience under the Plan.

Assessment of Risk Exposures

From time to time it becomes appropriate to modify one or more of the assumptions, to reflect experience trends (but not random year-to-year fluctuations). In addition, Actuarial Standards of Practice require that the Actuary minimally perform a qualitative assessment of key financial and demographic risks as part of the risk assessment process with each annual Actuarial Valuation. The risk assessments we perform include, but are not limited to, the following:

- Periodic demographic experience studies every 3 to 5 years to confirm the ongoing appropriateness of actuarial assumptions
- Highlight the impact of demographic experience over the past year, as well as other sources of change and volatility in the *Actuarial Recommended Contribution – Reconciliation* section of this report
- Detail year-over-year changes in contribution levels, assets, liabilities, and Funded Status in the *Recommended Contribution* and *Funded Status* sections in the *Management Summary* section of this report
- Review any material changes in the demographic data as summarized in the *Actuarial Valuation Data* section of this report
- Provide and discuss the Actuarial Assumption Summary document highlighting the rationale for each key assumption chosen by the client
- Identify potential Cash Flow Risk by highlighting expected benefit payments over the next 5-year and 10-year periods in the *Asset Growth* section in the *Management Summary* section of this report
- Describe the impact of any assumption, method, or policy change in the *Management Summary* section of this report
- Utilize supplemental information, such as the GASB Discount Rate sensitivity disclosures to understand, for example, what impact an alternative Expected Rate of Return on Investments assumption might have on the estimation of Actuarial Accrued Liability and Funded Status
- Utilize supplemental information, such as the GASB solvency test, to better understand the Cash Flow Risk and long-term sustainability of the Plan

Limitations of Risk Analysis

Since future experience may never be precisely as assumed, the process of selecting funding methods and actuarial assumptions may inherently create risk and volatility of results. A more detailed evaluation of the above risk exposures is beyond the scope and nature of the annual Actuarial Valuation process. For example, scenario tests, sensitivity tests, stress tests, and/or stochastic modeling for multi-year projections to assess the impact of alternative assumptions and methods, or modeling future experience different from the assumptions in these results, are not included in this Actuarial Valuation.

The Lake Villa Police Pension Fund and/or the Village of Lake Villa, Illinois should contact the Actuary if they desire a more detailed assessment of any of these forward-looking risk exposures.

ASSESSMENT AND USE OF ACTUARIAL MODELS

Actuarial Valuations rely upon the use of actuarial modeling software to predict the occurrence of future events, which include specific demographic and financial potential outcomes. Actuarial assumptions are established to provide a guideline to use for such modeling.

- The model used in this Actuarial Valuation is intended to determine the Recommended Contribution, under the selected Funding Policy. The actuarial assumptions used were developed with this goal in mind.
- There are no known material limitations or inconsistencies among the actuarial assumptions or methods.
- The output from the model is reasonable based on the individual actuarial assumptions and based on the actuarial assumptions in the aggregate.
- The actuarial software used to calculate plan liabilities has been purchased from an outside vendor. We have performed thorough testing of the software, including review of sample participants, to ensure the intended purpose of the model, the operation of the model, sensitivities and dependencies, and strengths and limitations of the model are sufficient for this purpose.
- Demographic data and financial information have been provided by client professionals, financial advisors, and/or auditors, who are known to be experts in their respective fields. We rely on the fact that the information provided by these experts has been given for the intended purpose of this Actuarial Valuation.
- Where applicable, certain actuarial assumptions and Funding Policy may be required as prescribed by law. In such instances, we have followed legal guidance to ensure conformity.
- The Expected Rate of Return on Investments assumption has been chosen using input from several sources; including, but not limited to: client professionals, financial advisors, auditors, and other capital market outlooks. We have relied on the information provided, in the aggregate, to settle on the selected Expected Rate of Return on Investments assumption.

As stated in the *Limitations of Risk Analysis* section, future experience may never be precisely as assumed. As a result, the funding methods and actuarial assumptions used in the model may create volatility in the results when compared year after year. A more detailed evaluation of this volatility is beyond the scope and nature of the annual Actuarial Valuation process. In such cases, additional scenario tests, sensitivity tests, stress tests, and/or stochastic modeling for multi-year projections to assess the impact of alternative assumptions and methods, or modeling future experience different from the assumptions in these results, may be performed to determine a range of reasonable results.

ACTUARIAL ASSUMPTIONS UTILIZED

Expected Rate of Return on Investments	6.50% Net of Administrative Expense
CPI-U	2.25%
Total Payroll Increases	3.25%
Individual Pay Increases*	3.75% - 18.26%

Individual pay increases include a long-term average increase for inflation, average annual increases for promotions, and any additional increases for a step program. Sample rates are as follows:

Service	Rate	Service	Rate
0	5.15%	8	3.75%
1	7.31%	9	3.75%
2	7.22%	10	3.75%
3	7.17%	15	3.75%
4	6.24%	20	3.75%
5	18.26%	25	3.75%
6	6.23%	30	3.75%
7	3.75%	35	3.75%

*Individual pay increases for active Members hired at age 40 or older are assumed annual increases at the ultimate rate reduced by 50 basis points, without adjustments in early service years.

Retirement Rates

100% of the L&A Assumption Study for Police 2020 Cap Age 65. Sample rates are as follows:

Age	Rate	Age	Rate
50	11.00%	58	16.25%
51	11.55%	59	16.25%
52	12.13%	60	16.25%
53	12.73%	61	16.25%
54	13.37%	62	18.00%
55	14.04%	63	20.00%
56	14.74%	64	20.00%
57	15.48%	65	100.00%

Termination Rates

100% of the L&A Assumption Study for Police 2020. Sample rates are as follows:

Age	Rate	Age	Rate
25	8.00%	40	2.17%
30	3.40%	45	1.56%
35	2.79%	50	0.46%

Disability Rates

100% of the L&A Assumption Study for Police 2020. Sample rates are as follows:

Age	Rate	Age	Rate
25	0.00%	40	0.38%
30	0.06%	45	0.53%
35	0.18%	50	0.48%

65% of active Members who become disabled are assumed to be in the Line of Duty.

Mortality Rates

Active Mortality follows the Sex Distinct Raw Rates as developed in the PubS-2010(A) Study. Mortality improvement uses MP-2019 Improvement Rates applied on a fully generational basis.

50% of active Member deaths are assumed to be in the Line of Duty.

Retiree Mortality follows the L&A Assumption Study for Police 2020. These rates are experience weighted with the Sex Distinct Raw Rates as developed in the PubS-2010(A) Study improved to 2017 using MP-2019 Improvement Rates. These rates are then improved fully generationally using MP-2019 Improvement Rates.

Disabled Mortality follows the Sex Distinct Raw Rates as developed in the PubS-2010 Study for disabled participants. Mortality improvement uses MP-2019 Improvement Rates applied on a fully generational basis.

Spouse Mortality follows the Sex Distinct Raw Rates as developed in the PubS-2010(A) Study for contingent survivors. For all rates not provided there (ages 45 and younger) the PubG-2010 Study for general employees was used. Mortality improvement uses MP-2019 Improvement Rates applied on a fully generational basis.

Marital Assumptions

Active Members: 80% of active Members are assumed to be married. Female spouses are assumed to be 3 years younger than male spouses.

Retiree and Disabled Members: Actual spousal data was utilized for retiree and disabled Members.

LOW-DEFAULT-RISK OBLIGATION MEASURE

Low-Default-Risk Obligation Measure – Purpose
Low-Default-Risk Obligation Measure
Low-Default-Risk Obligation Measure vs Actuarial Liability

LOW-DEFAULT-RISK OBLIGATION MEASURE - PURPOSE

The Pension Committee of the Actuarial Standards Board adopted changes to Actuarial Standards of Practice No. 4 ("ASOP 4"). ASOP 4 is titled "Measuring Pension Obligations and Determining Pension Plan Costs or Contributions". The changes were adopted by the Actuarial Standards Board in December 2021 and are effective for reporting and Measurement Dates on or after February 15, 2023.

One change is the requirement for all Funding Actuarial Valuations to include a Low-Default-Risk Obligation Measure ("LDROM"). In its simplest form, the LDROM is a measure of Actuarial Liability determined using a low-risk Expected Rate of Return on Investments. The LDROM is not intended to replace the Actuarial Liability used to determine the Recommended Contribution amount calculated in this report. The intention is to provide additional information on the Funded Status of the Plan and benefit security.

The Low-Default-Risk Obligation Measure is shown below as of the Measurement Date. The discussion that follows provides more information on the assumptions and methods used to determine the LDROM and some interpretation of the results.

LOW-DEFAULT-RISK OBLIGATION MEASURE

	Current Valuation
Low-Default-Risk Obligation Measure	$ 24,864,229
Fair Value of Assets	9,834,151
Obligation not Covered by Current Assets	$ 15,030,078

The Low-Default-Risk Obligation Measure is Not Intended to Replace the Actuarial Liability Used to Determine the Recommended Contribution.

The Obligation not Covered by Current Assets shown above is for illustration of the Low-Default-Risk Obligation Measure only and is not intended for any other purposes. The amount of Obligation not Covered by Current Assets should not be used for pension funding or financial statement reporting purposes. In addition, the Obligation not Covered by Current Assets amount should not be used for any other assessments related to pension funding, such as assessing Unfunded Liability for the purpose of issuing Pension Obligation Bonds. Discussion of any of these items should be handled separately.

LOW-DEFAULT-RISK OBLIGATION MEASURE

Selection of the Discount Rate

Under Actuarial Standards, a Discount Rate should be selected from a source that develops the rate using low-default-risk fixed income securities. In addition, the fixed income securities should be reasonably consistent with the pattern of expected benefit payments from the Fund.

The Low-Default-Risk Obligation Measure has been valued using the FTSE Pension Discount Curve. The FTSE Pension Discount Curve is determined using rates from corporate bonds that are rated AA (from the FTSE U.S. Broad Investment Grade Bond Index) and yields from the FTSE Russell's Treasury model curve. The result is a set of investment grade zero coupon bond rates with maturities from 6 months to 30 years.

The equivalent single discount rate that would produce the same liability as the FTSE Pension Discount Curve is 4.76%.

There are other indices constructed that are appropriate for this disclosure as well. They could produce Discount Rates that are higher or lower than the LDROM shown here. An increase/decrease in the discount rate of 50 basis points (0.50%) would decrease/increase the LDROM by (7.26%)/8.14%, respectively. In our opinion, the FTSE Pension Discount Curve meets the requirements of the disclosure of the LDROM. The curve is constructed using investment grade corporate bonds. In addition, the rates are updated monthly and the current rates used (as of the Measurement Date of this report) are reflective of current market conditions. Finally, the use of a yield curve as opposed to a single rate allows the flexibility for the LDROM to be determined in a manner consistent with the pattern of expected benefit payments.

The Discount Rate is intended for the current Measurement Date only. In order to stay consistent with the prevailing market conditions, the Discount Rate will be assessed and updated each year at each new Measurement Date.

Selection of the Actuarial Cost Method

The Standard requires the use of an immediate-gain Actuarial Cost Method. We have elected to use the Entry Age Normal cost method for measurement of the LDROM. Entry Age Normal is being applied on a percent of pay basis. The Cost Method is the same method used for the determination of the Recommended Contribution in this report.

Other immediate-gain Actuarial Cost Methods are available and acceptable for use in the determination of the LDROM. Other acceptable methods include benefits-based methods and accrued benefit methods. We selected the Entry Age Normal method due to the fact that benefit liability in this Fund is not typically settled with one-time payments. For example, the Plan does not pay lump sums (except refunds of Member Contributions) and is not anticipated to settle liability through the purchase of annuity contracts. Therefore, the usefulness of a benefits-based method is much more limited in interpretation of this measure as it relates to benefit security.

Interpretation of the LDROM

The Low-Default-Risk Obligation Measure is higher than the liability used for the Recommended Contribution determination by $5,510,377.

Actuarial Liability is determined in different ways based on the purpose of the measurement. The Actuarial Liability for Recommended Contribution purposes is used to develop a contribution amount that, when combined with other sources of funding (including Member Contributions and expected investment returns), would pay all future expected benefits. The expected investment returns under this scenario are based on the current asset allocation and capital market expectations of the Fund. Assets are invested in a way that involves risk. Actual returns can vary significantly year-to-year above and below expectations. The trade-off is a risk-premium over the long-term and above low-risk market rates.

The LDROM, by contrast, is developed using low-risk returns available in the market. These returns could be obtained theoretically with low-risk of deviation from expectation, and lower expectation (i.e. there is no risk-premium). The LDROM, then, can be thought of as the amount of money that should be set aside today to appropriately fund and prepare for all future benefit payments, if the assets were invested in relatively low volatility assets available in the market today.

The expected decrease in the liability for funding purposes as compared to the LDROM can be thought of as cost savings from investing in riskier assets, with higher long-term return expectations. At the same time, this difference also represents a risk factor for the Pension Fund as the Fund is reliant on receiving the expected return on investments, including a risk premium. Contributions, combined with these investment returns, are required in order to fund future benefit payments.

LOW DEFAULT RISK OBLIGATION MEASURE VS ACTUARIAL LIABILITY

	Current Valuation
Low-Default-Risk Obligation Measure	$ 24,864,229
Actuarial Accrued Liability (Entry Age Normal)	19,353,852
Difference	$ 5,510,377

The Low-Default-Risk Obligation Measure is Not Intended to Replace the Actuarial Liability Used to Determine the Recommended Contribution.

