MICHIGAN CARPENTERS' PENSION FUND

Actuarial Valuation Report
For Plan Year Commencing
September 1, 2022

United Actuarial
Services, Inc.
Actuaries and Consultants

March 17, 2023

Board of Trustees
Michigan Carpenters' Pension Fund

Dear Trustees:

We have been retained by the Board of Trustees of the Michigan Carpenters' Pension Fund to perform annual actuarial valuations of the pension plan. This report presents the results of our actuarial valuation for the plan year beginning September 1, 2022. The valuation results contained herein are based on current plan provisions summarized in Appendix A, the actuarial assumptions and methods listed in Appendix B and on financial statements audited by Benda, Grace, Stulz & Company, P.C. Participant data was provided by TIC International Corporation. While we have reviewed the data for reasonableness in accordance with Actuarial Standards of Practice No. 23, we have not audited it. The data was relied on as being both accurate and comprehensive.

This report has been prepared in order to (1) assist the Trustees in evaluating the current actuarial position of the plan, (2) determine the minimum required and maximum deductible contribution amounts under Internal Revenue Code §431 and §404, (3) provide the fund's auditor with information necessary to comply with Accounting Standards Codification 960, and (4) document the plan's certified status under Internal Revenue Code §432 for the current year and provide the basis to certify such status for the subsequent year. In addition, information contained in this report will be used to prepare Schedule MB of Form 5500 that is filed annually with the IRS and could be used to calculate employer withdrawal liability. We are not responsible for the use of, or reliance upon, this report for any other purpose.

We have prepared this report in accordance with generally accepted actuarial principles and practices and have performed such tests as we considered necessary to assure the accuracy of the results. The results have been determined on the basis of actuarial assumptions that, in our opinion, are appropriate for the purposes of this report, are individually reasonable and in combination represent our best estimate of anticipated experience under the plan. Actuarial assumptions may be changed from previous valuations due to changes in mandated requirements, plan experience resulting in changes in expectations about the future, and/or other factors. An assumption change does not indicate that prior assumptions were unreasonable when made. For purposes of current liability calculations, assumptions are prescribed by regulation or statute. By relying on this valuation report, the Trustees confirm they have accepted the assumptions contained in the report.

The results are based on our best interpretation of existing laws and regulations and are subject to revision based on future regulatory or other guidance.

Future actuarial measurements may differ significantly from the current measurements presented in this report due to such factors as the following: plan experience differing from that anticipated by the economic or demographic assumptions, changes in economic or demographic assumptions, increases or decreases expected as part of the natural operation of the methodology used for these measurements (such as the end of an amortization period or additional cost or contribution requirements based on the plan's funded status), and changes in plan provisions or applicable law.

The previous year's unfunded actuarial liability (UAL) and IRC Section 431 amortization bases were revised to reflect removing the zero dollar floor for negative UAL values. This change was made based on the potential for anomalous results under Revenue Ruling 81-213 and this alternative approach, which has been accepted by the IRS.

United Actuarial Services, Inc. does not provide, nor charge for, investment, tax or legal advice. None of the comments made herein should be construed as constituting such advice. We are not aware of any direct or material indirect financial interest or relationship that could create a conflict of interest that would impair the objectivity of our work.

The undersigned actuaries meet the Qualification Standards of the American Academy of Actuaries to render the actuarial opinion contained in this report. We are available to respond to any questions you may have about this report.

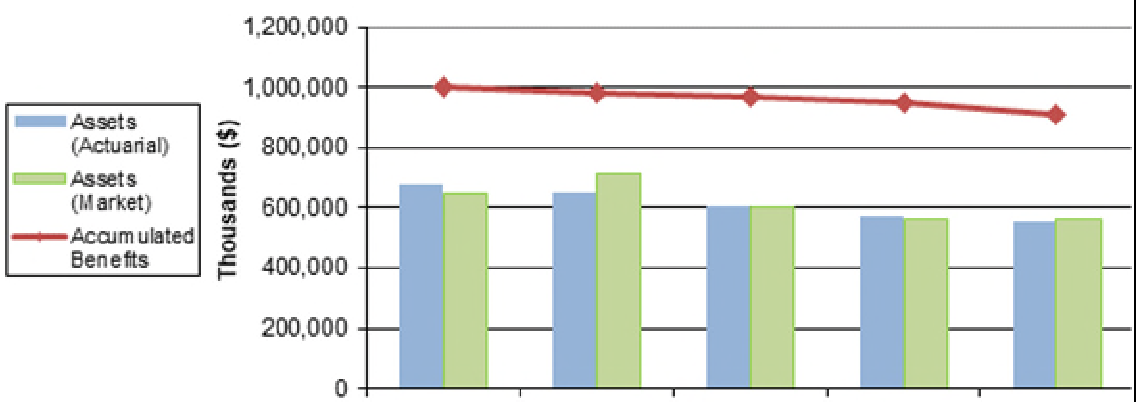
UNITED ACTUARIAL SERVICES, INC.

Enrolled Actuary	Consultant
Pierce Martin	Paul Bullock
Pierce Martin, EA, MAAA	Paul Bullock, ASA, EA, MAAA
Consulting Actuary	President

PART I: SUMMARY OF RESULTS

5 - YEAR SUMMARY OF VALUATION RESULTS

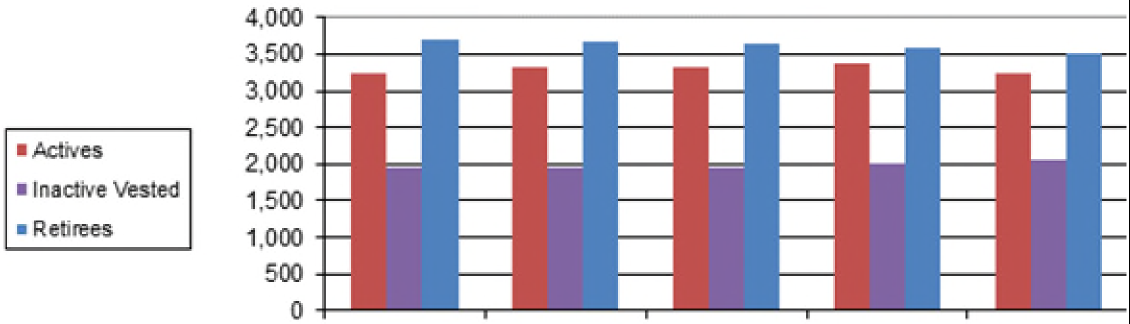
Actuarial Study as of September 1,	*2022*	*2021*	*2020*	*2019*	*2018*
PPA funded status	Endngrd	Endngrd	Endngrd	Endngrd	Endngrd
Progress under FIP/RP	Yes	Yes	Yes	n/a	n/a
Improvements restricted*	Yes	Yes	Yes	Yes	Yes
Funded ratio					
Valuation report (AVA)	67.8%	66.0%	62.0%	60.5%	61.0%
Valuation report (MVA)	64.3%	72.7%	62.3%	58.9%	61.8%
PPA certification (AVA)	67.8%	65.8%	61.9%	62.6%	61.6%
Proj. year of insolvency	None	None	None	None	None
Credit balance ($ 000)	65,895	83,715	106,935	129,775	114,994
Date of first projected funding deficiency (with extension)					
Valuation report	8/31/35	None	8/31/27	8/31/25	None
PPA certification	None	None	None	8/31/27	None
Net investment return					
On market value	-7.64%	21.51%	10.87%	1.31%	9.33%
On actuarial value	7.34%	10.85%	7.54%	5.38%	5.51%
Asset values ($ 000)					
Market	644,927	716,039	604,702	560,460	560,532
Actuarial	679,934	649,942	602,423	575,450	553,277
Accum. ben. ($ 000)	1,002,810	984,871	970,946	951,503	906,720



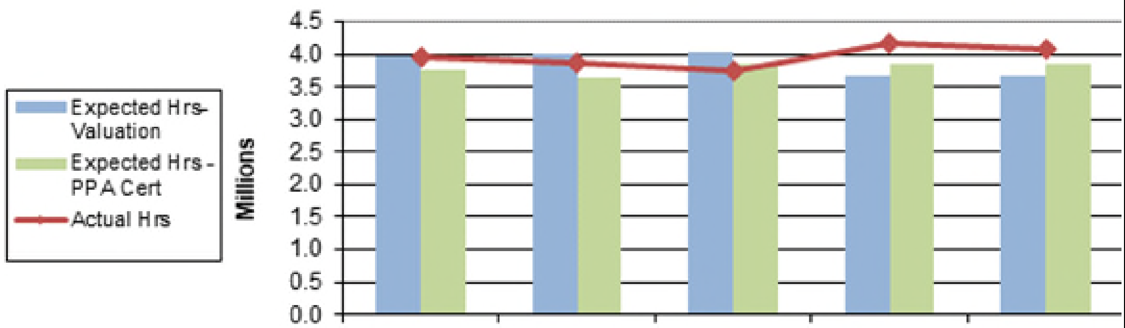
* Benefit improvement restrictions due to fund being in endangered status, as well as due to having an amortization extension. Restrictions in place until 9/1/2042 when bases with amortization extension have been fully amortized or until plan is in safe zone, whichever is later.

5 - YEAR SUMMARY OF DEMOGRAPHICS

Actuarial Study as of September 1,	*2022*	*2021*	*2020*	*2019*	*2018*
Participant counts					
Active	3,236	3,333	3,313	3,372	3,245
Inactive vested	1,947	1,955	1,944	2,007	2,071
Receiving benefits	3,698	3,676	3,655	3,579	3,514
Total	8,881	8,964	8,912	8,958	8,830
Average entry age	29.5	30.2	30.4	30.3	30.4
Average attained age	39.9	40.5	41.2	41.2	41.8



Hours worked in prior plan year (thousands)					
Expected hours valuation	3,980	3,994	4,036	3,673	3,665
Expected hours PPA cert	3,750	3,650	3,850	3,850	3,856
Actual hours worked	3,969	3,860	3,750	4,180	4,084



CHANGES FROM PRIOR STUDY

Changes in Plan Provisions

The plan provisions underlying this valuation are the same as those valued last year.

Changes in Actuarial Assumptions and Methods

The actuarial assumptions and methods used in this valuation differ from those used in the prior valuation in the following respects:

- The assumed operational expenses were decreased from $1,390,500 to $1,325,000 to reflect our best estimate of future expenses based on recent plan experience. The assumed annual increase remains at 3.0%.

- The current liability interest rate was changed from 1.97% to 2.00%. The new rate is within established statutory guidelines.

Additionally, the projection assumptions used in this valuation differ from those used in the prior valuation in the following respects:

- The annual future hours assumption used for projection purposes was increased from 3,850,000 to 3,950,000 hours. This reflects input from the Trustees regarding future industry activity as used for the 2022 PPA certification.

- The 2023 and 2031 increases of the PBGC premium to $35 and $52 per participant respectively is reflected for projection purposes.

HISTORY OF MAJOR ASSUMPTIONS

Assumption	Actuarial Study as of September 1, 2022	2021	2020	2019	2018
Future rate of net investment return	7.50%	7.50%	7.50%	7.50%	7.50%
Mortality table	PRI-2012	PRI-2012	PRI-2012	RP-2006	RP-2006
Adjustment	120% (M) 90% (F)	120% (M) 90% (F)	110%	115%	115%
Projection scale	MP-2021	MP-2021	MP-2020	MP-2019	MP-2018
Future expenses					
First future year ($ 000)	$1,325	$1,350	$1,350	$1,350	$1,350
Fut. annual increase	3.00%	3.00%	n/a	n/a	n/a
Average future hourly contribution rate*					
Credited	$10.02	$9.99	$9.97	$9.94	$9.94
Non-credited	3.39	3.32	3.31	3.50	3.45
Total	$13.41	$13.31	$13.28	$13.44	$13.39
Average future annual hours					
Vested	1,650	1,650	1,650	1,650	1,600
Non-vested	800	800	800	800	700
Assumptions used for projections					
Return, first 10 years	6.50%	6.50%	6.50%	6.50%	6.50%
Annual hours (000)					
First year out	3,950	3,750	3,650	3,850	3,850
Second year out	3,950	3,850	3,750	3,850	3,850
Third & later years	3,950	3,850	3,850	3,850	3,850

* Actual average derived from application of assumptions specified in Appendix B.

EXPERIENCE VS. ASSUMPTIONS

Comparing the prior year's experience to assumptions provides indications as to why overall results may differ from those expected

Actuarial assumptions are used to project certain future events related to the pension plan (e.g. deaths, withdrawals, investment income, expenses, etc.). While actual results for a single plan year will rarely match expected experience, it is intended that the assumptions will provide a reasonable long term estimate of developing experience.

The following table provides a comparison of expected outcomes for the prior plan year with the actual experience observed during the same period. This display may provide insight as to why the plan's overall actuarial position may be different from expected.

Plan Year Ending August 31, 2022	*Expected*	*Actual*
Decrements		
Terminations		856
less*: Rehires*		135
Terminations (net of rehires)	604.2	721
Active retirements	62.3	62
Active disabilities	5.5	2
Pre-retirement deaths	21.8	9
Post-retirement deaths	156.0	165
Monthly benefits of deceased retirees	$ 194,896	$ 185,676
Financial assumptions		
Rate of net investment return on actuarial value	7.50%	7.34%
Administrative expenses	$ 1,350,000	$ 1,326,172
Other demographic assumptions		
Average retirement age from active (new retirees)	61.8	60.9
*Average retirement age from inactive (new retirees)**	62.6	64.4
Average entry age (new entrants)	30.2	31.6
Hours worked per vested active	1,650	1,626
Hours worked per non-vested active	800	782
Total hours worked (valuation assumption)	3,979,500	3,969,174
Total hours worked (PPA certification assumption)	3,750,000	3,969,174
Unfunded liability (gain)/loss		
(Gain)/loss due to asset experience		$ 1,032,465
(Gain)/loss due to liability experience		2,929,653
Total (gain)/loss		$ 3,962,118

* Expected average based on the average for the total group of participants.

PLAN MATURITY

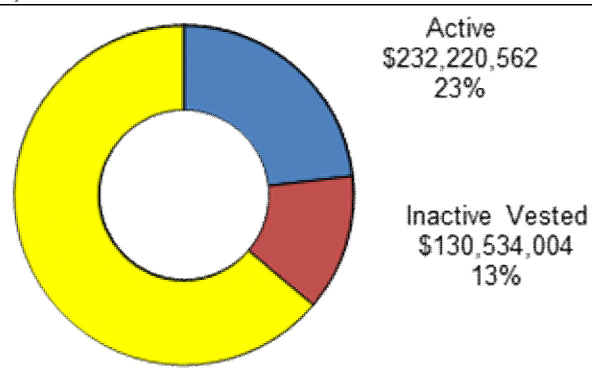
Measures of plan maturity can play a part in understanding risk and a plan's ability to recover from adverse experience

When a new pension plan is first established, its liabilities are typically limited to active plan participants. However, as people become vested and retire, a plan begins to develop liabilities attributable to nonactive participants (retirees and inactive vested participants). The process of adding nonactive liabilities (often referred to as "maturing") is a natural outgrowth of the operation of the plan. As a plan matures, its liabilities tend to balloon in relation to its contribution base, making it more difficult to correct for adverse outcomes by increasing contribution rates or reducing future benefit accruals.

