## SCHEDULE OF EMPLOYER ALLOCATIONS AND SCHEDULE OF PENSION AMOUNTS BY EMPLOYER

December 31, 2021



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#### INDEPENDENT AUDITORS' REPORT

To the Board of Trustees Public School Retirement System of the School District of Kansas City, Missouri Kansas City, Missouri

#### Opinion

We have performed an audit of the schedule of employer allocations of the Public School Retirement System of the School District of Kansas City, Missouri (the "Retirement System") as of and for the year ended December 31, 2021, and the related notes. We have also audited the total for all entities of the columns titled net pension liability, total deferred outflows of resources, total deferred inflows of resources, and total pension expense (specified column totals) as of and for the year ended December 31, 2021 included in the accompanying schedule of pension amounts by employer of the Retirement System, and the related notes.

In our opinion, based on our audit and on the procedures performed as described in the Auditor's Responsibilities for the Audit of the Schedules section, the schedules referred to above present fairly, in all material respects, the employer allocations and net pension liability, total deferred outflows of resources, total deferred inflows of resources, and total pension expense for the total of all participating entities for the Retirement System as of and for the year ended December 31, 2021, in accordance with accounting principles generally accepted in the United States of America.

### Basis for Opinion

We conducted our audit in accordance with auditing standards generally accepted in the United States of America (GAAS). Our responsibilities under those standards are further described in the Auditor's Responsibilities for the Audit of the 2021 Schedules section of our report. We are required to be independent of the Retirement System and to meet our other ethical responsibilities, in accordance with the relevant ethical requirements relating to our audits. We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our audit opinion.

### Responsibilities of Management for Schedules

Management is responsible for the preparation and fair presentation of the schedule of employer allocations and specified column totals included in the schedule of pension amounts by employer in accordance with accounting principles generally accepted in the United States of America; this includes the design, implementation, and maintenance of internal control relevant to the preparation and fair presentation of the schedules that are free from material misstatement, whether due to fraud or error.

In preparing the these schedules, management is required to evaluate whether there are conditions or events, considered in the aggregate, that raise substantial doubt about the Retirement System's ability to continue as a going concern.

#### Auditor's Responsibilities for the Audit of the Schedules

Our objectives are to obtain reasonable assurance about whether the schedule of employer allocations and specified column totals included in the schedule of pension amounts by employer are free from material misstatement, whether due to fraud or error, and to issue an auditor's report that includes our opinion. Reasonable assurance is a high level of assurance but is not absolute assurance and therefore is not a guarantee that an audit conducted in accordance with GAAS will always detect a material misstatement when it exists. The risk of not detecting a material misstatement resulting from fraud is



higher than for one resulting from error, as fraud may involve collusion, forgery, intentional omissions, misrepresentations, or the override of internal control. Misstatements are considered material if there is a substantial likelihood that, individually or in the aggregate, they would influence the judgment made by a reasonable user based on the schedules.

In performing an audit in accordance with GAAS, we:

- Exercise professional judgment and maintain professional skepticism throughout the audit.
- Identify and assess the risks of material misstatement of the schedule of employer allocations and specified column totals included in the schedule of pension amounts by employer, whether due to fraud or error, and design and perform audit procedures responsive to those risks. Such procedures include examining, on a test basis, evidence regarding the amounts and disclosures in the financial statements.
- Obtain an understanding of internal control relevant to the audit in order to design audit
  procedures that are appropriate in the circumstances, but not for the purpose of expressing an
  opinion on the effectiveness of the Retirement System's internal control. Accordingly, no such
  opinion is expressed.
- Evaluate the appropriateness of accounting policies used and the reasonableness of significant accounting estimates made by management, as well as evaluate the overall presentation of the financial statements.
- Conclude whether, in our judgment, there are conditions or events, considered in the aggregate, that raise substantial doubt about the Retirement System's ability to continue as a going concern for a reasonable period of time.

We are required to communicate with those charged with governance regarding, among other matters, the planned scope and timing of the audit, significant audit findings, and certain internal control-related matters that we identified during the audit.

#### Other Matter

We have audited, in accordance with auditing standards generally accepted in the United States of America, the financial statements of the Retirement System as of and for the year ended December 31, 2021, and our report thereon, dated June 13, 2022, expressed an unmodified opinion on those financial statements.

#### Restriction of Use

Our report is intended solely for the information and use of the Retirement System management, the Board of Trustees of the Retirement System, the Retirement System employers and their auditors and is not intended to be and should not be used by anyone other than these specified parties.