SUMMARY OF PRINCIPAL PLAN PROVISIONS

ESTABLISHMENT OF THE FUND

The Police Pension Fund is established and administered as prescribed by "Article 3 – Police Pension Fund – Municipalities 500,000 and Under" of the Illinois Pension Code.

ADMINISTRATION

The Police Pension Fund is administered by a Board of Trustees whose duties are to manage the Pension Fund, determine applications for pensions, authorize payment of pensions, establish rules, pay expenses, and keep records.

MEMBER CONTRIBUTIONS

Members contribute 9.910% of their pensionable salary.

REGULAR RETIREMENT PENSION BENEFIT

Tier I

Eligibility: Age 50 with at least 20 years of creditable service.

Benefit: 50% of final salary for the first 20 years of service, plus an additional 2.5% of final salary for each year of service beyond 20 years of service, and not to exceed 75% of final salary. "Final salary" is based on the police officer's pensionable salary attached to rank held on the last day of service, unless the pensionable salary was greater at some point within the year prior to the last day of service. If so, the pensionable salary is averaged over the last 12 months.

Annual Increase in Benefit: A police officer is entitled to receive an initial increase equal to 1/12 of 3% of the original monthly benefit for each full month that has passed since the pension began. The initial increase date will be the later of the first day of the month after the pensioner turns age 55 or the first day of the month after the benefit date anniversary. Subsequent increases of 3% of the current monthly benefit will be granted every January 1st thereafter.

REGULAR RETIREMENT PENSION BENEFIT - CONTINUED

Tier II

Eligibility: Age 55 with at least 10 years of creditable service.

Benefit: 2.5% of final average salary for each year of service, and not to exceed 75% of final average salary. "Final average salary" is determined by dividing the total pensionable salary during 48 consecutive months of service within the last 60 months of service in which total pensionable salary was the highest, by the number of months of service in that period (or by dividing the total pensionable salary during 96 consecutive months of service within the last 120 months of service in which total pensionable salary was the highest, by the number of months of service in that period, if greater). Annual salary for this purpose will not exceed the salary cap, indexed by the lesser of 3% or the CPI-U for the 12 months ending with the September preceding each November 1st. The salary cap will not decrease.

Annual Increase in Benefit: The initial increase date will be the later of the January 1st after the pensioner turns age 60 or the January 1st after the benefit date anniversary. Subsequent increases will be granted every January 1st thereafter. The initial increase and subsequent increases will be the lesser of 3% of the original benefit or ½ of the CPI-U for the 12 months ending with the September preceding each November 1st.

EARLY RETIREMENT PENSION BENEFIT

Tier I

None.

Tier II

Eligibility: Age 50 with at least 10 years of creditable service.

Benefit: The regular retirement pension benefit reduced by ½ of 1% for each month that the police officer's age is between 50 and 55.

Annual Increase in Benefit: The initial increase date will be the later of the January 1st after the pensioner turns age 60 or the January 1st after the benefit date anniversary. Subsequent increases will be granted every January 1st thereafter. The initial increase and subsequent increases will be the lesser of 3% of the original benefit or ½ of the CPI-U for the 12 months ending with the September preceding each November 1st.

SURVIVING SPOUSE BENEFIT

Tier I

Eligibility: Married to an active police officer with at least 8 years of creditable service, a disabled pensioner at the time of death, or a retired pensioner on the last day of service.

Active Line of Duty Death Benefit: An eligible surviving spouse is entitled to receive 100% of the police officer's final pensionable salary attached to rank held on the last day of service.

Non-Duty Death Benefit:

Disabled or Retired Pensioner: An eligible surviving spouse is entitled to receive the pensioner's benefit at the time of death.

Active Member with 20+ Years of Service: An eligible surviving spouse is entitled to the police officer's eligible benefit at the time of death.

Active Member with 10-20 Years of Service: An eligible surviving spouse is entitled to receive 50% of the police officer's pensionable salary attached to rank held on the last day of service, unless the pensionable salary was greater at some point within the year prior to the last day of service. If so, the pensionable salary is averaged over the last 12 months.

Annual Increase in Benefit: None.

Tier II

Eligibility: Married to an active police officer with at least 8 years of creditable service, a disabled pensioner at the time of death, or a retired pensioner on the last day of service.

Active Line of Duty Death Benefit: An eligible surviving spouse is entitled to receive 100% of the police officer's final pensionable salary attached to rank held on the last day of service.

Non-Duty Death Benefit:

Disabled or Retired Pensioner, Active Member with 20+ Years of Service, and Active Member with 10-20 Years of service: An eligible surviving spouse is entitled to receive the greater of 66⅔% of the police officer's earned pension benefit at the time of death or 54% of the police officer's monthly salary at the time of death.

Annual Increase in Benefit: The initial increase date will be the January 1st after the surviving spouse turns age 60. Subsequent increases will be granted every January 1st thereafter. The initial increase and subsequent increases will be the lesser of 3% of the original benefit or ½ of the CPI-U for the 12 months ending with the September preceding each November 1st.

SURVIVING SPOUSE BENEFIT - CONTINUED

Public Act 102-0811 passed on May 13, 2022 and is effective as of January 1, 2023 for Article 3 Pension Funds. The Act establishes that a surviving spouse of a deceased police retiree may be eligible for a survivor's pension of up to 15 years of benefit payments if (a) the surviving spouse has attained age 62 and (b) if the police officer was married to the surviving spouse after retirement, and for at least 5 years prior to the officer's death. Previously, there was no survivor's pension for spouses married after retirement. In our opinion, under a prudent interpretation of the provisions, we believe the impact to be de minimis. The legal community has suggested some uncertainty about multiple provisions contained in the Act, and the IDOI Public Pension Division has not provided an interpretation. The client has not made an administrative interpretation as to how the provisions of the Act will impact future surviving spouses. Due to the uncertainty around the interpretation and the expected *de minimis* impact, we have not valued this contingency separately for active Members. However, for any current retirees who were married after retirement and have been married for at least 5 years, as well as any surviving spouses currently in receipt of benefits under this provision, we have valued the liability of the benefit granted.

TERMINATION BENEFIT – VESTED

Tier I

Eligibility: Age 60 with at least 8 but less than 20 years of creditable service.

Benefit: 2.5% of final salary for each year of service. "Final salary" is based on the police officer's pensionable salary attached to rank held on the last day of service, unless the pensionable salary was greater at some point within the year prior to the last day of service. If so, the pensionable salary is averaged over the last 12 months.

Annual Increase in Benefit: A police officer is entitled to receive an initial increase equal to 1/12 of 3% of the original monthly benefit for each full month that has passed since the pension began. The initial increase date will be the first day of the month after the benefit date anniversary. Subsequent increases of 3% of the current monthly benefit will be granted every January 1st thereafter.

Tier II

None.

DISABILITY BENEFIT

Tier I

Eligibility: Duty or Non-Duty Disability or Occupational Disease Disability with at least 1 day of creditable service.

Benefit: For a duty disability or an occupational disease disability with at least 5 years of creditable service, a police officer is entitled to receive the greater of 65% of final salary or the regular retirement pension benefit at the time of disability. For a non-duty disability, a police officer is entitled to receive 50% of their final salary. "Final salary" is based on the police officer's pensionable salary attached to rank held on the last day of service.

Annual Increase in Benefit: A police officer is entitled to receive an initial increase equal to 3% of the original monthly benefit for each full year that has passed since the pension began. The initial increase date will be the later of the January 1st after following pensioner turns age 60 or the January 1st after the benefit date anniversary. Subsequent increases of 3% of the original monthly benefit will be granted every January 1st thereafter.

Tier II

Eligibility: Duty or Non-Duty Disability or Occupational Disease Disability with at least 1 day of creditable service.

Benefit: For a duty disability or an occupational disease disability with at least 5 years of creditable service, a police officer is entitled to receive the greater of 65% of final salary or the regular retirement pension benefit at the time of disability. For a non-duty disability, a police officer is entitled to receive 50% of their final salary. "Final salary" is based on the police officer's pensionable salary attached to rank held on the last day of service.

Annual Increase in Benefit: The initial increase date will be the later of the January 1st after the pensioner turns age 60 or the January 1st after the benefit date anniversary. Subsequent increases will be granted every January 1st thereafter. The initial increase and subsequent increases will be the lesser of 3% of the original benefit or ½ of the CPI-U for the 12 months ending with the September preceding each November 1st.

GLOSSARY OF TERMS

Glossary of Terms

GLOSSARY OF TERMS

Actuarial Accrued Liability – The Actuarial Present Value of future benefits based on Members' service rendered to the Measurement Date using the selected Actuarial Cost Method. It is that portion of the Actuarial Present Value of Plan benefits and expenses allocated to prior years of employment. It is not provided for by future Normal Costs.

Actuarial Cost Method – The method used to allocate the projected obligations of the Plan over the working lifetimes of the Plan Members.

Actuarial Value of Assets – The value of the assets used in the determination of the Unfunded Actuarial Accrued Liability. The Actuarial Value of Assets is related to the Fair Value of Assets, with adjustments made to spread unanticipated gains and losses for a given year over a period of several years. Actuarial Value of Assets is generally equally likely to fall above or below the Fair Value of Assets, and generally does not experience as much volatility over time as the Fair Value of Assets.

Asset Valuation Method **–** A valuation method designed to smooth random fluctuations in asset values. The objective underlying the use of an Asset Valuation Method is to provide for the long-term stability of Employer Contributions.

Funding Policy – A set of procedures for a Pension Fund that outlines the "best practices" for funding the pension benefits based on the goals of the Plan Sponsor. A Funding Policy discusses items such as assumptions, Actuarial Cost Method, assets, and other parameters that will best help the Plan Sponsor meet their goal of working in the best interest of the Plan Members.

Fair Value of Assets – The value of the cash, bonds, securities, and other assets held in the pension trust as of the Measurement Date.

Normal Cost – The present value of future benefits earned by Members during the current Fiscal Year. It is that portion of the Actuarial Present Value of benefits and expenses which is allocated to a valuation year by the Actuarial Cost Method.

Unfunded Actuarial Accrued Liability **–** The excess of the Actuarial Accrued Liability over the Actuarial Value of Assets. The Unfunded Actuarial Accrued Liability is amortized over a period either in level dollar amounts or as a level percentage of projected payroll.

Lauterbach & Amen, LLP

CERTIFIED PUBLIC ACCOUNTANTS

CMAP Pavement Management Program

BOARD PRESENTATION – VILLAGE OF LAKE VILLA
OCTOBER 30, 2023

Mark P. Gardner, P.E.
APTech Project Manager

CMAP Pavement Management Work Plan

The Chicago Metropolitan Agency for Planning (CMAP) is the region's official comprehensive planning organization.

This program supports effective and efficient use of member agency resources using pavement management tools and incorporation of preservation approaches in agencies.

CMAP hired APTech to implement pavement management for the Village.

Program Goals

- **Promote and support asset management at the local level**
- Implement the PAVER pavement management system
- Perform a comprehensive pavement condition survey
- Evaluate the impact of the Village's existing funding level on future pavement conditions
- Determine funding levels required to:
  - ✓ Maintain current pavement conditions
  - ✓ Improve current pavement conditions
  - ✓ Eliminate rehabilitation and reconstruction backlog
- Recommend pavement preservation and rehabilitation projects

Why Pavement Management Makes Sense

- According to the AASHTO PM Guide, Pavement Management provides a systematic approach that enables agencies to evaluate consequences of investment decisions and determine most cost-effective use of resources.
- Agencies have reported benefits including:
  - Developing strategies to use resources more efficiently
  - Data-driven, performance-based decision making
  - Better understand current and future road needs
  - Better respond to queries both internal and external
  - Better communication
  - Improved transparency in decision making
  - Better credibility

CMAP PM Project Overview

- Working with the Village;
  - Define pavement network
  - Assess treatment types and costs
  - Gather budget information
- Collect 2023 pavement condition information
- Implement PAVER pavement management software
- Run “scenario” analyses and present results to the Village
- Document work, results, and recommendations in report
- Provide PAVER training
- Village Board presentation

Pavement Data Collection and Pavement Management System Implementation for the Village of Lake Villa, Illinois

Draft Report

Prepared For:
The Village of Lake Villa

In Association With
Chicago Metropolitan Agency for Planning

VILLAGE OF Lake Villa

Prepared By:
Applied Pavement Technology, Inc.
115 W. Main Street, Suite 400
Urbana, IL 61801
217-398-3977
www.appliedpavement.com

applied pavement TECHNOLOGY

October 2023

providing engineering solutions to improve pavement performance

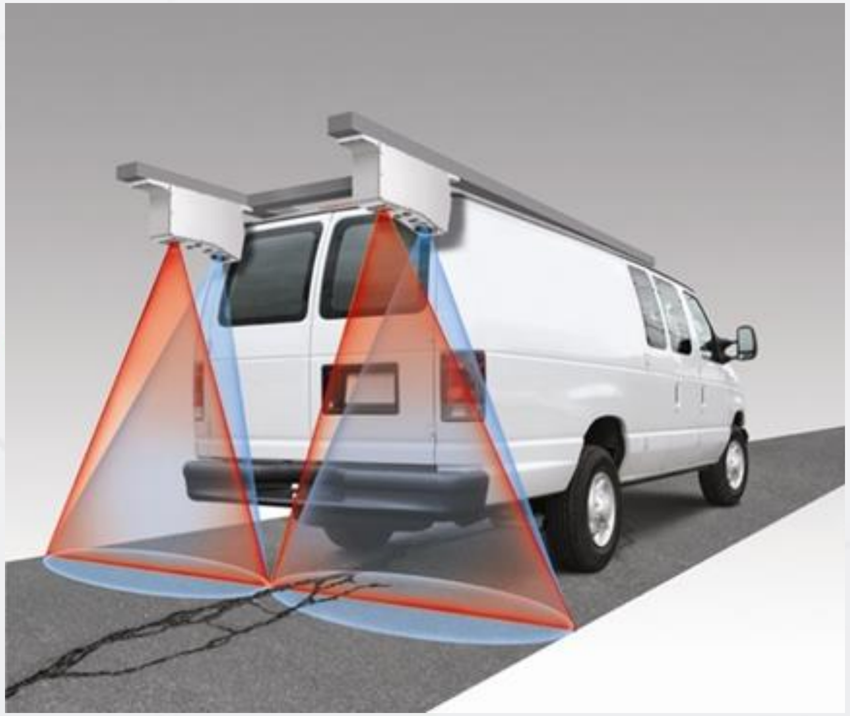
Data Collection

APTech's EDGE automated data collection van - July 2023

- LCMS sensors
- Road Surface Profiler,
- ROW Cameras (front-facing 3 angles and rear-facing)
- GPS receivers for spatial positioning.

