



# Sheet Metal Workers Local Pension Plan

Report of Required Actuarial Information -

Application for Proposed Benefit Suspensions as of May 1, 2019

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## Report of Required Actuarial Information - Application for Proposed Benefit Suspensions as of May 1, 2019 for the Sheet Metal Workers Local Pension Plan

This report includes the actuarial certification of plan solvency and presentation of additional actuarial information required for the application to suspend benefits for the Sheet Metal Workers Local Pension Plan (the “Plan”). This report has been completed in accordance with our understanding of IRC §432(e)(9)(C)(i) (including §1.432(e)(9)-1 and Revenue Procedure 2017-43).

### Purpose of the Report

The Plan was certified as “critical and declining” for the plan years beginning May 1, 2016 and May 1, 2017. The Trustees have chosen to pursue benefit suspensions which are allowed to such plans under §432. We have completed our analysis of the Trustees’ proposed benefit suspensions and determined that the proposed suspensions of benefits would likely enable the Plan to avoid insolvency (as defined in IRC §418E) assuming the proposed suspensions continue indefinitely and occur no later than May 1, 2019. In addition, we have also completed the analysis required to satisfy §432(e)(9)(D)(iv) (taking into account §1.432(e)(9)-1 and Revenue Procedure 2017-43) which requires that the proposed suspension does not materially exceed the level necessary to avoid insolvency. This report also includes additional information required for the application to suspended benefits.

Specifically, this report contains the materials required in checklist items 6, 9, 11, 25, 26, 27 and 28 included in Revenue Procedure 2017-43.

### Limited Distribution

Milliman’s work is prepared solely for the internal business use of the Board of Trustees Sheet Metal Workers Local Pension Plan (the “Plan Sponsor”) and the Plan’s Trustees and may not be provided to third parties without our prior written consent. Milliman does not intend to benefit or create a legal duty to any third party recipient of its work product. Milliman’s consent to release its work product to any third party may be conditioned on the third party signing a release, subject to the following exceptions:

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### Reliance

In preparing the report, we relied on our May 1, 2017 Actuarial Valuation, and, without audit, information (some oral and some in writing) supplied by the Plan’s administrator, auditor, and investment consultant. This information includes, but is not limited to, plan documents and provisions, participant data, and financial information. The participant data used for the suspension of benefits work is the same data used for the May 1, 2017 Actuarial Valuation. Additional individual participant information (i.e. missing pop-up amounts, years of service) was supplied by the Plan Administrator subsequent to the May 1, 2017 valuation to refine the benefit payment projections.

We found this information to be reasonably consistent and comparable with information used for other purposes. The results depend on the integrity of this information. If any of this information is incomplete or inaccurate, our results may be different and our calculations may need to be revised.

### Limited Use

Actuarial computations presented here were prepared to meet the requirement set forth in IRC §432(e)(9) (taking into account §1.432(e)(9)-1 and Revenue Procedure 2017-43).

Actuarial computations for purposes other than determining the contribution requirements for an ongoing plan (such as for assessing benefit security upon potential plan termination) may yield significantly different results from those shown in this report.

Future actuarial measurements may differ significantly from the current measurements presented in this report due to factors such as, but not limited to, 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 plan funded status); and changes in plan provisions or applicable law. Due to the limited scope of the actuarial assignment, we did not perform an analysis of the potential range of such future measurements.

The consultants who worked on this assignment are pension actuaries. Milliman's advice is not intended to be a substitute for qualified legal or accounting counsel.

### Certification

In our opinion, each assumption used, other than those assumptions mandated directly by the Internal Revenue Code and regulations thereon, is reasonable (taking into account the experience of the Plan and reasonable expectations).

On the basis of the foregoing, we hereby certify that to the best of our knowledge and belief, this report is complete and accurate and has been prepared in accordance with generally recognized and accepted actuarial principles and practices which are consistent with the principles prescribed by the Actuarial Standards Board and the Code of Professional Conduct and Qualification Standards for Actuaries Issuing Statements of Actuarial Opinion in the United States promulgated by the American Academy of Actuaries. We are members of the American Academy of Actuaries and meet its Qualification Standards to render the actuarial opinion contained herein.

Respectfully submitted,



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March 27, 2018  
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## Table of Contents

A.	Summary of Key Information and Results .....	2
B.	Development of Projected April 30, 2018 Market Value of Assets .....	4
C.	Deterministic Projection of Current Plan without Proposed Suspension .....	5
D.	Deterministic Projection of Proposed Suspension .....	7
E.	Deterministic Projection Demonstrating Proposed Suspension Does Not Materially Exceed the Level that is Necessary to Avoid Insolvency .....	9
F.	Deterministic Projection of Proposed Suspension Assuming Annual Rate of Return is Reduced by 1.00% .....	11
G.	Deterministic Projection of Proposed Suspension Assuming Annual Rate of Return is Reduced by 2.00% .....	13
H.	Deterministic Projection of Proposed Suspension Assuming the Industry Activity Assumption Continues Under the Same Trend as the Plan Experienced Over the Last 10 Years (0.1% per year) .....	15
I.	Deterministic Projection of the Proposed Suspension Assuming the Industry Activity Assumption Continues Under the Same Trend as the Plan Experienced Over the Last 10 Years, Reduced by 1.0% (-0.9% per year) .....	17
J.	Projection of Funded Percentage.....	19
K.	Response to Revenue Procedure 2017-43 Section 6.03, 6.04 and Appendix B.....	20
L.	Proposed Benefit Suspensions .....	31

## A. Summary of Key Information and Results

The Board of Trustees proposes the following reduction of benefits:

- A reduction in monthly benefits such that the revised monthly amount is based on a level accrual rate of \$48.00, multiplied by the years of service earned through April 30, 2019;
- The resulting benefit cannot be less than the MPRA guaranteed amount; and
- Participants whose current level accrual rate is already less than the \$48.00 level accrual rate, will not have their benefit reduced. A participant's current level accrual rate is determined by dividing their benefit amount by their years of service.

The reduction would take effect May 1, 2019 and would remain in effect indefinitely.

The following summary shows the results of the tests required to certify that the proposed suspensions meet the requirements set forth by the law.

### 1. Key Information

a. Projected year of insolvency without consideration of proposed suspension	Year Beginning May 1, 2035
b. End of extended period	April 30, 2049
c. Projected funded percentage (under IRC §432(j)(2)) at end of extended period (See Exhibit J)	107.01%
d. Number of Plan active participants (based on May 1, 2017 actuarial valuation)	655
e. Is the proposed suspension in combination with a partition?	No

### 2. Limitation on Aggregate Size of Suspension

- a. We certify that the proposed suspension is reasonably estimated to enable the Plan to avoid insolvency based on the following analysis.
  - i. The solvency ratio is projected on a deterministic basis to be at least 1.0 for each plan year throughout the extended period (see Exhibit D).
  - ii. The Plan's projected funded percentage at the end of the extended period exceeds 100% (see Exhibit J).
- b. We certify that the proposed suspension does not materially exceed the level that is necessary to avoid insolvency, as required under regulation §1.432(e)(9)-1(d)(5)(iii)(A) based on the following analysis
  - i. The Plan would fail one or more of the tests listed in 2a if the dollar amount of the proposed benefit suspension for each participant and beneficiary were reduced (but not below zero) by the greater of 5% of the individual's monthly amount proposed to be suspended and 2% of the individual's monthly amount without regard to the proposed suspension. Exhibit E demonstrates that if the suspension is reduced by the

aforementioned amounts, it will no longer be sufficient to enable the Plan to satisfy the requirement to avoid insolvency under §1.432(e)(9)-1(d)(5)(i)(A). The projection in Exhibit E does not satisfy the requirement in §1.432(e)(9)-1(d)(5)(ii)(3) because the Plan's funded percentage at the end of the extended period does not exceed 100%\* and in at least one of the last five years of the extended period the Plan's available resources are projected to decrease. Therefore, as specified in §1.432(e)(9)-1(d)(5)(iii)(A) "an alternative, similar but smaller suspension of benefits would not be sufficient to enable the Plan to satisfy the requirement to avoid insolvency under paragraph (d)(5)(i)(A)."

\* It can be demonstrated that the Plan's funded percentage at April 30, 2049 (the end of the extended period) with a smaller suspension does not exceed 100% as follows: The Plan's assets at April 30, 2049 with the smaller suspension are projected to be \$26,948,441 as shown in Exhibit E. The Plan's liabilities at April 30, 2049 with the proposed suspension are projected to be \$34,839,577 as shown in Exhibit J. Because the ratio of \$26,948,441 to \$34,839,577 is less than 100%, and a smaller suspension will provide larger liabilities at April 30, 2049, the Plan's funded percentage at April 30, 2049 with a smaller suspension will also be less than 100%.

- ii. The PBGC did not issue an order partitioning the Plan.

**The proposed suspension satisfies the limitations on aggregate size of suspension set forth in Regulation §1.432(e)(9)-1(d)(5).**

## B. Development of Projected April 30, 2018 Market Value of Assets

The table below shows the actual change in the market value of assets from May 1, 2017 through December 31, 2017 and projected market value of assets from January 1, 2018 through April 30, 2018. The calculations are based on the following information:

- The market value of assets as of May 1, 2017 is based on April 30, 2017 financial statements prepared by the auditor.
- Employer contributions, benefit payments and administrative expenses through December 31, 2017 and value of non-invested assets as of as of December 31, 2017 are based on unaudited financial statements prepared by the Plan Administrator.
- Estimated employer contributions from January 1, 2018 through April 30, 2018 are based on 4/12ths of the assumed contribution of \$3.85 million (equal to the product of the assumed 1.1 million hours and an average contribution rate of \$3.50/hour) for the 2017/2018 plan year.
- Estimated benefit payments from January 1, 2018 through April 30, 2018 are based on 4/12ths of the expected benefit payments projected for the 2017/2018 plan year by the valuation system based on the data and assumptions described in Exhibit K.
- The administrative expenses from January 1, 2018 through April 30, 2018 are based on the full year's administrative expense assumption reported in the May 1, 2017 actuarial valuation, less the actual amount for May 1, 2017 through December 31, 2017 reported in the Plan Administrator's unaudited December 31, 2017 financial statements.
- Investment returns through December 31, 2017 were based the value on non-invested assets reported in the Plan Administrator's unaudited December 31, 2017 financial statements and the value of invested assets as of December 31, 2017 provided by the investment consultant.
- Investment returns from January 1, 2018 through April 30, 2018 are based on an assumed return of 2.21% (4/12ths of the expected return) during that period.

	From May 1, 2017 through December 31, 2017	From January 1, 2018 through April 30, 2018	Total for 2017/2018 Plan Year
1. Market value of assets (beginning of period)	\$41,435,167	\$42,593,586	\$41,435,167
2. Employer contributions	2,595,209	1,283,333	3,878,542
3. Withdrawal liability payments	0	0	0
4. Benefit payments			
a. Current retirees and beneficiaries	n/a	1,786,883	n/a
b. Terminated vested participants	n/a	29,725	n/a
c. Current actives	n/a	64,991	n/a
d. New entrants	n/a	0	n/a
e. Total	3,640,992	1,881,599	5,522,591
5. Administrative expenses	286,862	213,138	500,000
6. Investment returns	<u>2,491,064</u>	<u>932,352</u>	<u>3,423,416</u>
7. Market value of assets (end of year)			
(1) + (2) + (3) - (4e) - (5) + (6)	\$42,593,586	\$42,714,534	\$42,714,534

### C. Deterministic Projection of Current Plan without Proposed Suspension

The following table shows the projection of the plan-year-by-plan-year market value of assets projected to the year of insolvency (plan year beginning May 1, 2035). The plan years beginning May 1, 2017 through May 1, 2035 are shown.