Mayer Woffman McCann P.C.

Kansas City, Missouri
September 28, 2022

### **SCHEDULE OF EMPLOYER ALLOCATIONS**

As of and for the year ended December 31, 2021

Employer	Co	Employer Allocated Proportion	
Academie Lafayette	\$	752,745	2.824904%
Academy for Integrated Arts		193,893	0.727642%
Allen Village Charter		349,806	1.312753%
Brookside Charter School		649,101	2.435948%
Citizens of the World Kansas City		347,280	1.303274%
Crossroads Charter Schools		910,617	3.417367%
DeLaSalle Charter School 2.0		152,227	0.571278%
Ewing Marion Kauffman School		870,868	3.268196%
Frontier Schools		1,343,449	5.041700%
Genesis Schools, Inc.		210,971	0.791733%
Gordon Parks Elementary		190,787	0.715986%
Guadalupe Centers Schools		1,057,210	3.967501%
Hogan Preparatory Academy		753,007	2.825887%
Hope Leadership Academy		94,361	0.354118%
Kansas City Girl's Preparatory		170,875	0.641260%
Kansas City International Academy		679,462	2.549887%
Kansas City Public Library		1,051,319	3.945394%
Kansas City Public Schools		14,811,408	55.584303%
KIPP Endeavor Academy		554,314	2.080231%
Lee A. Tolbert Community Academy		334,907	1.256840%
Scuola Vita Nuova		290,711	1.090981%
University Academy		877,428	3.292815%
Total	\$	26,646,746	100.000000%

NOTE: The Retirement System had contributions of \$70,743 for 2021; however, this amount was not used in determining the Schedule of Employer Allocations.

### SCHEDULE OF PENSION AMOUNTS BY EMPLOYER

As of and for the year ended December 31, 2021

			Defe	rred Outflows of Reso	ources			Defe	red Inflows of Reso	ources	
Employer	12/31/2021 Net Pension Liability	Differences Between Expected and Actual Experience	Net Difference Between Projected and Actual Earnings on Pension Plan	Changes in Assumptions	Changes in Proportion	Total Deferred Outflows of Resources	Differences Between Expected and Actual Experience	Net Difference Between Projected and Actual Earnings on Pension Plan Investments	Changes in Assumptions	Changes in Proportion	Total Deferred Inflows of Resources
Academie Lafayette	\$ 7,024,945	\$ 7,887	\$ 477,450	\$ 5,354	\$ 144,988	\$ 635,679	\$ 114,685	\$ 2,235,739	\$ -	\$ -	\$ 2,350,424
Academy for Integrated Arts	1,809,493	2,032	122,982	1,379	247,750	374,143	29,541	575,884	· -	· _	605,425
Allen Village Charter	3,264,542	3,665	221,874	2,488	,	228,027	53,295	1,038,964	_	296,316	1,388,575
Benjamin Banneker Charter Academy	-	-		_,	_		-	-	_	-	-
Brookside Charter School	6,057,693	6,801	411,711	4,617	131,076	554,205	98,894	1,927,904	-	-	2,026,798
Citizens of the World Kansas City	3,240,970	3,639	220,272	2,470	575,057	801,438	52,910	1,031,462	-	-	1,084,372
Crossroads Charter Schools	8,498,276	9,541	577,585	6,477	1,253,993	1,847,596	138,738	2,704,637	-	-	2,843,375
DeLaSalle Charter School 2.0	1,420,649	1,595	96,554	1,083	350,624	449,856	23,193	452,132	-	-	475,325
Ewing Marion Kauffman School	8,127,319	9,124	552,373	6,195		567,692	132,682	2,586,577	-	210,475	2,929,734
Frontier Schools	12,537,653	14,076	852,120	9,556	-	875,752	204,682	3,990,197	-	1,074,074	5,268,953
Genesis Schools, Inc.	1,968,874	2,210	133,814	1,501	-	137,525	32,143	626,608	-	252,020	910,771
Gordon Parks Elementary	1,780,507	1,999	121,012	1,357	-	124,368	29,067	566,659	-	205,378	801,104
Guadalupe Centers Schools	9,866,345	11,077	670,565	7,520	168,481	857,643	161,072	3,140,034	-	162,692	3,463,798
Hogan Preparatory Academy	7,027,389	7,890	477,616	5,356	99,426	590,288	114,725	2,236,517	-	-	2,351,242
Hope Leadership Academy	880,617	989	59,851	671	95,873	157,384	14,376	280,263	-	-	294,639
Kansas City Girl's Preparatory	1,594,679	1,790	108,382	1,215	556,553	667,940	26,034	507,518	-	-	533,552
Kansas City International Academy	6,341,035	7,119	430,968	4,833	165,478	608,398	103,520	2,018,080	-	-	2,121,600
Kansas City Neighborhood Academy	-	-	-	-	-	-	-	-	-	-	-
Kansas City Public Library	9,811,369	11,015	666,829	7,478	348,226	1,033,548	160,174	3,122,538	-	-	3,282,712
Kansas City Public Schools	138,226,534	155,185	9,394,554	105,357	-	9,655,096	2,256,603	43,991,575	-	2,001,950	48,250,128
KIPP Endeavor Academy	5,173,099	5,808	351,589	3,943	442,981	804,321	84,453	1,646,376	-	-	1,730,829
Lee A. Tolbert Community Academy	3,125,498	3,509	212,424	2,382	-	218,315	51,025	994,712	-	244,396	1,290,133
Pathway Academy	-	-	-	-	-	-	-	-	-	-	-
Scuola Vita Nuova	2,713,041	3,046	184,392	2,068	15,058	204,564	44,291	863,445	-	7,743	915,479
University Academy	8,188,542	9,193	556,534	6,241	<u> </u>	571,968	133,681	2,606,062		140,520	2,880,263
Total	\$ 248,679,069	\$ 279,190	\$ 16,901,451	\$ 189,541	\$ 4,595,564	\$ 21,965,746	\$ 4,059,784	\$ 79,143,883	\$ -	\$ 4,595,564	\$ 87,799,231