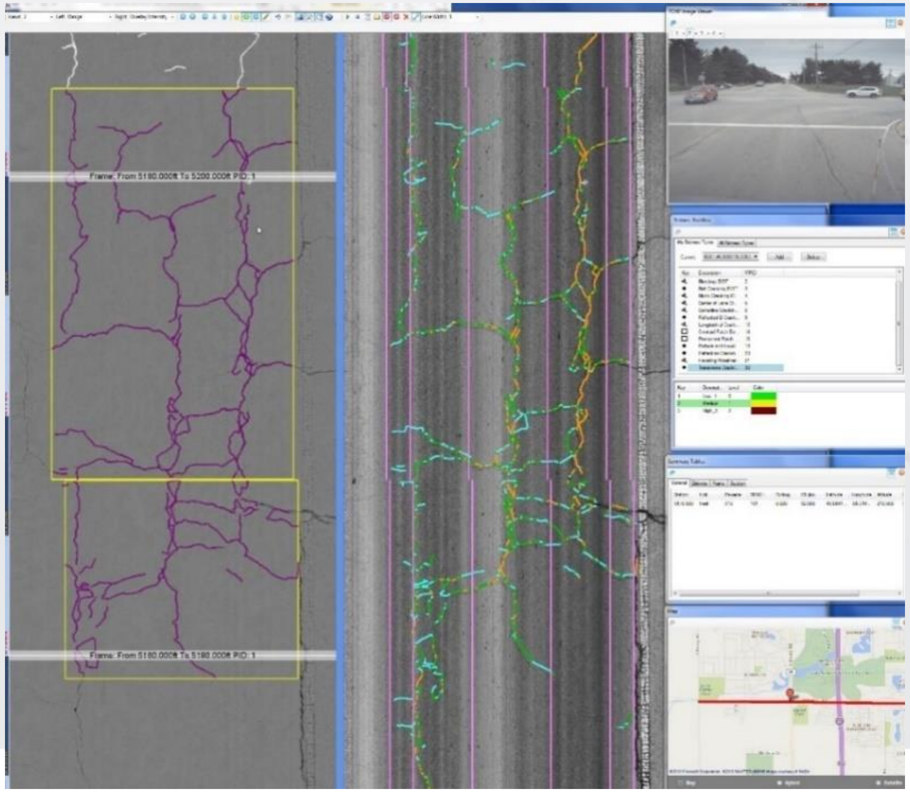
The van drove Village roadways with a driver watching the road and a separate technician reviewing data in real time.

Safe, efficient, unobtrusive.

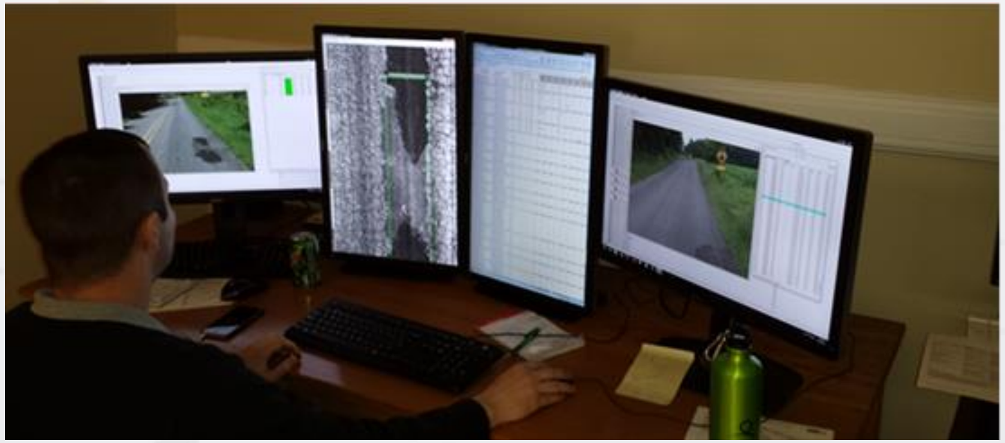


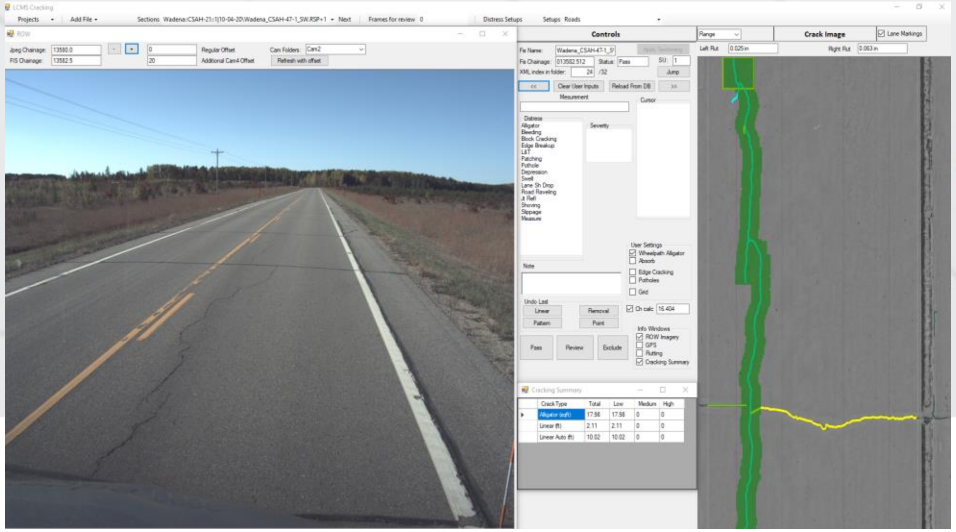
Distress Data Extraction

Laser Crack Measurement System produced range and intensity 3D images. Automated image processing algorithms initially identified distress.

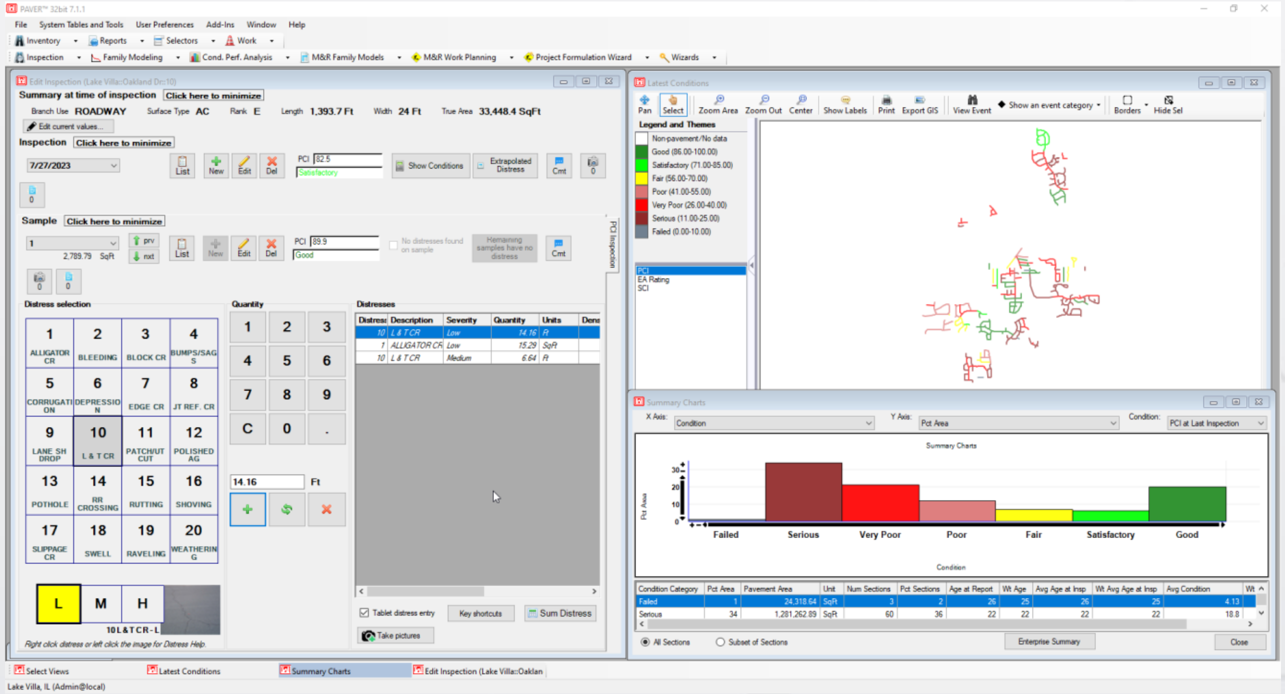


Trained surveyors reviewed on workstations to complete the surveys.





Calculation of Pavement Condition Index (PCI)



Distress
- Type
- Severity
- Extent

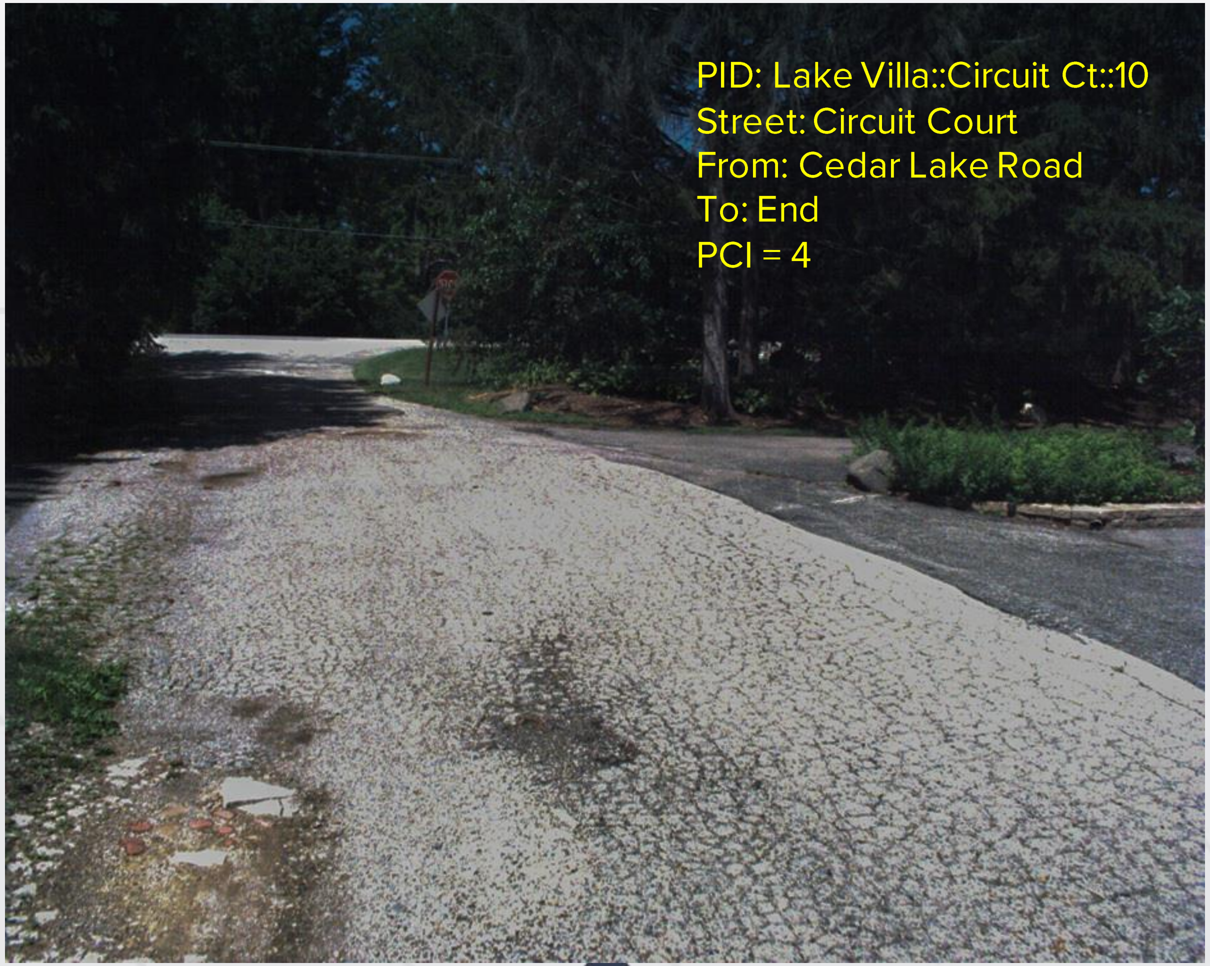
PCI Range		Condition Category	
100	86	Good	
85	71	Satisfactory	
70	56	Fair	
55	41	Poor	
40	26	Very Poor	
25	11	Serious	
10	0	Failed	

Pavement Condition Examples

Pavement Condition Examples (cont.)