<b>Plan year beginning May 1</b>	<b>2017</b>	<b>2018</b>	<b>2019</b>	<b>2020</b>	<b>2021</b>	<b>2022</b>	<b>2023</b>	<b>2024</b>
1. Market value of assets (beginning of year)	\$41,435,167	\$42,714,534	\$43,137,893	\$43,100,047	\$42,813,803	\$42,233,710	\$41,125,411	\$39,580,746
2. Employer contributions	3,878,542	3,850,000	3,500,000	3,500,000	3,500,000	3,325,000	3,325,000	3,325,000
3. Withdrawal liability payments	0	0	0	0	0	0	0	0
4. Benefit payments								
a. Current retirees and beneficiaries	N/A	5,256,556	5,148,142	5,033,921	4,894,830	4,766,438	4,630,515	4,494,683
b. Terminated vested participants	N/A	185,452	300,977	401,248	532,566	651,974	863,048	1,000,458
c. Current actives	N/A	359,212	573,969	820,286	1,088,352	1,390,577	1,660,635	1,905,600
d. New entrants	N/A	0	0	0	0	0	0	0
e. Total	5,522,591	5,801,220	6,023,088	6,255,455	6,515,748	6,808,989	7,154,198	7,400,741
5. Administrative expenses	500,000	385,000	287,000	292,740	298,595	304,567	310,658	316,871
6. Investment returns	3,423,416	2,759,579	2,772,242	2,761,951	2,734,250	2,680,257	2,595,191	2,484,368
7. Market value of assets (end of year) (1) + (2) + (3) - (4e) - (5) + (6)	\$42,714,534	\$43,137,893	\$43,100,047	\$42,813,803	\$42,233,710	\$41,125,411	\$39,580,746	\$37,672,502
8. Available resources (1) + (2) + (3) - (5) + (6)	\$48,237,125	\$48,939,113	\$49,123,135	\$49,069,258	\$48,749,458	\$47,934,400	\$46,734,944	\$45,073,243
9. Solvency ratio (8) / (4e)	8.73	8.44	8.16	7.84	7.48	7.04	6.53	6.09
<b>Plan year beginning May 1</b>	<b>2025</b>	<b>2026</b>	<b>2027</b>	<b>2028</b>	<b>2029</b>	<b>2030</b>	<b>2031</b>	<b>2032</b>
1. Market value of assets (beginning of year)	\$37,672,502	\$35,403,950	\$32,767,871	\$30,015,704	\$26,873,755	\$23,388,132	\$19,593,791	\$15,444,875
2. Employer contributions	3,325,000	3,325,000	3,325,000	3,325,000	3,325,000	3,325,000	3,325,000	3,325,000
3. Withdrawal liability payments	0	0	0	0	0	0	0	0
4. Benefit payments								
a. Current retirees and beneficiaries	4,347,481	4,192,710	4,035,188	3,872,827	3,706,071	3,535,406	3,361,359	3,184,514
b. Terminated vested participants	1,129,931	1,287,717	1,408,469	1,547,526	1,648,735	1,717,509	1,824,676	1,889,835
c. Current actives	2,143,203	2,343,758	2,540,209	2,736,383	2,902,342	3,046,237	3,177,186	3,277,669
d. New entrants	0	0	0	0	0	0	0	0
e. Total	7,620,615	7,824,185	7,983,866	8,156,736	8,257,148	8,299,152	8,363,221	8,352,018
5. Administrative expenses	323,208	329,672	336,265	342,990	349,850	356,847	363,984	371,264
6. Investment returns	2,350,271	2,192,778	2,242,964	2,032,777	1,796,375	1,536,658	1,253,289	946,412
7. Market value of assets (end of year) (1) + (2) + (3) - (4e) - (5) + (6)	\$35,403,950	\$32,767,871	\$30,015,704	\$26,873,755	\$23,388,132	\$19,593,791	\$15,444,875	\$10,993,005
8. Available resources (1) + (2) + (3) - (5) + (6)	\$43,024,565	\$40,592,056	\$37,999,570	\$35,030,491	\$31,645,280	\$27,892,943	\$23,808,096	\$19,345,023
9. Solvency ratio (8) / (4e)	5.65	5.19	4.76	4.29	3.83	3.36	2.85	2.32



**C. Deterministic Projection of Current Plan without Proposed Suspension (continued)**

<b>Plan year beginning May 1</b>	<b>2033</b>	<b>2034</b>	<b>2035</b>
1. Market value of assets (beginning of year)	\$10,993,005	\$6,234,644	\$1,183,546
2. Employer contributions	3,325,000	3,325,000	3,325,000
3. Withdrawal liability payments	0	0	0
4. Benefit payments			
a. Current retirees and beneficiaries	3,005,525	2,825,126	2,644,124
b. Terminated vested participants	1,953,004	2,003,352	2,016,406
c. Current actives	3,363,921	3,429,099	3,477,617
d. New entrants	0	0	0
e. Total	8,322,450	8,257,577	8,138,147
5. Administrative expenses	378,689	386,263	393,988
6. Investment returns	617,778	267,742	n/a
7. Market value of assets (end of year) (1) + (2) + (3) - (4e) - (5) + (6)	\$6,234,644	\$1,183,546	Insolvent
8. Available resources (1) + (2) + (3) - (5) + (6)	\$14,557,094	\$9,441,123	\$4,012,578
9. Solvency ratio (8) / (4e)	1.75	1.14	0.49

## D. Deterministic Projection of Proposed Suspension

The table shows the projection of the plan-year-by-plan-year market value of assets over the extended projection period. The plan years beginning May 1, 2017 through May 1, 2048 are shown.

Plan year beginning May 1	2017	2018	2019	2020	2021	2022	2023	2024
1. Market value of assets (beginning of year)	\$41,435,167	\$42,714,534	\$43,137,893	\$43,958,046	\$44,648,278	\$45,182,745	\$45,345,515	\$45,266,520
2. Employer contributions	3,878,542	3,850,000	3,500,000	3,500,000	3,500,000	3,325,000	3,325,000	3,325,000
3. Withdrawal liability payments	0	0	0	0	0	0	0	0
4. Benefit payments								
a. Current retirees and beneficiaries	N/A	5,256,556	4,493,211	4,390,976	4,274,856	4,160,132	4,038,782	3,918,468
b. Terminated vested participants	N/A	185,452	251,973	332,936	431,214	527,502	683,179	786,331
c. Current actives	N/A	359,212	447,046	641,125	848,331	1,080,116	1,284,281	1,469,629
d. New entrants	N/A	0	0	0	0	0	0	0
e. Total	5,522,591	5,801,220	5,192,230	5,365,037	5,554,401	5,767,750	6,006,242	6,174,428
5. Administrative expenses	500,000	385,000	287,000	292,740	298,595	304,567	310,658	316,871
6. Investment returns	3,423,416	2,759,579	2,799,383	2,848,009	2,887,463	2,910,087	2,912,905	2,901,963
7. Market value of assets (end of year) (1) + (2) + (3) - (4e) - (5) + (6)	\$42,714,534	\$43,137,893	\$43,958,046	\$44,648,278	\$45,182,745	\$45,345,515	\$45,266,520	\$45,002,184
8. Available resources (1) + (2) + (3) - (5) + (6)	\$48,237,125	\$48,939,113	\$49,150,276	\$50,013,315	\$50,737,146	\$51,113,265	\$51,272,762	\$51,176,612
9. Solvency ratio (8) / (4e)	8.73	8.44	9.47	9.32	9.13	8.86	8.54	8.29
Plan year beginning May 1	2025	2026	2027	2028	2029	2030	2031	2032
1. Market value of assets (beginning of year)	\$45,002,184	\$44,567,566	\$43,968,560	\$43,546,604	\$42,984,181	\$42,312,059	\$41,567,254	\$40,733,468
2. Employer contributions	3,325,000	3,325,000	3,325,000	3,325,000	3,325,000	3,325,000	3,325,000	3,325,000
3. Withdrawal liability payments	0	0	0	0	0	0	0	0
4. Benefit payments								
a. Current retirees and beneficiaries	3,787,765	3,650,503	3,511,520	3,368,738	3,222,597	3,073,562	2,922,120	2,768,782
b. Terminated vested participants	880,089	986,487	1,067,105	1,154,337	1,225,522	1,273,735	1,342,511	1,387,636
c. Current actives	1,648,136	1,803,778	1,956,527	2,110,763	2,244,552	2,360,518	2,468,725	2,554,730
d. New entrants	0	0	0	0	0	0	0	0
e. Total	6,315,990	6,440,768	6,535,152	6,633,838	6,692,671	6,707,815	6,733,356	6,711,148
5. Administrative expenses	323,208	329,672	336,265	342,990	349,850	356,847	363,984	371,264
6. Investment returns	2,879,580	2,846,434	3,124,461	3,089,405	3,045,399	2,994,857	2,938,554	2,877,396
7. Market value of assets (end of year) (1) + (2) + (3) - (4e) - (5) + (6)	\$44,567,566	\$43,968,560	\$43,546,604	\$42,984,181	\$42,312,059	\$41,567,254	\$40,733,468	\$39,853,452
8. Available resources (1) + (2) + (3) - (5) + (6)	\$50,883,556	\$50,409,328	\$50,081,756	\$49,618,019	\$49,004,730	\$48,275,069	\$47,466,824	\$46,564,600
9. Solvency ratio (8) / (4e)	8.06	7.83	7.66	7.48	7.32	7.20	7.05	6.94

**D. Deterministic Projection of Proposed Suspension (continued)**

Plan year beginning May 1	2033	2034	2035	2036	2037	2038	2039	2040
1. Market value of assets (beginning of year)	\$39,853,452	\$38,944,391	\$38,025,594	\$37,130,487	\$36,266,238	\$35,471,539	\$34,757,454	\$34,146,224
2. Employer contributions	3,325,000	3,325,000	3,325,000	3,325,000	3,325,000	3,325,000	3,325,000	3,325,000
3. Withdrawal liability payments	0	0	0	0	0	0	0	0
4. Benefit payments								
a. Current retirees and beneficiaries	2,614,109	2,458,706	2,303,218	2,148,341	1,994,793	1,843,351	1,694,840	1,550,073
b. Terminated vested participants	1,424,916	1,456,670	1,468,299	1,490,647	1,494,950	1,505,093	1,501,944	1,489,150
c. Current actives	2,629,887	2,690,445	2,738,113	2,769,071	2,781,456	2,780,024	2,773,084	2,753,971
d. New entrants	0	0	0	0	0	0	0	0
e. Total	6,668,912	6,605,821	6,509,630	6,408,059	6,271,199	6,128,468	5,969,868	5,793,194
5. Administrative expenses	378,689	386,263	393,988	401,868	409,905	418,103	426,465	434,994
6. Investment returns	2,813,540	2,748,287	2,683,511	2,620,678	2,561,405	2,507,486	2,460,103	2,420,983
7. Market value of assets (end of year) (1) + (2) + (3) - (4e) - (5) + (6)	\$38,944,391	\$38,025,594	\$37,130,487	\$36,266,238	\$35,471,539	\$34,757,454	\$34,146,224	\$33,664,019
8. Available resources (1) + (2) + (3) - (5) + (6)	\$45,613,303	\$44,631,415	\$43,640,117	\$42,674,297	\$41,742,738	\$40,885,922	\$40,116,092	\$39,457,213
9. Solvency ratio (8) / (4e)	6.84	6.76	6.70	6.66	6.66	6.67	6.72	6.81
Plan year beginning May 1	2041	2042	2043	2044	2045	2046	2047	2048
1. Market value of assets (beginning of year)	\$33,664,019	\$33,351,442	\$33,212,533	\$33,264,362	\$33,540,571	\$34,055,709	\$34,836,046	\$35,904,852
2. Employer contributions	3,325,000	3,325,000	3,325,000	3,325,000	3,325,000	3,325,000	3,325,000	3,325,000
3. Withdrawal liability payments	0	0	0	0	0	0	0	0
4. Benefit payments								
a. Current retirees and beneficiaries	1,409,838	1,274,846	1,145,754	1,023,166	907,609	799,547	699,357	607,261
b. Terminated vested participants	1,459,924	1,440,096	1,416,791	1,380,869	1,340,656	1,292,333	1,243,672	1,190,717
c. Current actives	2,716,620	2,672,668	2,622,045	2,558,512	2,494,037	2,421,701	2,338,121	2,250,891
d. New entrants	0	0	0	0	0	0	0	0
e. Total	5,586,382	5,387,610	5,184,590	4,962,547	4,742,302	4,513,581	4,281,150	4,048,869
5. Administrative expenses	443,694	452,568	461,619	470,851	480,268	489,873	499,670	509,663
6. Investment returns	2,392,499	2,376,269	2,373,038	2,384,607	2,412,708	2,458,791	2,524,626	2,611,796
7. Market value of assets (end of year) (1) + (2) + (3) - (4e) - (5) + (6)	\$33,351,442	\$33,212,533	\$33,264,362	\$33,540,571	\$34,055,709	\$34,836,046	\$35,904,852	\$37,283,116
8. Available resources (1) + (2) + (3) - (5) + (6)	\$38,937,824	\$38,600,143	\$38,448,952	\$38,503,118	\$38,798,011	\$39,349,627	\$40,186,002	\$41,331,985
9. Solvency ratio (8) / (4e)	6.97	7.16	7.42	7.76	8.18	8.72	9.39	10.21

### E. Deterministic Projection Demonstrating Proposed Suspension Does Not Materially Exceed the Level that is Necessary to Avoid Insolvency

The table shows the projection of the plan-year-by-plan-year market value of assets over the extended projection period. The plan years beginning May 1, 2017 through May 1, 2048 are shown.