### SCHEDULE OF PENSION AMOUNTS BY EMPLOYER (continued)

For the year ended December 31, 2021

	Pension Expense						
Employer		roportionate Share of Plan Pension Expense		Net Recognition of Deferred Amounts from Changes in Proportionate Share		Total Employer Pension Expense	
Academie Lafayette	\$	(71,873)	\$	149,817	\$	77,944	
Academy for Integrated Arts		(18,513)		222,592		204,079	
Allen Village Charter		(33,400)		(343,289)		(376,689)	
Benjamin Banneker Charter Academy		-		(341,681)		(341,681)	
Brookside Charter School		(61,977)		160,131		98,154	
Citizens of the World Kansas City		(33,159)		610,029		576,870	
Crossroads Charter Schools		(86,947)		1,066,751		979,804	
DeLaSalle Charter School 2.0		(14,535)		125,048		110,513	
Ewing Marion Kauffman School		(83,152)		34,076		(49,076)	
Frontier Schools		(128,274)		(456,613)		(584,887)	
Genesis Schools, Inc.		(20,144)		(243,439)		(263,583)	
Gordon Parks Elementary		(18,217)		(134,442)		(152,659)	
Guadalupe Centers Schools		(100,944)		483,269		382,325	
Hogan Preparatory Academy		(71,898)		(176,435)		(248,333)	
Hope Leadership Academy		(9,010)		38,029		29,019	
Kansas City Girl's Preparatory		(16,315)		607,416		591,101	
Kansas City International Academy		(64,876)		237,931		173,055	
Kansas City Neighborhood Academy		-		(549,781)		(549,781)	
Kansas City Public Library		(100,381)		309,734		209,353	
Kansas City Public Schools		(1,414,209)		(1,283,034)		(2,697,243)	
KIPP Endeavor Academy		(52,927)		296,771		243,844	
Lee A. Tolbert Community Academy		(31,977)		(211,373)		(243,350)	
Pathway Academy		-		(492,833)		(492,833)	
Scuola Vita Nuova		(27,757)		89,543		61,786	
University Academy	_	(83,778)	_	(198,217)		(281,995)	
Total	\$	(2,544,263)	\$	-	\$	(2,544,263)	