Headcount ratios show the number of retiree or inactive participants supported by each active participant. While there is no hard and fast rule, we generally consider a plan to be mature if each active is supporting more than 1 retiree or more than 2 nonactives. A negative net cash flow (benefits payments and expenses greater than contributions) can also be an indicator of a mature plan. A negative cash flow, when expressed as a percentage of assets, in excess of the assumed rate of return on fund assets may not be sustainable in the long term.

Actuarial Study as of September 1,	*2022*	*2021*	*2020*	*2019*	*2018*
Retiree/active headcount ratio	1.14	1.10	1.10	1.06	1.08
Nonactive/active headcount ratio	1.74	1.69	1.69	1.66	1.72
Cash flow					
Contr.-ben.-exp. ($000)	(17,090)	(16,916)	(15,841)	(7,422)	(6,873)
Percent of assets	-2.65%	-2.36%	-2.62%	-1.32%	-1.23%

Liabilities of Actives, Retirees, and Inactive Vesteds
Total Liabilities: $1,002,810,102



UNFUNDED VESTED BENEFITS/EMPLOYER WITHDRAWAL LIABILITY

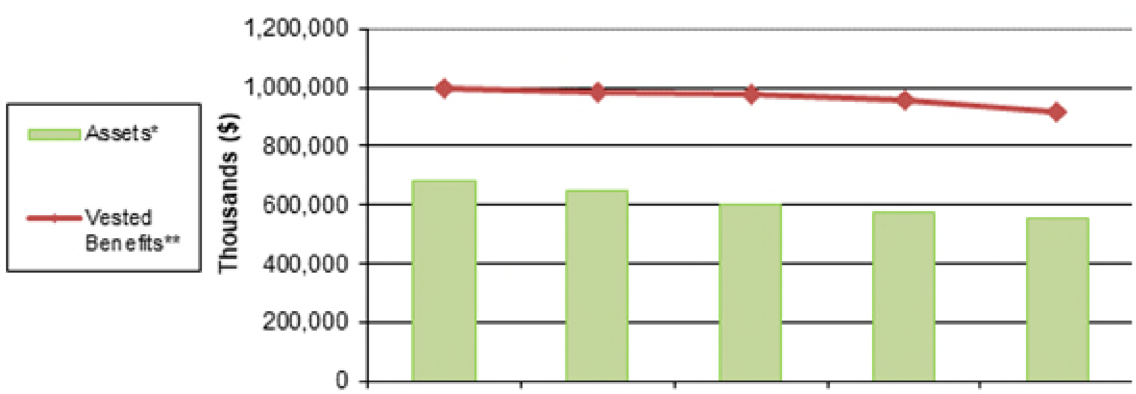
An employer withdrawing during the coming year may have withdrawal liability

The following table shows a history of the plan's unfunded vested benefits (UVB) required to compute a specific employer withdrawal liability under the presumptive method. If all unfunded vested benefits since the inception of the Multiemployer Pension Plan Amendments Act of 1980 (MPPAA) are zero ($0) or less, there will be no withdrawal liability assessed to a withdrawing employer. Otherwise, an employer may be assessed withdrawal liability payments pursuant to MPPAA. The display does not reflect adjustments for prior employer withdrawals.

In accordance with IRC Section 432(e)(9)(A) and PBGC Technical Update 10-3, the impact of reducing adjustable benefits is reflected by adding the unamortized portion of the value of affected benefits (VAB) to the most recent year's unfunded vested benefits pool. An employer who is assessed withdrawal liability will be assessed a portion of the UVB and the VAB.

Presumptive Method ($ 000)

August 31,	*2022*	*2021*	*2020*	*2019*	*2018*
Vested benefits interest	7.50%	7.50%	7.50%	7.50%	7.50%
Vested benefits	988,779	970,469	961,724	940,669	896,476
less: Asset value*	679,934	649,942	602,423	575,450	553,277
UVB	308,845	320,527	359,301	365,219	343,199
Unamortized VAB	10,163	13,336	16,288	19,033	21,587
UVB + VAB	319,008	333,863	375,589	384,252	364,786



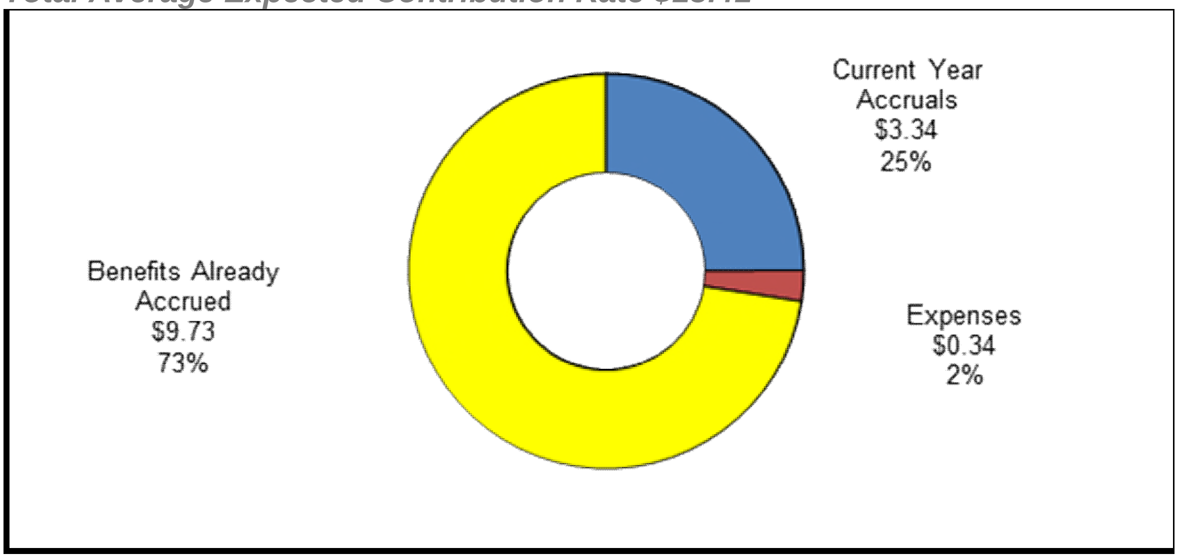
* Actuarial Value
** Includes VAB

CONTRIBUTION ALLOCATION

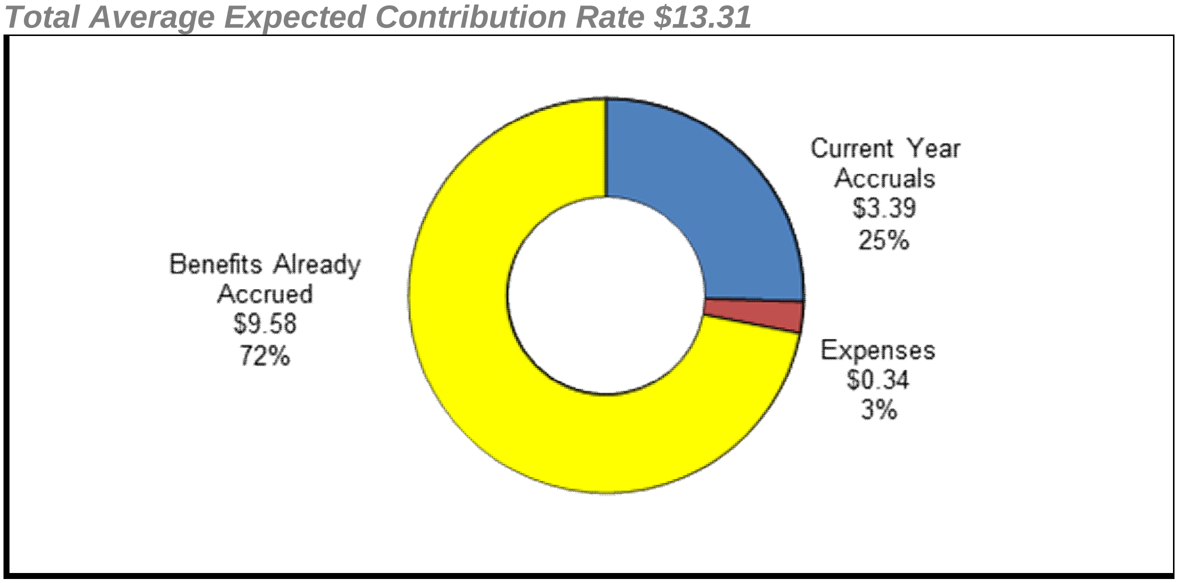
These graphs show how the contributions are being spent

The following allocation charts illustrate how the expected contribution rate for the coming plan year will be "spent" to pay for benefits being earned in the current year, plan expenses, and funding of past unfunded liabilities.

Contribution Allocation as of September 1, 2022
Total Average Expected Contribution Rate $13.41



Contribution Allocation as of September 1, 2021
Total Average Expected Contribution Rate $13.31



FUNDING STANDARD ACCOUNT PROJECTION

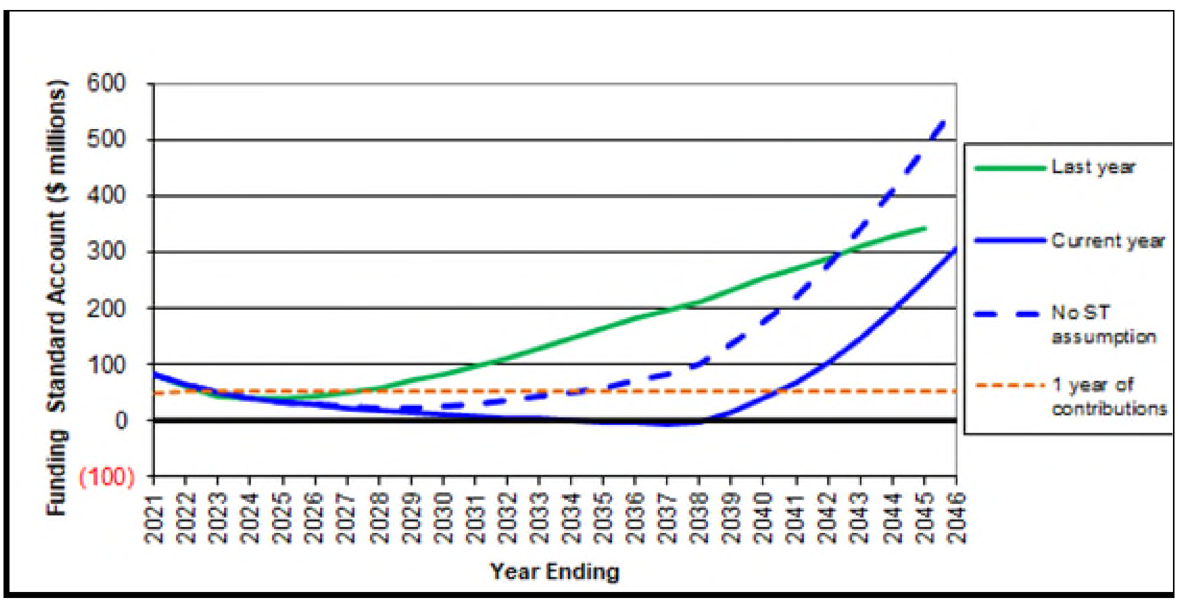
> *The funding standard account projection is a major driver of PPA status*

The funding standard account (FSA) was established by ERISA as a means of determining compliance with minimum funding standards. The FSA is hypothetical in the sense that it does not represent actual assets held by a custodian. Rather, a positive FSA balance (called a "credit balance") means that the plan has exceeded minimum funding standards on a cumulative basis, while a negative balance (called a "funding deficiency") means that the plan has fallen short of such standards.

Actuaries must project the plan's FSA each year in order to determine PPA status. If a funding deficiency is projected in a future year, the plan could be forced into yellow (endangered) or red (critical) status depending how far into the future the first projected funding deficiency is. The plan's FSA projection appears below. These projections are based on the assumptions summarized in the "Actuarial Assumptions used for Projections" section of Appendix B.

As a rule of thumb, UAS recommends in non-Critical status year that plans maintain a projected credit balance of at least one year's contributions (shown as an orange dotted line in the graph below) in each future year. Maintaining a "cushion" in the Funding Standard Account helps minimize the risk of a surprise funding deficiency at the end of a non-Critical status plan year. Such a deficiency could trigger an excise tax payable directly by employers. If the Plan is in Critical status at the start of plan year, it is protected from these excise taxes so long as scheduled progress has been satisfied in at least one of the past three plan years.

An additional blue dashed line has been added to illustrate the impact of a higher potential short-term assumed return of 7.50% for the next 10 years. Recent interest rate increases may support in the future an increase in this assumption to as high as 7.50%.



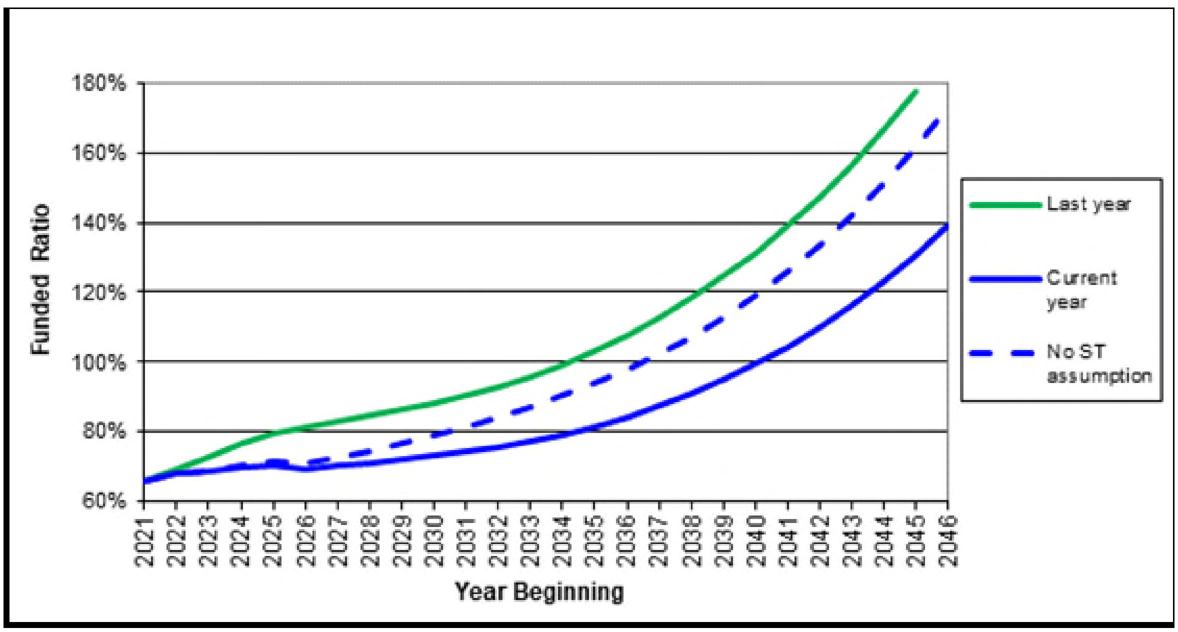
FUNDED RATIO PROJECTION

> *The plan's funded ratio is a major driver of PPA status*

The funded ratio is defined as the actuarial value of plan assets divided by the plan's liabilities for accrued benefits. Along with the funding standard account projection, funded ratio is one of the two major drivers of PPA funded status. In order for a plan to enter the green zone (also called "safe" or "not endangered or critical") the funded ratio must be at least 80%. An insolvency, which is the plan year when the plan would run out of money, occurs if the funded ratio is projected to be 0%. In order for a plan to enter critical and declining status, an insolvency needs to be projected within 20 plan years of the PPA certification (it may need to be within 15 years under certain conditions). The projection of the funded ratio appears below. These projections are based on the assumptions summarized in the "Actuarial Assumptions used for Projections" section of Appendix B.