Plan year beginning May 1	2017	2018	2019	2020	2021	2022	2023	2024
1. Market value of assets (beginning of year)	\$41,435,167	\$42,714,534	\$43,137,893	\$43,885,987	\$44,494,572	\$44,936,553	\$44,994,669	\$44,796,884
2. Employer contributions	3,878,542	3,850,000	3,500,000	3,500,000	3,500,000	3,325,000	3,325,000	3,325,000
3. Withdrawal liability payments	0	0	0	0	0	0	0	0
4. Benefit payments								
a. Current retirees and beneficiaries	N/A	5,256,556	4,549,976	4,446,830	4,329,217	4,213,435	4,090,946	3,969,408
b. Terminated vested participants	N/A	185,452	255,310	337,526	437,723	535,454	694,333	799,446
c. Current actives	N/A	359,212	456,724	655,112	867,138	1,104,374	1,313,436	1,503,181
d. New entrants	N/A	0	0	0	0	0	0	0
e. Total	5,522,591	5,801,220	5,262,010	5,439,468	5,634,078	5,853,263	6,098,715	6,272,035
5. Administrative expenses	500,000	385,000	287,000	292,740	298,595	304,567	310,658	316,871
6. Investment returns	3,423,416	2,759,579	2,797,104	2,840,793	2,874,654	2,890,946	2,886,588	2,867,590
7. Market value of assets (end of year) (1) + (2) + (3) - (4e) - (5) + (6)	\$42,714,534	\$43,137,893	\$43,885,987	\$44,494,572	\$44,936,553	\$44,994,669	\$44,796,884	\$44,400,568
8. Available resources (1) + (2) + (3) - (5) + (6)	\$48,237,125	\$48,939,113	\$49,147,997	\$49,934,040	\$50,570,631	\$50,847,932	\$50,895,599	\$50,672,603
9. Solvency ratio (8) / (4e)	8.73	8.44	9.34	9.18	8.98	8.69	8.35	8.08
Plan year beginning May 1	2025	2026	2027	2028	2029	2030	2031	2032
1. Market value of assets (beginning of year)	\$44,400,568	\$43,819,907	\$43,060,094	\$42,455,273	\$41,691,966	\$40,801,480	\$39,820,570	\$38,731,125
2. Employer contributions	3,325,000	3,325,000	3,325,000	3,325,000	3,325,000	3,325,000	3,325,000	3,325,000
3. Withdrawal liability payments	0	0	0	0	0	0	0	0
4. Benefit payments								
a. Current retirees and beneficiaries	3,837,391	3,698,721	3,558,234	3,413,849	3,266,006	3,115,169	2,961,827	2,806,500
b. Terminated vested participants	895,393	1,004,681	1,087,518	1,177,592	1,250,521	1,299,962	1,370,823	1,417,218
c. Current actives	1,685,945	1,845,012	2,000,983	2,158,311	2,294,580	2,412,647	2,522,678	2,609,977
d. New entrants	0	0	0	0	0	0	0	0
e. Total	6,418,729	6,548,414	6,646,735	6,749,752	6,811,107	6,827,778	6,855,328	6,833,695
5. Administrative expenses	323,208	329,672	336,265	342,990	349,850	356,847	363,984	371,264
6. Investment returns	2,836,276	2,793,273	3,053,179	3,004,435	2,945,471	2,878,715	2,804,867	2,724,770
7. Market value of assets (end of year) (1) + (2) + (3) - (4e) - (5) + (6)	\$43,819,907	\$43,060,094	\$42,455,273	\$41,691,966	\$40,801,480	\$39,820,570	\$38,731,125	\$37,575,936
8. Available resources (1) + (2) + (3) - (5) + (6)	\$50,238,636	\$49,608,508	\$49,102,008	\$48,441,718	\$47,612,587	\$46,648,348	\$45,586,453	\$44,409,631
9. Solvency ratio (8) / (4e)	7.83	7.58	7.39	7.18	6.99	6.83	6.65	6.50

### E. Deterministic Projection Demonstrating Proposed Suspension Does Not Materially Exceed the Level that is Necessary to Avoid Insolvency (continued)

Plan year beginning May 1	2033	2034	2035	2036	2037	2038	2039	2040
1. Market value of assets (beginning of year)	\$37,575,936	\$36,370,971	\$35,134,931	\$33,900,774	\$32,674,448	\$31,493,687	\$30,368,148	\$29,318,156
2. Employer contributions	3,325,000	3,325,000	3,325,000	3,325,000	3,325,000	3,325,000	3,325,000	3,325,000
3. Withdrawal liability payments	0	0	0	0	0	0	0	0
4. Benefit payments								
a. Current retirees and beneficiaries	2,649,754	2,492,207	2,334,517	2,177,396	2,021,584	1,867,874	1,717,115	1,570,148
b. Terminated vested participants	1,455,877	1,488,686	1,500,534	1,523,247	1,527,565	1,537,641	1,534,496	1,521,356
c. Current actives	2,686,183	2,747,291	2,795,332	2,826,178	2,838,102	2,835,940	2,828,215	2,808,082
d. New entrants	0	0	0	0	0	0	0	0
e. Total	6,791,814	6,728,184	6,630,383	6,526,821	6,387,251	6,241,455	6,079,826	5,899,586
5. Administrative expenses	378,689	386,263	393,988	401,868	409,905	418,103	426,465	434,994
6. Investment returns	2,640,538	2,553,407	2,465,214	2,377,363	2,291,395	2,209,019	2,131,299	2,059,839
7. Market value of assets (end of year) (1) + (2) + (3) - (4e) - (5) + (6)	\$36,370,971	\$35,134,931	\$33,900,774	\$32,674,448	\$31,493,687	\$30,368,148	\$29,318,156	\$28,368,415
8. Available resources (1) + (2) + (3) - (5) + (6)	\$43,162,785	\$41,863,115	\$40,531,157	\$39,201,269	\$37,880,938	\$36,609,603	\$35,397,982	\$34,268,001
9. Solvency ratio (8) / (4e)	6.36	6.22	6.11	6.01	5.93	5.87	5.82	5.81
Plan year beginning May 1	2041	2042	2043	2044	2045	2046	2047	2048
1. Market value of assets (beginning of year)	\$28,368,415	\$27,558,017	\$26,888,604	\$26,374,981	\$26,048,433	\$25,920,758	\$26,015,209	\$26,351,922
2. Employer contributions	3,325,000	3,325,000	3,325,000	3,325,000	3,325,000	3,325,000	3,325,000	3,325,000
3. Withdrawal liability payments	0	0	0	0	0	0	0	0
4. Benefit payments								
a. Current retirees and beneficiaries	1,427,778	1,290,737	1,159,700	1,035,287	918,037	808,427	706,837	613,493
b. Terminated vested participants	1,491,405	1,470,997	1,447,002	1,410,141	1,368,945	1,319,582	1,269,830	1,215,735
c. Current actives	2,769,430	2,724,097	2,671,951	2,606,803	2,540,615	2,466,530	2,381,052	2,291,845
d. New entrants	0	0	0	0	0	0	0	0
e. Total	5,688,613	5,485,831	5,278,653	5,052,231	4,827,597	4,594,539	4,357,719	4,121,073
5. Administrative expenses	443,694	452,568	461,619	470,851	480,268	489,873	499,670	509,663
6. Investment returns	1,996,909	1,943,986	1,901,649	1,871,534	1,855,190	1,853,863	1,869,102	1,902,255
7. Market value of assets (end of year) (1) + (2) + (3) - (4e) - (5) + (6)	\$27,558,017	\$26,888,604	\$26,374,981	\$26,048,433	\$25,920,758	\$26,015,209	\$26,351,922	\$26,948,441
8. Available resources (1) + (2) + (3) - (5) + (6)	\$33,246,630	\$32,374,435	\$31,653,634	\$31,100,664	\$30,748,355	\$30,609,748	\$30,709,641	\$31,069,514
9. Solvency ratio (8) / (4e)	5.84	5.90	6.00	6.16	6.37	6.66	7.05	7.54

**F. Deterministic Projection of Proposed Suspension Assuming Annual Rate of Return is Reduced by 1.00%**

The table shows the projection of the plan-year-by-plan-year market value of assets over the extended projection period as required under regulation 1.432(e)(9)-1(d)(5)(vi)(B)(1) and revenue procedure 2017-43 6.05(1). The plan years beginning May 1, 2017 through May 1, 2048 are shown.

<b>Plan year beginning May 1</b>	<b>2017</b>	<b>2018</b>	<b>2019</b>	<b>2020</b>	<b>2021</b>	<b>2022</b>	<b>2023</b>	<b>2024</b>
1. Market value of assets (beginning of year)	\$41,435,167	\$42,714,534	\$42,722,139	\$43,097,119	\$43,309,734	\$43,333,692	\$42,953,727	\$42,300,946
2. Employer contributions	3,878,542	3,850,000	3,500,000	3,500,000	3,500,000	3,325,000	3,325,000	3,325,000
3. Withdrawal liability payments	0	0	0	0	0	0	0	0
4. Benefit payments								
a. Current retirees and beneficiaries	N/A	5,256,556	4,493,211	4,390,976	4,274,856	4,160,132	4,038,782	3,918,468
b. Terminated vested participants	N/A	185,452	251,973	332,936	431,214	527,502	683,179	786,331
c. Current actives	N/A	359,212	447,046	641,125	848,331	1,080,116	1,284,281	1,469,629
d. New entrants	N/A	0	0	0	0	0	0	0
e. Total	5,522,591	5,801,220	5,192,230	5,365,037	5,554,401	5,767,750	6,006,242	6,174,428
5. Administrative expenses	500,000	385,000	287,000	292,740	298,595	304,567	310,658	316,871
6. Investment returns	3,423,416	2,343,825	2,354,210	2,370,392	2,376,954	2,367,352	2,339,119	2,297,452
7. Market value of assets (end of year) (1) + (2) + (3) - (4e) - (5) + (6)	\$42,714,534	\$42,722,139	\$43,097,119	\$43,309,734	\$43,333,692	\$42,953,727	\$42,300,946	\$41,432,099
8. Available resources (1) + (2) + (3) - (5) + (6)	\$48,237,125	\$48,523,359	\$48,289,349	\$48,674,771	\$48,888,093	\$48,721,477	\$48,307,188	\$47,606,527
9. Solvency ratio (8) / (4e)	8.73	8.36	9.30	9.07	8.80	8.45	8.04	7.71
<b>Plan year beginning May 1</b>	<b>2025</b>	<b>2026</b>	<b>2027</b>	<b>2028</b>	<b>2029</b>	<b>2030</b>	<b>2031</b>	<b>2032</b>
1. Market value of assets (beginning of year)	\$41,432,099	\$40,362,236	\$39,097,141	\$37,940,924	\$36,601,977	\$35,109,575	\$33,498,821	\$31,751,271
2. Employer contributions	3,325,000	3,325,000	3,325,000	3,325,000	3,325,000	3,325,000	3,325,000	3,325,000
3. Withdrawal liability payments	0	0	0	0	0	0	0	0
4. Benefit payments								
a. Current retirees and beneficiaries	3,787,765	3,650,503	3,511,520	3,368,738	3,222,597	3,073,562	2,922,120	2,768,782
b. Terminated vested participants	880,089	986,487	1,067,105	1,154,337	1,225,522	1,273,735	1,342,511	1,387,636
c. Current actives	1,648,136	1,803,778	1,956,527	2,110,763	2,244,552	2,360,518	2,468,725	2,554,730
d. New entrants	0	0	0	0	0	0	0	0
e. Total	6,315,990	6,440,768	6,535,152	6,633,838	6,692,671	6,707,815	6,733,356	6,711,148
5. Administrative expenses	323,208	329,672	336,265	342,990	349,850	356,847	363,984	371,264
6. Investment returns	2,244,335	2,180,345	2,390,200	2,312,881	2,225,119	2,128,908	2,024,790	1,913,417
7. Market value of assets (end of year) (1) + (2) + (3) - (4e) - (5) + (6)	\$40,362,236	\$39,097,141	\$37,940,924	\$36,601,977	\$35,109,575	\$33,498,821	\$31,751,271	\$29,907,276
8. Available resources (1) + (2) + (3) - (5) + (6)	\$46,678,226	\$45,537,909	\$44,476,076	\$43,235,815	\$41,802,246	\$40,206,636	\$38,484,627	\$36,618,424
9. Solvency ratio (8) / (4e)	7.39	7.07	6.81	6.52	6.25	5.99	5.72	5.46