## NOTES TO SCHEDULE OF EMPLOYER ALLOCATIONS AND SCHEDULE OF PENSION AMOUNTS BY EMPLOYER

### (1) <u>Description of plan</u>

General - The Retirement System is a cost-sharing multiple-employer defined benefit pension plan (the "Plan"), which was established by the General Assembly of the State of Missouri and is exempt from the provisions of the Employee Retirement Income Security Act of 1974. The Board of Trustees of the Retirement System (the "Board") administers and operates the Plan in accordance with the statutes of the State of Missouri. During the year ended December 31, 2021, participating employers consisted of the School District of Kansas City, Missouri; the Kansas City, Missouri Public Library District; the Retirement System; and the following charter schools: Academie Lafayette, Academy for Integrated Arts, Allen Village Charter, Brookside Charter School, Citizens of the World Kansas City, Crossroads Charter Schools, DeLaSalle Charter School, Ewing Marion Kauffman School, Frontier Schools, Genesis School, Inc., Gordon Parks Elementary, Guadalupe Center Schools, Hogan Preparatory Academy, Hope Leadership Academy, KC International Academy, Kansas City Girl's Preparatory Academy, KIPP Endeavor Academy, Lee A. Tolbert Community Academy, Scuola Vita Nuova, and University Academy.

**Eligibility** - All regular, full-time employees of the participating employers become members of the Plan as a condition of employment if they are in a position requiring at least 25 hours of work per week and nine calendar months per year. Employees who retire after June 30, 1999 and were hired prior to January 1, 2014 are members of Plan B. Employees hired on or after January 1, 2014 are members of Plan C. At January 1, 2021, the Plan's membership consisted of:

	2021
Active Plan members	4,108
Retirees and beneficiaries receiving benefits	4,099
Terminated Plan members, vested entitled to but not yet	
receiving benefits	521
Terminated Plan members, nonvested entitled to a refund of	
contributions plus accrued interest	2,590
Total Plan membership	11,318

Contributions - Members were required to contribute 9% of their annual covered salary. During 2018, the Missouri General Assembly passed legislation that increased the employer contribution rate to 10.50% of annual covered salary effective January 1, 2019, and then to 12.00% of annual covered salary effective January 1, 2020. Beginning July 1, 2021, the employer contribution rate will be the greater of (1) the actuarial required contribution rate less the member contribution rate, or (2) 12.00% of annual covered salary, until the Retirement System is fully funded. Once the Retirement System is fully funded, the employer contribution rate may increase or decrease, in subsequent years, depending on valuation results and the employee contribution rate may decrease from 9% depending on valuation results. However, such changes are subject to statutory limitations.

The contribution rate is set each year by the Board of the Kansas City Public School Retirement System upon the recommendation of the Retirement System's actuary within the contribution restrictions of RSMo Section 169.350 subsections 5 and 6.

## NOTES TO SCHEDULE OF EMPLOYER ALLOCATIONS AND SCHEDULE OF PENSION AMOUNTS BY EMPLOYER

### (1) <u>Description of plan</u> (continued)

**Service** - Creditable service is membership service. This is service for which required contributions have been made. Members of Plan B are effectively limited to 30 years of creditable service, regardless of the number of years actually worked, unless the member earned more than 30 years prior to August 28, 1993. Members of Plan C are effectively limited to 34.25 years of creditable service, regardless of the number of years actually worked.

#### Compensation

Annual compensation - Compensation in excess of the limitations set forth in Section 401(a)(17) of the Internal Revenue Code will be disregarded for purposes of determining contributions and benefits for members of Plan B and C. A member's annual compensation is the member's regular compensation.

Average final compensation - For members of Plan B and C, the average final compensation is the highest average compensation paid during any four consecutive years of creditable service.

#### **Normal retirement**

Eligibility - A member of Plan B may retire (a) after the completion of five years of creditable service, provided such member has attained at least the age of 60 or (b) after the member has accumulated a minimum of 75 credits (effective August 28, 1998), where each year of creditable service plus a member's age equals 75 credits. A member of Plan C may retire (a) after the completion of five years of creditable service, provided such member has attained at least the age of 62 or (b) after the member has accumulated a minimum of 80 credits, where each year of creditable service plus a member's age equals 80 credits.

Benefit - For a member of Plan B, the normal monthly retirement benefit equals the product of one-twelfth of 2.00% (1.75% for members who retired prior to June 30, 1999) of the member's average final compensation and years of creditable service, subject to a maximum of 60% of their average final compensation. The normal monthly retirement benefit for a member of Plan B whose years of creditable service exceeded 34.25 years on August 28, 1993, shall equal the product of 1.75% and the member's years of creditable service on August 28, 1993. For a member of Plan C, the normal monthly retirement benefit equals the product of one-twelfth of 1.75% of the member's average final compensation and years of creditable service, subject to a maximum of 60% of their average final compensation.