According to the funding improvement plan, the plan has a funded ratio goal of 73.4% by September 1, 2035.

An additional blue dashed line has been added to illustrate the impact of a higher potential short-term assumed return of 7.50% for the next 10 years. Recent interest rate increases may support in the future an increase in this assumption to as high as 7.50%.

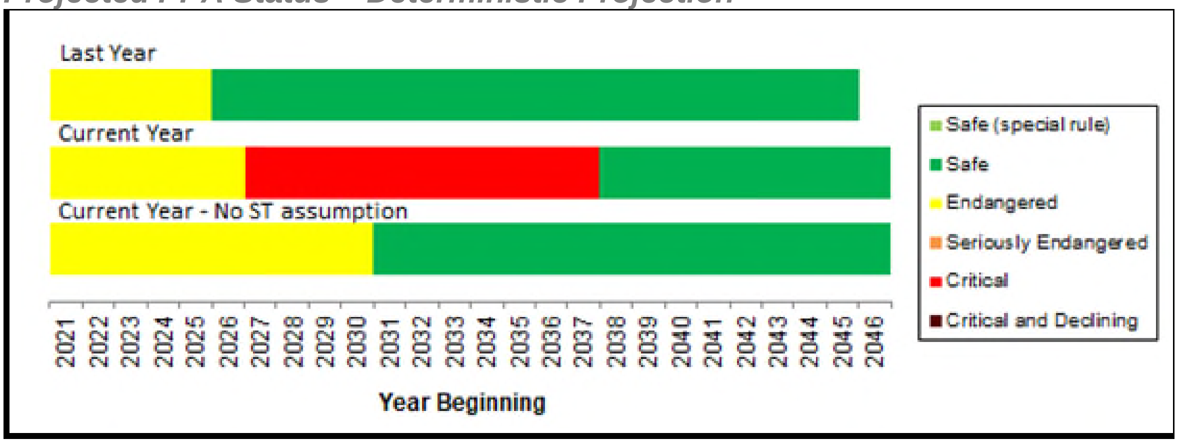


PPA STATUS PROJECTIONS

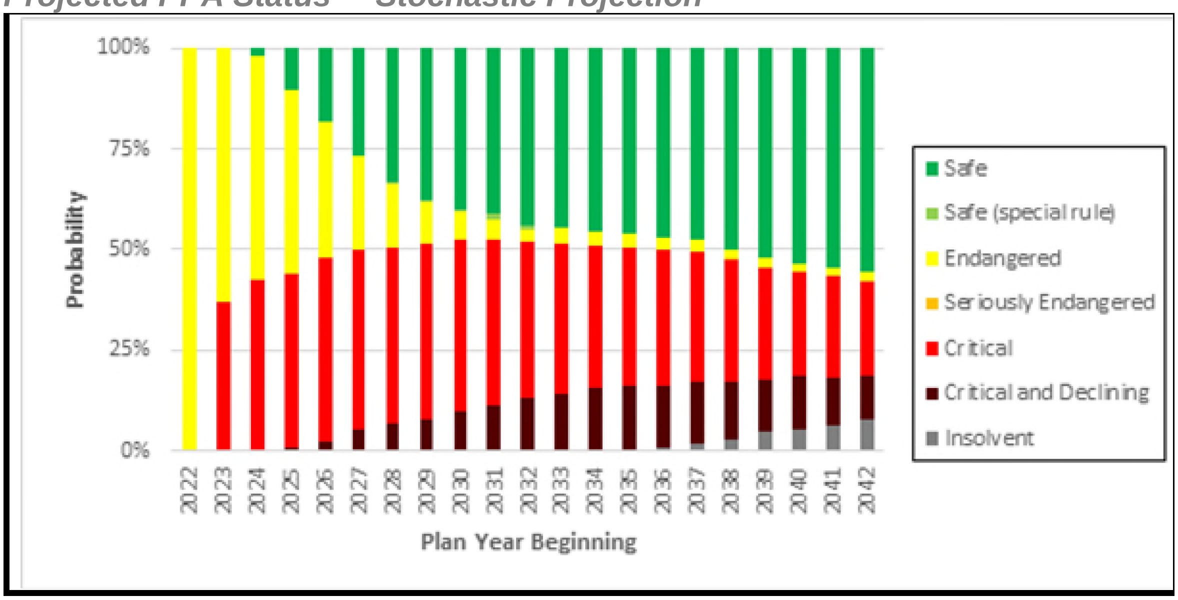
A plan that is not in green (i.e. safe) zone is subject to additional requirements and restrictions

The following graphs show *deterministic* and *stochastic* projections of PPA status based on the assumptions summarized in the "Actuarial Assumptions used for Projections" section of Appendix B. The deterministic projection shows the expected status for each future year. The stochastic projection shows the estimated probability of being in each status in each future year. The projections are based on the current plan and do not assume any changes in plan provisions or contribution rates, even if the plan moves to a worse PPA zone. A second current year scenario illustrates the impact of a higher short-term (ST) assumed return of 7.50% for the next 10 years, which may be supported in the future by recent interest rate increases.

Projected PPA Status – Deterministic Projection



*Projected PPA Status – Stochastic Projection**



* Distribution of returns based on the mean and standard deviation of the Plan's investment portfolio. Mean for years 1-10 based on short-term expectations, years 11-20 based on long-term expectations.

SENSITIVITY ANALYSIS AND SCENARIO/STRESS TESTING

Sensitivity analysis along with scenario and stress testing can help Trustees gauge a plan's key risks

Sensitivity analysis studies the funding impact to the plan when a given assumption changes. *Scenario testing* studies the funding impact from actual experience for one or more possible outcomes. *Stress testing* studies the funding impact from poor experience. The sensitivity analysis along with the scenario and stress testing below can be used to gauge a plan's key risks from investments and hours.

Currently, in order to project no funding deficiencies and maintain a valid funding improvement plan, the plan requires a minimum contribution rate increase of $0.10 on June 1, 2023. In the table below we use this result to perform scenario and stress testing on the investment return assumption by assuming asset returns for the 2022-23 plan year of 16.00%, 6.50%, and -3.00%. The high and low returns are 75% of one standard deviation from the expected return. Statistically, the return has about a 55% probability of being within this range for the year. The last column contains a threshold asset return below which the plan would not meet the funding goals of projecting an acceptable Funding Improvement Plan along with no projected critical status. We also perform a sensitivity analysis on the future hours assumption by showing the effect of varying it by ±10%. Lastly, we examine the impact of an asset return of 7.50% for all years at the baseline hours, which may be supported in the future by recent interest rate increases.

Non-credited Hourly Contribution Rate Increase Needed on June 1, 2023 to Avoid Red Zone and Maintain a Valid Funding Improvement Plan

Sensitivity Analysis Assumptions	Scenario and Stress Testing: Return for 2022-23 PY (6.50% for the next 9 years, 7.50% thereafter)			2022-23 Min. Return to Meet Funding Goals
	16.00%	Assumed Return*	-3.00%	
10% Lower Hours 3,555,000 per year	None	$1.35	$2.90	14.5%
Baseline Hours 3,950,000 per year	None	**$0.10**	$1.50	7.0%
10% Higher Hours 4,345,000 per year	None	None	$0.35	-0.5%
No Short-Term Return 7.50% per year, Baseline hours	None	None	$0.85	3.0%

* The assumed return for the 2022-23 plan year is 6.50% in the first three rows and 7.50% in the last row.

Sensitivity Analysis and Scenario/Stress Testing (cont.)

Note that the preceding table shows solutions using a one-time non-credited contribution rate increase only. There are other possible solutions besides the provided contribution rate increase shown above, including a credited increase, a combination of credited and non-credited increases, or a schedule of contribution rate increases over multiple years. Benefit reductions could also be added to lower or eliminate the necessary contribution rate increase(s).

PART II: SUPPLEMENTAL STATISTICS

PARTICIPANT DATA RECONCILIATION

The participant data reconciliation table below provides information as to how the plan's covered population changed since the prior actuarial study. Such factors as the number of participants retiring, withdrawing and returning to work have an impact on the actuarial position of the pension fund.

Participants Valued As	*Active*	*Inactive Vested*	*Receiving Benefits*	*Total Valued*
September 1, 2021	3,333	1,955	3,676	8,964
Change due to:				
New hire	689	-	-	689
Rehire	135	(39)	-	96
Termination	(856)	99	-	(757)
Disablement	(2)	(3)	5	-
Retirement	(62)	(59)	121	-
Death	(1)	(8)	(165)	(174)
Cash out	-	(1)	-	(1)
New beneficiary	-	4	57	61
Certain pd. expired	-	-	(1)	(1)
*Data adjustment**	-	(1)	5	4
Net change	(97)	(8)	22	(83)
September 1, 2022	3,236	1,947	3,698	8,881

* Inactive vested data adjustment: <u>less</u> 1 inactive vested who was confirmed as not being vested in the plan.

Receiving benefits data adjustment: <u>Addition</u> of 3 retirees who were previously thought to be deceased, 1 retiree who was not previously reported, and 1 retiree who was previously assumed deceased.

HOURS WORKED DURING PLAN YEAR

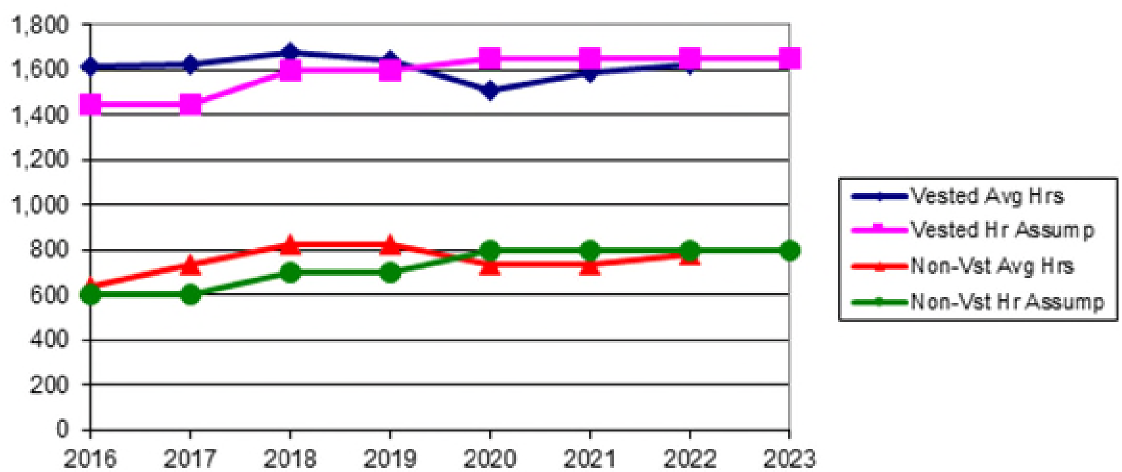
Hours Worked Per Participant

Plan Year Ending August 31, 2022	*Number*	*Hours Worked*	*Average Hours Worked*
Actives			
Vested	1,621	2,635,873	1,626
Non-vested, continuing	926	979,044	1,057
Non-vested, new entrant	689	283,965	412
Total active	3,236	3,898,882	1,205
Others	102	70,292	689
Total for plan year	3,338	3,969,174	1,189

History of Total Actual and Expected Hours Worked (Thousands)

Plan Year Ending August 31,	*2023*	*2022*	*2021*	*2020*	*2019*
Expected hours valuation	3,940	3,980	3,994	4,036	3,673
Expected hours PPA cert	3,950	3,750	3,650	3,850	3,850
Actual hours worked	n/a	3,969	3,860	3,750	4,180

History of Average Actual and Expected Hours Worked per Participant



CONTRIBUTIONS MADE DURING PLAN YEAR

Employer Credited Contributions Reported in Employee Data

Plan Year Ending August 31, 2022	*Number*		*Credited Contributions Reported*
Actives			
Vested	1,621	$	26,737,245
Non-vested, continuing	926		9,727,135
Non-vested, new entrant	689		2,723,744
Total valued as active	3,236		39,188,124
Others	102		705,576
Total for plan year	3,338	$	39,893,700

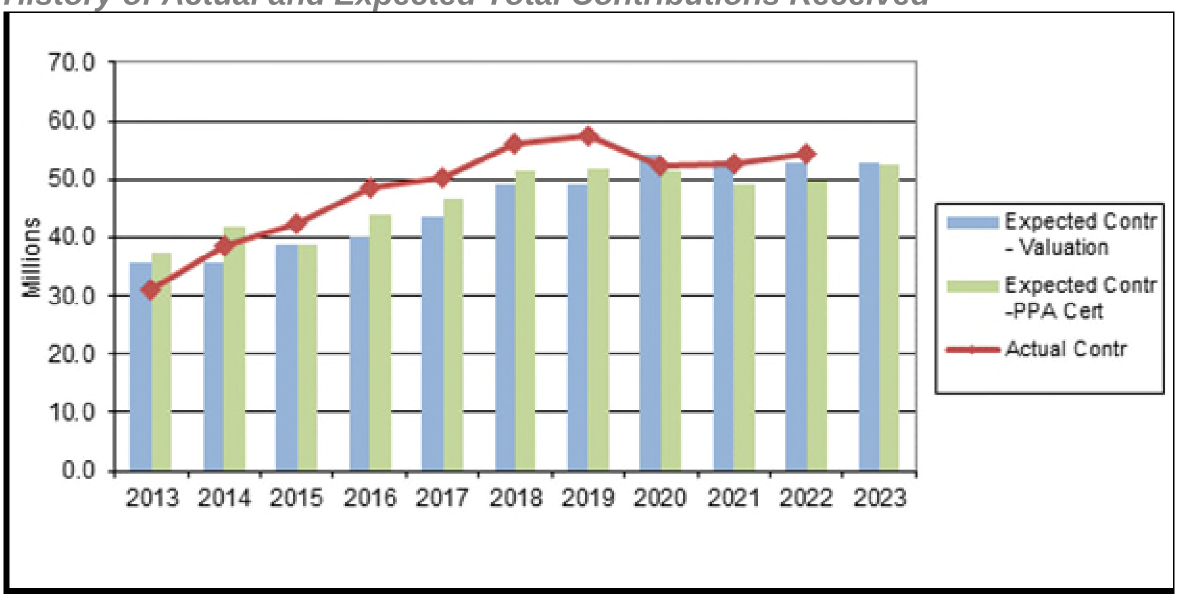
Average credited hourly contribution rate	$	10.05

Comparison with Audited Employer Contributions

Employer credited contributions reported in data	$	39,893,700
Adjusted total employer contributions reported*	$	53,321,023
Total audited employer contributions	$	54,471,887
Percent reported		98%

* Adjusted to reflect the reported non-credited contributions

History of Actual and Expected Total Contributions Received



ACTIVE INFORMATION

Active Participants by Age and Service as of September 1, 2022

	Years of Service										
Age	<1	1-4	5-9	10-14	15-19	20-24	25-29	30-34	35-39	40+	Total
< 25	77	258	41	-	-	-	-	-	-	-	376
25-29	63	195	119	1	-	-	-	-	-	-	378
30-34	44	156	114	26	5	-	-	-	-	-	345
35-39	40	98	106	35	27	6	-	-	-	-	312
40-44	34	93	77	45	43	53	11	-	-	-	356
45-49	33	50	54	27	33	81	41	3	-	-	322
50-54	28	46	34	20	37	75	69	38	6	-	353
55-59	13	42	30	19	24	46	69	45	31	-	319
60-64	7	20	13	9	16	32	39	10	-	2	148
65-69	1	2	2	2	1	1	-	-	-	-	9
70+	2	-	-	-	-	1	-	-	-	-	3
Totals	342	960	590	184	186	295	229	96	37	2	2,921
Unrecorded DOB	274	41	-	-	-	-	-	-	-	-	315
Total Active Lives	616	1,001	590	184	186	295	229	96	37	2	3,236

INACTIVE VESTED INFORMATION

Inactive Vested Participants by Age as of September 1, 2022

Age Group	Number	Estimated Monthly Deferred Vested Benefits*
< 30	9	$ 7,157
30-34	26	19,469
35-39	83	49,986
40-44	178	121,050
45-49	263	202,443
50-54	339	287,598
55-59	444	396,712
60-64	443	400,885
65-69	141	97,083
70+	20	8,769
Totals	1,946	1,591,152
Unrecorded birth date	1	333
Total inactive vested lives	1,947	$ 1,591,485

* Amount payable at assumed retirement age as used in the valuation process.