Pavement Condition Examples (cont.)

Pavement Condition Examples (cont.)

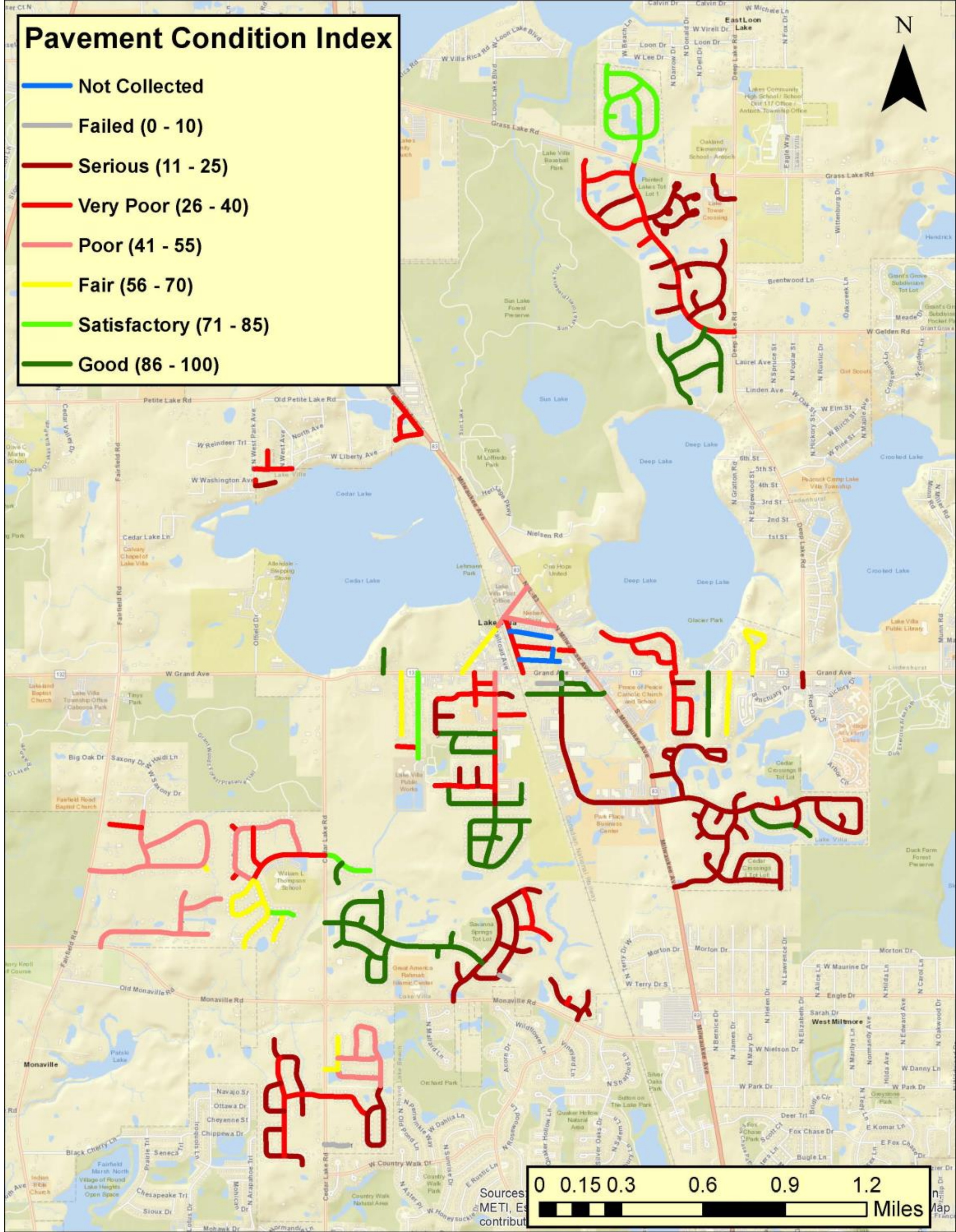


PCI Results

PCI Range		Condition Category	
100	86	Good	
85	71	Satisfactory	
70	56	Fair	
55	41	Poor	
40	26	Very Poor	
25	11	Serious	
10	0	Failed	

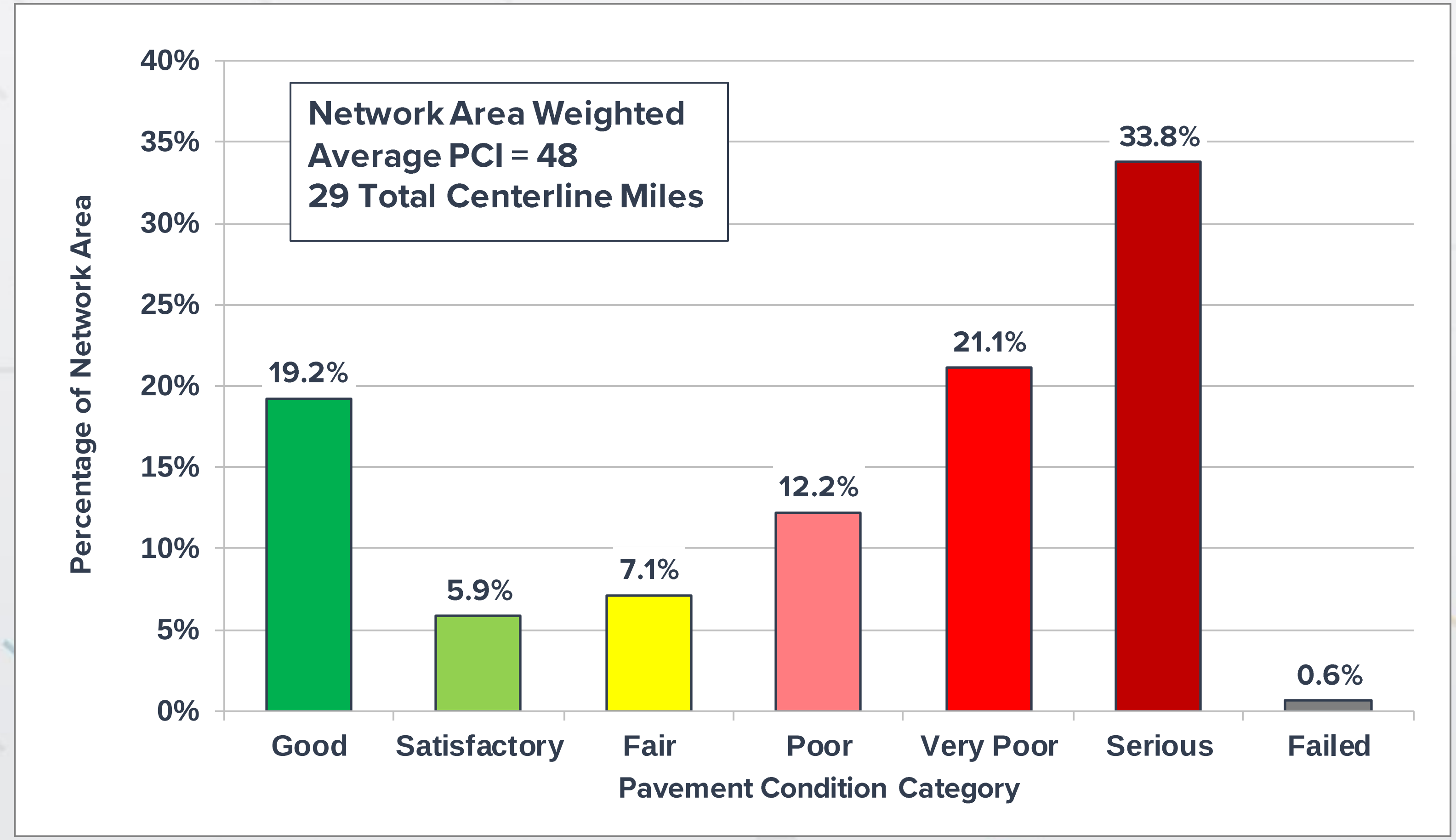
Network Area Weighted Average PCI = 48

29 Total Centerline Miles



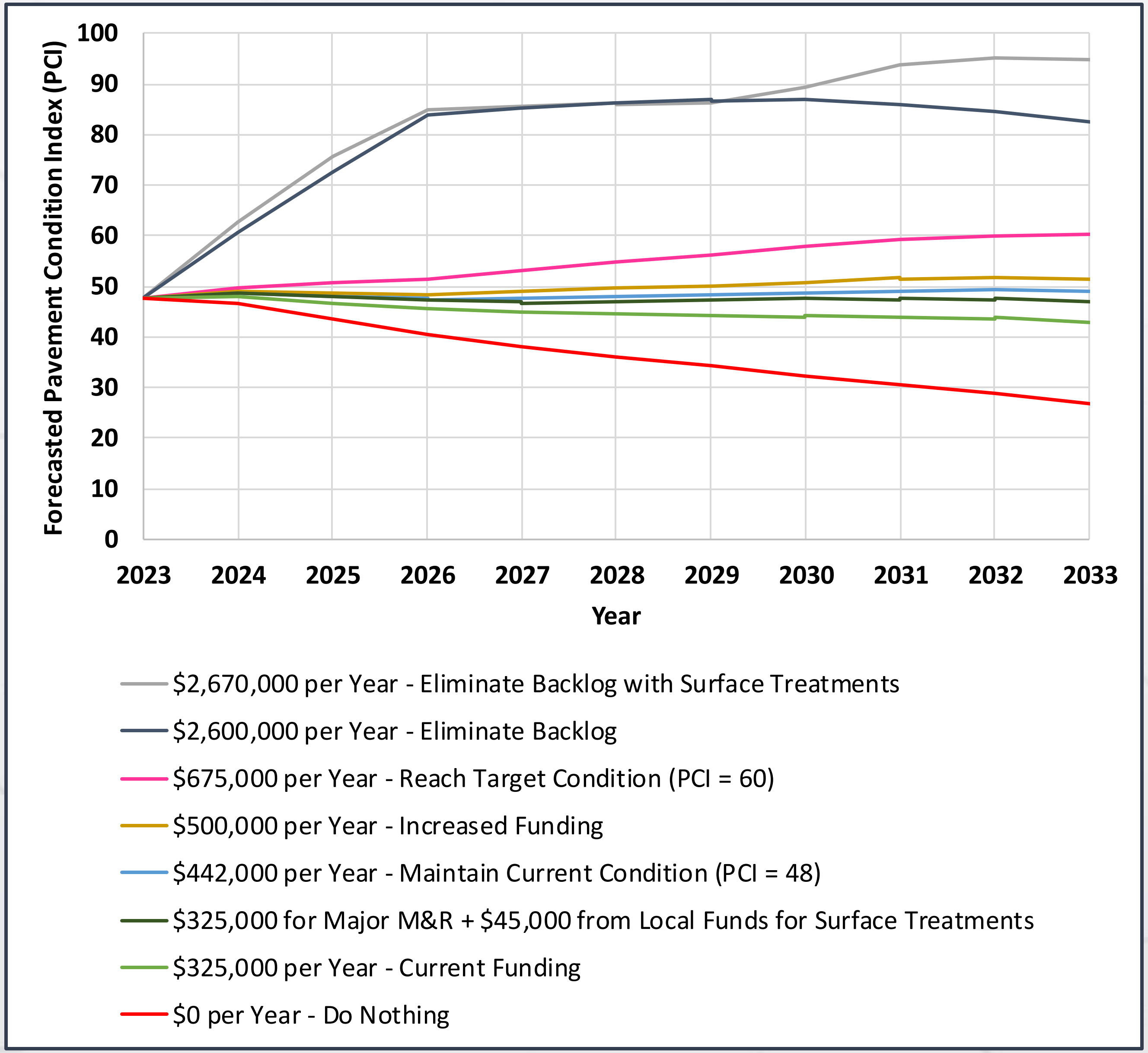
PCI Results – Network Level (Percentage of Area)

PCI Range		Condition Category	
100	86	Good	
85	71	Satisfactory	
70	56	Fair	
55	41	Poor	
40	26	Very Poor	
25	11	Serious	
10	0	Failed	



Budget Analyses Forecasted PCI (10-year analysis)

- $2.67M/yr – Eliminate Backlog with Surface Treatments. Final PCI 97
- $2.60M/yr – Eliminate Backlog without Surface Treatments. Final PCI 82
- $675,000/yr – Target PCI (60)
- $500,000/yr – Increased Funding. Final PCI 52
- $442,000/yr – Maintain Current PCI (48)
- $325,000/yr for Major M&R (Current Funding) + $45,000/yr for Surface Treatments (Local Funds). Final PCI 47
- $325,000/yr – Current Funding. Final PCI 43
- $0/yr (safety repairs only). Final PCI 27