Minimum benefit - Effective January 1, 1996, any member with at least ten years of service, but less than twenty years, is entitled to a minimum monthly retirement benefit equal to the sum of \$150 and \$15 for each full year of creditable service in excess of ten years or the actuarial equivalent if an option is elected. Any member with at least twenty years of creditable service at retirement is entitled to a minimum monthly retirement benefit of \$300 or the actuarial equivalent of \$300 if an option is elected. Beneficiaries of deceased members who retired with at least ten years of creditable service and elected one of the optional plans for payment of benefits may receive the actuarial equivalent of the minimum monthly retirement benefit available for the option chosen.

#### Early retirement

*Eligibility* - A member with at least five years of creditable service and a minimum age of fifty-five is eligible for early retirement.

Benefit - A member eligible for early retirement will receive a reduced benefit, calculated as for normal retirement, which recognizes service and compensation to the actual retirement date. The reduction in benefit will provide a benefit which is actuarially equivalent to the normal retirement benefit that would be payable at the member's normal retirement date.

## NOTES TO SCHEDULE OF EMPLOYER ALLOCATIONS AND SCHEDULE OF PENSION AMOUNTS BY EMPLOYER

### (1) <u>Description of plan</u> (continued)

#### **Disability retirement**

*Eligibility* - A member with at least five years of creditable service who is certified to be totally incapacitated for performance of duty by the Medical Board (as designated by the Board) is eligible for disability retirement.

Benefit - A disabled member will receive a benefit calculated as for normal retirement, based on credible service and average final compensation at the actual disability retirement date, or the minimum disability benefit whichever is greater. The minimum disability retirement benefit shall be the lesser of:

- 1. 25% of the member's average final compensation; or
- 2. The member's service retirement benefit calculated on the member's average final compensation and the maximum number of years of creditable service the member would have earned had the member remained an employee until age 60.

#### Termination benefits - vested

*Eligibility* - A member who has at least five years of creditable service earns a vested interest in their accrued benefit, provided the member leaves their contributions in the Plan.

Benefit - The vested benefit is calculated as a normal retirement benefit based on a member's creditable service and average final compensation on the termination date. The benefit is payable, at minimum, on the member's normal retirement date.

### Termination benefits - non-vested

If the member's termination is for reasons other than death or retirement, and if the member has not met the vesting or retirement requirements, the member's contributions with interest will be refunded.

#### Death benefit

*Prior to retirement* - For a member who passes away while actively employed, the member's accumulated contributions with interest will be paid to the member's beneficiary. Certain beneficiaries of a member of Plan B or C have the option to receive a monthly retirement benefit or a refund of the member's contributions with interest. All beneficiaries are guaranteed to receive at least the member's accumulated contributions at retirement, if a member passes away before electing an option.

*Post retirement* - The optional form of benefit payment selected under either Plan B or Plan C will determine what, if any, benefits are payable upon death after retirement.

Option 1 - The retiree's designated survivor will receive, for life, the same level of monthly retirement benefit. In the event that the retiree's designated survivor predeceases the retiree, the retiree's monthly retirement benefit will be adjusted to the amount it would have been, had the retiree not elected Option 1.

Option 2 - The retiree's designated survivor will receive, for life, a monthly retirement benefit equal to one-half the retiree's benefit. In the event the retiree's designated survivor predeceases the retiree, the retiree's monthly benefit will be adjusted to the amount it would have been, had the retiree not elected Option 2.

Option 3 - No benefits are payable to the retiree's estate or any beneficiary. Retirement benefits payable under this option will be actuarially increased from the normal formula.

## NOTES TO SCHEDULE OF EMPLOYER ALLOCATIONS AND SCHEDULE OF PENSION AMOUNTS BY EMPLOYER

### (1) <u>Description of plan</u> (continued)

#### Death benefit (continued)

If the death of any retiree who has not elected an option occurs before they have received total benefits at least as large as their accumulated contributions and interest, the difference shall be paid to the deceased's beneficiary, if living, or to their estate.

**Benefit increase adjustments** - The Board shall determine annually whether or not the Retirement System can provide an increase in benefits for those retirees who, as of January 1 preceding the date of such increase, have been retired at least one year (three years prior to January 1, 2002). Any increase also applies to optional retirement allowances paid to a retiree's beneficiary. Before any increases are made, the following requirements must be satisfied:

- 1. The Retirement System funded ratio as of January 1<sup>st</sup> of the preceding year of the proposed increase must be at least 100% after adjusting for the effect of the proposed increase. The funded ratio is the ratio of assets to the pension benefit obligation.
- 2. The actuarially required contribution rate, after adjusting for the effect of the proposed increase, may not exceed the statutory contribution rate.
- 3. The actuary must certify that the proposed increase will not impair the actuarial soundness of the Retirement System.