Retiree Information

Benefits Being Paid by Form of Payment as of September 1, 2022

Form of Payment	Number	Monthly Benefits Being Paid			
		Total	Average	Smallest	Largest
Life only*	1,347	$ 2,281,607	$ 1,694	$ 12	$ 6,517
Joint & survivor	1,473	2,930,558	1,990	31	6,711
Disability	67	27,164	405	145	750
Beneficiaries	811	666,162	821	20	4,640
Totals	3,698	$ 5,905,491	$ 1,597	$ 12	$ 6,711

Retirees by Age and Form of Payment as of September 1, 2022

Age Group	Form of Benefits Being Paid				
	Life Only*	Joint & Survivor	Disability	Beneficiaries	Total
< 40	-	-	1	1	2
40-44	-	-	1	-	1
45-49	-	-	2	3	5
50-54	-	-	10	7	17
55-59	22	30	24	32	108
60-64	179	199	27	76	481
65-69	391	404	2	142	939
70-74	348	337	-	123	808
75-79	203	219	-	110	532
80-84	115	142	-	125	382
85-89	61	97	-	99	257
90-94	25	36	-	74	135
95+	3	9	-	19	31
Totals	1,347	1,473	67	811	3,698

* Includes retirees receiving life and certain benefits.

RETIREE INFORMATION (CONT.)

Age of Participants Retired During Last 5 Plan Years
(excludes beneficiaries and disability retirements)

Age at Retirement	Plan Year Ending August 31, 2022	2021	2020	2019	2018
< 58	-	-	-	-	-
58	26	21	34	28	22
59	9	7	15	3	9
60	7	10	12	17	11
61	7	7	12	8	13
62	13	12	12	13	18
63	4	6	9	3	6
64	8	6	5	3	1
65	34	57	51	40	32
66+	13	15	20	7	10
Totals	121	141	170	122	122
Average retirement age	62.6	63.1	62.6	62.2	62.3

PART III: ASSET INFORMATION

MARKET AND ACTUARIAL FUND VALUES

Asset information extracted from the fund's financial statements audited by Benda, Grace, Stulz & Company, P.C.

Market/Actuarial Value of Fund Investments as of August 31,	*2022*	*2021*	*2020*
Invested assets			
Common stock	$ 56,564,365	$ 61,946,330	$ 49,741,143
Common collective trusts	21,390,239	20,542,185	9,489,411
Limited partnerships	259,201,288	249,869,703	183,651,007
Mutual funds	209,156,869	276,249,771	255,182,888
Hedge fund of funds	82,093,876	89,550,345	77,561,222
Insurance co. sep. accounts	3,294,390	3,263,153	12,711,428
Real estate collective trusts	3,429,956	3,877,580	3,871,135
Corporate bonds/notes	-	-	4,002
Other	7,224,537	8,166,346	9,157,151
	642,355,520	713,465,413	601,369,387
Net receivables*	2,571,932	2,573,675	3,332,872
Market value	$ 644,927,452	$ 716,039,088	$ 604,702,259
Fund assets - Actuarial value			
Market value	$ 644,927,452	$ 716,039,088	$ 604,702,259
less*: Deferred investment gains and (losses)*	(35,006,487)	66,096,782	2,279,336
Actuarial value	$ 679,933,939	$ 649,942,306	$ 602,422,923
Actuarial value as a percentage of market value	105.43%	90.77%	99.62%

* Equals receivables, less any liabilities

FLOW OF FUNDS

Asset information extracted from the fund's financial statements audited by Benda, Grace, Stulz & Company, P.C.

Plan Year Ending August 31,	*2022*	*2021*	*2020*
Market value at beginning of plan year	$ 716,039,088	$ 604,702,259	$ 560,460,389
Additions			
Employer contributions	54,471,887	52,732,966	52,193,967
*Net investment income**	(54,030,600)	128,243,961	60,050,075
Other income	9,128	8,405	32,901
	450,415	180,985,332	112,276,943
Deductions			
Benefits paid	70,235,879	68,377,243	66,734,116
*Net expenses**	1,326,172	1,271,260	1,300,957
	71,562,051	69,648,503	68,035,073
Net increase (decrease)	(71,111,636)	111,336,829	44,241,870
Adjustment	-	-	-
Market value at end of plan year	$ 644,927,452	$ 716,039,088	$ 604,702,259
Cash flow			
Contr.-ben.-exp.	(17,090,164)	(16,915,537)	(15,841,106)
Percent of assets	-2.65%	-2.36%	-2.62%
Estimated net investment return			
On market value	-7.64%	21.51%	10.87%
On actuarial value	7.34%	10.85%	7.54%

* Investment expenses have been offset against gross investment income.

INVESTMENT GAIN AND LOSS

Investment Gain or Loss
Plan Year Ending August 31, 2022

Expected market value at end of plan year		
Market value at beginning of plan year	$	716,039,088
Employer contributions and non-investment income		54,481,015
Benefits and expenses paid		(71,562,051)
Expected investment income (at 7.50% rate of return)		53,062,393
		752,020,445
Actual market value at end of plan year		644,927,452
less: Expected market value		752,020,445
Investment gain or (loss)	$	(107,092,993)

History of Gains and (Losses)

Plan Year Ending August 31,	Investment Gain or (Loss)	Amount Recognized This Year
2022	$ (107,092,993)	$ (21,418,599)
2021	83,525,309	16,705,062
2020	18,608,354	3,721,671
2019	(34,453,102)	(6,890,620)
2018*	9,463,820	1,892,764
Total	$ (29,948,612)	$ (5,989,722)

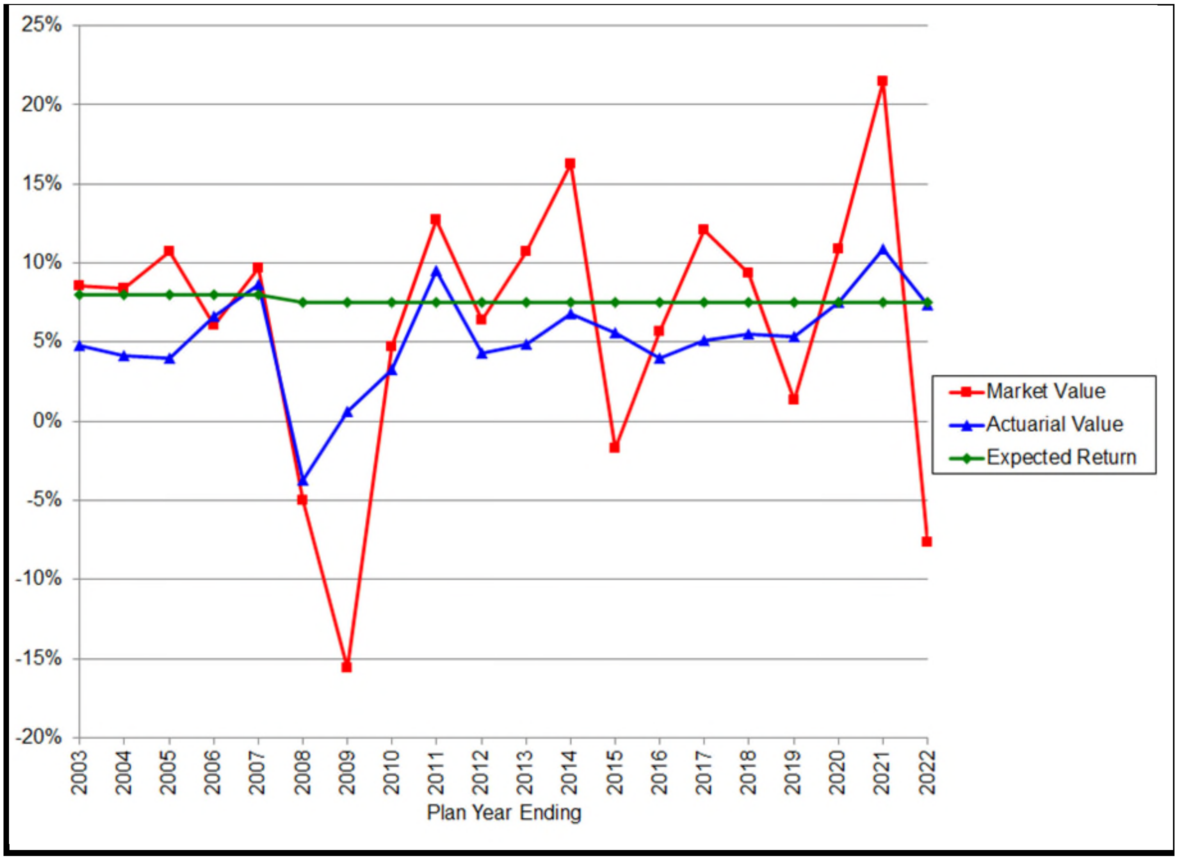
Deferred Investment Gains and (Losses)

Plan Year Ending August 31,	Amount of Gain or (Loss) Deferred as of August 31,			
	2022	2023	2024	2025
2022	$ (85,674,394)	$ (64,255,796)	$ (42,837,197)	$ (21,418,599)
2021	50,115,185	33,410,124	16,705,062	-
2020	7,443,342	3,721,671	-	-
2019	(6,890,620)	-	-	-
Totals	$ (35,006,487)	$ (27,124,001)	$ (26,132,135)	$ (21,418,599)

* 2018 values have been changed from the 2018 report due to receipt of revised financials after completion of the 2018 actuarial valuation report.

RATE OF RETURN ON FUND ASSETS

Historical Rates of Net Investment Return



The following table shows average rates of return over various periods calculated on a geometric average basis. These statistics may not be appropriate for evaluating a Plan's rate of return assumption as such assumption is forward-looking whereas the statistics are historical. Furthermore, these statistics do not reflect the internal rate of return actually experienced by the Fund over these periods.

Average Rates of Net Investment Return (geometric average)

Period	Return on Market Value Period Ending August 31,		Return on Actuarial Value Period Ending August 31,	
	2022	2021	2022	2021
One year	-7.64%	21.51%	7.34%	10.85%
5 years	6.63%	10.83%	7.31%	6.86%
10 years	7.52%	9.05%	6.28%	5.98%
15 years	5.00%	6.21%	5.08%	5.16%
20 years	5.91%	6.25%	5.21%	5.09%

PART IV: ENROLLED ACTUARY'S REPORT

NORMAL COST/ACTUARIAL LIABILITY

Normal Cost as of September 1,		*2022*		*2021*
Benefit accruals	$	12,680,565	$	13,005,626
Anticipated administrative expenses (beg. of year)		1,277,108		1,301,205
Total normal cost	$	13,957,673	$	14,306,831

Unfunded Actuarial Liability as of September 1,		*2022*		*2021*
Actuarial liability				
Participants currently receiving benefits	$	640,055,536	$	624,769,441
Inactive vested participants		130,534,004		124,848,484
Active participants		232,220,562		235,253,483
		1,002,810,102		984,871,408
less: Fund assets (actuarial value)		679,933,939		649,942,306
Unfunded actuarial liability	$	322,876,163	$	334,929,102

ACTUARIAL LIABILITY RECONCILIATION/PROJECTION

Reconciliation of Unfunded Actuarial Liability

Expected unfunded actuarial liability as of August 31, 2022		
Unfunded actuarial liability as of September 1, 2021	$	334,929,102
Normal cost (including expenses)		14,306,831
Actual contributions		(54,471,887)
Interest to end of plan year		24,149,999
		318,914,045
Increase (decrease) due to:		
Experience (gain) or loss		3,962,118
Plan amendment		-
Change in actuarial assumptions		-
Change in actuarial method		-
Net increase (decrease)		3,962,118
Unfunded actuarial liability as of September 1, 2022	$	322,876,163

Projection of Actuarial Liability to Year End

Actuarial liability as of September 1, 2022	$	1,002,810,102
Expected increase (decrease) due to:		
Normal cost (excluding expenses)		12,680,565
Benefits paid		(78,276,760)
Interest on above		(1,984,336)
Interest on actuarial liability		75,210,758
Net expected increase (decrease)		7,630,227
Expected actuarial liability as of August 31, 2023	$	1,010,440,329

FUNDED RATIOS

Present Value of Accumulated Benefits/ Funded Ratios Actuarial Study as of September 1,		*2022*		*2021*
Present value of vested accumulated benefits				
Participants currently receiving benefits	$	640,055,536	$	624,769,441
Inactive vested participants		129,218,783		123,510,726
Active participants		219,504,501		222,188,706
Total		988,778,820		970,468,873
Nonvested accumulated benefits		14,031,282		14,402,535
Present value of all accumulated benefits	$	1,002,810,102	$	984,871,408
Market value of assets	$	644,927,452	$	716,039,088
Funded ratios (Market value)				
Vested benefits		65.2%		73.8%
All accumulated benefits		64.3%		72.7%
Actuarial value of assets	$	679,933,939	$	649,942,306
Funded ratios (Actuarial value used for PPA)				
Vested benefits		68.8%		67.0%
All accumulated benefits		67.8%		66.0%
Interest rate used to value benefits		7.50%		7.50%

FUNDING PERIOD

The funding period is the approximate number of years that would be required to completely fund the unfunded entry age normal actuarial liability if future plan experience occurs according to the assumptions. The funding period is an indicator of the long term financial soundness of the plan. Historically, funds often targeted a maximum funding period of up to 20 years. Today, asset losses are being paid off over a maximum of 15 years and are the primary driver for ERISA minimum funding. An ultimate target of no more than 10 years is recommended. A lower, more conservative funding period target can be chosen. As the funding period drops, the risk of having future funding issues also diminishes.