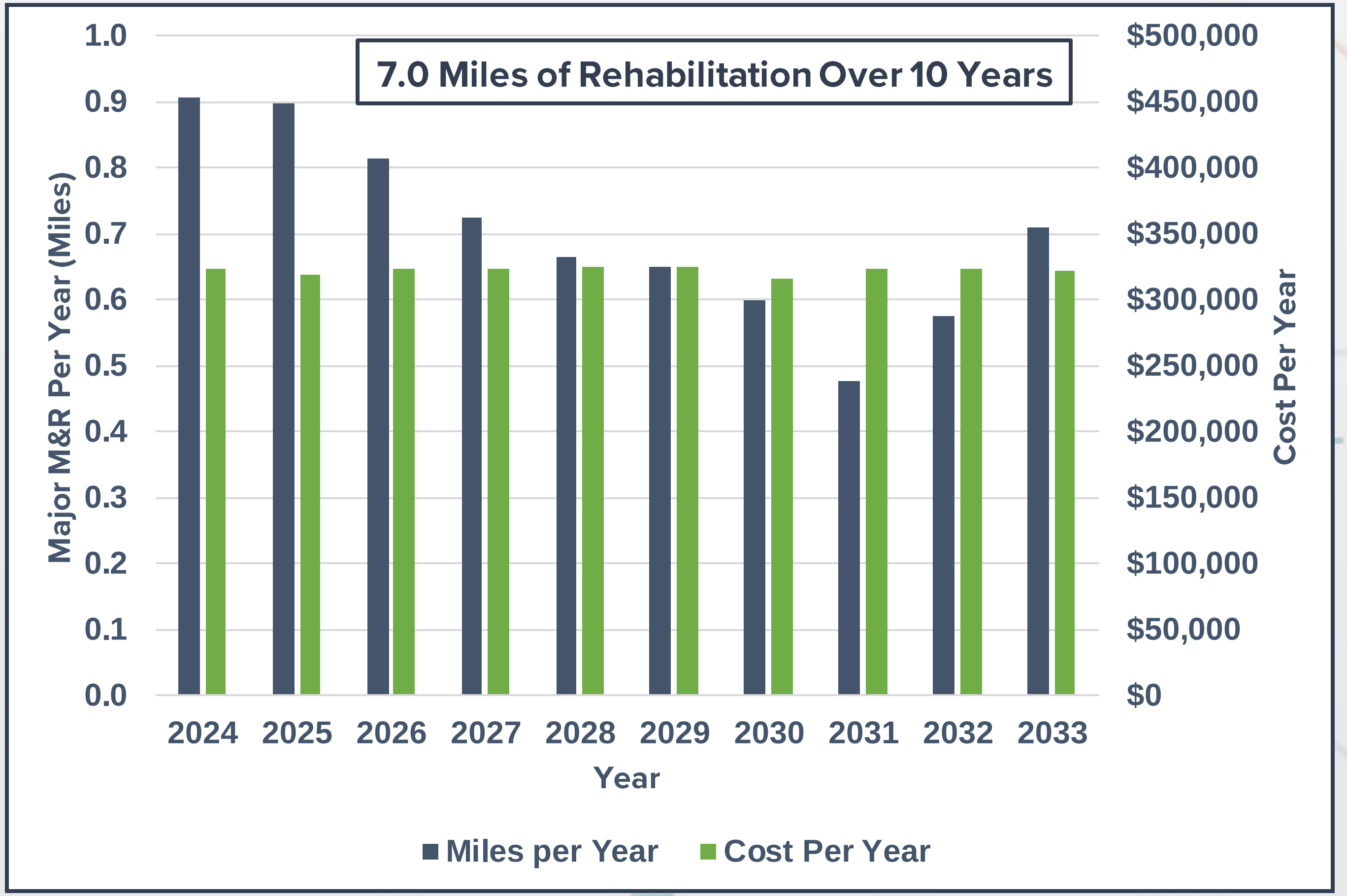


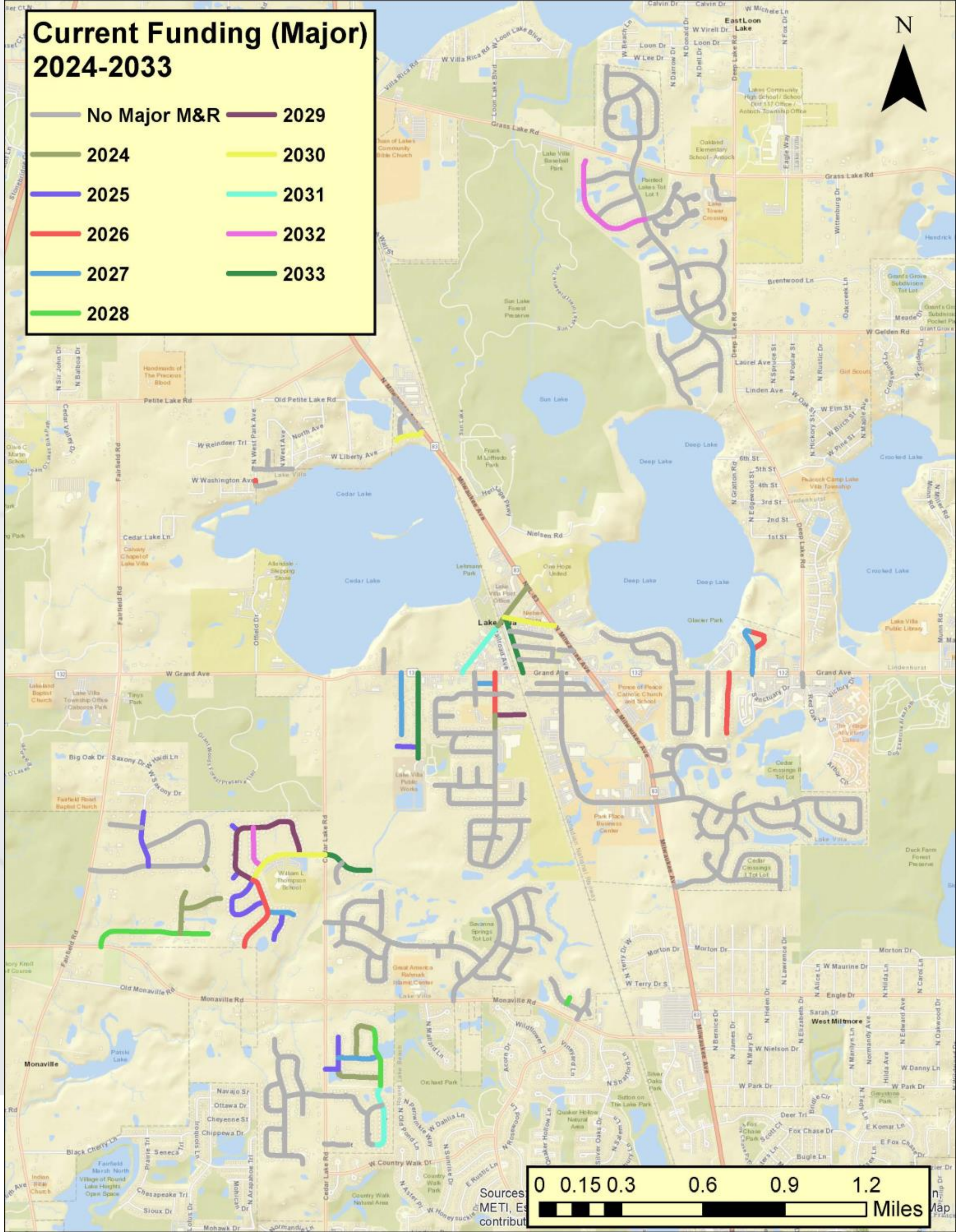
Overview of Budget Scenario Results

Funding Scenario	Total 10-Year Funded Costs	Remaining M&R Backlog in 2033	Total Funded + Backlog	Forecasted PCI in 2033
$2,670,000 per Year - Eliminate Backlog with Surface Treatments	$26,687,694	$0	$26,687,694	95
$2,600,000 per Year - Eliminate Backlog	$25,978,633	$0	$25,978,633	82
$675,000 per Year - Reach Target Condition (PCI = 60)	$6,752,019	$32,273,421	$39,025,440	60
$500,000 per Year - Increased Funding	$4,958,111	$34,636,218	$39,594,330	52
$442,000 per Year - Maintain Current Condition (PCI = 48)	$4,423,388	$35,326,587	$39,749,975	49
$325,000 for Major M&R + $45,000 from Local Funds for Surface Treatments	$3,614,448	$36,541,397	$40,155,845	47
$325,000 per Year - Current Funding	$3,217,503	$36,804,676	$40,022,179	43
$0 per Year - Do Nothing	$0	$41,061,141	$41,061,141	27

Current Funding 2024-2033

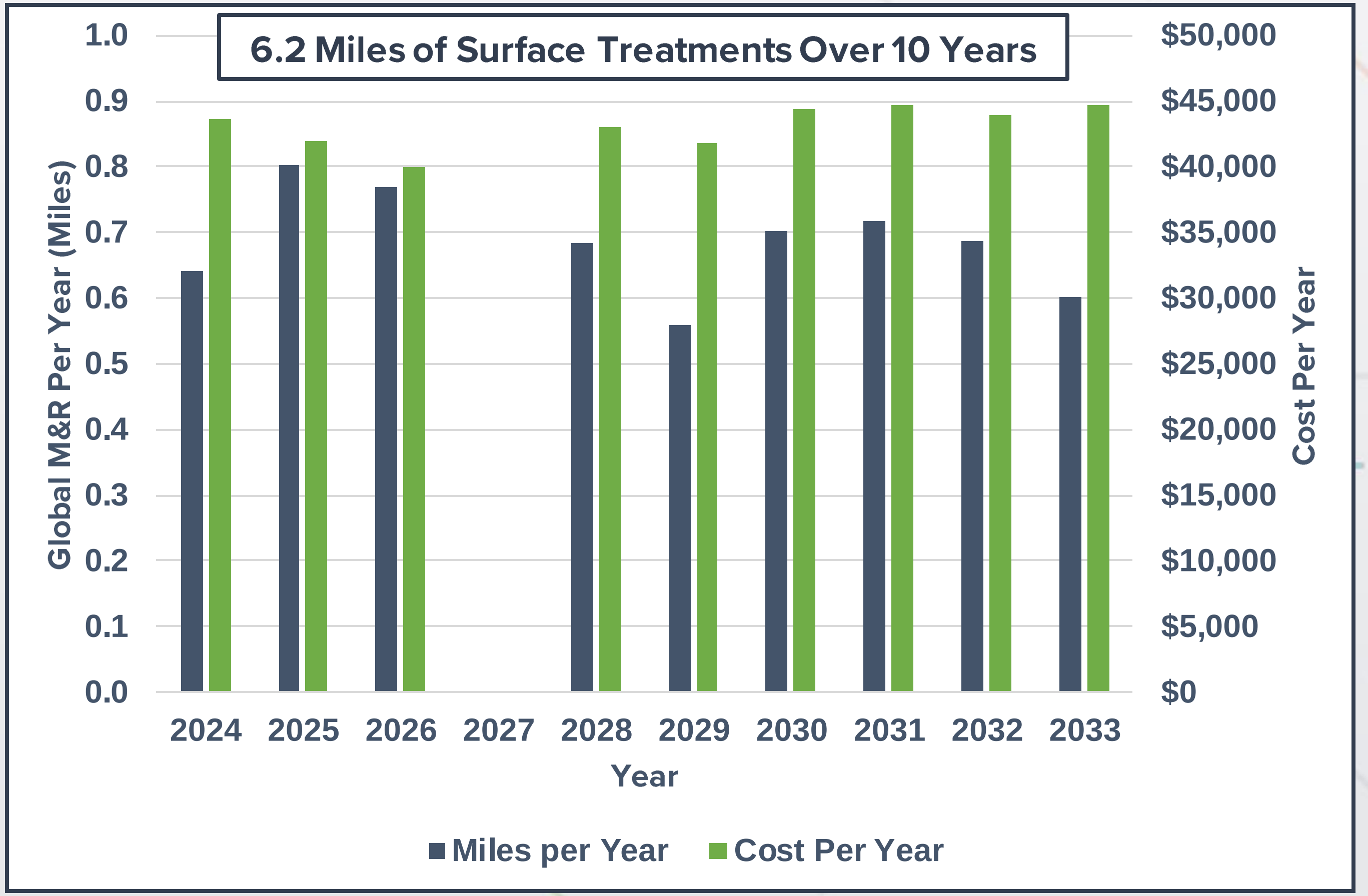
$325k per Year on Major + $45K per Year on Global