In accordance with the Benefit Increase Adjustments Policy, if an increase is permissible, the amount of the increase will be equal to the lesser of 3% or the percentage increase in the CPI for the preceding year, subject to a cumulative increase of 100% subsequent to December 31, 2000.

The Board reserves the right, at its sole discretion, not to award any Benefit Increase Adjustment or other supplements for any year, even if the statutory requirements for an increase are satisfied, or to provide increases in greater or lesser amounts than prescribed by this policy. For the years ended December 31, 2021 and 2020 there was no Benefit Increase Adjustment or an extra check issued to eligible retirees.

Administration of the Retirement System - The Board is responsible for the general administration and proper operation of the Retirement System. The Board consists of twelve members: four members appointed by the Kansas City Public Schools Board of Directors, one member appointed by the Board of Trustees of the Library District, four members elected by and from the members of the Retirement System, two members elected by and from the retirees of the Retirement System, and the Superintendent of Schools of the School District of Kansas City, Missouri. The Board hires an Executive Director to manage the day-to-day operations and implement policies as set by the Board.

### (2) <u>Summary of significant accounting policies</u>

**Basis of accounting** - The schedule of employer allocations and the schedule of pension amounts by employer present amounts that are elements of the financial statements of the Retirement System or of its participating employers. Accordingly, they do not purport to be a complete presentation of the financial position or changes in financial position of either the Retirement System or its participating employers.

**Use of estimates** - The amounts reported in the schedule of employer allocations and the schedule of pension amounts by employer were prepared in accordance with accounting principles generally accepted in the United States of America. Such preparation requires management to make estimates and assumptions related to the reported amounts. Accordingly, actual results may differ from those estimates.

## NOTES TO SCHEDULE OF EMPLOYER ALLOCATIONS AND SCHEDULE OF PENSION AMOUNTS BY EMPLOYER

### (3) Net pension liability

The components of the net pension liability of the participating employers as of December 31, 2021 were as follows:

Total pension liability \$ 1,002,176,461 Less: Fiduciary net position 753,497,392 Net pension liability \$ 248,679,069

Plan fiduciary net position as a percentage of total pension liability

75.19%

#### (4) Actuarial assumptions

Valuation Date
Actuarial Cost Method
Amortization Method
Remaining Amortization Period
Asset Valuation Method
Actuarial Assumptions:
Investment Rate of Return

Investment Rate of Return Projected Salary Increases Inflation

Mortality:

January 1, 2021 Entry Age Normal Level Percent of Pay, Layered 26 years 5-year Smoothed Market Value

7.25%, including inflation Rates vary by years of service 2.25%

Pre-retirement mortality rates were based on Pub-2010 General Members (Below Median) Retiree Mortality Table with a one-year age setback for males and a one-year age set forward for females, projected 15 years from valuation date using most recent MP-Scale. Post-retirement mortality rates were based on Pub-2010 General Members (Below Median) Retiree Mortality Tables with a one-year age setback for males and a one-year age set forward for females, projected 7 years from valuation date using most recent MP-Scale. Disability mortality rates were based on Pub-2010 Non-Safety Disabled Mortality Table with a one-year age setback for males and a one-year age set forward for females. Beneficiaries mortality rates were based on Pub-2010 General Members (Below Median) Contingent Survivor Mortality Tables with a one-year age setback for males and a one-year age set forward for females, projected 7 years from valuation date using most recent MP-Scale.

The actuarial assumptions used in the January 1, 2020 valuation were adopted by the Board from the results of an actuarial experience study covering the four-year period ended December 31, 2019 (dated October 5, 2020).