Funding Period Calculation *Actuarial Study as of September 1,*	*2022*	*2021*
Unfunded actuarial liability		
Actuarial liability	$ 1,084,988,177	$ 1,069,123,788
less: *Fund assets (actuarial value)*	679,933,939	649,942,306
	405,054,238	419,181,482
Funds available to amortize unfunded		
Anticipated contributions (beg. of yr.)	50,911,850	51,036,530
less: *Normal cost (including expenses)*	4,879,650	4,983,255
	$ 46,032,200	$ 46,053,275
Funding period (years)	14	14

CURRENT LIABILITY

Current Liability is determined in a manner similar to the value of accrued benefits, but using an interest rate assumption within an acceptable range determined by the IRS. The current liability is used in the determination of the maximum deductible employer contribution and full funding limit under the Internal Revenue Code. For plans in critical status, it may also be used to determine eligibility for financial assistance under the America Rescue Plan. This alternative measure of liabilities is also a "low default risk" measure. Such a measure could match a lower risk investment strategy, which would provide more benefit security if it can be adequately funded.

Current Liability as of September 1,	*2022*	*2021*
Vested current liability		
Participants currently receiving benefits	$ 1,081,185,362	$ 1,063,969,029
Inactive vested participants	297,505,334	288,685,553
Active participants	594,916,678	600,979,101
	1,973,607,374	1,953,633,683
Nonvested current liability		
Inactive vested participants	2,537,901	2,796,163
Active participants	45,407,040	47,317,185
	47,944,941	50,113,348
Total current liability	$ 2,021,552,315	$ 2,003,747,031
Market value of assets	$ 644,927,452	$ 716,039,088
Current liability funded ratio (Market value)	31.9%	35.7%
Interest rate used for current liability	2.00%	1.97%

Projection of Current Liability to Year End	
Current liability as of September 1, 2022	$ 2,021,552,315
Expected increase (decrease) due to:	
Benefits accruing	42,792,371
Benefits paid	(78,276,760)
Interest on above	73,080
Interest on current liability	40,431,046
Net expected increase (decrease)	5,019,737
Expected current liability as of August 31, 2023	$ 2,026,572,052

FUNDING STANDARD ACCOUNT

Funding Standard Account Plan Year Ending August 31,	*2023 (Projected)*	*2022 (Final)*
Charges		
Prior year funding deficiency	$ -	$ -
Normal cost (including expenses)	13,957,673	14,306,831
Amortization charges (see Appendix C)	62,063,866	65,497,475
Interest on above	5,701,614	5,985,321
Total charges	81,723,153	85,789,627
Credits		
Prior year credit balance	65,894,803	83,714,709
Employer contributions	52,951,076	54,471,887
Amortization credits (see Appendix C)	4,815,381	4,815,381
Interest on above	7,288,929	8,682,453
ERISA full funding credit	-	-
Total credits	130,950,189	151,684,430
Credit balance (credits less charges)	$ 49,227,036	$ 65,894,803

FUNDING STANDARD ACCOUNT WITHOUT AMORTIZATION EXTENSION

The Funding Standard Account on the previous page has been developed using an amortization extension approved by the IRS under §412(e) or §431(d) of the Code. We are required to report the dollar difference between the minimum required contribution with extension and without extension on the Schedule MB.

Funding Standard Account *Plan Year Ending August 31,*	*2023* *(Projected)*	*2022* *(Final)*
Charges		
Prior year funding deficiency	$ 22,808,816	$ 16,145,764
Normal cost (including expenses)	13,957,673	14,306,831
Amortization charges (see Appendix C)	46,658,844	48,151,996
Interest on above	6,256,900	5,895,344
Total charges	89,682,233	84,499,935
Credits		
Prior year credit balance	-	-
Employer contributions	52,951,076	54,471,887
Amortization credits (see Appendix C)	4,815,381	4,815,381
Interest on above	2,346,819	2,403,851
ERISA full funding credit	-	-
Total credits	60,113,276	61,691,119
Credit balance (credits less charges)	$ (29,568,957)	$ (22,808,816)

FULL FUNDING LIMIT

Projection of Assets for Full Funding Limit		*Market Value*		*Actuarial Value*
Asset value as of September 1, 2022	$	644,927,452	$	679,933,939
Expected increase (decrease) due to:				
Investment income		45,384,493		48,009,979
Benefits paid		(78,276,760)		(78,276,760)
Expenses		(1,325,000)		(1,325,000)
Net expected increase (decrease)		(34,217,267)		(31,591,781)
Expected value as of August 31, 2023*	$	610,710,185	$	648,342,158

* Ignoring expected employer contributions (as required by regulation).

Full Funding Limit as of August 31, 2023		*For Minimum Required*		*For Maximum Deductible*
ERISA full funding limit (not less than 0)				
Actuarial liability	$	1,010,440,329	$	1,010,440,329
less: *Assets (lesser of market or actuarial)*		610,710,185		610,710,185
plus: Credit balance (w/interest to year end)		70,836,913		n/a
		470,567,057		399,730,144
ERISA full funding limit without extension (not less than 0)				
Actuarial liability		1,010,440,329		n/a
less: *Assets (lesser of market or actuarial)*		610,710,185		n/a
plus: *Credit bal. w/o ext. (w/int. to year end)*		-		n/a
		399,730,144		n/a
Full funding limit override (not less than 0)				
90% of current liability		1,823,914,847		1,823,914,847
less: *Assets (actuarial value)*		648,342,158		648,342,158
		1,175,572,689		1,175,572,689
Full funding limit (greater of ERISA limit and full funding override)				
With amortization extension	$	1,175,572,689	$	1,175,572,689
Without amortization extension	$	1,175,572,689		n/a

MINIMUM REQUIRED CONTRIBUTION AND FULL FUNDING CREDIT

Minimum Required Contribution Plan Year Beginning September 1, 2022		*Without Extension*		*With Extension*
Minimum funding cost				
Normal cost (including expenses)	$	13,957,673	$	13,957,673
Net amortization of unfunded liabilities		41,843,463		57,248,485
Interest to end of plan year		4,185,085		5,340,460
		59,986,221		76,546,618
Full funding limit		1,175,572,689		1,175,572,689
Net charge to funding std. acct. (lesser of above)		59,986,221		76,546,618
less: *Credit balance with interest to year end*		(24,519,477)		70,836,913
Minimum Required Contribution (not less than 0)	$	84,505,698	$	5,709,705
Effect of extension			$	78,795,993

Full Funding Credit to Funding Standard Account Plan Year Ending August 31, 2023		*Without Extension*		*With Extension*
Full funding credit (not less than 0)				
Minimum funding cost (n.c., amort., int.)	$	59,986,221	$	76,546,618
less*: full funding limit*		1,175,572,689		1,175,572,689
	$	-	$	-

MAXIMUM DEDUCTIBLE CONTRIBUTION

The maximum amount of tax-deductible employer contributions made to a pension plan is determined in accordance with Section 404(a) of the Internal Revenue Code. For a multiemployer pension plan, Section 413(b)(7) of the Internal Revenue Code and IRS Announcement 98-1 provide that, if anticipated employer contributions are less than the deductible limit for a plan year, then all employer contributions paid during the year are guaranteed to be deductible. If anticipated employer contributions exceed the deductible limit, the Trustees have two years from the close of the plan year in question to retroactively improve benefits to alleviate the problem.

Maximum Deductible Contribution
Plan Year Beginning September 1, 2022

Preliminary deductible limit		
Normal cost (including expenses)	$	13,957,673
10-year limit adjustment (using "fresh start" alternative)		43,756,757
Interest to end of plan year		4,328,582
		62,043,012
Full funding limit		1,175,572,689
Maximum deductible contribution override		
140% of vested current liability projected to August 31, 2023		2,769,911,282
less*: Actuarial value of assets projected to August 31, 2023*		648,342,158
		2,121,569,124
Maximum deductible contribution*	$	2,121,569,124
Anticipated employer contributions	$	52,951,076

* Equals the lesser of the preliminary deductible limit and the full funding limit, but not less than the maximum deductible contribution override.

HISTORY OF UNFUNDED VESTED BENEFITS

Presumptive Method

August 31,	Vested Benefits Interest Rate	Value of Vested Benefits	Asset Value*	Unfunded Vested Benefits	Unamortized Portion of VAB
2003	8.00%	585,725,844	546,933,298	38,792,546	
2004	8.00%	614,835,974	545,337,572	69,498,402	
2005	8.00%	625,635,046	541,099,517	84,535,529	
2006	8.00%	679,586,027	547,823,278	131,762,749	
2007	7.50%	760,397,977	568,943,985	191,453,992	
2008	7.50%	791,335,623	520,856,466	270,479,157	
2009	7.50%	785,621,334	493,003,156	292,618,178	7,552,238
2010	7.50%	770,976,557	475,169,057	295,807,500	36,546,438
2011	7.50%	783,214,375	490,293,887	292,920,488	35,114,418
2012	7.50%	795,879,170	485,449,415	310,429,755	33,574,997
2013	7.50%	811,172,970	481,874,816	329,298,154	31,920,119
2014	7.50%	825,931,742	494,366,295	331,565,447	30,141,126
2015	7.50%	847,899,117	505,653,996	342,245,121	28,228,708
2016	7.50%	861,908,964	514,965,430	346,943,534	26,172,859
2017	7.50%	871,437,581	531,018,415	340,419,166	23,962,821
2018	7.50%	896,476,088	553,276,541	343,199,547	21,587,029
2019	7.50%	940,669,202	575,450,196	365,219,006	19,033,055
2020	7.50%	961,724,247	602,422,923	359,301,324	16,287,531
2021	7.50%	970,468,873	649,942,306	320,526,567	13,336,093
2022	7.50%	988,778,820	679,933,939	308,844,881	10,163,299

* Actuarial Value

TERMINATION BY MASS WITHDRAWAL

If all employers were to cease to have an obligation to contribute to the plan, the plan would be considered "terminated due to mass withdrawal." In this event, the Trustees would have the option of distributing plan assets in satisfaction of all plan liabilities through the purchase of annuities from insurance carriers or payment of lump sums. If assets are insufficient to cover liabilities, a special actuarial valuation pursuant to Section 4281 of ERISA would be performed as of the end of the plan year in which the mass withdrawal occurred. If the Section 4281 valuation indicates the value of nonforfeitable benefits exceeds the value of plan assets, employer withdrawal liability would be assessed.

The ERISA Section 4281 valuation described above uses required actuarial assumptions that are typically more conservative than those used for valuing an on-going plan. In order to illustrate the impact of the mass withdrawal assumptions, we performed an illustrative Section 4281 valuation as if mass withdrawal had occurred during the prior plan year. The value of assets used below is market value without any adjustments for outstanding employer withdrawal liability claims.

As required by regulation, interest rates of 2.81% for the first 20 years and 2.94% for each year thereafter and the GAM 94 Basic Mortality Table projected to 2032 were used.

Illustrative Section 4281 Valuation as of August 31, 2022

Value of nonforfeitable benefits		
Participants currently receiving benefits	$	992,978,125
Inactive vested participants		257,608,393
Active participants		537,975,511
Expenses (per Section 4281 of ERISA)		10,959,802
		1,799,521,831
less: Fund assets (market value)		644,927,452
Value of nonforfeitable benefits in excess of (less than) fund assets	$	1,154,594,379

ASC 960 INFORMATION

The following displays are intended to assist the fund's auditor in complying with Accounting Standards Codification 960. The results shown are not necessarily indicative of the plan's potential liability upon termination.

Present Value of Accumulated Benefits *Actuarial Study as of September 1,*		*2022*		*2021*
Present value of vested accumulated benefits				
Participants currently receiving benefits	$	640,055,536	$	624,769,441
Expenses on parts. currently rec. benefits		12,801,111		12,495,389
Other participants		348,723,284		345,699,432
Expenses on other participants		6,974,466		6,913,989
		1,008,554,397		989,878,251
Present value of nonvested accumulated benefits				
Nonvested accumulated benefits		14,031,282		14,402,535
Expenses on nonvested benefits		280,626		288,051
		14,311,908		14,690,586
Present value of all accumulated benefits	$	1,022,866,305	$	1,004,568,837
Market value of plan assets	$	644,927,452	$	716,039,088
Interest rate used to value benefits		7.50%		7.50%

Changes in Present Value of Accumulated Benefits		
Present value of accumulated benefits as of September 1, 2021	$	1,004,568,837
Increase (decrease) due to:		
Plan amendment		-
Change in actuarial assumptions		-
Benefits accumulated and experience gain or loss		14,516,856
Interest due to decrease in discount period		75,342,663
Benefits paid		(70,235,879)
Operational expenses paid		(1,326,172)
Net increase (decrease)		18,297,468
Present value of accumulated benefits as of September 1, 2022	$	1,022,866,305

APPENDICES

PLAN HISTORY

Origins/Purpose

The Michigan Carpenters' Council Pension Fund was established in May 1963 to cover the Saginaw Valley and Southwestern Michigan District Councils. Since that time, coverage has been extended to all District Councils, other than the Detroit and Vicinity District Council. Effective January 1, 1982 members working under the jurisdiction of Lathers Local 1028-L began participating in the Michigan Carpenters' Council Pension Plan prospectively. On October 1, 1994 the Marble-Mosaic-Terrazzo and Tile Workers' Helpers Pension Plan merged into the Michigan Carpenters' Pension Fund.

The Pension Plan is managed under the provisions of the Labor Management Relations Act by a Board of Trustees consisting of an equal number of representatives from Labor and from Management.

The purpose of the Pension Plan is to provide Normal and Early Retirement Benefits, Joint and Survivor Benefits, Optional Retirement Benefits, Total and Permanent Disability Benefits, Vested Benefits and Death Benefits.

Employer Contributions

The Pension Plan is financed entirely by contributions from the employers as specified in the applicable Collective Bargaining Agreements. Most of the Carpenters' agreements follow the below schedule:

Date	Credited Hourly Contribution Rate	Non-Credited Hourly Contribution Rate	Total Hourly Contribution Rate
8-1-05	$ 3.00	$ 0.10	$ 3.10
6-1-06	3.00	0.20	3.20
6-1-07	3.00	1.00	4.00
6-1-08	3.00	2.00	5.00
6-1-09	4.45	2.00	6.45
6-1-10	5.90	2.00	7.90
6-1-11	7.35	2.00	9.35
7-1-12	8.80	2.00	10.80
6-1-13	8.80	2.50	11.30
6-1-14	8.80	3.00	11.80
6-1-15	9.28	3.00	12.28
9-1-16	9.52	3.24	12.76
6-1-17	9.76	3.48	13.24

The "credited" contributions are counted towards benefits in eligible years. Contributions that are "non-credited" are not counted when determining pension benefits.

PLAN HISTORY (CONT.)

Reciprocity

The Fund is a party to the agreement operative among pension plans covering Carpenters, Millwrights and Millmen which are in the jurisdiction of the Third District of the United Brotherhood of Carpenters and Joiners of America, AFL-CIO, International Pro-Rata Pension Reciprocity Agreement sponsored by the United Brotherhood of Carpenters and Joiners of America, AFL-CIO and other "money follows the man" reciprocity agreements.