**F. Deterministic Projection of Proposed Suspension Assuming Annual Rate of Return is Reduced by 1.00% (continued)**

<b>Plan year beginning May 1</b>	<b>2033</b>	<b>2034</b>	<b>2035</b>	<b>2036</b>	<b>2037</b>	<b>2038</b>	<b>2039</b>	<b>2040</b>
1. Market value of assets (beginning of year)	\$29,907,276	\$27,981,173	\$25,989,066	\$23,960,717	\$21,899,196	\$19,838,619	\$17,784,937	\$15,754,790
2. Employer contributions	3,325,000	3,325,000	3,325,000	3,325,000	3,325,000	3,325,000	3,325,000	3,325,000
3. Withdrawal liability payments	0	0	0	0	0	0	0	0
4. Benefit payments								
a. Current retirees and beneficiaries	2,614,109	2,458,706	2,303,218	2,148,341	1,994,793	1,843,351	1,694,840	1,550,073
b. Terminated vested participants	1,424,916	1,456,670	1,468,299	1,490,647	1,494,950	1,505,093	1,501,944	1,489,150
c. Current actives	2,629,887	2,690,445	2,738,113	2,769,071	2,781,456	2,780,024	2,773,084	2,753,971
d. New entrants	0	0	0	0	0	0	0	0
e. Total	6,668,912	6,605,821	6,509,630	6,408,059	6,271,199	6,128,468	5,969,868	5,793,194
5. Administrative expenses	378,689	386,263	393,988	401,868	409,905	418,103	426,465	434,994
6. Investment returns	1,796,498	1,674,977	1,550,269	1,423,406	1,295,527	1,167,889	1,041,186	916,554
7. Market value of assets (end of year) (1) + (2) + (3) - (4e) - (5) + (6)	\$27,981,173	\$25,989,066	\$23,960,717	\$21,899,196	\$19,838,619	\$17,784,937	\$15,754,790	\$13,768,156
8. Available resources (1) + (2) + (3) - (5) + (6)	\$34,650,085	\$32,594,887	\$30,470,347	\$28,307,255	\$26,109,818	\$23,913,405	\$21,724,658	\$19,561,350
9. Solvency ratio (8) / (4e)	5.20	4.93	4.68	4.42	4.16	3.90	3.64	3.38
<b>Plan year beginning May 1</b>	<b>2041</b>	<b>2042</b>	<b>2043</b>	<b>2044</b>	<b>2045</b>	<b>2046</b>	<b>2047</b>	<b>2048</b>
1. Market value of assets (beginning of year)	\$13,768,156	\$11,858,730	\$10,022,982	\$8,269,826	\$6,623,983	\$5,090,276	\$3,684,431	\$2,418,259
2. Employer contributions	3,325,000	3,325,000	3,325,000	3,325,000	3,325,000	3,325,000	3,325,000	3,325,000
3. Withdrawal liability payments	0	0	0	0	0	0	0	0
4. Benefit payments								
a. Current retirees and beneficiaries	1,409,838	1,274,846	1,145,754	1,023,166	907,609	799,547	699,357	607,261
b. Terminated vested participants	1,459,924	1,440,096	1,416,791	1,380,869	1,340,656	1,292,333	1,243,672	1,190,717
c. Current actives	2,716,620	2,672,668	2,622,045	2,558,512	2,494,037	2,421,701	2,338,121	2,250,891
d. New entrants	0	0	0	0	0	0	0	0
e. Total	5,586,382	5,387,610	5,184,590	4,962,547	4,742,302	4,513,581	4,281,150	4,048,869
5. Administrative expenses	443,694	452,568	461,619	470,851	480,268	489,873	499,670	509,663
6. Investment returns	795,650	679,430	568,053	462,555	363,863	272,609	189,648	115,616
7. Market value of assets (end of year) (1) + (2) + (3) - (4e) - (5) + (6)	\$11,858,730	\$10,022,982	\$8,269,826	\$6,623,983	\$5,090,276	\$3,684,431	\$2,418,259	\$1,300,343
8. Available resources (1) + (2) + (3) - (5) + (6)	\$17,445,112	\$15,410,592	\$13,454,416	\$11,586,530	\$9,832,578	\$8,198,012	\$6,699,409	\$5,349,212
9. Solvency ratio (8) / (4e)	3.12	2.86	2.60	2.33	2.07	1.82	1.56	1.32



**G. Deterministic Projection of Proposed Suspension Assuming Annual Rate of Return is Reduced by 2.00%**

The table shows the projection of the plan-year-by-plan-year market value of assets until the year of insolvency (plan year beginning May 1, 2040) as required under regulation 1.432(e)(9)-1(d)(5)(vi)(B)(2) and revenue procedure 2017-43 6.05(2). The plan years beginning May 1, 2017 through May 1, 2040 are shown.

<b>Plan year beginning May 1</b>	<b>2017</b>	<b>2018</b>	<b>2019</b>	<b>2020</b>	<b>2021</b>	<b>2022</b>	<b>2023</b>	<b>2024</b>
1. Market value of assets (beginning of year)	\$41,435,167	\$42,714,534	\$42,306,438	\$42,244,607	\$41,997,265	\$41,538,749	\$40,655,604	\$39,481,288
2. Employer contributions	3,878,542	3,850,000	3,500,000	3,500,000	3,500,000	3,325,000	3,325,000	3,325,000
3. Withdrawal liability payments	0	0	0	0	0	0	0	0
4. Benefit payments								
a. Current retirees and beneficiaries	N/A	5,256,556	4,493,211	4,390,976	4,274,856	4,160,132	4,038,782	3,918,468
b. Terminated vested participants	N/A	185,452	251,973	332,936	431,214	527,502	683,179	786,331
c. Current actives	N/A	359,212	447,046	641,125	848,331	1,080,116	1,284,281	1,469,629
d. New entrants	N/A	0	0	0	0	0	0	0
e. Total	5,522,591	5,801,220	5,192,230	5,365,037	5,554,401	5,767,750	6,006,242	6,174,428
5. Administrative expenses	500,000	385,000	287,000	292,740	298,595	304,567	310,658	316,871
6. Investment returns	3,423,416	1,928,124	1,917,399	1,910,435	1,894,480	1,864,172	1,817,584	1,759,095
7. Market value of assets (end of year) (1) + (2) + (3) - (4e) - (5) + (6)	\$42,714,534	\$42,306,438	\$42,244,607	\$41,997,265	\$41,538,749	\$40,655,604	\$39,481,288	\$38,074,084
8. Available resources (1) + (2) + (3) - (5) + (6)	\$48,237,125	\$48,107,658	\$47,436,837	\$47,362,302	\$47,093,150	\$46,423,354	\$45,487,530	\$44,248,512
9. Solvency ratio (8) / (4e)	8.73	8.29	9.14	8.83	8.48	8.05	7.57	7.17
<b>Plan year beginning May 1</b>	<b>2025</b>	<b>2026</b>	<b>2027</b>	<b>2028</b>	<b>2029</b>	<b>2030</b>	<b>2031</b>	<b>2032</b>
1. Market value of assets (beginning of year)	\$38,074,084	\$36,450,295	\$34,616,909	\$32,845,065	\$30,869,322	\$28,719,445	\$26,430,744	\$23,984,904
2. Employer contributions	3,325,000	3,325,000	3,325,000	3,325,000	3,325,000	3,325,000	3,325,000	3,325,000
3. Withdrawal liability payments	0	0	0	0	0	0	0	0
4. Benefit payments								
a. Current retirees and beneficiaries	3,787,765	3,650,503	3,511,520	3,368,738	3,222,597	3,073,562	2,922,120	2,768,782
b. Terminated vested participants	880,089	986,487	1,067,105	1,154,337	1,225,522	1,273,735	1,342,511	1,387,636
c. Current actives	1,648,136	1,803,778	1,956,527	2,110,763	2,244,552	2,360,518	2,468,725	2,554,730
d. New entrants	0	0	0	0	0	0	0	0
e. Total	6,315,990	6,440,768	6,535,152	6,633,838	6,692,671	6,707,815	6,733,356	6,711,148
5. Administrative expenses	323,208	329,672	336,265	342,990	349,850	356,847	363,984	371,264
6. Investment returns	1,690,409	1,612,054	1,774,573	1,676,085	1,567,644	1,450,961	1,326,500	1,194,823
7. Market value of assets (end of year) (1) + (2) + (3) - (4e) - (5) + (6)	\$36,450,295	\$34,616,909	\$32,845,065	\$30,869,322	\$28,719,445	\$26,430,744	\$23,984,904	\$21,422,315
8. Available resources (1) + (2) + (3) - (5) + (6)	\$42,766,285	\$41,057,677	\$39,380,217	\$37,503,160	\$35,412,116	\$33,138,559	\$30,718,260	\$28,133,463
9. Solvency ratio (8) / (4e)	6.77	6.37	6.03	5.65	5.29	4.94	4.56	4.19



**G. Deterministic Projection of Proposed Suspension Assuming Annual Rate of Return is Reduced by 2.00% (continued)**

<b>Plan year beginning May 1</b>	<b>2033</b>	<b>2034</b>	<b>2035</b>	<b>2036</b>	<b>2037</b>	<b>2038</b>	<b>2039</b>	<b>2040</b>
1. Market value of assets (beginning of year)	\$21,422,315	\$18,757,084	\$16,004,927	\$13,194,977	\$10,329,477	\$7,441,495	\$4,535,680	\$1,627,192
2. Employer contributions	3,325,000	3,325,000	3,325,000	3,325,000	3,325,000	3,325,000	3,325,000	3,325,000
3. Withdrawal liability payments	0	0	0	0	0	0	0	0
4. Benefit payments								
a. Current retirees and beneficiaries	2,614,109	2,458,706	2,303,218	2,148,341	1,994,793	1,843,351	1,694,840	1,550,073
b. Terminated vested participants	1,424,916	1,456,670	1,468,299	1,490,647	1,494,950	1,505,093	1,501,944	1,489,150
c. Current actives	2,629,887	2,690,445	2,738,113	2,769,071	2,781,456	2,780,024	2,773,084	2,753,971
d. New entrants	0	0	0	0	0	0	0	0
e. Total	6,668,912	6,605,821	6,509,630	6,408,059	6,271,199	6,128,468	5,969,868	5,793,194
5. Administrative expenses	378,689	386,263	393,988	401,868	409,905	418,103	426,465	434,994
6. Investment returns	1,057,370	914,927	768,668	619,427	468,122	315,756	162,845	10,267
7. Market value of assets (end of year) (1) + (2) + (3) - (4e) - (5) + (6)	\$18,757,084	\$16,004,927	\$13,194,977	\$10,329,477	\$7,441,495	\$4,535,680	\$1,627,192	Insolvent
8. Available resources (1) + (2) + (3) - (5) + (6)	\$25,425,996	\$22,610,748	\$19,704,607	\$16,737,536	\$13,712,694	\$10,664,148	\$7,597,060	\$4,527,465
9. Solvency ratio (8) / (4e)	3.81	3.42	3.03	2.61	2.19	1.74	1.27	0.78

## H. Deterministic Projection of Proposed Suspension Assuming the Industry Activity Assumption Continues Under the Same Trend as the Plan Experienced Over the Last 10 Years (0.1% per year)

The table shows the projection of the plan-year-by-plan-year market value of assets over the extended projection period as required under regulation 1.432(e)(9)-1(d)(5)(vi)(C)(1) and revenue procedure 2017-43 6.05(3). The plan years beginning May 1, 2017 through May 1, 2048 are shown.