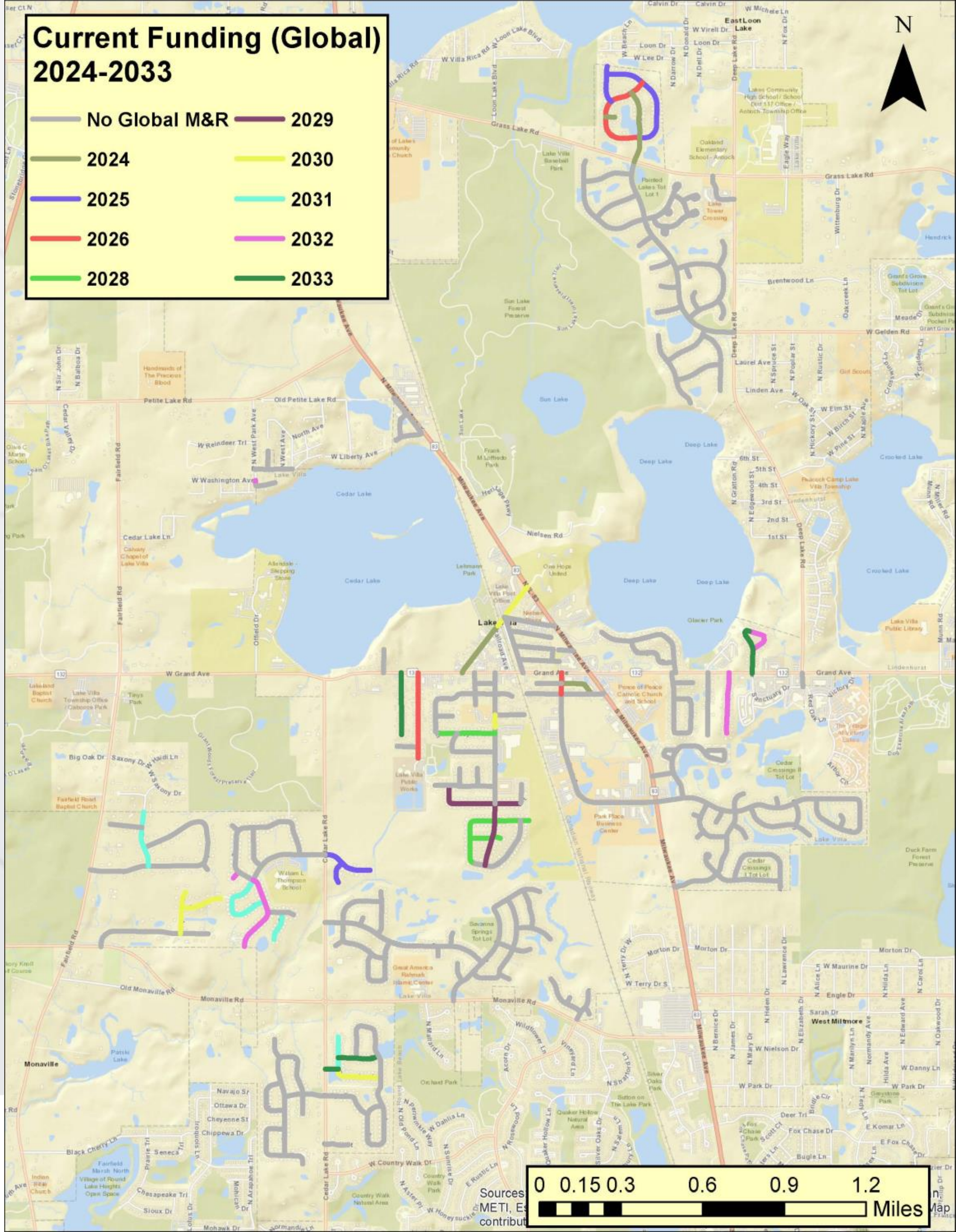




Current Funding 2024-2033

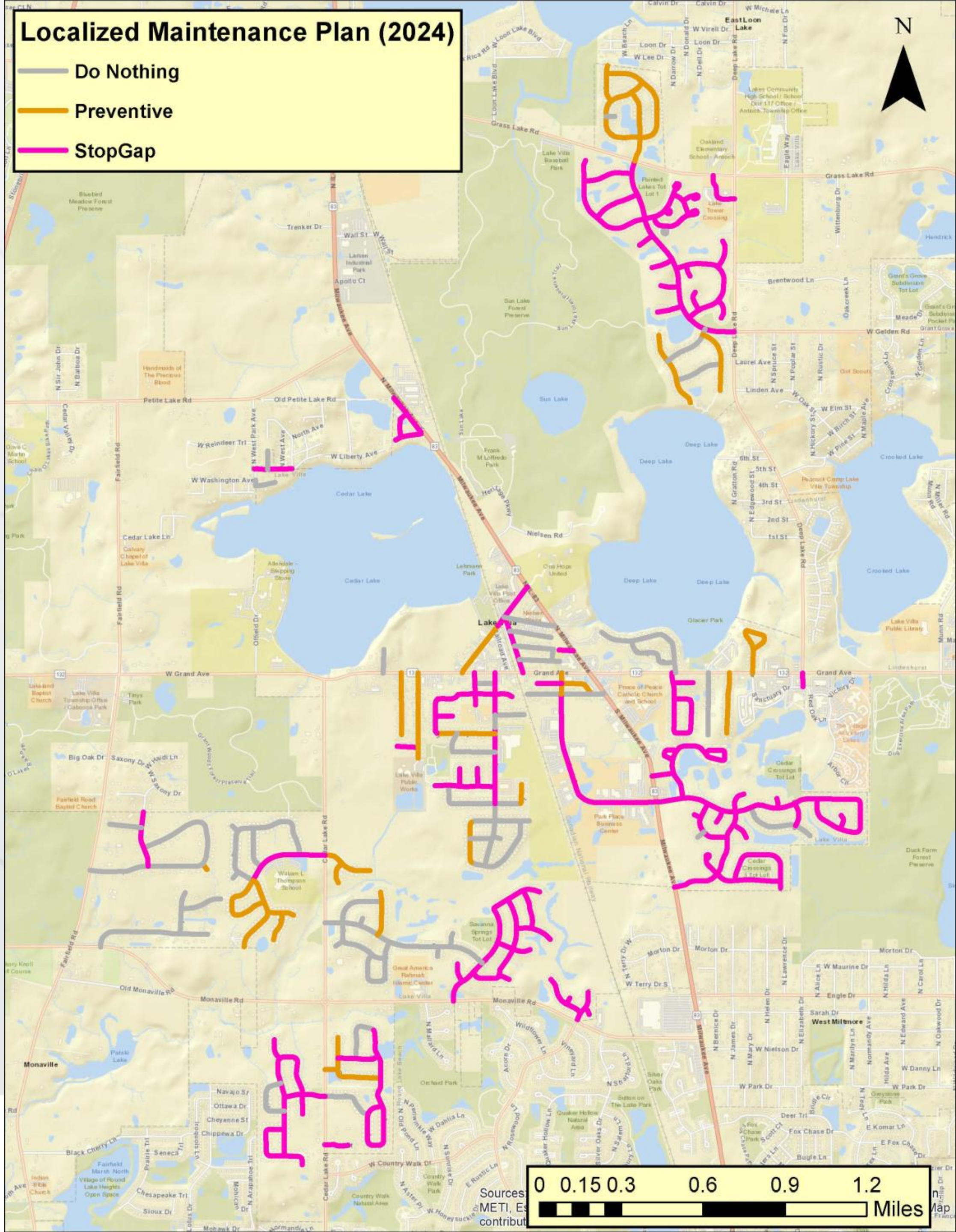
$325k per Year on Major + $45K per Year on Global



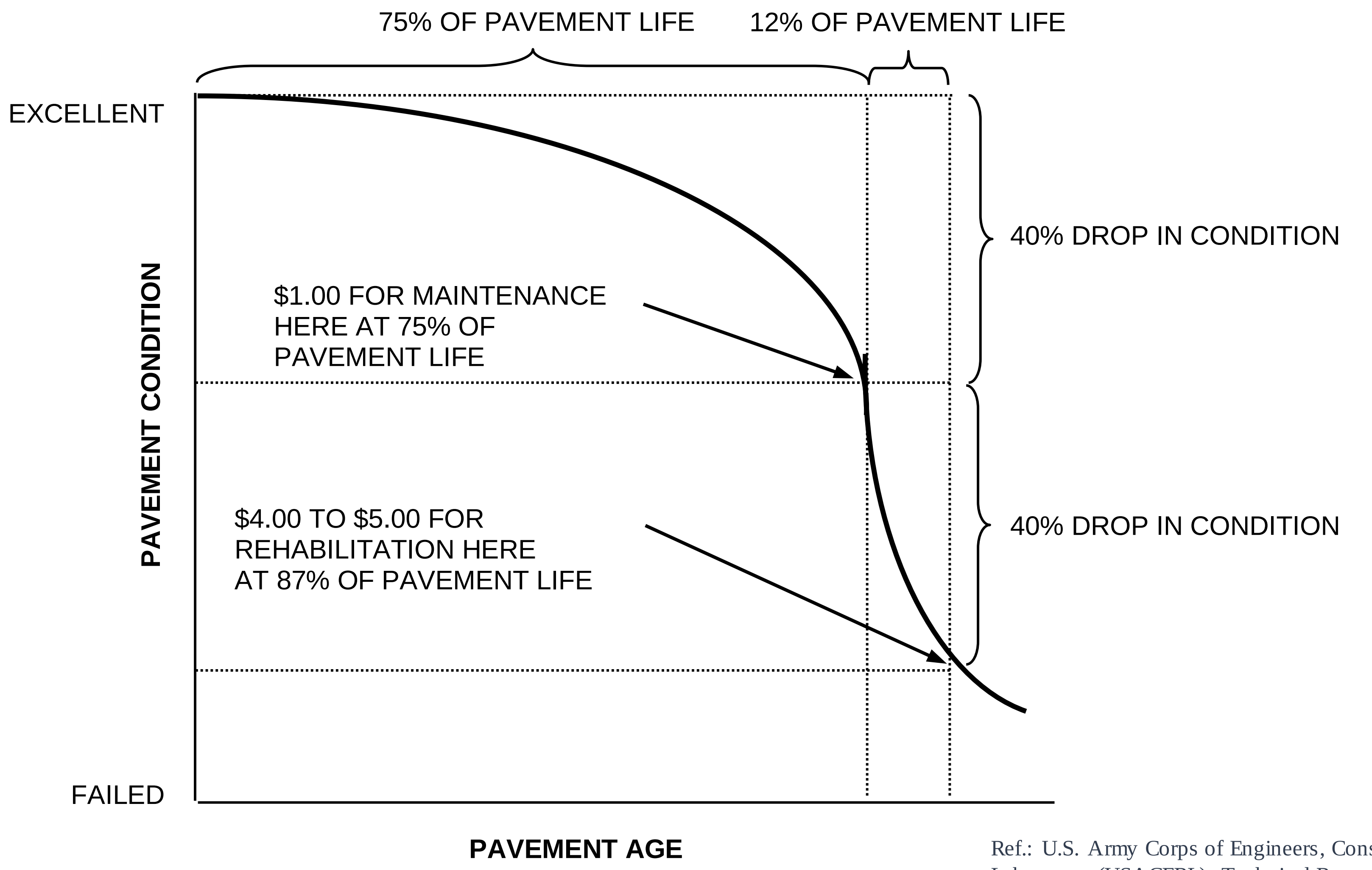


Preservation – A Little Goes a Long Way

Policy	Work Description	Work Quantity	Work Cost
Preventive	Crack Sealing	3,774 ft	$3,774
Preventive	Patching	1,193 ft^2	$5,297
Stopgap	Patching	68,890 ft^2	$310,310
Total			**$319,380**



Pavement Life Cycle and Expected Costs



Ref.: U.S. Army Corps of Engineers, Construction Engineering Laboratory (USACERL) Technical Report M-90/05 (Shahin and Walther 1990)

Recommendations

- Maintain the PMS
  - Annual updates to work history
  - Update condition data about every 3-5 years
  - Update treatment unit costs
- Use the PMS to make accountable, performance-based, data-driven decisions about work needs, and to demonstrate progress towards achieving goals.
- Use preventive maintenance (preservation) approaches to make the most effective use of available resources by extending pavement life.

Acknowledgements

- Village of Lake Villa
- Chicago Metropolitan Agency for Planning (CMAP)
- AECOM – Program management support for CMAP

Discussion

- Thanks for your time attention!
- Any questions?

Contact Information:

Mark Gardner, P.E.
mgardner@appliedpavement.com
512-222-6444

Self-Service Kayak Rental Proposal

2023-03-02

This proposal is valid for 60 days.

Cover Letter

Dear colleague,

Rent.Fun, a Movatic company, is excited to submit our propoal
for the region's first-ever self-service kayak rental program.

Like most parks and rec enthusiasts, we believe that there is no better feeling than launching a kayak at sunset.

But buying your own boat is expensive! And lugging it to the park is a pain.

With rent.fun’s self-service kayak rental program, your community can click a button on their smart phone and rent a kayak at the waters edge.

No lines. No paper forms. No reservations.

And unlike traditional operators, we’re open for business 7 days a week, sun-up to sun down, all season long.

From assisting users with technical issues, to repairing and replacement equipment - we handle all the logistics so you don't have to lift a finger.

Welcome to the new age of recreational rentals.

We’d be honored to partner with you!

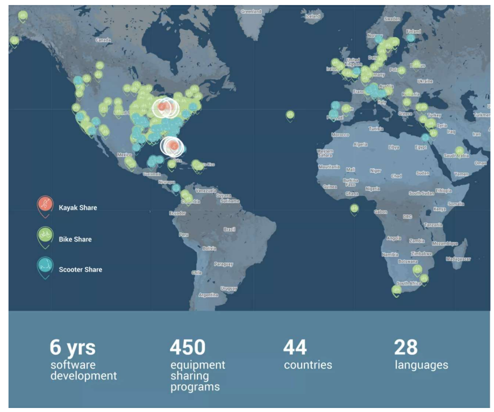
Sincerely,

Adam Greenstein, JD/MBA
CEO & Chief Fun Officer
617.686.0667
adam@rent.fun

Our Story

With nearly a decade of experience powering self-service equipment rental programs, we have a deep understanding of how to deploy software and hardware to create equipment sharing programs that make usage more convenient, affordable, and environmentally-friendly than traditional rental models.

Equipment Sharing Pioneer.
In 2012, our founder developed software-connected “smart locks” that could transform a fleet of standard bicycles into a fully functional bike sharing program. That technology has been licensed to over 450 equipment sharing systems across 44 counties.



Operational Excellence.
More than just technology, we've honed our operational skills through our first subsidiary - Tandem-Mobility (tandem-mobility.com) -- a bike share operations company that has launched and operated 18 municipal bike share programs over the past 24 months.

