



April 13, 2021

Mr. Rick Rivera
Pension Administrator
1700 Convention Center Drive
Miami Beach, Florida 33139

**Re: City of Miami Beach Employees' Retirement Plan
Proposed Plan Changes with 30-Year Projections**

Dear Rick:

As requested, Gabriel, Roeder, Smith & Company (GRS) has prepared the enclosed 30-year projections of the Required City Contributions, Unfunded Actuarial Accrued Liability (UAAL), and Funded Ratio for the City of Miami Beach Employees' Retirement Plan (Plan) based on the current provisions (i.e., "Baseline Projections") compared to the proposed changes as described below (i.e., "Scenario #1). This report also includes discussion of risks associated with measuring the accrued liability and actuarially determined contribution. The enclosed projections are based on census and asset data as of October 1, 2019.

The enclosed exhibits present the following:

1. **Baseline Projections:** 30-year projections of the Required City Contributions, Unfunded Actuarial Accrued Liability (UAAL), and Funded Ratio based on current benefit provisions using current assumptions and methods as described in the October 1, 2019 Actuarial Valuation Report dated June 4, 2020. The projections were prepared assuming actual experience matches the assumptions including an investment return on market value of assets of 7.40% each year. Current benefit provisions include the following:
 - **Vesting:** Members become 100% vested in their accrued benefits after completion of at least 5 years of Credited Service.
 - **Normal Retirement Eligibility:** Tier C members (i.e., all members hired on or after September 30, 2010 or October 27, 2010 for members of CWA) are eligible for Normal Retirement at the earlier of: i) age 55 and completion of 30 years of Credited Service; or ii) age 62 and completion of 5 years of Credited Service.
 - **Ordinary Disability:** Members must have at least 5 years of Credited Service to be eligible for disability benefits that are not service connected.

2. **Scenario #1:** Same as the Baseline Projections EXCEPT:
 - **Vesting:** All new hires become 100% vested in their accrued benefits after completion of at least 10 years of Credited Service.

- Normal Retirement Eligibility: All new hires are eligible for Normal Retirement at the earlier of: i) age 55 and completion of 30 years of Credited Service; or ii) age 62 and completion of 10 years of Credited Service.
- Ordinary Disability: All new hires must have at least 10 years of Credited Service to be eligible for disability benefits that are not service connected.

For purposes of the enclosed analysis, the proposed Plan changes described above are assumed to be effective on October 1, 2019. Except as indicated above, all remaining methods, assumptions, and benefit provisions are the same as indicated in our October 1, 2019 Actuarial Valuation Report.

Risks Associated with Measuring the Accrued Liability and Actuarially Determined Contribution

The determination of the accrued liability and the actuarially determined contribution requires the use of assumptions regarding future economic and demographic experience. Risk measures are intended to aid in the understanding of the effects of future experience differing from the assumptions used in the course of the actuarial valuation. Risk measures may also help with illustrating the potential volatility in the accrued liability and the actuarially determined contribution that results from the differences between actual experience and the actuarial assumptions.

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 due to changing conditions; 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 scope of an actuarial valuation does not include an analysis of the potential range of such future measurements.

Examples of risk that may reasonably be anticipated to significantly affect the Plan's future financial condition include:

1. Investment risk – actual investment returns may differ from the either assumed or forecasted returns;
2. Contribution risk – actual contributions may differ from expected future contributions. For example, actual contributions may not be made in accordance with the Plan's funding policy or material changes may occur in the anticipated number of covered employees, covered payroll, or other relevant contribution base;
3. Salary and Payroll risk – actual salaries and total payroll may differ from expected, resulting in actual future accrued liability and contributions differing from expected;
4. Longevity risk – members may live longer or shorter than expected and receive pensions for a period of time other than assumed;



5. Other demographic risks – members may terminate, retire or become disabled at times or with benefits other than assumed resulting in actual future accrued liability and contributions differing from expected.

The effects of certain trends in experience can generally be anticipated. For example, if the investment return is less (or more) than the assumed rate, the cost of the Plan can be expected to increase (or decrease). Likewise, if longevity is improving (or worsening), increases (or decreases) in cost can be anticipated.

The computed contribution amounts may be considered as a minimum contribution that complies with the pension Board's funding policy and the State statutes. The timely receipt of the actuarially determined contributions is critical to support the financial health of the Plan. Users of this report should be aware that contributions made at the actuarially determined rate do not necessarily guarantee benefit security.

Risk Assessment

Risk assessment was outside the scope of this report. Risk assessment may include scenario tests, sensitivity tests, stochastic modeling, stress tests, and a comparison of the present value of accrued benefits at low-risk discount rates with the actuarial accrued liability. We are prepared to perform such assessment to aid in the decision-making process.

Disclosures and Qualifications

This report was prepared at the request of the Board of Trustees for the City of Miami Beach Employees' Retirement Plan, and is intended for use by the Plan and those designated or approved by the Board. This report may be provided to parties other than the Plan only in its entirety and only with the permission of the Board. GRS is not responsible for unauthorized use of this report.