Plan year beginning May 1	2017	2018	2019	2020	2021	2022	2023	2024
1. Market value of assets (beginning of year)	\$41,435,167	\$42,714,534	\$43,171,370	\$44,392,633	\$45,514,621	\$46,513,530	\$47,356,302	\$48,006,486
2. Employer contributions	3,878,542	3,882,421	3,886,303	3,890,189	3,894,079	3,897,973	3,901,871	3,905,773
3. Withdrawal liability payments	0	0	0	0	0	0	0	0
4. Benefit payments								
a. Current retirees and beneficiaries	N/A	5,256,556	4,493,211	4,390,976	4,274,856	4,160,132	4,038,782	3,918,468
b. Terminated vested participants	N/A	185,452	251,973	332,936	431,214	527,502	683,179	786,331
c. Current actives	N/A	359,212	447,046	641,125	848,331	1,080,116	1,284,281	1,469,629
d. New entrants	N/A	0	0	0	0	0	0	0
e. Total	5,522,591	5,801,220	5,192,230	5,365,037	5,554,401	5,767,750	6,006,242	6,174,428
5. Administrative expenses	500,000	385,000	287,000	292,740	298,595	304,567	310,658	316,871
6. Investment returns	3,423,416	2,760,635	2,814,190	2,889,576	2,957,826	3,017,116	3,065,213	3,102,816
7. Market value of assets (end of year) (1) + (2) + (3) - (4e) - (5) + (6)	\$42,714,534	\$43,171,370	\$44,392,633	\$45,514,621	\$46,513,530	\$47,356,302	\$48,006,486	\$48,523,776
8. Available resources (1) + (2) + (3) - (5) + (6)	\$48,237,125	\$48,972,590	\$49,584,863	\$50,879,658	\$52,067,931	\$53,124,052	\$54,012,728	\$54,698,204
9. Solvency ratio (8) / (4e)	8.73	8.44	9.55	9.48	9.37	9.21	8.99	8.86
Plan year beginning May 1	2025	2026	2027	2028	2029	2030	2031	2032
1. Market value of assets (beginning of year)	\$48,523,776	\$48,926,716	\$49,224,920	\$49,805,909	\$50,324,709	\$50,817,883	\$51,328,674	\$51,847,469
2. Employer contributions	3,909,679	3,913,589	3,917,503	3,921,421	3,925,342	3,929,267	3,933,196	3,937,129
3. Withdrawal liability payments	0	0	0	0	0	0	0	0
4. Benefit payments								
a. Current retirees and beneficiaries	3,787,765	3,650,503	3,511,520	3,368,738	3,222,597	3,073,562	2,922,120	2,768,782
b. Terminated vested participants	880,089	986,487	1,067,105	1,154,337	1,225,522	1,273,735	1,342,511	1,387,636
c. Current actives	1,648,136	1,803,778	1,956,527	2,110,763	2,244,552	2,360,518	2,468,725	2,554,730
d. New entrants	0	0	0	0	0	0	0	0
e. Total	6,315,990	6,440,768	6,535,152	6,633,838	6,692,671	6,707,815	6,733,356	6,711,148
5. Administrative expenses	323,208	329,672	336,265	342,990	349,850	356,847	363,984	371,264
6. Investment returns	3,132,459	3,155,055	3,534,903	3,574,207	3,610,353	3,646,186	3,682,939	3,722,015
7. Market value of assets (end of year) (1) + (2) + (3) - (4e) - (5) + (6)	\$48,926,716	\$49,224,920	\$49,805,909	\$50,324,709	\$50,817,883	\$51,328,674	\$51,847,469	\$52,424,201
8. Available resources (1) + (2) + (3) - (5) + (6)	\$55,242,706	\$55,665,688	\$56,341,061	\$56,958,547	\$57,510,554	\$58,036,489	\$58,580,825	\$59,135,349
9. Solvency ratio (8) / (4e)	8.75	8.64	8.62	8.59	8.59	8.65	8.70	8.81

**H. Deterministic Projection of Proposed Suspension Assuming the Industry Activity Assumption Continued Under the Same Trend as the Plan Experienced Over the Last 10 Years (0.1% per year) (continued)**

Plan year beginning May 1	2033	2034	2035	2036	2037	2038	2039	2040
1. Market value of assets (beginning of year)	\$52,424,201	\$53,083,767	\$53,853,759	\$54,776,499	\$55,868,710	\$57,179,345	\$58,730,489	\$60,556,220
2. Employer contributions	3,941,066	3,945,007	3,948,952	3,952,901	3,956,854	3,960,811	3,964,772	3,968,737
3. Withdrawal liability payments	0	0	0	0	0	0	0	0
4. Benefit payments								
a. Current retirees and beneficiaries	2,614,109	2,458,706	2,303,218	2,148,341	1,994,793	1,843,351	1,694,840	1,550,073
b. Terminated vested participants	1,424,916	1,456,670	1,468,299	1,490,647	1,494,950	1,505,093	1,501,944	1,489,150
c. Current actives	2,629,887	2,690,445	2,738,113	2,769,071	2,781,456	2,780,024	2,773,084	2,753,971
d. New entrants	0	0	0	0	0	0	0	0
e. Total	6,668,912	6,605,821	6,509,630	6,408,059	6,271,199	6,128,468	5,969,868	5,793,194
5. Administrative expenses	378,689	386,263	393,988	401,868	409,905	418,103	426,465	434,994
6. Investment returns	3,766,101	3,817,069	3,877,406	3,949,237	4,034,885	4,136,904	4,257,292	4,398,650
7. Market value of assets (end of year) (1) + (2) + (3) - (4e) - (5) + (6)	\$53,083,767	\$53,853,759	\$54,776,499	\$55,868,710	\$57,179,345	\$58,730,489	\$60,556,220	\$62,695,419
8. Available resources (1) + (2) + (3) - (5) + (6)	\$59,752,679	\$60,459,580	\$61,286,129	\$62,276,769	\$63,450,544	\$64,858,957	\$66,526,088	\$68,488,613
9. Solvency ratio (8) / (4e)	8.96	9.15	9.41	9.72	10.12	10.58	11.14	11.82
Plan year beginning May 1	2041	2042	2043	2044	2045	2046	2047	2048
1. Market value of assets (beginning of year)	\$62,695,419	\$65,202,343	\$68,095,695	\$71,408,294	\$75,190,695	\$79,475,613	\$84,308,827	\$89,734,561
2. Employer contributions	3,972,706	3,976,679	3,980,656	3,984,637	3,988,622	3,992,611	3,996,604	4,000,601
3. Withdrawal liability payments	0	0	0	0	0	0	0	0
4. Benefit payments								
a. Current retirees and beneficiaries	1,409,838	1,274,846	1,145,754	1,023,166	907,609	799,547	699,357	607,261
b. Terminated vested participants	1,459,924	1,440,096	1,416,791	1,380,869	1,340,656	1,292,333	1,243,672	1,190,717
c. Current actives	2,716,620	2,672,668	2,622,045	2,558,512	2,494,037	2,421,701	2,338,121	2,250,891
d. New entrants	0	0	0	0	0	0	0	0
e. Total	5,586,382	5,387,610	5,184,590	4,962,547	4,742,302	4,513,581	4,281,150	4,048,869
5. Administrative expenses	443,694	452,568	461,619	470,851	480,268	489,873	499,670	509,663
6. Investment returns	4,564,294	4,756,851	4,978,152	5,231,162	5,518,866	5,844,057	6,209,950	6,619,677
7. Market value of assets (end of year) (1) + (2) + (3) - (4e) - (5) + (6)	\$65,202,343	\$68,095,695	\$71,408,294	\$75,190,695	\$79,475,613	\$84,308,827	\$89,734,561	\$95,796,307
8. Available resources (1) + (2) + (3) - (5) + (6)	\$70,788,725	\$73,483,305	\$76,592,884	\$80,153,242	\$84,217,915	\$88,822,408	\$94,015,711	\$99,845,176
9. Solvency ratio (8) / (4e)	12.67	13.64	14.77	16.15	17.76	19.68	21.96	24.66

# I. Deterministic Projection of the Proposed Suspension Assuming the Industry Activity Assumption Continues Under the Same Trend as the Plan Experienced Over the Last 10 Years, Reduced by 1.0% (-0.9% per year)

The table shows projection of the plan-year-by-plan-year market value of assets over the extended projection period as required under regulation 1.432(e)(9)-1(d)(5)(vi)(C)(2) and revenue procedure 2017-43 6.05(4). The plan years beginning May 1, 2017 through May 1, 2048 are shown.

Plan year beginning May 1	2017	2018	2019	2020	2021	2022	2023	2024
1. Market value of assets (beginning of year)	\$41,435,167	\$42,714,534	\$43,131,321	\$44,270,147	\$45,264,814	\$46,088,851	\$46,706,355	\$47,077,838
2. Employer contributions	3,878,542	3,843,635	3,809,042	3,774,761	3,740,788	3,707,121	3,673,757	3,640,693
3. Withdrawal liability payments	0	0	0	0	0	0	0	0
4. Benefit payments								
a. Current retirees and beneficiaries	N/A	5,256,556	4,493,211	4,390,976	4,274,856	4,160,132	4,038,782	3,918,468
b. Terminated vested participants	N/A	185,452	251,973	332,936	431,214	527,502	683,179	786,331
c. Current actives	N/A	359,212	447,046	641,125	848,331	1,080,116	1,284,281	1,469,629
d. New entrants	N/A	0	0	0	0	0	0	0
e. Total	5,522,591	5,801,220	5,192,230	5,365,037	5,554,401	5,767,750	6,006,242	6,174,428
5. Administrative expenses	500,000	385,000	287,000	292,740	298,595	304,567	310,658	316,871
6. Investment returns	3,423,416	2,759,372	2,809,014	2,877,683	2,936,245	2,982,700	3,014,626	3,032,518
7. Market value of assets (end of year) (1) + (2) + (3) - (4e) - (5) + (6)	\$42,714,534	\$43,131,321	\$44,270,147	\$45,264,814	\$46,088,851	\$46,706,355	\$47,077,838	\$47,259,750
8. Available resources (1) + (2) + (3) - (5) + (6)	\$48,237,125	\$48,932,541	\$49,462,377	\$50,629,851	\$51,643,252	\$52,474,105	\$53,084,080	\$53,434,178
9. Solvency ratio (8) / (4e)	8.73	8.43	9.53	9.44	9.30	9.10	8.84	8.65
Plan year beginning May 1	2025	2026	2027	2028	2029	2030	2031	2032
1. Market value of assets (beginning of year)	\$47,259,750	\$47,267,177	\$47,106,040	\$47,142,444	\$47,039,256	\$46,827,605	\$46,544,893	\$46,175,234
2. Employer contributions	3,607,927	3,575,456	3,543,277	3,511,388	3,479,786	3,448,468	3,417,432	3,386,675
3. Withdrawal liability payments	0	0	0	0	0	0	0	0
4. Benefit payments								
a. Current retirees and beneficiaries	3,787,765	3,650,503	3,511,520	3,368,738	3,222,597	3,073,562	2,922,120	2,768,782
b. Terminated vested participants	880,089	986,487	1,067,105	1,154,337	1,225,522	1,273,735	1,342,511	1,387,636
c. Current actives	1,648,136	1,803,778	1,956,527	2,110,763	2,244,552	2,360,518	2,468,725	2,554,730
d. New entrants	0	0	0	0	0	0	0	0
e. Total	6,315,990	6,440,768	6,535,152	6,633,838	6,692,671	6,707,815	6,733,356	6,711,148
5. Administrative expenses	323,208	329,672	336,265	342,990	349,850	356,847	363,984	371,264
6. Investment returns	3,038,698	3,033,847	3,364,544	3,362,252	3,351,084	3,333,482	3,310,249	3,282,322
7. Market value of assets (end of year) (1) + (2) + (3) - (4e) - (5) + (6)	\$47,267,177	\$47,106,040	\$47,142,444	\$47,039,256	\$46,827,605	\$46,544,893	\$46,175,234	\$45,761,819
8. Available resources (1) + (2) + (3) - (5) + (6)	\$53,583,167	\$53,546,808	\$53,677,596	\$53,673,094	\$53,520,276	\$53,252,708	\$52,908,590	\$52,472,967
9. Solvency ratio (8) / (4e)	8.48	8.31	8.21	8.09	8.00	7.94	7.86	7.82