Tax Exempt Status

The Trust Agreement and the Pension Plan were initially filed with and approved by the District Director, Internal Revenue Service, as qualified and exempt from taxation. It is the intention of the Trustees to maintain the Trust Agreement and Pension Plan as qualified and exempt from taxation under the appropriate provisions of the Internal Revenue Code and the Rules and Regulations issued thereunder, as amended from time to time.

SUMMARY OF PLAN PROVISIONS

Plan year	The 12-month period beginning September 1 and ending the following August 31.
Years of service for eligibility and benefit determination	Effective September 1, 1976, plan year with at least 500 service hours (435 hours worked). Effective September 1, 2007, plan year with at least 575 service hours (500 hours worked).
Years of vesting service	One vesting year for each Year of Service plus additional service as granted through special circumstances.
Break in service plan year	Plan year with less than 500 service hours (435 hours worked).
Normal retirement benefit	
Eligibility	Age 65 or 5th anniversary of date of participation, if later.
Monthly amount	• Accrued benefit as of August 31, 1997; plus • 4.3% of contributions made from September 1, 1997 through August 31, 2003; plus • 1.0% of contributions made on or after September 1, 2003 through July 31, 2005; plus • 1.0% of credited contributions made on or after August 1, 2005 through August 31, 2007; plus • 1.0% of credited contributions made for each plan year with at least 575 service hours (500 hours worked), on or after September 1, 2007. Payable for life. For service before September 1, 1997, active participants were granted a 12% increase in their accrued benefits.
Index 90 and 58 early retirement benefit	
Eligibility	Active participant; combined age and service equals 90 and at least age 58.
Monthly amount	Normal. Payable for life.

SUMMARY OF PLAN PROVISIONS (CONT.)

Early retirement benefit	
Eligibility	Age 58 with 10 years of service.
Monthly amount	Normal. Reduced by 5/9th of 1% for each month under age 65. Payable for life.
Optional forms of payment	• 50% qualified joint and survivor. • 75% joint and survivor. • 100% joint and survivor. • Life – Ten years certain.
Total and permanent disability benefit	
Eligibility	Under age 65 with 5 years of service. Disabled while active.
Monthly or single sum amount	Prior to February 1, 2011, disabled participants with 5 but less than 10 years of service may receive a lump sum payment equal to the greater of total contributions or actuarial equivalent of deferred vested benefit in lieu of their deferred vested benefit. Disabled participants with at least 10 years of service and one year of service in the 4 plan years preceding disability and a disability award from Social Security receive the lesser of $375 or accrued benefit. Payable until the earliest of age 65, recovery or death. Normal at age 65. Those without a disability award from Social Security receive the lesser of $750 or accrued benefit. Payable until Social Security disability begins or 5-year period, whichever is earlier.
Vested benefit	
Eligibility	Terminated, 5 years of service.
Monthly amount	100% of normal (based on benefit formula in effect at time participant became inactive) commencing at age 65. Payable for life.
Pre-retirement deferred surviving spouse benefit	
Eligibility	Death of vested participant with eligible spouse.
Monthly or single sum amount	50% of participant's joint and 50% survivor. Payable to spouse for life commencing when participant would have reached earliest retirement age.

HISTORICAL PLAN MODIFICATIONS

Vesting schedule	
Effective date	September 1, 1997
Adoption date	March 18, 1997
Provisions	The vested benefit schedule modified from 5-10 year graded vesting to 100% at 5 years.
Lump sum distributions	
Effective date	September 1, 1997
Adoption date	March 18, 1997
Provisions	The amount of unilateral lump sum distributions increased from \$3,500 to \$5,000.
Active participant benefit increase	
Effective date	September 1, 1997
Adoption date	March 24, 1998
Provisions	For active participants, benefits accrued through September 1, 1997 increased by 12%.
Retiree benefit increase	
Effective date	September 1, 1997
Adoption date	March 24, 1998
Provisions	All retirees and beneficiaries receiving benefits as of September 1, 1997 received an additional 5% increase.
Pre-retirement joint and survivor benefit increase	
Effective date	September 1, 1997
Adoption date	March 24, 1998
Provisions	The pre-retirement joint and survivor benefit increased from joint and 50% survivor to joint and 100% survivor.

HISTORICAL PLAN MODIFICATIONS (CONT.)

Disability benefit increase	
Effective date	September 1, 1997
Adoption date	March 24, 1998
Provisions	The monthly disability benefit increased from $250 to $375 for those receiving a disability award from Social Security and from $500 to $750 for those without the disability award.
Vesting years	
Effective date	September 1, 1998
Adoption date	September 27, 1999
Provisions	One vesting year granted for each plan year the active participant performs 1 hour of work. 435 hours is still required in order to earn a year of service for other purposes such as retirement eligibility.
Joint and survivor option	
Effective date	September 1, 2001
Adoption date	June 21, 2001
Provisions	A joint and 75% survivor annuity optional form was added. The new benefit is the actuarial equivalent of the single life annuity.
Lump sum death benefit	
Effective date	September 1, 2000
Adoption date	December 14, 2001
Provisions	The pre-retirement lump sum death benefit for unmarried participants was increased to pay 100% of contributions at 15 years of service.

HISTORICAL PLAN MODIFICATIONS (CONT.)

Crediting rate decrease

Effective date	September 1, 2003
Adoption date	June 17, 2003
Provisions	The crediting rate for employer contributions for work performed on and after September 1, 2003 was decreased from 4.30% to 1.00%. Contributions for work performed prior to September 1, 2003 are still credited at 4.30%.

Crediting rate increase

Effective date	September 1, 2003 – (RESCINDED March 1, 2009)
Adoption date	February 9, 2005
Provisions	The crediting rate for employer contributions for work performed from September 1, 2003 through August 31, 2004 was increased from 1.00% to 3.00%. Contributions for work performed on and after September 1, 2004 are still credited at 1.00%.

Non-credited contributions

Effective date	August 1, 2005
Approval date	May 11, 2005
Provisions	Effective August 1, 2005, 10¢ per hour is non-credited with respect to benefit accruals. The non-credited amount increases by 10¢ each year until it reaches 50¢ per hour.

Crediting rate increase

Effective date	September 1, 2004 – (RESCINDED March 1, 2009)
Adoption date	February 8, 2006
Provisions	The crediting rate for employer contributions for work performed from September 1, 2004 through August 31, 2005 was increased from 1.00% to 3.00%. Contributions for work performed on and after September 1, 2005 are still credited at 1.00%.

HISTORICAL PLAN MODIFICATIONS (CONT.)

Index 80 & Index 85/58 early retirement benefit

Effective date	September 1, 2007
Adoption date	July 10, 2007
Provisions	For participants who worked before September 1, 2007, the Index 80 benefit stays in effect. For participants who first worked on or after September 1, 2007, the Index 80 benefit eligibility is replaced by the Index 85 and age 58 benefit eligibility.

Non-credited contributions

Effective date	June 1, 2007
Approval date	July 10, 2007
Provisions	Effective June 1, 2007, $1.00 per hour is <u>non-credited</u> with respect to benefit accruals.

Future service benefit credit

Effective date	September 1, 2007
Adoption date	July 10, 2007
Provisions	For plan years beginning on or after September 1, 2007, no future service benefit credit will be given for employer contributions during a plan year in which fewer than 500 hours of work (575 hours of service) are performed.

Non-credited contributions

Effective date	June 1, 2008
Approval date	December 19, 2007
Provisions	Effective June 1, 2008, $2.00 per hour is <u>non-credited</u> with respect to benefit accruals.

HISTORICAL PLAN MODIFICATIONS (CONT.)

Crediting rate decrease

Effective date	March 1, 2009 - rescinded September 1, 2003 and September 1, 2004 increase
Adoption date	December 17, 2008
Provisions	For participants currently active or in pay status, the crediting rate for employer contributions for work performed from September 1, 2003 through August 31, 2005 was changed from 3.00% to 1.00%.

Pre-retirement deferred surviving spouse benefit

Effective date	March 1, 2009
Adoption date	December 17, 2008
Provisions	The 100% of participant's joint and 100% survivor pre-retirement deferred death benefit is changed to 50% of participant's joint and 50% survivor.

Lump sum death benefit eliminated

Effective date	March 1, 2009
Adoption date	December 17, 2008
Provisions	The pre-retirement lump sum death benefit has been eliminated.

Index 80 & Index 90/58 early retirement benefit

Effective date	September 1, 2009
Adoption date	June 6, 2009
Provisions	For participants who had 78 points on or before September 1, 2009, the Index 80 benefit stays in effect. For all other participants, it is replaced by the Index 90 and age 58 benefit eligibility.

HISTORICAL PLAN MODIFICATIONS (CONT.)

Early retirement benefit

Effective date	September 1, 2009
Adoption date	June 6, 2009
Provisions	The early retirement reduction that is measured from age 60 applies only if the participant is at least age 58 and has 25 or more years of service on or before September 1, 2009.

Lump sum disability benefit

Effective date	February 1, 2011
Adoption date	December 21, 2010
Provisions	Lump sum disability option previously payable to disabled participants with 5-9 years of service is no longer available.

Reciprocity of non-credited contributions

Effective date	November 1, 2012
Approval date	September 19, 2012
Provisions	Detroit-Michigan reciprocity agreement requires only the transfer of credited employer contributions.

Non-credited contribution increases

Effective date	June 1, 2013 & June 1, 2014
Approval date	November 20, 2012
Provisions	Effective June 1, 2013, $2.50 per hour is <u>non-credited</u> with respect to benefit accruals. The total hourly contribution rate is also increased 50¢, effective June 1, 2013. Effective June 1, 2014, $3.00 per hour is <u>non-credited</u> with respect to benefit accruals. The total hourly contribution rate is also increased 50¢, effective June 1, 2014.

HISTORICAL PLAN MODIFICATIONS (CONT.)

Reciprocity of non-credited contributions

Effective date	November 1, 2015
Approval date	August 12, 2015
Provisions	The Detroit-Michigan reciprocity agreement that requires only the transfer of credited employer contributions has been terminated effective November 1, 2015. This means that reciprocity will default back to the international agreement, to which both funds are a party. Reciprocity will generally be "money follows the man" starting in November.

Credited contribution increases

Effective date	June 1, 2015
Approval date	December 10, 2014
Provisions	Effective June 1, 2015, the total hourly contribution rate is increased 48¢. All of the 48¢ increase is credited for benefit accruals. The non-credited rate remains $3.00.

Nuclear power plants

Effective date	January 1, 2016
Approval date	December 15, 2015
Provisions	$3.28 is moved from the hourly pension contribution rate to the wage rate on Carpenter and Millwright hours worked at nuclear power plants which have a total power generating capability of 500 megawatts or more in the jurisdiction of Local Union 525.

Credited and non-credited contribution increases

Effective date	September 1, 2016
Approval date	April 27, 2016
Provisions	Effective September 1, 2016, the total hourly contribution rate is increased 48¢. 24¢ of this increase is credited for benefit accruals and 24¢ is non-credited, bringing the non-credited rate up to $3.24.

HISTORICAL PLAN MODIFICATIONS (CONT.)

Credited and non-credited contribution increases	
Effective date	June 1, 2017
Provisions	Effective June 1, 2017, the total hourly contribution rate is increased 48¢. 24¢ of this increase is credited for benefit accruals and 24¢ is non-credited, bringing the non-credited rate up to $3.48.

ACTUARIAL ASSUMPTIONS

Valuation date

September 1, 2022

Interest rates

ERISA rate of return used to value liabilities

7.50% per year net of investment expenses

Unfunded vested benefits

7.50% per year net of investment expenses

Current liability

2.00% (in accordance with Section 431(c)(6) of the Internal Revenue Code)

Operational expenses

Funding

$1,325,000 for the 2022-23 plan year excluding investment expenses. Expenses are assumed to increase 3.0% each year.

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A 2.00% load was applied to the accrued liabilities for 2022 (2.00% for 2021).

Mortality

Assumed plan mortality

120% of the PRI-2012 Blue Collar Mortality Tables for male employees and healthy annuitants and 90% of the PRI-2012 Blue Collar Mortality Tables for female employees and healthy annuitants projected forward using the MP-2021 projection scale.

Current liability

Separate annuitant and non-annuitant rates based on the RP-2000 Mortality Tables Report developed for males and females as prescribed by Section 431(c)(6) of the Internal Revenue Code.

Disability

40% of the 1964 OASDI male table - specimen rates shown below:

Age	Disability Rate
25	.0003
30	.0004
35	.0006
40	.0009
45	.0014
50	.0024
55	.0040
60	.0065

ACTUARIAL ASSUMPTIONS (CONT.)

Withdrawal

T-5 Turnover Table from The Actuary's Pension Handbook (less GAM 51 mortality and OASDI 64 disability rates) – specimen rates shown below. Assumed rate during second year of employment is 50%*, 35% for the third year, and 15% for the fourth year.

Age	Withdrawal Rate
25	.0772
30	.0722
35	.0628
40	.0515
45	.0398
50	.0256
55	.0094
60	.0090

No withdrawal assumed after participant reaches early retirement age.

* All newly reported participants are considered to have already worked their first year of employment.

Retirement

Active lives

According to the following schedule:

Age	Ineligible for Index 90/58	Eligible for Index 90/58*
58	.03	.70
59	.03	.35
60	.05	.50
61	.20	.35
62-63	.25	.60
64	.30	.60
65+	1.00	1.00

* Eligibility during the upcoming year.
Minimum of 0.50 in first year eligible for Index 90/58

Resulting in an average expected retirement age of 60.9.

Inactive vested lives

Earliest eligible retirement age.

ACTUARIAL ASSUMPTIONS (CONT.)

Disabled lives	Disability benefit assumed payable until the earliest of age 60, age 65 if they have less than 10 years of service, age eligible for Index 90/58 (or current age if older). Then normal retirement benefit commences. Future disabled participants assumed to receive $750 per month for the first 5 years of disability, $375 per month thereafter
Timing of decrements	Middle of year
Future hours worked	
Vested lives	1,650 hours per year, 0 after assumed retirement age.
Non-vested lives	800 hours per year, 0 after assumed retirement age.
Future contribution rate	
Credited rate	Credited hourly contribution rate is set equal to: • Individual's average hourly credited contribution rate for the most recent plan year adjusted for any negotiated increases
Total rate	Total hourly contribution rate is set equal to: • Individual's expected credited rate (above); *plus* • Individual's average hourly non-credited contribution rate for the most recent plan year adjusted for any negotiated increases
Age of participants with unrecorded birth dates	Based on average entry age of participants with recorded birth dates and same vesting status.
Marriage assumptions	100% assumed married with the male spouse 3 years older than his wife.
Optional form assumption	All non-retired participants assumed to elect the life only form of benefit.

ACTUARIAL ASSUMPTIONS (CONT.)

Inactive vested lives over age 74	Continuing inactive vested participants age nearest 74 and older are assumed deceased and are not valued. Participants assumed deceased under age 74 prior to September 1, 2020 are still assumed to be deceased.
QDRO benefits	Benefits to alternate payee included with participant's benefit until payment commences.
Section 415 limit assumptions	
Dollar limit	$245,000 per year.
Assumed form of payment for those limited by Section 415	Joint and 100% survivor annuity.
Benefits not valued	None
Benefits Vested	No death benefits are vested. Disability benefits are considered vested only in relation to corresponding retirement benefit. Early retirement subsidies are considered vested when participant reaches age 58 and has 10 years of vesting service.