Continuous Innovation. In 2019, we started experimenting with a new app-based rental program - “kayak share.”   Since then, we've perfected our proprietary "smart lockers" and are expanding our kayak share network to include 45 locations across 15 states. We plan to expand contactless rentals to other forms of recreational equipment - such as lawn games, pickle ball paddles and tennis rockets - in 2024.

How Self-Service Kayak Rentals Work

Kayaks, lifejackets, and paddles are stored in solar-powered "smart lockers" and secured with app-controlled locks.

To rent and access equipment, users just download the rent.fun app, add payment information and sign the digital waiver, and then unlock and rent by scanning a QR code on the smart locker.

In-app tutorials provide water safety instructions and kayaking tips for beginners.

After a paddle on the water, the user returns the items to the same locker where they got it. The rental automatically ends and the user's credit card is charged for the duration of their rental.

RENT!FUN

The Smart Locker

The First Kayak Locker controlled via Smart Phone:

Solar-Powered
No electric hookup required.

Customizable Signage
Add your brand and your own water safety tips

Corrugated Metal Roof
Protects assets from rain and sun

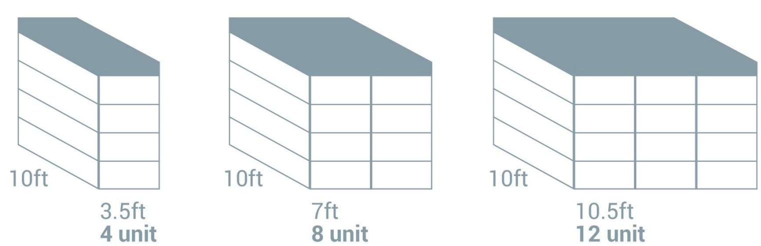
Cellular locks
No Wi-fi required

Multi-modal
Can accommodate single kayaks, double kayaks, and stand-up paddle-boards (SUPs).

Sit on top application
Can be installed on any flat surface

Steel Mesh Frame
Protects assets from theft and vandalism

Size Options



RENT!FUN

Example Installations

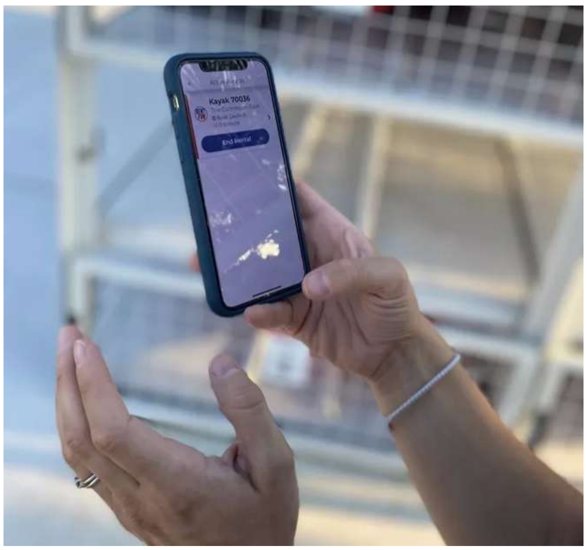
We can install on any service. A concrete pad is not required.

RENT!FUN

The Software

The Mobile App

Everything that a user needs to rent their favorite equipment - without needing to make reservations, wait in line, or fill out paper forms.

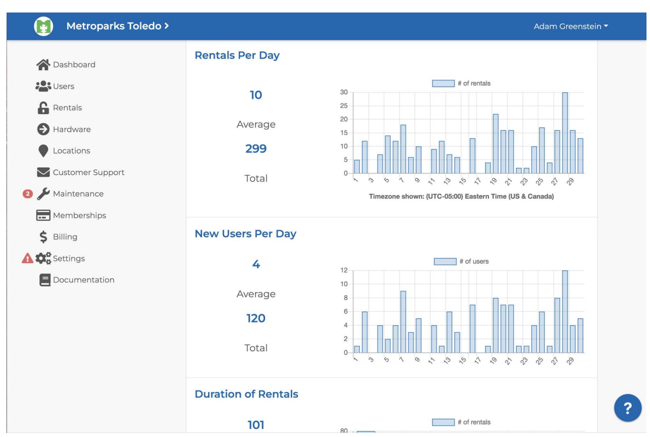


- Rental Instructions and Safety Tips
- Scan QR Code to Lock & Unlock Equipment
- Start & End Rentals
- Accepts Credit Card, Debit Card
- Communicate with Customer Support
- Sign Electronic Waivers
- Get your receipts sent via email
- View Available Units

The Admin Dashboard

Everything that a park system needs to manage and track the performance of their program.

- Utilization Data
- Revenue Reports
- Customizable Hours of Operation
- Track Maintenance Tickets.



RENT!FUN

Operations

Install

Upon contact execution, we will consult with you to identity the ideal water-front location to install your kayak rental station. We do not need a concrete pad or access to the electrical grid, any flat surface (gravel, dirt, grass, etc.) will do. Within 30 to 90 days, our Launch Manager will arrive by truck to deliver and install the station at the designated location, with the assistance of our local Field Technician (see below). Install will be completed within 1-2 days of arrival.

Ongoing Maintenance

30 days before launch, our team begins recruiting for a part-time Field Technician, local to your community. The Field Technician will assist with install and will be responsible for ongoing maintenance. During the install process, our Launch Manager will train our local Field Technician on all aspects of the equipment and technology.

Once the station is activated, our local Field Technician will conduct Preventive Maintenance Checks weekly or bi-weekly depending on the operational needs of the program. All tasks are logged digitally and to ensure compliance with our standard operating procedures and contractual requirements. In the event that equipment is damaged or goes missing, we will replace such items at no cost to the City. All field technicians are provided with safety stock of equipment (stored locally) to ensure prompt replacement of equipment.

Preventative Maintenance Checklist	
(1) Kayaks ❏ *Remove the kayak from each locker unit.* ❏ *Inspect the Rigging - Make sure the handles, perimeter lines and bungees and seats are all in good shape.* ❏ *Inspect Bottom - Flip kayak over and look for damage, holes, scratches or gouges.* ❏ *Clean - Wipe exterior and interior seats with water and/or disinfecting wipes.*	(2) Lifejackets ❏ *Remove each lifejacket from each locker unit.* ❏ *Check that all hardware and straps are firmly attached and are in working order.* ❏ *Check for leaks, mildew, lumpy or hardened buoyancy material, and oil saturation in the fabric.* ❏ *Make sure that there are no rips or tears in the fabric.* ❏ *Make sure that the label stating USCG approval is attached, and that it is readable.* ❏ *Discard and replace life jackets that show signs of deterioration - tears, mildew stains,*
(3) Paddles ❏ Remove each paddle from each unit. ❏ Rinse with clean, fresh water; be sure to rinse the ferrule as well. ❏ Examine the internal parts of the shaft to make sure they are clear of water and debris.	(4) Locker and Locker Door ❏ Lock and unlock each lock and check battery levels. ❏ Open and close each locker door, inspect hinge, check for proper functioning - make any necessary repairs. ❏ Check that all signage is present and properly displayed. Signs should be straight, clean, and undamaged.

RENT!FUN

Marketing

Through Rent.Fun's full-service offering, we will invest heavily in marketing and community engagement to drive utilization of the program and increase awareness of your parks and public spaces.

Custom Website

We develop and promote a custom website for every program that we launch, which informs users of pricing information, rental instructions, and launch locations.

Local Partnerships

Through partnerships with local hotels, businesses, and nonprofits, we create a network of program ambassadors who promote the program and the park to their constituents. We arm these groups with digital and printed content and promo codes that promote the program and the parks.

Launch Events & Local Press

We recommend holding a joint City / Rent.Fun launch event and ribbon cutting ceremony to celebrate the program's launch. We will invite local and regional news outlets to attend the event and cover the story to general local press.

Digital Marketing

Pre- and post-launch we will invest in geo-targeted google ad words and social media ads to drive rent.fun app downloads and utilization of kayak rental stations. Our objective? When someone searches "kayak rental" or similar terms in your area, rent.fun rental stations will be the first result that they see.

RENT!FUN

Risk Management

Liability

All users must sign a digital waiver in app prior to rentals, under which they assume all risk associated with use of rent.fun equipment. In addition, per the terms of the agreement between Rent.Fun and our public agency partners, we take on all liability associated with the program and agree to indemnify and hold harmless our public agency partners.

Insurance

We will add our government agency partners as additionally insured under our policy, which includes $1m of General Liability Coverage, $5m aggregate.

ACORD®

CERTIFICATE OF LIABILITY INSURANCE

DATE (MM/DD/YYYY): 10/15/2021

THIS CERTIFICATE IS ISSUED AS A MATTER OF INFORMATION ONLY AND CONFERS NO RIGHTS UPON THE CERTIFICATE HOLDER. THIS CERTIFICATE DOES NOT AFFIRMATIVELY OR NEGATIVELY AMEND, EXTEND OR ALTER THE COVERAGE AFFORDED BY THE POLICIES BELOW. THIS CERTIFICATE OF INSURANCE DOES NOT CONSTITUTE A CONTRACT BETWEEN THE ISSUING INSURER(S), AUTHORIZED REPRESENTATIVE OR PRODUCER, AND THE CERTIFICATE HOLDER.

IMPORTANT: If the certificate holder is an ADDITIONAL INSURED, the policy(ies) must have ADDITIONAL INSURED provisions or be endorsed. If SUBROGATION IS WAIVED, subject to the terms and conditions of the policy, certain policies may require an endorsement. A statement on this certificate does not confer rights to the certificate holder in lieu of such endorsement(s).

PRODUCER
K&K Insurance Group, Inc.
1712 Magnavox Way
Fort Wayne IN 46804

CONTACT NAME: Rachel Bailey
PHONE (A/C, No, Ext): 877-783-1161 FAX (A/C, No): 800-363-3694
E-MAIL ADDRESS: OandG@kandkinsurance.com
PRODUCER CUSTOMER ID:

INSURED
Rent.Fun LLC
201 S. Division St., Suite 400
Ann Arbor, MI 48104
A Member of the Sports, Leisure & Entertainment RPG

	INSURER(S) AFFORDING COVERAGE	NAIC #
INSURER A:	Nationwide Mutual Insurance Company	23787
INSURER B:		
INSURER C:		
INSURER D:		
INSURER E:		
INSURER F:		

COVERAGES **CERTIFICATE NUMBER:** W02039423 **REVISION NUMBER:**

THIS IS TO CERTIFY THAT THE POLICIES OF INSURANCE LISTED BELOW HAVE BEEN ISSUED TO THE INSURED NAMED ABOVE FOR THE POLICY PERIOD INDICATED. NOTWITHSTANDING ANY REQUIREMENT, TERM OR CONDITION OF ANY CONTRACT OR OTHER DOCUMENT WITH RESPECT TO WHICH THIS CERTIFICATE MAY BE ISSUED OR MAY PERTAIN, THE INSURANCE AFFORDED BY THE POLICIES DESCRIBED HEREIN IS SUBJECT TO ALL THE TERMS, EXCLUSIONS AND CONDITIONS OF SUCH POLICIES. LIMITS SHOWN MAY HAVE BEEN REDUCED BY PAID CLAIMS.

INSR LTR	TYPE OF INSURANCE	ADDL INSD	SUBR WVD	POLICY NUMBER	POLICY EFF (MM/DD/YYYY)	POLICY EXP (MM/DD/YYYY)	LIMITS	
A	X COMMERCIAL GENERAL LIABILITY			6BRPA0000031575200	10/15/2021 3:33 PM EDT	10/15/2022 12:01 AM	EACH OCCURRENCE	$1,000,000
	CLAIMS-MADE; X OCCUR						DAMAGE TO RENTED PREMISES (Ea Occurrence)	$300,000
							MED EXP (Any one person)	EXCLUDED
							PERSONAL & ADV INJURY	$1,000,000
							GENERAL AGGREGATE	$5,000,000
	GEN'L AGGREGATE LIMIT APPLIES PER:						PRODUCTS – COMP/OP AGG	$1,000,000
	POLICY; PRO-JECT; LOC						PROFESSIONAL LIABILITY	
	X OTHER: MEMBER						LEGAL LIAB TO PARTICIPANTS	
	AUTOMOBILE LIABILITY						COMBINED SINGLE LIMIT (Ea accident)	
	ANY AUTO						BODILY INJURY (Per person)	
	OWNED AUTOS ONLY; SCHEDULED AUTOS						BODILY INJURY (Per accident)	
	HIRED AUTOS ONLY; NON-OWNED AUTOS ONLY						PROPERTY DAMAGE (Per accident)	
	NOT PROVIDED WHILE IN HAWAII							
	UMBRELLA LIAB; OCCUR						EACH OCCURRENCE	
	EXCESS LIAB; CLAIMS-MADE						AGGREGATE	
	DED; RETENTION							
	WORKERS COMPENSATION AND EMPLOYERS' LIABILITY	N/A					PER STATUTE; OTHER	
	ANY PROPRIETOR/PARTNER/EXECUTIVE OFFICER/MEMBER EXCLUDED? (Mandatory in NH) Y / N						E.L. EACH ACCIDENT	
							E.L. DISEASE – EA EMPLOYEE	
	If yes, describe under DESCRIPTION OF OPERATIONS below						E.L. DISEASE – POLICY LIMIT	
	MEDICAL PAYMENTS FOR PARTICIPANTS						PRIMARY MEDICAL	
							EXCESS MEDICAL	

DESCRIPTION OF OPERATIONS / LOCATIONS / VEHICLES (ACORD 101, Additional Remarks Schedule, may be attached if more space is required)
Kayak/Canoe/Raft/Tube/Paddle & Surf Board Rental Operations Class I, II, III rivers, flatwater (non-guided/guided)

CERTIFICATE HOLDER
Evidence of Coverage

CANCELLATION
SHOULD ANY OF THE ABOVE DESCRIBED POLICIES BE CANCELLED BEFORE THE EXPIRATION DATE THEREOF, NOTICE WILL BE DELIVERED IN ACCORDANCE WITH THE POLICY PROVISIONS.