**I. Deterministic Projection of Proposed Suspension Assuming the Industry Activity Assumption Continued Under the Same Trend as the Plan Experienced Over the Last 10 Years, Reduced by 1.0% (-0.9% per year) (continued)**

<b>Plan year beginning May 1</b>	<b>2033</b>	<b>2034</b>	<b>2035</b>	<b>2036</b>	<b>2037</b>	<b>2038</b>	<b>2039</b>	<b>2040</b>
1. Market value of assets (beginning of year)	\$45,761,819	\$45,322,303	\$44,876,497	\$44,458,363	\$44,075,644	\$43,767,645	\$43,546,087	\$43,433,914
2. Employer contributions	3,356,195	3,325,989	3,296,055	3,266,391	3,236,993	3,207,860	3,178,989	3,150,378
3. Withdrawal liability payments	0	0	0	0	0	0	0	0
4. Benefit payments								
a. Current retirees and beneficiaries	2,614,109	2,458,706	2,303,218	2,148,341	1,994,793	1,843,351	1,694,840	1,550,073
b. Terminated vested participants	1,424,916	1,456,670	1,468,299	1,490,647	1,494,950	1,505,093	1,501,944	1,489,150
c. Current actives	2,629,887	2,690,445	2,738,113	2,769,071	2,781,456	2,780,024	2,773,084	2,753,971
d. New entrants	0	0	0	0	0	0	0	0
e. Total	6,668,912	6,605,821	6,509,630	6,408,059	6,271,199	6,128,468	5,969,868	5,793,194
5. Administrative expenses	378,689	386,263	393,988	401,868	409,905	418,103	426,465	434,994
6. Investment returns	3,251,890	3,220,289	3,189,429	3,160,817	3,136,112	3,117,153	3,105,171	3,101,944
7. Market value of assets (end of year) (1) + (2) + (3) - (4e) - (5) + (6)	\$45,322,303	\$44,876,497	\$44,458,363	\$44,075,644	\$43,767,645	\$43,546,087	\$43,433,914	\$43,458,048
8. Available resources (1) + (2) + (3) - (5) + (6)	\$51,991,215	\$51,482,318	\$50,967,993	\$50,483,703	\$50,038,844	\$49,674,555	\$49,403,782	\$49,251,242
9. Solvency ratio (8) / (4e)	7.80	7.79	7.83	7.88	7.98	8.11	8.28	8.50
<b>Plan year beginning May 1</b>	<b>2041</b>	<b>2042</b>	<b>2043</b>	<b>2044</b>	<b>2045</b>	<b>2046</b>	<b>2047</b>	<b>2048</b>
1. Market value of assets (beginning of year)	\$43,458,048	\$43,659,898	\$44,044,368	\$44,629,452	\$45,449,782	\$46,520,969	\$47,870,420	\$49,522,626
2. Employer contributions	3,122,025	3,093,927	3,066,082	3,038,487	3,011,141	2,984,041	2,957,185	2,930,570
3. Withdrawal liability payments	0	0	0	0	0	0	0	0
4. Benefit payments								
a. Current retirees and beneficiaries	1,409,838	1,274,846	1,145,754	1,023,166	907,609	799,547	699,357	607,261
b. Terminated vested participants	1,459,924	1,440,096	1,416,791	1,380,869	1,340,656	1,292,333	1,243,672	1,190,717
c. Current actives	2,716,620	2,672,668	2,622,045	2,558,512	2,494,037	2,421,701	2,338,121	2,250,891
d. New entrants	0	0	0	0	0	0	0	0
e. Total	5,586,382	5,387,610	5,184,590	4,962,547	4,742,302	4,513,581	4,281,150	4,048,869
5. Administrative expenses	443,694	452,568	461,619	470,851	480,268	489,873	499,670	509,663
6. Investment returns	3,109,901	3,130,721	3,165,211	3,215,241	3,282,616	3,368,864	3,475,841	3,605,218
7. Market value of assets (end of year) (1) + (2) + (3) - (4e) - (5) + (6)	\$43,659,898	\$44,044,368	\$44,629,452	\$45,449,782	\$46,520,969	\$47,870,420	\$49,522,626	\$51,499,882
8. Available resources (1) + (2) + (3) - (5) + (6)	\$49,246,280	\$49,431,978	\$49,814,042	\$50,412,329	\$51,263,271	\$52,384,001	\$53,803,776	\$55,548,751
9. Solvency ratio (8) / (4e)	8.82	9.18	9.61	10.16	10.81	11.61	12.57	13.72

## J. Projection of Funded Percentage

The table shows the projected market value of assets, plan liability and funded percentage for the plan years beginning May 1, 2017 through May 1, 2049 for the proposed suspension as required under regulation 1.432(e)(9)-1(d)(5)(vi)(D) and revenue procedure 2017-43 6.06.

<b>Plan year beginning May 1</b>	<b>2017</b>	<b>2018</b>	<b>2019</b>	<b>2020</b>	<b>2021</b>	<b>2022</b>	<b>2023</b>	<b>2024</b>
1. Market value of assets (beginning of year)	\$41,435,167	\$42,714,534	\$43,137,893	\$43,958,046	\$44,648,278	\$45,182,745	\$45,345,515	\$45,266,520
2. Unit credit accrued liability*	101,986,669	102,916,553	85,971,786	86,201,631	86,268,080	86,143,428	85,790,500	85,168,512
3. Funded percentage: (1) / (2)	40.63%	41.50%	50.18%	50.99%	51.76%	52.45%	52.86%	53.15%
<b>Plan year beginning May 1</b>	<b>2025</b>	<b>2026</b>	<b>2027</b>	<b>2028</b>	<b>2029</b>	<b>2030</b>	<b>2031</b>	<b>2032</b>
1. Market value of assets (beginning of year)	\$45,002,184	\$44,567,566	\$43,968,560	\$43,546,604	\$42,984,181	\$42,312,059	\$41,567,254	\$40,733,468
2. Unit credit accrued liability*	84,332,525	83,296,111	82,063,562	80,653,494	79,049,927	77,281,414	75,382,318	73,333,424
3. Funded percentage: (1) / (2)	53.36%	53.50%	53.58%	53.99%	54.38%	54.75%	55.14%	55.55%
<b>Plan year beginning May 1</b>	<b>2033</b>	<b>2034</b>	<b>2035</b>	<b>2036</b>	<b>2037</b>	<b>2038</b>	<b>2039</b>	<b>2040</b>
1. Market value of assets (beginning of year)	\$39,853,452	\$38,944,391	\$38,025,594	\$37,130,487	\$36,266,238	\$35,471,539	\$34,757,454	\$34,146,224
2. Unit credit accrued liability*	71,174,269	68,918,357	66,580,920	64,190,816	61,750,177	59,292,133	56,821,614	54,354,185
3. Funded percentage: (1) / (2)	55.99%	56.51%	57.11%	57.84%	58.73%	59.83%	61.17%	62.82%
<b>Plan year beginning May 1</b>	<b>2041</b>	<b>2042</b>	<b>2043</b>	<b>2044</b>	<b>2045</b>	<b>2046</b>	<b>2047</b>	<b>2048</b>
1. Market value of assets (beginning of year)	\$33,664,019	\$33,351,442	\$33,212,533	\$33,264,362	\$33,540,571	\$34,055,709	\$34,836,046	\$35,904,852
2. Unit credit accrued liability*	51,908,698	49,517,681	47,176,379	44,892,407	42,689,124	40,569,917	38,548,997	36,636,586
3. Funded percentage: (1) / (2)	64.85%	67.35%	70.40%	74.10%	78.57%	83.94%	90.37%	98.00%
<b>Plan year beginning May 1</b>	<b>2049</b>							
1. Market value of assets (beginning of year)	\$37,283,116							
2. Unit credit accrued liability*	34,839,577							
3. Funded percentage: (1) / (2)	107.01%							

\*The interest rate for calculating the unit credit accrued liability is 6.5% which is the assumption used in the May 1, 2017 actuarial valuation.

## K. Response to Revenue Procedure 2017-43 Section 6.03, 6.04 and Appendix B

The following is a response to Section 6.03, 6.04 and Appendix B of the Revenue Procedure 2017-43. In many cases, we have referenced other materials that are included in this application. Between this response, the May 1, 2017 Actuarial Valuation, the May 1, 2017 PPA Actuarial Certification, and our report titled “Supplemental Information to Actuarial Certification for the Plan Year Beginning May 1, 2017”, all assumptions used in the projections required under Section 3.01, 3.02, 4.02(1), 4.03, 6.05 and 6.06 of Revenue Procedure 2017-43 have been described. This section responds to the items in Revenue Procedure 2017-43 Appendix B in the same order laid out in Appendix B.

### Part 1 – Actuarial Assumptions and Methods Used for Projections

#### Investment Returns

Plan Year Beginning May 1	Return
2017*	2.21%
2018 – 2026	6.64%
2027+	7.40%

\* The 2017 entry is the return for the 4 months from January 1, 2018 through April 30, 2018. 2.21% is 4/12th of 6.64%, which is the amount derived for the entire year.

#### Mortality Assumptions

- Active and Terminated Vested Participants: RP-2014 Blue Collar Employee Mortality Table adjusted to reflect Mortality Improvement Scale MP-2016 from the 2006 base year, and projected forward using MP-2016 on a generational basis.
- Current and Future Retirees, Disabled Participants and Beneficiaries: RP-2014 Blue Collar Healthy Annuitant Mortality Table adjusted to reflect Mortality Improvement Scale MP-2016 from the 2006 base year, and projected forward using MP-2016 on a generational basis.

#### Other Demographic Assumptions

##### Retirement Rates from Active Status

Age	Active Retirement Rates
55	10%
56	10%
57	10%
58	10%
59	10%
60	10%
61	20%
62	50%
63	50%
64	50%
65	100%

### Retirement Rates from Terminated Vested Status

Age	Terminated Vested Retirement Rates
55	5%
56	5%
57	5%
58	5%
59	5%
60	5%
61	20%
62	20%
63	10%
64	10%
65	100%

### Termination

Age	Less than 2 Years of Service	2 - 4 Years of Service	4 or More Years of Service: Ultimate Rates (Sarason T-5)
20 & under	30.00%	15.00%	7.88%
21	30.00%	15.00%	7.83%
22	30.00%	15.00%	7.79%
23	30.00%	15.00%	7.74%
24	30.00%	15.00%	7.69%
25	30.00%	15.00%	7.64%
26	30.00%	15.00%	7.58%
27	30.00%	15.00%	7.50%
28	30.00%	15.00%	7.39%
29	30.00%	15.00%	7.26%
30	30.00%	15.00%	7.11%
31	30.00%	15.00%	6.94%
32	30.00%	15.00%	6.76%
33	30.00%	15.00%	6.56%
34	30.00%	15.00%	6.35%
35	30.00%	15.00%	6.13%
36	30.00%	15.00%	5.90%
37	30.00%	15.00%	5.66%
38	30.00%	15.00%	5.42%
39	30.00%	15.00%	5.18%
40	30.00%	15.00%	4.93%
41	30.00%	15.00%	4.68%
42	30.00%	15.00%	4.42%
43	30.00%	15.00%	4.16%
44	30.00%	15.00%	3.89%
45	30.00%	15.00%	3.89%



46	30.00%	15.00%	3.63%
47	30.00%	15.00%	3.35%
48	30.00%	15.00%	3.06%
49	30.00%	15.00%	2.75%
50	30.00%	15.00%	2.41%
51	30.00%	15.00%	2.06%
52	30.00%	15.00%	1.70%
53	30.00%	15.00%	1.34%
54	30.00%	15.00%	1.00%
55 & over	30.00%	15.00%	0.00%

**Disability**

None.

**Exclusion of Terminated Vested Participants**

None. All terminated vested participants are included.