RATIONALE FOR SELECTION OF ACTUARIAL ASSUMPTIONS

The non-prescribed actuarial assumptions were selected to provide a reasonable long term estimate of developing experience. The assumptions are reviewed annually, including a comparison to actual experience. The following describes our rationale for the selection of each non-prescribed assumption that has a significant effect on the valuation results.

ERISA rate of return used to value liabilities	Future rates of return were modeled based on the Plan's current investment policy asset allocation and composite, long-term capital market assumptions taken from Horizon Actuarial's 2022 survey of investment consultants. Based on this analysis, we selected a final assumed rate of 7.50%, which we feel is reasonable. This rate may not be appropriate for other purposes such as settlement of liabilities. Due to the special rules related to withdrawal liability for a construction industry plan and the nature of the building trades industry, we believe the valuation interest rate is also appropriate for withdrawal liability purposes.
Mortality	The PRI-2012 Blue Collar Mortality Tables for employees and healthy annuitants projected forward using the MP-2021 projection scale was chosen as the base table for this population. The blue collar table was chosen based on the industry of plan participants. Finally, a 120% multiplier for males and 90% for females was applied in order to more closely match projected deaths to actual post-retirement death experience. The period of actual data studied to develop this multiplier was from September 1, 2017 to August 31, 2022 for this plan blended with the PRI 2012 Blue Collar mortality tables. Based on information from the CDC on COVID-19 deaths, this study was adjusted to exclude an increase in deaths due to COVID-19.
Retirement	Actual rates of retirement by age were last studied for this plan for the period September 1, 2014 to August 31, 2019. The assumed future rates of retirement were selected based on the results of this study. No adjustments were deemed necessary at this time.

RATIONALE FOR SELECTION OF ACTUARIAL ASSUMPTIONS (CONT.)

Withdrawal	Actual rates of withdrawal by age were last studied for this plan for the period September 1, 2014 to August 31, 2019. The assumed future rates of withdrawal were selected based on the results of this study. No adjustments were deemed necessary at this time.
Future hours worked	Based on review of recent plan experience.

ACTUARIAL ASSUMPTIONS USED FOR PROJECTIONS

The assumptions used for the credit balance, funded ratio and PPA zone projections are the same as used throughout the report with the following exceptions.

Assumed return on fund assets	
Current year projections	6.50% for the first 10 years (9/1/2022-8/31/2032)* 7.50% thereafter
Prior year projections	6.50% for the first 10 years (9/1/2021-8/31/2031)* 7.50% thereafter
	* For PPA certification projections, the 6.50% short-term assumption is used for years prior to the certification date only; the 7.50% long-term assumption is used for all years following the certification date.
Expenses	
Current year projections	$1,325,000 per year excluding investment expenses increasing 3% each year thereafter. Additional increases are reflected in plan years beginning 2023 and 2031 to account for the scheduled PBGC premium rate increases to $35 and $52 per participant.
Prior year projections	$1,350,000 per year excluding investment expenses increasing 3% each year thereafter. An additional increase is reflected in plan year beginning 2031 to account for the scheduled PBGC premium rate increase to $52 per participant.
Future total hours worked	
Current year projections	3,950,000 for all years
Prior year projections	3,750,000 for the plan year ending 2022 3,850,000 thereafter
	The total hours above are a further pro-rata adjustment to future hours assumption by participant.
Contribution rate increases	
Current year projections	None
Prior year projections	None
Changes since prior year	None

ACTUARIAL ASSUMPTIONS USED FOR PROJECTIONS (CONT.)

Open group projections	
Current year projections	Projected normal costs are adjusted using the open group percentage increases from the 2021 valuation. Projected benefit payment amounts are adjusted using the new entrant payments from the 2021 valuation pro-rated for the change in new entrants required to replace exiting actives in the current valuation.
Prior year projections	Stable population assumed with new entrants replacing active participants as they withdraw, retire, or die. New entrants are based upon entry age of actual new entrants and returning participants over the last 5 years.
Stochastic modeling	1000 trials. Future returns are modeled using an expected return of 7.21% for the first 10 years and 7.82% thereafter and a standard deviation of 12.73%, which is representative of the plan's investment portfolio. The preceding expected returns are one-year values which are not representative of longer-term geometric average returns as considered when setting the ERISA return assumption.

ACTUARIAL METHODS

Funding method	
ERISA Funding	Traditional unit credit cost method, effective September 1, 2003.
Funding period	Individual entry age normal with costs spread as a level dollar amount over service
Population valued	
Actives	Eligible employees with at least one hour during the preceding plan year.
Inactive vested	Vested participants with no hours during the preceding plan year.
Retirees	Participants and beneficiaries in pay status as of the valuation date.
Asset valuation method	
Actuarial value	Smoothed market value with phase-in effective September 1, 2008. Gains and losses are spread over a 5-year period. The actuarial value is limited to not less than 80% and not more than 120% of the actual market value of assets in any plan year.
Unfunded vested benefits	For the presumptive method, actuarial value, as described above, is used.
Amortization extension	
Effective dates	September 1, 2008 (first extension) September 1, 2019 (second extension)
Length of extension	5 years for both extensions
Applicable amortization bases extended	All funding standard account amortization charge bases with an outstanding balance on each effective date unless such charge base was for a method change, already extended under the Pension Relief Act of 2010, or already had the 5-year extension applied.

Date Established	Source of Change in Unfunded Liability	Original Amount	Original Period	Remaining Period Years	Remaining Period Months	9/1/2022 Outstanding Balance	9/1/2022 Amortization Payment
Charges							
9/1/1978	Amendment		45	1	0	260,844	260,844
9/1/1979	Amendment		45	2	0	450,053	233,150
9/1/1980	Amendment		45	3	0	1,259,858	450,665
9/1/1988	Amendment		35	1	0	672,648	672,648
9/1/1989	Amendment		35	2	0	2,018,428	1,045,685
9/1/1990	Assumptions		35	3	0	1,212,022	433,551
9/1/1993	Assumptions		35	6	0	1,589,188	314,947
9/1/1994	Amendment		35	7	0	2,853,034	501,072
9/1/1994	Assumptions		35	7	0	548,239	96,289
9/1/1995	Assumptions	23,693,931	35	8	0	10,558,373	1,676,838
9/1/1997	Amendment	39,574,309	35	10	0	21,072,035	2,855,719
9/1/1997	Assumptions	14,174,319	35	10	0	7,547,368	1,022,833
9/1/2002	Amendment	28,326,474	35	15	0	19,972,743	2,104,797
9/1/2003	Assumptions	20,435,609	35	16	0	14,983,382	1,524,700
9/1/2003	Experience	30,551,079	20	1	0	2,519,597	2,519,597
9/1/2004	Experience	30,580,654	20	2	0	5,001,389	2,591,088
9/1/2005	Amendment	12,867,110	35	18	0	10,086,743	966,722
9/1/2005	Experience	27,327,749	20	3	0	6,621,647	2,368,625
9/1/2006	Amendment	12,243,623	35	19	0	9,877,424	922,605
9/1/2006	Assumptions	32,519,474	35	19	0	26,234,745	2,450,470
9/1/2006	Experience	21,799,795	20	4	0	6,935,466	1,926,240
9/1/2007	Assumptions	43,584,357	35	20	0	36,088,320	3,293,008
9/1/2007	Experience	18,130,929	20	5	0	7,083,682	1,628,688
9/1/2008	Experience	20,337,861	20	6	0	9,364,164	1,855,800
9/1/2008	Method	51,897,525	15	1	0	5,469,121	5,469,121
9/1/2009	Assumptions	2,841,020	20	7	0	1,004,802	176,472
9/1/2009	Experience	5,073,753	20	7	0	1,794,475	315,160
9/1/2009	Relief 08 Asset Loss	34,760,076	29	16	0	27,167,847	2,764,577
9/1/2010	Experience	6,936,306	20	8	0	2,953,223	469,019
9/1/2010	Relief 08 Asset Loss	19,337,414	28	16	0	15,274,115	1,554,282
9/1/2011	Relief 08 Asset Loss	10,134,263	27	16	0	8,097,142	823,958
9/1/2012	Relief 08 Asset Loss	21,827,033	26	16	0	17,658,500	1,796,915
9/1/2013	Relief 08 Asset Loss	22,587,104	25	16	0	18,523,478	1,884,934
9/1/2014	Relief 08 Asset Loss	19,238,145	24	16	0	16,012,578	1,629,428
9/1/2015	Assumptions	6,918,506	20	13	0	5,096,633	583,454

Date Established	Source of Change in Unfunded Liability	Original Amount	Original Period	Remaining Period Years	Remaining Period Months	9/1/2022 Outstanding Balance	9/1/2022 Amortization Payment
9/1/2015	Experience	11,107,701	20	13	0	8,182,671	936,739
9/1/2016	Experience	20,386,733	20	14	0	16,075,887	1,761,579
9/1/2017	Experience	18,943,784	20	15	0	15,859,676	1,671,348
9/1/2018	Assumptions	5,919,635	20	16	0	5,225,634	531,756
9/1/2018	Experience	14,681,216	20	16	0	12,960,029	1,318,803
9/1/2019	Assumptions	19,014,723	20	17	0	17,596,182	1,735,066
9/1/2019	Experience	21,934,667	20	17	0	20,298,291	2,001,507
9/1/2020	Assumptions	3,585,595	15	13	0	3,300,734	377,862
9/1/2021	Assumptions	1,212,360	15	14	0	1,165,942	127,763
9/1/2022	Experience	3,962,118	15	15	0	3,962,118	417,542
				Total Charges:		**428,490,470**	**62,063,866**

Credits

Date Established	Source of Change in Unfunded Liability	Original Amount	Original Period	Remaining Period Years	Remaining Period Months	9/1/2022 Outstanding Balance	9/1/2022 Amortization Payment
9/1/2016	Assumptions	6,865,210	15	9	0	4,961,119	723,480
9/1/2017	Assumptions	13,752,769	15	10	0	10,694,324	1,449,315
9/1/2020	Experience	1,257,599	15	13	0	1,157,688	132,530
9/1/2021	Experience	23,818,310	15	14	0	22,906,373	2,510,056
				Total Credits:		**39,719,504**	**4,815,381**

Net Charges:	**388,770,966**	**57,248,485**
Less Credit Balance:	65,894,803	
Less Reconciliation Balance:	0	
Unfunded Actuarial Liability:	**322,876,163**	

Date Established	Source of Change in Unfunded Liability	Original Amount	Original Period	Remaining Period		9/1/2022 Outstanding Balance	9/1/2022 Amortization Payment
				Years	Months		
Charges							
9/1/1993	Assumptions		30	1	0	363,731	363,731
9/1/1994	Amendment		30	2	0	1,101,781	570,792
9/1/1994	Assumptions		30	2	0	211,703	109,687
9/1/1995	Assumptions	23,693,931	30	3	0	5,275,665	1,887,151
9/1/1997	Amendment	39,574,309	30	5	0	13,697,381	3,149,315
9/1/1997	Assumptions	14,174,319	30	5	0	4,906,012	1,127,989
9/1/2002	Amendment	28,326,474	30	10	0	16,539,587	2,241,476
9/1/2003	Assumptions	20,435,609	30	11	0	12,704,013	1,615,446
9/1/2005	Amendment	12,867,110	30	13	0	8,868,302	1,015,230
9/1/2006	Amendment	12,243,623	30	14	0	8,808,057	965,178
9/1/2006	Assumptions	32,519,474	30	14	0	23,394,500	2,563,544
9/1/2007	Assumption	43,584,357	30	15	0	32,575,068	3,432,876
9/1/2008	Experience	20,337,861	15	1	0	2,143,279	2,143,279
9/1/2009	Assumptions	2,841,020	15	2	0	577,891	299,397
9/1/2009	Experience	5,073,753	15	2	0	1,032,064	534,690
9/1/2009	Relief 08 Asset Loss	34,760,076	29	16	0	27,167,847	2,764,577
9/1/2010	Experience	6,936,306	15	3	0	2,043,479	730,972
9/1/2010	Relief 08 Asset Loss	19,337,414	28	16	0	15,274,115	1,554,282
9/1/2011	Relief 08 Asset Loss	10,134,263	27	16	0	8,097,142	823,958
9/1/2012	Relief 08 Asset Loss	21,827,033	26	16	0	17,658,500	1,796,915
9/1/2013	Relief 08 Asset Loss	22,587,104	25	16	0	18,523,478	1,884,934
9/1/2014	Relief 08 Asset Loss	19,238,145	24	16	0	16,012,578	1,629,428
9/1/2015	Assumptions	6,918,506	15	8	0	4,590,831	729,096
9/1/2015	Experience	11,107,701	15	8	0	7,370,600	1,170,568
9/1/2016	Experience	20,386,733	15	9	0	14,732,400	2,148,425
9/1/2017	Experience	18,943,784	15	10	0	14,730,928	1,996,362
9/1/2018	Assumptions	5,919,635	15	11	0	4,905,864	623,832
9/1/2018	Experience	14,681,216	15	11	0	12,166,969	1,547,158
9/1/2019	Assumptions	19,014,723	15	12	0	16,662,758	2,003,838
9/1/2019	Experience	21,934,667	15	12	0	19,221,534	2,311,551
9/1/2020	Assumptions	3,585,595	15	13	0	3,300,734	377,862
9/1/2021	Assumptions	1,212,360	15	14	0	1,165,942	127,763
9/1/2022	Experience	3,962,118	15	15	0	3,962,118	417,542

Date Established	Source of Change in Unfunded Liability	Original Amount	Original Period	Remaining Period Years	Remaining Period Months	9/1/2022 Outstanding Balance	9/1/2022 Amortization Payment
				Total Charges:		**339,786,851**	**46,658,844**

Credits

Date Established	Source of Change in Unfunded Liability	Original Amount	Original Period	Remaining Period Years	Remaining Period Months	9/1/2022 Outstanding Balance	9/1/2022 Amortization Payment
9/1/2016	Assumptions	6,865,210	15	9	0	4,961,119	723,480
9/1/2017	Assumptions	13,752,769	15	10	0	10,694,324	1,449,315
9/1/2020	Experience	1,257,599	15	13	0	1,157,688	132,530
9/1/2021	Experience	23,818,310	15	14	0	22,906,373	2,510,056
				Total Credits:		**39,719,504**	**4,815,381**
				Net Charges:		**300,067,347**	**41,843,463**
				Less Credit Balance:		-22,808,816	
				Less Reconciliation Balance:		0	
				Unfunded Actuarial Liability:		**322,876,163**	

SUMMARY OF PPA AND MPRA RULES

Background

All multiemployer pension plans in effect on July 16, 2006 are required to engage an actuary to annually certify their status under the Pension Protection Act of 2006 ("PPA"). Such certification must be filed with the government by the 90th day of the plan year.

This Appendix D provides a high-level summary of some of the rules related to PPA, which were further modified in 2015 by the Multiemployer Pension Reform Act of 2014 ("MPRA"). Please seek advice from your actuary or Fund Counsel for more detailed information.

PPA Status Criteria

The table below summarizes the criteria for each PPA status. Projected deficiencies are calculated as of the last day of each plan year and are based on contribution rates codified in bargaining agreements and, if applicable, wage allocations.