AUTHORIZED REPRESENTATIVE

Coverage is only extended to U.S. events and activities.
** NOTICE TO TEXAS INSUREDS: The Insurer for the purchasing group may not be subject to all the insurance laws and regulations of the State of Texas

ACORD 25 (2016/03)

RENT!FUN

Costs & Revenue Share

5-year partnership

Rent.Fun will maintain ownership of the equipment and will be responsible for all ongoing program costs and logistics.

5 year services agreement	Price
One time Activation Fee Includes installation and activation of smart locker - fully equipped with kayaks / paddleboards / lifejackets / paddle; locker signage.	**$18,000** Paid upfront prior to launch;
5 year services agreement Guarantees that have the you'll have the program for 5 years. At the end of the 5 year term, you have the option to renew the program at no cost.	**No cost**
Rental Fees You can choose to charge Market Rate Rental Fees (e.g. $20 per hour), or a Nominal Rental Fee (e.g. $5 per hour).	
Revenue Share For Market Rate Rental Fees, City shall receive 50% of the rental revenue generated during the Term.	

Customer is responsible for:

- help with marketing the program

Rent.Fun is responsible for:

- delivery, installation, maintenance
- on site signage
- providing end users with technical support
- utilization reporting
- maintenance and replacement of equipment
- collecting and processing rental revenue and refunds
- insurance and liability coverage

RENT!FUN

SAMPLE SERVICES AGREEMENET

This Services Agreement (this "Agreement"), effective as of __________, 2023 (the "Effective Date"), is entered into by and between Rent.fun, LLC, a Michigan limited liability company ("Operator") and _______ ("City"). Now, therefore, in consideration of the mutual covenants and representations set forth in this Agreement, and for other good and valuable consideration the receipt and sufficiency of which are hereby acknowledged and agreed, City and Operator hereby agree as follows:

The parties agree that the following schedules and attachments are herein incorporated by reference:

Schedule A – Rental Station Services and Obligations
Schedule B – Term & Premises
Schedule C – City Obligations

1. Purpose. Operator operates recreational equipment sharing programs that utilize recreational equipment, physical storage and blue-tooth and cellular locking technology to allow the equipment to be rented, paid for, and locked and unlocked by users with an app (collectively, the "Rental Station Services"). City now wishes to engage Operator, and Operator has agreed to provide the Rental Station Services on the City's parks, recreation, and open space areas (the "Premises") on the terms and conditions set forth herein.

2. Term. This Agreement is effective as of the Effective Date and shall continue as specified in Schedule B, unless terminated earlier in accordance with the terms of this Agreement.

3. Compensation for Services, Payment. City shall pay Operator an Activation Fee as set forth in Schedule C.

4. Exclusive License. City hereby grants to Operator an exclusive license during the Term to enter upon and utilize the Premises to install and operate the Rental Station Services and to bring onto the Premises personnel and equipment as Operator deems necessary in connection with the Rental Station Services. This exclusive license allows Operator to erect and store such equipment and materials as necessary on the Premises. Operator understands that City's Premises have varying rules and regulations depending on the location and will comply with said rules and regulations. During the Term of this Agreement, City agrees that Operator shall be the only self-service recreational equipment rental operator with the right to use the Premises.

5. Termination. Unless otherwise prohibited by law, either party may terminate this Agreement: (i) if the other party is adjudicated bankrupt or otherwise seeks to avoid its performance obligations under applicable bankruptcy or insolvency laws, (ii) upon the occurrence of a material breach of this Agreement by the other party if such breach is not cured within thirty (30) days after written notice identifying the matter constituting the material breach, or (iii) if City no longer owns or no longer has the right to license the Premises as specified herein this Agreement. In advance of any change in ownership of the Premises, City will provide Operator with at least fifteen (15) business days prior written notice of such change of ownership and use commercially reasonable efforts to get the new owner of the Premises to sign an agreement substantially similar to this Agreement with Operator (if this Agreement is not transferred as part of such change in ownership.) Upon termination or expiration of this Agreement, Operator shall collect and remove all equipment or items located on City's Premises within thirty (30) days.

6. DISCLAIMER. To the maximum extent permitted by law, except as otherwise set forth in this Agreement, neither party makes any representations or warranties to the other, including with respect to its products and services or the subject matter of this agreement, and each party hereby disclaims any express, implied or statutory warranties, including the implied warranties of fitness for a particular purpose, title, merchantability, and non-infringement.

7. Liability for Loss; Indemnity. City shall not be liable for any injury or damages to persons or property sustained by the Operator or by other persons, including but not limited to customers of the Operator or any others using the equipment of the Operator, with or without permission of the Operator. The Operator shall defend, indemnify, and hold the City harmless against any and all third party claims, damages, and lawsuits asserted against City arising out of this Agreement alleging (a) Operator's negligence or willful misconduct in providing the Rental Station Services; and/or (b) Operator was grossly negligent or committed an intentional act that caused injury to a person or damage to property arising out of this Agreement. Operator shall indemnify and hold City harmless from and against all damages finally awarded by a court of competent jurisdiction or agreed to by Operator in settlement with respect to such third party claims.

8. Insurance. The Operator shall, throughout the term of this Agreement, at its own cost and expense procure and maintain public liability insurance with respect to the Operator's operations arising out of this Agreement, with limits of at least $1,000,000.00 for bodily injury and death. Such policy of insurance shall name the City as an insured or additional insured, as its interest may appear, and shall provide that the policy cannot be cancelled without at least ten (10) days written notice to the City. Such policy shall contain an endorsement waiving all rights of subrogation, if any, against the City. The Operator shall provide the City with a copy of such prior to placement of any equipment on the Premises, or conducting any business on the Premises. Operator acknowledges and agrees that it is not an insured under any property or general liability policy maintained by the City.

9. Compliance with Law and Policy. Operator agrees to provide the Rental Station Services in accordance with all City policies, regulations, rules, and practices and with all applicable municipal, state, and federal laws, including but not limited to fire codes.

10. Subcontractors. The Operator shall be the sole source of contact for the contract. The Operator is totally responsible for all actions and work performed by its subcontractors. All terms, conditions and requirements of the contract shall apply without qualification to any services performed or goods provided by any subcontractor.

11. Miscellaneous. This Agreement and all matters concerning its interpretation, performance, or enforcement will be governed in accordance with the laws of the State of Michigan (exclusive of its choice of law rules), and the federal laws of the U.S. Notwithstanding any provision hereof. City and Operator are independent contractors under this Agreement and nothing herein shall be construed to create a partnership, joint venture or agency relationship. Each party is solely responsible for all applicable taxes, withholdings, and other statutory or contractual obligations. Neither party may assign performance of this Agreement or any of its rights or delegate any of its duties under this Agreement without the prior written consent of the other, except that Operator may assign this Agreement without City's prior written consent in the case of a merger, acquisition or other change of control, and in such event this Agreement shall be binding upon and inure to the benefit of the parties hereto and their respective successors and assigns. This Agreement may be amended by mutual agreement of the parties. Such amendments shall only be effective if incorporated in written amendments to this Agreement and executed by duly authorized representatives of the parties. This Agreement may be executed simultaneously or in any number of counterparts, each of which shall be deemed an original, but all of which together shall constitute one and the same agreement. This Agreement contains the entire agreement of the parties relating to the subject matter hereof. In the event any of the provisions of this agreement shall be held to be invalid by any court of competent jurisdiction, the same shall be deemed severable, and as never having been contained herein, and this agreement shall then be construed and enforced in accordance with the remaining provisions hereof. In the event either party fails or refuses to comply with the terms of this agreement, then the non-breaching party may seek any remedy available at law or in equity.

13. Independent Contractor. Operator is an independent contractor and neither the Operator nor its officers, employees and/or agents shall be deemed the City's agent, representative or employee. This Agreement does not create an employee/employer relationship, a partnership, joint venture or any other type of legal relationship between the City and the Operator.

RENT!FUN

SCHEDULE A: **<u>Station Services and Obligations</u>**

1. EQUIPMENT & INITIAL LAUNCH: Operator will make available for rent Kayak Rental Stations Services, as collectively defined below in this subsection. Each Kayak Rental Station shall include:

- 4 sit-on-top kayaks / SUPs, with associated paddles and lifejackets
- Each craft offered for rent shall be furnished with all items of safety equipment specified by state laws governing the use and operation of watercraft on state water; and
- When not in use, all equipment shall be stored in a tamper-proof locker provided, maintained, and installed by Operator. The locker shall include individual storage units suitable to store each kayak and / or SUP and associated lifejackets and paddles. Each storage unit shall be secured by an app-controlled cellular lock, provided and maintained by Operator.

2. SIGNAGE. Operator may choose to provide signage at the Premises. Operator may obtain third party sponsors for the signage and retain all revenue collected therefrom. Operator will submit designs of any anticipated decals or signage for City's approval prior to installation, not to be unreasonably withheld. Operator shall be solely responsible for installation and maintenance of any decals or signage.

3. CUSTOMER SUPPORT: Operator shall provide customer and technical support services to end users of its equipment to resolve billing issues, technical issues, and general inquiries.

4. MARKETING: Operator shall develop and deliver to City a custom website designed to market the Rental Station Services prior to launch.

5. MAINTENANCE: Operator maintenance personnel will visit the Premises to perform general maintenance and cleaning of all equipment to ensure that all equipment is in good repair and condition for use. In the event a safety or maintenance issue is discovered on any equipment available for rent, such equipment shall be made unavailable to users and shall be removed and repaired before it is put back into service.

SCHEDULE B: T<u>erm and Revenue Share</u>

1. TERM: The Term shall commence on the Effective Date and shall continue for a period of 5 years, unless earlier terminated in accordance with the provisions of this Agreement ("Initial Term"). Af the expirtaion of the intitial term, this agreement shall automatically at no cost to City, under an adjusted revenue share percentage to be negotiated between the parties.

2. REVENUE SHARE: City shall receive 50% of the gross rental revenue received from watercraft rentals on Premises, less the direct costs of any Non-Standard Repairs that are required during the Term. Non-standard repairs shall include: (a) moving the locker to a new City-managed location, on written request of City; (b) replacement of locker or parts thereof due to vandalism, natural disasters, or other outside forces unrelated to Operators or its Rental Station Services.

SCHEDULE C: **<u>City Obligations</u>**

1. MARKETING. City will use reasonable efforts to promote the Rental Stations Services to the public, which shall include linking to the program website from the City's web properties and social media accounts.

2. COMPENSATION. City shall pay Operator the following fees:

- Activation Fee: $18,000.

3. PAYMENT. An invoice shall be sent following execution of this Agreement, with payment terms of net 30 days.

AGREED AND ACCEPTED

Operator: Rent.fun, LLC

By: ______________________________

Name: ______________________________

Title: ______________________________

Date: ______________________________

City ______________________________

By: ______________________________

Name: ______________________________

Title: ______________________________

Date: ______________________________

MARKET RATE FEE STRUCTURES - *$20-25 / 2 hour rental*

4-unit

Kayaks	**4**					
Activation Fee (one time)	**$18,000**					
Term	**5 years**					
Revenue Share	**50%**					
Renewal	**No Cost**					
Footprint	**10 ft x 3.5 ft**					
Average Revenue per Rental	**$25**				**After 5 years**	**After 10 years**
	Annual Rentals	**Annual Gross Rental Revenue**	**Annual Rev Share for HOST**	**Total Rev Share for HOST - 5 years**	**HOST Profit**	**City Profit**
Low Utilization	200	$5,000	$2,500	$12,500	**-$5,500**	**$7,000**
Average Utilization	300	$7,500	$3,750	$18,750	**$750**	**$19,500**
High Utilization	400	$10,000	$5,000	$25,000	**$7,000**	**$32,000**

8-unit

Kayaks	**8**					
Activation Fee	**$26,000**					
Term	**5 years**					
Rev Share	**50%**					
Renewal	**No Cost**					
Footprint	**10 ft x 7 ft**					
Average Revenue per Rental	**$25**				**After 5 years**	**After 10 years**
	Annual Rentals	**Annual Gross Revenue**	**Annual Rev Share for CITY**	**Total Rev Share for CITY - 5 years**	**City Profit**	**City Profit**
Low Utilization	250	$6,250	$3,125	$15,625	**-$10,375**	**$5,250**
Average Utilization	375	$9,375	$4,688	$23,438	**-$2,563**	**$20,875**
High Utilization	500	$12,500	$6,250	$31,250	**$5,250**	**$36,500**

12-unit

Kayaks	**12**					
Activation Fee	**$34,000**					
Term	**5 years**					
Rev Share	**50%**					
Renewal	**No Cost**					
Footprint	**10 ft x 10.5 ft**					
Average Revenue per Rental	**$35**				**After 5 years**	**After 10 years**
	Annual Rentals	**Annual Gross Revenue**	**Annual Rev Share for CITY**	**Total Rev Share for CITY - 5 years**	**City Profit**	**City Profit**
Low Utilization	300	$7,500	$3,750	$18,750	**-$15,250**	**$11,500**
Average Utilization	450	$11,250	$5,625	$28,125	**-$5,875**	**$30,250**
High Utilization	600	$15,000	$7,500	$37,500	**$3,500**	**$49,000**