## NOTES TO SCHEDULE OF EMPLOYER ALLOCATIONS AND SCHEDULE OF PENSION AMOUNTS BY EMPLOYER

### (4) <u>Actuarial assumptions</u> (continued)

The long-term expected rate of return on pension plan investments is reviewed as part of the regular experience study prepared by the Retirement System. Several factors are considered in evaluating the long-term rate of return assumption, including long-term historical data, estimates inherent in current market data, and an analysis in which best-estimate ranges of expected future real rates of return (expected returns, net of investment expense and inflation), along with estimates of variability and correlations for each asset class, were developed by the Retirement System's investment consultant. These ranges are combined to produce the 10-year long-term expected rate of return by weighting the expected future real rates of return by the target asset allocation percentage and by adding expected inflation. Best estimates of arithmetic real rates of return for each major asset class included in the Retirement System's target asset allocation as of December 31, 2021 (see the discussion of the pension plan's investment policy) are summarized in the following table:

Asset Class	Target Allocation	<u>1</u>	10-Year Long-term Expected Real Rate of Return				
LIC Large Cap Favilty	10.50	0/	6.20	0/			
US Large Cap Equity	10.50	%	6.20	%			
US Mid Cap Equity	6.00	%	6.80	%			
US Small Cap Equity	6.00	%	7.20	%			
International Developed Equity	12.00	%	7.10	%			
Emerging Market Equity	10.00	%	9.00	%			
Core Fixed Income	10.00	%	1.20	%			
Global Fixed Income	5.00	%	1.20	%			
High Yield Bonds	2.50	%	3.70	%			
Multi-Asset Class	13.50	%	4.70	%			
Hedge Fund of Funds	5.00	%	3.30	%			
Private Equity	7.50	%	10.40	%			
Real Estate - Core	6.00	%	4.50	%			
Real Estate - Value Add	3.00	%	7.00	%			
Real Estate - Opportunistic	3.00	%	9.10	%			
	100.00	<b>=</b>					

**Discount rate** - The discount rate used to measure the total pension liability as of December 31, 2021 was 7.25%. The projection of cash flows used to determine the discount rate assumed that contributions from the Plan members will be made at the current contribution rate and that contributions from employers will be made at contractually required rates, actuarially determined. Based on those assumptions, the Plan's fiduciary net position was projected to be available to make all projected future benefit payments of current Plan members. Therefore, the long-term expected rate of return on Plan investments was applied to all periods of projected benefit payments to determine the total pension liability.

## NOTES TO SCHEDULE OF EMPLOYER ALLOCATIONS AND SCHEDULE OF PENSION AMOUNTS BY EMPLOYER

### (4) <u>Actuarial assumptions</u> (continued)

Sensitivity of the net pension liability to changes in the discount rate - The following represents the net pension liability of participating entities as of December 31, 2021, calculated using the discount rate assumption, as well as what the net pension liability would be if it were calculated using a discount rate that is one percentage point lower or one percentage point higher than the current assumption.

	Discount Rate	Participating entities' net pension liability
1% decrease	6.25%	\$348,022,417
Current discount rate	7.25%	248,679,069
1% increase	8.25%	164,581,064

## NOTES TO SCHEDULE OF EMPLOYER ALLOCATIONS AND SCHEDULE OF PENSION AMOUNTS BY EMPLOYER

### (5) Collective deferred outflows of resources and deferred inflows of resources

A summary of the collective deferred outflows of resources and deferred inflows of resources as of December 31, 2021 are included below. The actual experience and assumption change impacts are recognized over the average expected remaining service life of active and inactive Plan members at the beginning of the measurement period, while investment gains/losses are recognized equally over five years.

	Deferred Outflows of Resources							
	ı	December 31, 2020		Additions		Recognition		December 31, 2021
Differences between expected	_		_		-		•	,
and actual experience								
2017 Base	\$	-	\$	-	\$	-	\$	-
2018 Base		-		-		-		-
2019 Base		-		-		-		-
2020 Base		611,560		-		332,370		279,190
2021 Base		-		-				
Total		611,560		-		332,370		279,190
Changes of assumptions								
2017 Base	\$	-	\$	-	\$	-	\$	-
2018 Base		-		-		-		-
2019 Base		-		-		-		-
2020 Base		368,635		-		200,345		168,290
2021 Base		-		32,094		10,843		21,251
Total		368,635		32,094		211,188		189,541
Differences between projected								
and actual earnings								
2017 Base	\$	-	\$	-	\$	-	\$	-
2018 Base		33,802,903		-		16,901,452		16,901,451
2019 Base		-		-		-		-
2020 Base		-		-		-		-
2021 Base		-		-				-
Total		33,802,903		-		16,901,452		16,901,451
Changes in proportion								
2017 Base	\$	-	\$	-	\$	-	\$	-
2018 Base		-		-		-		-
2019 Base		1,942,402		-		1,942,402		-
2020 Base		3,431,972		-		1,865,201		1,566,771
2021 Base				4,574,099		1,545,306		3,028,793
Total		5,374,374		4,574,099		5,352,909		4,595,564
Total	\$	40,157,472	\$	4,606,193	\$	22,797,919	\$	21,965,746