**Assumptions Regarding Form and Commencement of Benefits**

- Future retirees are assumed to elect the following forms of payment: 45% elect the single life annuity, 10% elect the ten year certain and life annuity, 20% elect the joint and 50% survivor annuity with pop-up, and 25% elect the joint and 75% survivor with pop-up.
- Terminated vested participants are assumed commence benefits immediately upon retiring. The retirement rates for current and future terminated vested participants are described above.
- We do not assume future disabilities because the disability benefit was eliminated effective September 1, 2013.

**Assumptions Regarding Missing or Incomplete Data**

- Active, terminated vested, retiree and disabled records where gender is not reported are assumed to be male.
- Beneficiary, deferred beneficiary, and alternate payee records where gender is not reported are assumed to be female.
- Spouses are assumed to be opposite gender of the member if gender is not reported.
- Female spouses are 3 years younger than male spouses.
- 100% of active and terminated vested participants are assumed to be married.
- For missing pop-up amounts, it was assumed that the pop-up benefit is 112% and 119% of the current benefit for the 50% joint and survivor and 75% joint and survivor options, respectively.

**New Entrant Profile**

- No assumption was made with respect to the demographic characteristics of new entrants because benefit accruals were suspended effective August 1, 2013. There is no impact on projected plan liabilities and benefit payments from new entrants to the Plan during the projection period. However, we have assumed that there will be replacement of current participants by new entrants based on Trustee input related to projected contribution base units (see below).

**Contribution Base Units and Rates**

The table below shows the assumed contribution base units (hours) and average contribution rate used for projections shown in this report.

Plan Year Beginning May 1	Total Contribution Base Units (hours)	Average Contribution Rate (Hourly)
2017	1,108,155	\$3.50
2018	1,100,000	\$3.50
2019	1,000,000	\$3.50
2020	1,000,000	\$3.50
2021	1,000,000	\$3.50
2022	950,000	\$3.50
2023	950,000	\$3.50
2024	950,000	\$3.50
2025	950,000	\$3.50
2026	950,000	\$3.50
2027	950,000	\$3.50
2028	950,000	\$3.50
2029	950,000	\$3.50
2030	950,000	\$3.50
2031	950,000	\$3.50
2032	950,000	\$3.50
2033	950,000	\$3.50
2034	950,000	\$3.50
2035	950,000	\$3.50
2036	950,000	\$3.50
2037	950,000	\$3.50
2038	950,000	\$3.50
2039	950,000	\$3.50
2040	950,000	\$3.50
2041	950,000	\$3.50
2042	950,000	\$3.50
2043	950,000	\$3.50
2044	950,000	\$3.50
2045	950,000	\$3.50
2046	950,000	\$3.50
2047	950,000	\$3.50
2048	950,000	\$3.50

Total estimated hours for the plan year May 2017 through April 2018 are  $741,488 + 366,667 = 1,108,155$ . There are estimated to be 741,488 hours for May 2017 through December 2017 based on employer contributions of \$2,595,209 divided by the average contribution rate of \$3.50 per hour. We are estimating 366,667 hours for January 2018 through April 2018 based on 4/12ths of the 1.1 million hours assumption for the 2017/2018 plan year.

**Withdrawal Liability Payments**

- No withdrawal liability payments are currently being made and no future withdrawal liability payments are assumed.

**Administrative Expenses**

- The annual administrative expense assumption is \$500,000 for the year beginning May 1, 2017. This is based on the expenses incurred from May 1, 2017 through December 31, 2017 and the anticipated increase in expenses for the remainder of the year due to work related to the application for the proposed suspension of benefits. The administrative expenses are assumed to decrease to \$385,000 for the year beginning May 1, 2018 and return to the level before work related to the proposed suspension of benefits began, or \$287,000 (\$270,000 increased for inflation), for the year beginning May 1, 2019. After May 1, 2019, administrative expenses are assumed to increase by 2% per year thereafter for inflation.

**Projection Methodology**

- No data grouping techniques were used to produce projections.
- No changes were made to cash flow projections produced by our valuation software.

**Part 2 – Supporting Documentation for Selection of Certain Actuarial Assumptions****Investment Returns**

The components of the target portfolio used in the projections, expressed in terms of the asset classes used for setting the Plan's investment policy are as follows:

Asset Class	Allocations
US Fixed Income	15.5%
US Large Cap Growth Equity	1.6%
US Large Cap Value Equity	7.0%
US Mid Cap Value Equity	9.2%
US Small Cap Value Equity	5.0%
Europe Equity	7.5%
Japan Equity	2.8%
Asia Pacific ex Japan Equity	1.4%
Absolute Return Assets	15.0%
Private Equity	15.0%
Private Real Estate Funds	20.0%

The components of the target portfolio were allocated as follows among the asset classes provided in Appendix B of Revenue Procedure 2017-43:

Asset Class	Allocations
US Equity – Large Cap	8.6%
US Equity – Small/Mid Cap	14.2%
Non-US Equity – Developed	11.7%
US Corporate Bonds – Core	15.5%
Real Estate	20.0%
Hedge Funds (includes 100% of Absolute Return Assets)	15.0%
Private Equity	15.0%

The 10 and 20-year median returns shown on Exhibits 17 and 18 of the 2017 edition of the Horizon Survey of Capital Market Assumptions were used. The associated standard deviations and correlation coefficients from Exhibit 15 of the same survey were also used.

This process produced a median geometric return of 6.64% using the 10-year capital market assumptions and a median geometric return of 7.40% using the 20-year capital market assumptions, which were then used to project future investment returns.

### Demographic Experience

- An experience study was completed by the prior actuarial firm for the period May 1, 2010 to April 30, 2015. The retirement rates from active status and termination rates were updated as of May 1, 2015 as a result of the experience study. The results of the experience analysis as provided by the prior actuarial firm are shown below. Our understanding is that the prior actuarial firm did not prepare a formal experience study report.

For PYE	Exp Retmnts Would Have Been	Actual Retmnts Were	Actual Retmnts Not Elig	Expected per Valuation	Actual per Valuation
4/30/2015	10.90	4	-	18.80	4.00
4/30/2014	9.40	8	2	15.40	8.00
4/30/2013	10.30	10	4	15.20	10.00
4/30/2012	9.10	5	-	13.50	5.00
4/30/2011	7.50	9	1	19.40	9.00
<b>Total</b>	<b>47.20</b>	<b>36</b>	<b>7</b>	<b>82.30</b>	<b>36</b>

  

For PYE	Exp w/d's Would Have Been	Actual w/d's Were	Expected per Valuation	Actual per Valuation
4/30/2015	44.84	50	35.0	50
4/30/2014	43.91	48	35.3	48.0
4/30/2013	44.43	41	34.5	41.0
4/30/2012	41.90	20	32.5	20.0
4/30/2011	51.54	70	40.0	70.0
<b>Total</b>	<b>226.61</b>	<b>229</b>	<b>177.300</b>	<b>229</b>

- The historical actuarial gains and losses over the last ten years are shown below.

Plan Year Beginning May 1	Demographic and Administrative Expense (Gain)/Loss	Asset (Gain)/Loss	Total (Gain)/Loss
2016	\$(686,979)	\$2,537,985	\$1,851,006
2015	(205,159)	3,903,376	3,698,217
2014	263,280	2,936,285	3,199,565
2013	30,444	(802,801)	(772,357)
2012	494,878	(647,011)	(152,133)
2011	(1,007,671)	7,955,392	6,947,721
2010	15,363	(2,382,945)	(2,367,582)
2009	170,143	(6,229,620)	(6,059,477)
2008	(237,956)	16,572,030	16,334,074
2007	700,026	1,344,216	2,044,242

- The detailed demographic (gain)/loss for the 2016-2017 plan year by changes in status is provided below. Note the sum of the amounts shown in the table do not match the total shown above due to the (gain)/loss on administrative expenses and benefit payments.

	5/1/2017 Status				
5/1/2016 Status	Active	Deferred	In Pay	Non Participating*	Total
Active	\$8,336	\$46,288	\$(73,078)	\$(705)	\$(19,159)
Deferred	(5,491)	(69,270)	288	(250,746)	(325,219)
In Pay	0	(34,385)	380,621	(775,403)	(429,168)
Not in Data	92	0	111,317	0	111,409
<b>Total</b>	<b>2,938</b>	<b>(57,367)</b>	<b>419,148</b>	<b>(1,026,855)</b>	<b>(662,137)</b>

\*Due to deaths, benefit expirations, and data corrections.

- The demographic (gain)/loss for the 2015-2016 plan year by changes in status is provided below. Note the sum of the amounts shown in the table do not match the total shown above due to the (gain)/loss on administrative expenses and benefit payments, and the difference between our replication of the May 1, 2015 actuarial valuation results and the prior actuarial firm's May 1, 2015 actuarial valuation results.

	5/1/2016 Status				
5/1/2015 Status	Active	Deferred	In Pay	Non Participating*	Total
Active	\$9,191	\$13,062	\$(4,732)	\$(88,091)	\$(70,570)
Deferred	(1,405)	14,930	(62,982)	(3,054)	(52,511)
In Pay	0	0	337,507	(842,005)	(504,498)
Not in Data	0	0	27,372	0	27,372
Total	7,785	27,992	297,165	(933,150)	(600,206)

\*Due to deaths, benefit expirations, and data corrections.

- The details of the demographic (gain)/loss for years prior to 2015-2016 are unavailable.
- Regarding the assumption that 100% of the active and terminated vested participants are married, we do not receive data on the marital status of the active or terminated vested population. This assumption determines the projected survivor benefits payable to assumed surviving spouses for projected pre-retirement deaths from active and terminated vested status. Given the limitations of the available data and the relatively small impact of the assumption, we believe that the current assumption remains appropriate.
- The distribution of benefit form elections as provided by the Plan Administrator for the last five years is shown below. The analysis includes retirements from both active and terminated vested status.

Benefit Form	Percentage Electing
Single Life	42.7%
Five Year Certain and Life	4.5%
Ten Year Certain and Life	9.0%
Joint and 50% Survivor	7.9%
Joint and 50% Survivor with Pop-up	12.3%
Joint and 75% Survivor	3.4%
Joint and 75% Survivor with Pop-up	20.2%

- The retirement rates by age for active participants for the last two years (plan years beginning May 1, 2015 and May 1, 2016) are shown below. We did not prepare a retirement experience analysis covering years prior to May 1, 2015 as the prior actuarial firm completed an experience analysis that covered those years.

Age	Exposures	Number Retired	Retirement Rate
55	40	4	10%
56	36	1	3%
57	28	2	7%
58	27	2	7%
59	19	2	11%
60	15	1	7%
61	16	3	19%

62	7	3	43%
63	1	0	0%
64	1	0	0%
65 & over	4	0	0%

- The retirement rates by age for terminated participants for the last five years (plan years beginning May 1, 2012 through May 1, 2016) are shown below.

Age	Exposures	Number Retired	Retirement Rate
55	85	5	6%
56	70	2	3%
57	72	2	3%
58	69	2	3%
59	58	2	3%
60	45	4	9%
61	38	8	21%
62	27	4	15%
63	16	1	6%
64	12	3	25%
65 & over	31	2	6%

### **Mortality Assumptions**

- The Plan is not large enough to develop a credible mortality table based exclusively on Plan experience. We have relied on the most recent mortality tables (RP-2014) published by the Society of Actuaries in which credible mortality experience was analyzed. The Plan's participants consist primarily of blue-collar participants; as such, the blue-collar variations of the RP-2014 tables were used.
- With respect to future mortality improvement, the MP-2016 mortality improvement scale was used to project future improvement in mortality from 2006 on a generational basis.

### **New Entrant Profile**

No assumption was made with respect to the demographic characteristics of new entrants because benefit accruals were suspended effective August 1, 2013. There is no impact on projected plan liabilities and benefit payments from new entrants to the Plan during the projection period. However, we have assumed that there will be replacement of current participants by new entrants based on Trustee input related to projected contribution base units (see below).

### **Contribution Base Units and Employer Withdrawals**

- The table below shows the 10-year history of the employers that contributed 5% or more of annual contributions to the Plan.