PPA Status	Getting In	Getting Out
Safe ("green zone")	A plan is safe if it is not described in any of the other statuses. Generally, a plan that is at least 80% funded and has no projected funding deficiencies in the current year or next 6 years is safe.	A plan leaves safe status when it is certified as being in another status
Safe ("green zone") special rule	Beginning in 2015, a plan that would otherwise be endangered, but was safe for the prior year, remains safe if it is projected to return to safe within 10 years	A plan leaves safe status when it is certified as being in another status
Endangered ("yellow zone")	A plan is endangered if it is not in a worse status and it is described in one of the following: • Funded percentage is less than 80%, or • Projected funding deficiency in the current year or next 6 years.	A plan leaves endangered status when it no longer meets the requirements to be classified as endangered or when it enters a worse status
Seriously endangered ("orange zone")	A plan is seriously endangered if it is not in a worse status and it meets both of the following: • Funded percentage is less than 80%, and • Projected funding deficiency in the current year or next 6 years.	A plan leaves seriously endangered status when it no longer meets both of the requirements listed or when it enters a worse status

SUMMARY OF PPA AND MPRA RULES (CONT.)

PPA Status	Getting In	Getting Out
Critical ("red zone")	A plan is critical if it is not in critical and declining status and is described in one or more of the following: • Projected funding deficiency (not recognizing extensions) in the current year or next 3 years (next 4 years if funded at less than 65%), or • Funded percentage is less than 65%, and, inability to pay nonforfeitable benefits and expenses for next 7 years, or • (1) Contributions are less than current year costs (i.e. "normal cost") plus interest on any unfunded past liabilities, and, (2) value of vested benefits for non-actives is greater than for actives, and, (3) projected funding deficiency (not recognizing extensions) in the current year or next 4 years, or • Inability to pay all benefits and expenses for next 5 years. A plan with a 5-year amortization extension under IRC Section 431(d) that previously emerged from critical status in 2015 or later will re-enter critical status only if it is described in one of the following: • Projected funding deficiency in the current year or next 9 years (including amortization extensions), or, • Projected insolvency within the next 30 years If a plan is certified as safe or endangered status but projected to be critical within the next 5 years, the Trustees have the option of electing to have the plan treated as critical status immediately.	A plan emerges from critical status when it meets all of the following: • No longer meets any of the critical status tests, and, • No projected funding deficiencies in the current year or next 9 years, and, • No projected insolvencies in the next 30 years A plan with a 5-year amortization extension under IRC Section 431(d) emerges from critical status when it meets both of the following: • No projected funding deficiencies in the current year or next 9 years, and, • No projected insolvencies in the next 30 years

SUMMARY OF PPA AND MPRA RULES (CONT.)

PPA Status	*Getting In*	*Getting Out*
Critical and declining ("deep red zone")	Beginning in 2015, a plan is in critical and declining status if: • It satisfies one or more of the critical status criteria, and, • It is projected to become insolvent within the next 15 years (20 years if the plan has a ratio of inactive participants to active participants that exceeds 2 to 1 or if the funded percentage of the plan is less than 80%)	A plan leaves critical and declining when it no longer satisfies the criteria. Status cannot change to safe, endangered, or seriously endangered unless the plan also meets the critical status emergence rules (see above).

Restrictions for Non-Safe Zone Plans

The Trustees of a plan that is not in safe zone face a number of restrictions in plan improvements that can be adopted and bargaining agreements that can be accepted.

Period	*Endangered/Critical Restrictions*
Date of first certification through adoption of funding improvement/rehabilitation plan ("plan adoption period")	• No reduction in level of contributions for any participants • No suspension of contributions • No exclusion of new or younger employees • No amendment that increases the liabilities of the plan by reason of any increase in benefits, change in accrual, or change in vesting unless required by law
After adoption of a funding improvement/rehabilitation plan until end of funding improvement/rehabilitation period	• Cannot be amended so as to be inconsistent with funding improvement/rehabilitation plan • No amendment that increases benefits, including future accruals, unless actuary certifies as being paid for with contributions not contemplated in funding improvement/ rehabilitation plan and still expected to meet applicable benchmark after considering the amendment

Additionally, critical, and critical and declining status plans cannot pay benefits greater than the single life annuity once the initial red zone notice is sent unless the benefit is eligible for automatic cash-out.

SUMMARY OF PPA AND MPRA RULES (CONT.)

Employer Surcharges for Critical Status Plans

When a non-critical plan enters critical status, employers must pay the plan a surcharge equal to 5% of their bargained contributions (the amount increases to 10% after the end of the plan year). The surcharges cannot be used to accrue benefits. Surcharges will generally commence about 5 months into the initial critical plan year.

Once the Trustees have adopted a rehabilitation plan, each set of bargaining parties is asked to adopt one of the schedules contained in such rehabilitation plan. Surcharges cease to apply to contributions made under a CBA where the bargaining parties have adopted a schedule. If this can be accomplished within the first 5 months of the initial critical year, then surcharges can be avoided altogether.

Special Critical/Critical and Declining Status Tools

The Trustees of a plan that is in critical status have the ability (as the result of collective bargaining) to cut "adjustable benefits" that, for the most part, cannot be reduced under other circumstances. Adjustable benefits include early retirement subsidies, optional forms of payment, disability benefits, and death benefits. Normal retirement benefits are never adjustable benefits.

The Trustees of a critical and declining plan may apply to the Treasury Department for approval to suspend certain payments under MPRA (suspensions are benefit cuts that will be restored once they are no longer needed). The suspensions may affect even those participants who are already in pay status. However, certain protections apply to participants who are age 75 or older or are disabled. Furthermore, no one's benefit can be reduced below 110% of the amount guaranteed by the PBGC. While not officially repealed with ARPA (see below), benefit suspensions have effectively been eliminated for existing deeply troubled plans in favor of the special financial assistance program.

SUMMARY OF ARPA RULES

Overview

The American Rescue Plan Act (ARPA) was passed in March 2021 with an interim final rule in July, 2021 and a final rule in July, 2022. ARPA provides options for eligible multiemployer plans to receive special financial assistance and all multiemployer plans to elect funding relief. The PBGC premium is also scheduled to increase to $52 in 2031.

Special Financial Assistance

A multiemployer plan is eligible for the special financial assistance program if:

- The plan is in critical and declining status in any plan year beginning in 2020 through 2022 using 2020 certification assumptions;
- A suspension of benefits has been approved with respect to the plan under MPRA as of the date of the enactment of the law;
- The plan is certified to be in critical status, has a current liability funded percentage of less than 40%, and has a ratio of active to inactive participants which is less than two to three in any plan year beginning in 2020 through 2022; or
- The plan became insolvent after December 16, 2014, and has remained insolvent and has not been terminated as of the date of the enactment of the law.

The PBGC has given priority consideration for special financial assistance to eligible plans that will become insolvent soon, have more than $1 billion liability, or suspended benefits.

An eligible plan must submit an application to the PBGC for special financial assistance by December 31, 2025. Plans without priority consideration may have to wait until as late as March 11, 2023 before they can apply.

The amount of special financial assistance to be provided by the PBGC shall be the amount required for the plan to pay all benefits due through the last day of the plan year ending in 2051 without any further reductions. This amount will be the best of three different calculations for plans with a MPRA suspension. For this determination, the actuary will use the assumptions from the plan's 2020 PPA certification except interest rate limits may apply. The special financial assistance will be paid by the PBGC in a single, lump sum payment as soon as practicable upon approval of the application and does not have to be paid back.

Several restrictions do apply for plans receiving special financial assistance including:

- Up to 33% of the special financial assistance can be invested in publicly traded equities or high yield bonds. The rest must be invested in investment-grade bonds;
- The plan will be deemed in critical status through the 2051 plan year end;
- Contribution decreases are not permitted unless it would lessen the risk of loss;
- For the first ten years, only future benefits can be improved if they are paid for with new contributions. Then, past or future increases can be made with PBGC approval if they do not create a projected insolvency;
- Use mass withdrawal interest for EWL for ten years or when SFA runs out, if later; and
- A statement of compliance must be annually filed with the PBGC.

SUMMARY OF ARPA RULES (CONT.)

Funding Relief Provisions

There are a few options for funding relief which are available to every multiemployer plan.

Temporary Delay of PPA Status

Multiemployer plans are allowed to temporarily delay the plan's certification of endangered, critical or critical and declining status. The plan sponsor of a multiemployer plan can choose to designate to have its zone status remain the same for the first plan year beginning on or after March 1, 2020 or the next succeeding plan year.

If a plan was in endangered or critical status for the plan year preceding the plan year for which it has chosen to delay updating its zone status, it will not be required to update its funding improvement plan or rehabilitation plan until the following plan year. A notice of this election is required unless this election places the plan in safe status.

Temporary Extension of Funding Improvement and Rehabilitation Periods

A plan which is in endangered or critical status for a plan year beginning in 2020 or 2021 (after applying any elected delay in PPA status) can elect to extend its funding improvement or rehabilitation period by five years.

Adjustments to the Funding Standard Account Rules

The plan may elect one or both of the following if, as of February 29, 2020, it is projected to have sufficient assets to pay expected benefits and expenses through the end of the applicable extended period:

- Extend select experience losses in either or both of the first two plan years ending after February 29, 2020 from 15 years to 30 years from the year in which the loss occurred. Such losses must be attributable to investment experience, contribution shortfall, employment reduction or retirement rate experience; and
- Extend the smoothing of the loss attributable to the investment losses in either or both of the first two plan years ending after February 29, 2020 from five years to up to ten years for the determination of the actuarial value of assets. The actuarial value of assets, however, cannot exceed 130% of the market value.

The Treasury must rely on plan sponsors' calculations of plan losses unless calculations are clearly erroneous. Restrictions on plan amendments that increase benefits apply.

PBGC Premium

The PBGC premium will increase to $52 per participant for the plan year beginning in 2031 and increased each year thereafter by a wage inflation rate.

GLOSSARY OF COMMON PENSION TERMS

Benefits

Accrued Benefit: A benefit that an employee has earned (or accrued) through past participation in the plan. It is the amount payable at normal retirement age.

Why it matters: Under the law, Accrued Benefits generally may not be reduced by plan amendment (note that special rules allowing for limited reduction and/or suspension of accrued benefits apply to critical status, critical and declining status and insolvent plans).

Actuarial Equivalence: Given a set of actuarial assumptions, when two different sets of payment scenarios have an equal present value.

Early Retirement Reduction Factor: A retirement benefit that begins before normal retirement age may be reduced. The plan document defines the amount of the reduction by formula or a table of factors. This reduction may or may not be actuarially equivalent, but its present value can be no less than actuarially equivalent to the benefit payable at normal retirement age.

Benefit Crediting (Accrual) Rate: A general reference to the calculation of the amount of monthly retirement benefit earned per dollar contributed or per year or hour worked.

Assets

Market Value of Assets: This is the fair value of all assets in the fund on an accrued, not cash basis. The market value of assets matches the value in the plan audit.

Actuarial Value of Assets: The amount of assets recognized for actuarial valuation purposes. Recent changes in market value may be partially recognized (there are variations allowed on the exact recognition). Generally the actuarial value is limited to not be less than 80% or more than 120% of the market value.

Why it matters: Many funding calculations use this "smoothed" asset value method to lessen the impact of volatility in the market value of plan assets.

Assumed Rate of Return: Long term assumption of the rate of return on assets based upon the diversification mix of invested assets.

Why it matters: This assumption is used in calculating the present values discussed in the Liabilities section below. The Assumed Rate of Return has an inverse relationship with plan liabilities. In other words, a lower Assumed Rate of Return increases liabilities, while a higher Assumed Rate of Return decreases plan Liabilities.

GLOSSARY OF COMMON PENSION TERMS (CONT.)

Liabilities

Present Value of Accrued Benefits: The discounted value of benefit payments due in the future but based only on the current Accrued Benefits of each participant. The value is based on actuarial assumptions including an assumed rate of investment return.

Why it matters: This liability is one of the primary factors in determining a plan's annual PPA funded status (see Funded Ratio).

Present Value of Vested Benefits: The discounted value of Accrued Benefits that are considered vested (non-forfeitable). Benefits that are not vested include those of participants who have not satisfied the plan vesting requirement (usually five years of service). In addition under the law some death and temporary disability benefits are also considered non-vested regardless of service because they are not considered protected benefits.

Why it matters: This liability is the primary driver of a plan's Employer Withdrawal Liability.

Actuarial (Accrued) Liability: For inactive members this is the same as the Present Value of Accrued Benefits above. For active members this depends on the cost method selected by the actuary. Under the accrued benefit or traditional unit credit cost method this is also the same as the Present Value of Accrued Benefits. Under other cost methods (including most commonly entry age normal) this represents an alternate allocation of projected benefit cost over the working lifetime of active members. Under the entry age normal cost method, the active Actuarial Liability is larger than the Present Value of Accrued Benefits.

Unfunded Actuarial Liability: The Actuarial Liability less the Actuarial Value of Assets.

Current Liability: This is similar to the Present Value of Accrued Benefits, but uses a statutory, significantly lower, interest rate (equivalent to an expected rate of return on a bond only-type portfolio) and statutory mortality tables. The lower interest rate means that Current Liability tends to be significantly higher than the Present Value of Accrued Benefits. This number has very little impact on multiemployer plans.

Normal Cost: The present value of all benefits that are expected to accrue or to be earned under the plan during the plan year. The way in which a benefit is considered to be earned varies with the actuarial cost method.

Risk: The potential of future deviation of actual results from expectations derived from actuarial assumptions.

GLOSSARY OF COMMON PENSION TERMS (CONT.)

Funding

Funded Ratio (Funded Percentage): Actuarial Value of Assets divided by the Present Value of Accrued Benefits. This is one of two key measures used to determine a plan's annual PPA funded status. This may also be referred to as PPA Funded Ratio. This must be greater than 80% to avoid endangered status.

Credit Balance: The accumulated excess of actual contributions over legally required minimum contributions as maintained in the funding standard account. The funding standard account is maintained by the actuary in the valuation process and reported annually in schedule MB to the Form 5500 filing. A negative credit balance is known as an accumulated funding deficiency. Prior to PPA, an accumulated funding deficiency caused an immediate excise tax (waiver under PPA if certain conditions are met). After PPA, a current or projected funding deficiency is one of the key measures used in determining the annual PPA status. It can eventually trigger an excise tax levied on contributing employers.

Withdrawal Liability

Unfunded Vested Benefits (UVB): Present Value of Vested Benefits less the value of plan assets determined on either an actuarial or market value basis. The selection of asset measurement is part of the withdrawal liability method of the Plan.

Employer Withdrawal Liability (EWL): An employer that withdraws from a multiemployer plan is liable for its proportionate share of Unfunded Vested Benefits, determined as of the date of withdrawal.

Why it matters: If a contributing employer leaves the plan while it has Unfunded Vested Benefits liability, that employer's allocated share of Employer Withdrawal Liability is either assessed, as applicable, or reallocated among the plan's remaining active employers if the presumptive method is used. A construction employer withdrawing from a construction industry plan will not be assessed unless they continue performing work within the jurisdiction of the CBA or restart such work within a period of 5 years. Small amounts (under $150,000) are generally reduced or eliminated pursuant to the "de minimis rule."