# NOTES TO SCHEDULE OF EMPLOYER ALLOCATIONS AND SCHEDULE OF PENSION AMOUNTS BY EMPLOYER

### (5) <u>Collective deferred outflows of resources and deferred inflows of resources</u> (continued)

Deferred Inflows of Resources							
	December 31, 2019	_	Additions	_	Recognition		December 31, 2020
\$	-	\$	-	\$	-	\$	-
	-		-		-		-
	53,134		-		53,134		-
	-		<del>-</del>				
	-				2,071,318		4,059,784
	53,134		6,131,102		2,124,452		4,059,784
\$	_	\$	-	\$	-	\$	-
	_		-		-		-
	2,952,324		-		2,952,324		-
	_		-		-		-
	-		-		-		-
	2,952,324		-		2,952,324		-
\$	11.038.122	\$	_	\$	11.038.122	\$	_
•	-	·	_	•	-	•	_
	36.657.528		_		12.219.176		24,438,352
			_				14,109,410
	, , , <u>-</u>		50,745,151				40,596,121
	66,508,197		50,745,151		38,109,465		79,143,883
¢	_	Φ.	_	Φ.	_	Φ.	_
Ψ	_	Ψ	_	Ψ	_	Ψ	_
	1 0/12 //12				1 0/12 //02		_
			_				1,566,771
	5,451,972		4 574 000				3,028,793
	5,374,374		4,574,099		5,352,909	_	4,595,564
\$	74,888,029	\$	61,450,352	\$	48,539,150	\$	87,799,231
	\$ \$	\$ - 53,134 - 53,134 \$ - 2,952,324 - 2,952,324 \$ 11,038,122 - 36,657,528 18,812,547 - 66,508,197 \$ - 1,942,402 3,431,972 - 5,374,374	\$ - \$ 2,952,324 \$ 2,952,324 \$ 11,038,122 \$ 36,657,528 18,812,547 - 66,508,197 \$ \$ - \$ 1,942,402 3,431,972 - 5,374,374	\$ - \$ - 6,131,102 \$ - 6,131,102 \$ - 6,131,102 \$ - 6,131,102 \$ - 6,131,102 \$ - 7 - 7 - 7 - 7 - 7 - 7 - 7 - 7 - 7 -	December 31, 2019         Additions           \$ -	December 31, 2019         Additions         Recognition           \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ -	December 31, 2019         Additions         Recognition           \$ - \$ - \$ - \$ - \$ - \$ 53,134         - 53,134         - 53,134           - 6,131,102         2,071,318         - 2,124,452           \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ 2,952,324         - 2,952,324         - 2,952,324

## NOTES TO SCHEDULE OF EMPLOYER ALLOCATIONS AND SCHEDULE OF PENSION AMOUNTS BY EMPLOYER

### (5) <u>Collective deferred outflows of resources and deferred inflows of resources</u> (continued)

The following provides the net deferred outflows/(inflows) of resources as of December 31, 2021, that will be recognized in pension expense in future years:

Year Ending December 31:	Deferred Outflows of Resources	Deferred Inflows of Resources	Net Deferred Outflows (Inflows) of Resources
2022	\$ 17,359,774	\$ 29,142,661	\$ (11,782,887)
2023	10,408	29,059,809	(29,049,401)
2024	-	14,852,166	(14,852,166)
2025	-	10,149,031	(10,149,031)
2026	-	-	-
Thereafter	-	-	-

### (6) Collective pension expense

Collective pension expense for the year ended December 31, 2021 is as follows:

Service cost	\$ 20,891,514
Interest on the total pension liability	69,689,655
Expensed portion of current-period difference between expected and actual experience in the total pension	(2.074.240)
liability	(2,071,318)
Expensed portion of current-period assumption changes	10,843
Member contributions	(20,141,089)
Projected earnings of plan investments	(48,894,086)
Expenses portion of current-period difference between projected and actual earnings on plan investments	(10,149,030)
Administrative expenses	1,645,412
Other	5,562
Recognition of beginning deferred outflows resources	17,434,167
Recognition of beginning deferred inflows resources	(30,965,893)
Total pension expense	\$ (2,544,263)