Plan Year Beginning May 1	Employer Name	Contribution Base Units	Contribution Rate	Total Contribution
2016	EAST COAST METAL SYSTEMS, INC.	109,408	\$4.60	\$503,277
2016	THE K COMPANY, INC.	81,901	5.18	424,248
2016	R G SMITH CO., INC.	69,216	5.18	358,537
2016	METAL MASTERS, INC.	46,713	5.18	241,975
2015	THE K COMPANY, INC.	82,637	5.18	428,058
2015	EAST COAST METAL SYSTEMS, INC.	90,329	4.60	415,514
2015	R G SMITH CO., INC.	59,532	5.18	308,377

2015	METAL MASTERS, INC.	45,617	5.18	236,295
2015	SHEET METAL CRAFTERS	42,298	5.18	219,103
2015	OHIO FABRICATORS, INC.	38,941	5.18	201,712
2014	EAST COAST METAL SYSTEMS, INC.	95,260	4.60	438,198
2014	THE K COMPANY, INC.	66,050	5.18	342,139
2014	R G SMITH CO., INC.	54,007	5.18	279,758
2014	METAL MASTERS, INC.	52,584	5.18	272,386
2014	OHIO FABRICATORS, INC.	39,168	5.18	202,890
2014	SHEET METAL CRAFTERS	86,325	2.18	188,189
2013	EAST COAST METAL SYSTEMS, INC.	90,020	4.60	414,091
2013	THE K COMPANY, INC.	59,621	5.18	308,837
2013	R G SMITH CO., INC.	57,535	5.18	298,031
2013	OHIO FABRICATORS, INC.	43,266	5.18	224,120
2013	METAL MASTERS, INC.	37,050	5.18	191,921
2012	EAST COAST METAL SYSTEMS, INC.	83,266	4.60	383,024
2012	THE K COMPANY, INC.	62,053	5.18	321,435
2012	R G SMITH CO., INC.	45,724	5.18	236,851
2012	OHIO FABRICATORS, INC.	41,575	5.18	215,361
2012	SHEET METAL CRAFTERS	40,172	5.18	208,093
2012	METAL MASTERS, INC.	35,231	5.18	182,494
2011	EAST COAST METAL SYSTEMS, INC.	96,036	4.03	387,027
2011	THE K COMPANY, INC.	61,132	4.54	277,540
2011	R G SMITH CO., INC.	46,070	4.54	209,160
2011	OHIO FABRICATORS, INC.	45,656	4.54	207,279
2011	METAL MASTERS, INC.	40,331	4.54	183,101
2011	SHEET METAL CRAFTERS	36,881	4.54	167,439
2010	EAST COAST METAL SYSTEMS, INC.	60,372	4.03	243,298
2010	R G SMITH CO., INC.	50,135	4.54	227,612
2010	METAL MASTERS INC.	40,811	4.54	185,281
2010	THE K COMPANY, INC.	37,006	4.54	168,007
2009	GLOBAL INSULATION, INC.	82,434	3.75	309,129
2009	EAST COAST METAL SYSTEMS, INC.	64,256	3.33	213,972
2009	THE K COMPANY, INC.	50,141	3.75	188,029
2009	OHIO FABRICATORS, INC.	43,467	3.75	163,003

The table below shows the 10-year experience for certain critical assumptions as required under regulation 1.432(e)(9)-1(d)(5)(vi)(A) and revenue procedure 2017-43 6.04.

Plan Year Beginning May 1	Total Employer Contributions	Pension Hours	Average Hourly Contribution Rate	Withdrawal Liability Payments	Market Value Return on Assets
2016	\$3,896,375	1,126,133	\$3.46	\$0	9.1%
2015	3,815,488	1,087,575	3.51	0	0.1%
2014	3,696,518	1,044,941	3.54	0	7.4%
2013	3,620,036	1,015,775	3.56	0	10.6%
2012	3,476,411	998,372	3.48	0	10.3%
2011	3,262,884	1,034,107	3.16	0	-7.9%
2010	2,517,134	922,328	2.73	0	14.6%
2009	2,732,416	1,023,122	2.67	0	25.9%
2008	2,619,413	1,066,839	2.46	0	-30.3%



2007	2,992,541	1,140,517	2.62	0	-3.4%
Average Trend from 2007 to 2016		0.1%			

- Explanation for the historical trends experienced by the Plan with respect to contribution base units is documented in several sections within the application, including Section 5.01, 5.02(1)(a), 5.02(1)(e), 5.02(3), 5.02(4) and 5.03.
- Contribution rates have increased by over 50% since the implementation of the Rehabilitation Plan effective August 1, 2009. For example, the contribution rate for Building Trades Journeymen – Akron increased from \$3.41 per hour before the Rehabilitation Plan to the current \$5.18 per hour rate. The original Rehabilitation Plan required annual contribution increases of 10% from 2009 to 2016; however, it was later determined that further increases would harm the funding of Plan. The last required rate increase was a 14% increase in 2012. Additional explanation for the historical trends experienced by the Plan with respect to contribution rates is documented in several sections within the application, including Section 5.01, 5.02(1)(a), 5.02(1)(e), 5.02(3), 5.02(4) and 5.03.
- At their November 30, 2017 meeting, the Trustees discussed the assumptions for contribution base units for the coming years, ultimately determining that 950,000 for future years will be used. While the Trustees had observed actual hours on average 11% higher than 950,000 during the past four years, the forecasted lesser hours is based on the Trustees' understanding that there had been a short term upswing in projects that was not predictably sustainable and that several specific projects would be winding down and terminating the near term. This was the basis for the projection and supports the lesser hours forecast.
- The assumed \$3.50 average hourly contribution rate is based on actual experience and assumes the distribution of active participants among various participating employers remains stable.
- No employers have withdrawn from the Plan and been assessed a withdrawal liability during the last five years. In addition, there are no future withdrawal liability payments due to the Plan from previous years' withdrawals.

#### **Take-up rate with respect to selection of benefit/contribution schedule**

- All bargaining parties elected the Preferred Schedule of the Rehabilitation Plan.

#### **Projection Methodology**

- No approximation techniques were used to produce the projections.
- No changes were made to cash flow projections produced by our valuation software.

### **Part 3 – Additional Disclosures Relating to Use of Different Assumptions**

The following assumptions differed between the projections produced under Section 3.01 and Section 3.02, 4.02(1), 4.03, 6.05 and 6.06. An explanation for the difference is included.

- Investment returns - For the purpose of the projections included in 3.01, we used a 6.5% investment return assumption. This assumption was set based on Milliman's Capital Market Assumptions. The investment return assumption used to develop the projections described in 3.02, 4.02(1), 4.03, 6.05 and 6.06 were developed using short term and long-term assumptions to reflect different return expectations over different periods based on the 2017 Horizon Survey of Capital Market Assumptions, which is a widely used survey that has been deemed reasonable in similar circumstances.
- Administrative expenses – For the purposes of the projections included in 3.01, we assumed that future administrative expenses would increase by 2% per year from the actual expenses paid during the 2016/2017 plan year. The administrative expense assumption was refined for the projections described in 3.02, 4.02(1), 4.03, 6.05 and 6.06 to reflect the expected short-term increase in expenses related to the application for the



proposed benefit suspension. We have maintained the 2% per year inflationary adjustment for the refined assumption.

- Retirement rates from terminated vested status – For purposes of the projections included in 3.01, we assumed that terminated vested participants would commence benefits at age 60 or 62, depending on their date of termination. For purposes of the projections described in 3.02, 4.02(1), 4.03, 6.05 and 6.06 we developed retirement rates by age based on actual experience over the past five years as shown in Part 2 of this exhibit.
- Form of payment – For purposes of the projections included in 3.01, we assumed that participants would elect the single life annuity form of payment. For purposes of the projections described in 3.02, 4.02(1), 4.03, 6.05 and 6.06, we added optional forms of payment based on actual experience over the past five years as shown in Part 2 of this exhibit.
- Exclusion of terminated vested participants – For purposes of the projections included in 3.01, we assumed that terminated vested participants over age 70 at the valuation date are deceased with no benefit payable. For purposes of the projections described in 3.02, 4.02(1), 4.03, 6.05 and 6.06, we included all terminated vested participants.
- Load for pop-up – For purposes of the projections included in 3.01, we assumed a 1.4% load on liabilities for retirees who elected the pop-up option on their joint and survivor benefit. For purposes of the projections described in 3.02, 4.02(1), 4.03, 6.05 and 6.06, we valued the actual individual pop-up amount as provided by the Plan Administrator.
- Contribution base units – For purposes of the projections included in 3.01, we assumed 1,100,000 hours for the years ending April 30, 2018 and April 30, 2019, 890,000 hours for the years ending April 30, 2020 through April 30, 2022, and 950,000 hours for each year thereafter. For purposes of the projections described in 3.02, 4.02(1), 4.03, 6.05 and 6.06, we used an updated assumption based on input from the Board of Trustees.

## L. Proposed Benefit Suspensions

The application filed on behalf of the Sheet Metal Workers Local Pension Plan sets forth the following proposed benefit suspension to be effective May 1, 2019. The suspension is expected to continue indefinitely.

This application proposes the participant's or beneficiary's benefit be reduced to a level accrual rate of \$48 multiplied by the years of service earned through April 30, 2019. The proposed suspension does not provide for different treatment of participants and beneficiaries other than as a result of the application of the individual limitations of §432(e)(9)(D)(i), (ii) and (iii), which are described at the end of this exhibit.

Although the proposed reduction does not include a different set of benefit reductions that applies to different categories of participants or beneficiaries, each participant has a different work history and retirement date. The Plan has had a number of benefit level changes over time. This means that the proposed reduction will impact participants in different ways. The chart below summarizes the categories of participants based on the Plan's benefit formula before the proposed suspension.

	Retirement/Termination Date	% of Employer Contribution Accrual Rate
Category 1	May 1, 1983 – April 30, 1984	2.6%
Category 2	May 1, 1984 – April 30, 1987	2.8%
Category 3	May 1, 1987 – April 30, 1990	3.0%
Category 4	May 1, 1990 – April 30, 1994	3.5%
Category 5	May 1, 1994 – April 30, 2003	3.65%
Category 6	May 1, 2003 – July 31, 2009	3.65% of contributions through April 30, 2003; plus 2.2% of contributions from May 1, 2003 through April 30, 2006; plus .36% of contributions from May 1, 2006 through July 31, 2009
Category 7	On or after August 1, 2009	3.65% of contributions through April 30, 2003; plus 2.2% of contributions from May 1, 2003 through April 30, 2006; plus .36% of contributions from May 1, 2006 through July 31, 2013; plus 0% of contributions after August 1, 2013.  As of August 1, 2009, subsidies for early retirement and optional forms of payment were eliminated from the Plan.

Participants in Categories 1-4 will not be impacted by the proposed reduction because all in those categories either have benefit protections under Federal law or have a current level accrual rate that is already less than the proposed \$48.00 level accrual rate.

Participants in Category 5 through 7 who have a benefit that is eligible for a reduction, will be impacted as follows:

Category 5 – average current level accrual rate reduced from \$75\* to \$48

Category 6 - average current level accrual rate reduced from \$74\* to \$48

Category 7 - average current level accrual rate reduced from \$69\* to \$48

\* A participant's current level accrual rate is determined by dividing their benefit amount by their years of service.

The current level accrual rate shown above is the **average** for all participants in the category eligible for reduction. Each individual participant has a different current level accrual rate depending on their years of service, annual hours worked, and hourly contribution rate made on their behalf.

Participants entering the Plan after July 31, 2013 are excluded from the above analysis because those participants have not earned any benefits under the Plan and thus, are not impacted by the proposed reduction.

The following summarizes the individual limitations of §432(e)(9)(D)(i), (ii) and (iii).

- §432(e)(9)(D)(i) – No suspension will result in reducing a participant's or beneficiary's benefit below 110% of the PBGC guaranteed benefit.
- §432(e)(9)(D)(ii) –No suspensions can be made for participants and beneficiaries above the age of 80 as of the end of the month of the effective date of the suspension (May 31, 2019). The suspension is reduced by a factor for participants and beneficiaries above the age of 75 but younger than 80 as of the end of the month of the effective date of the suspension. The factor is calculated by determining how many months the participant or beneficiary has until age 80 (as of the end of the month of the effective date of the suspension) and dividing that amount by 60.
- §432(e)(9)(D)(iii) – No suspension for disabled participants.