The purpose of this report is to describe the financial effect of potential changes to Plan benefits. No statement in this report is intended to be a recommendation in favor of the potential changes or in opposition to the proposed changes. This report should not be relied on for any purpose other than the purpose described above. Determinations of financial results, associated with the benefits described in this report, for purposes other than those identified above may be significantly different.

The calculations in this report are based upon information furnished by the Plan Administrator for the October 1, 2019 Actuarial Valuation Report concerning Plan benefits, financial transactions, plan provisions and active members, terminated members, retirees and beneficiaries. We reviewed this information for internal and year-to-year consistency, but did not audit the data. We are not responsible for the accuracy or completeness of the information provided by the Plan Administrator.

Projections are deterministic, meaning that throughout the projection period, Plan experience is expected to exactly match the actuarial assumptions, including the assumed investment return on the market value of assets.



Throughout the projections, new members are assumed to be hired each year at a rate sufficient to maintain a constant active headcount. New members are assumed to have the same average demographic characteristics (age, gender, salary – adjusted each year for inflation) at their dates of employment as those of current members hired between October 1, 2014 and October 1, 2019 (during the five-year period ending on the most recent actuarial valuation / census data collection date).

The calculations are based upon assumptions regarding future events, which may or may not materialize. They are also based on the assumptions, methods, and plan provisions outlined in this report. If you have reason to believe that the assumptions that were used are unreasonable, that the plan provisions are incorrectly described, that important plan provisions relevant to this proposal are not described, or that conditions have changed since the calculations were made, you should contact the author of the report prior to relying on information in the report.

This report was prepared using our proprietary valuation model and related software which in our professional judgment has the capability to provide results that are consistent with the purposes of the valuation and this report and has no material limitations or known weaknesses. We performed tests to ensure that the model reasonably represents that which is intended to be modeled.

In the event that more than one plan change is being considered, it is very important to remember that the results of separate actuarial valuations cannot generally be added together to produce a correct estimate of the combined effect of all of the changes. The total can be considerably different than the sum of the parts due to the interaction of various plan provisions with each other, and with the assumptions that must be used.

This report has been prepared by actuaries who have substantial experience valuing public employee retirement systems. To the best of our knowledge the information contained in this report is accurate and fairly presents the actuarial position of the Plan as of the valuation date. All calculations have been made in conformity with generally accepted actuarial principles and practices, and with the Actuarial Standards of Practice issued by the Actuarial Standards Board and with applicable statutes.

Melissa Zrelack and Travis Robinson are members of the American Academy of Actuaries (MAAA) and meet the Qualification Standards of the American Academy of Actuaries to render the actuarial opinions contained herein. The undersigned actuaries are independent of the plan sponsor.

We welcome your questions and comments.

Sincerely yours,



Melissa Zrelack, MAAA, EA, FCA
Consultant and Actuary



Travis Robinson, MAAA, ASA, EA, FCA
Senior Analyst and Actuary

This communication shall not be construed to provide tax advice, legal advice or investment advice.



**City of Miami Beach Employees' Retirement Plan
30-Year Projection of Required City Contributions**

Fiscal Year Ending	Valuation Date	Current Plan (Baseline) ¹					Scenario 1 - Plan Changes ^{1,2}					Increase/(Decrease) in Required City Contribution	
		Covered Payroll for Contribution	Required City Contribution		UAAL on Valuation	Funded Ratio on Valuation	Covered Payroll for Contribution	Required City Contribution		UAAL on Valuation	Funded Ratio on Valuation		
		Year	\$ Amount	% of Pay	Date	Date	Year	\$ Amount	% of Pay	Date	Date	\$ Amount	% of Pay
2021	10/1/2019	91,152,047	30,699,942	33.68%	225,521,620	74%	91,152,047	30,699,942	33.68%	225,521,620	74%	0	0.00%
2022	10/1/2020	94,100,758	30,001,371	31.88%	212,390,369	77%	94,100,758	29,981,918	31.86%	212,390,369	77%	(19,453)	(0.02)%
2023	10/1/2021	96,963,681	29,613,647	30.54%	202,300,579	78%	96,963,681	29,574,425	30.50%	202,281,126	78%	(39,222)	(0.04)%
2024	10/1/2022	99,948,275	29,699,062	29.71%	197,812,425	79%	99,948,275	29,641,017	29.66%	197,775,241	79%	(58,045)	(0.06)%
2025	10/1/2023	103,206,256	29,915,486	28.99%	194,487,269	80%	103,206,256	29,840,061	28.91%	194,435,435	80%	(75,425)	(0.07)%
2026	10/1/2024	106,222,790	29,841,297	28.09%	185,778,945	82%	106,230,080	29,749,768	28.01%	185,715,988	82%	(91,529)	(0.09)%
2027	10/1/2025	109,299,901	29,571,922	27.06%	176,274,215	83%	109,328,944	29,464,121	26.95%	176,203,377	83%	(107,802)	(0.11)%
2028	10/1/2026	112,038,862	29,347,472	26.19%	166,007,139	85%	112,107,396	29,224,604	26.07%	165,930,119	85%	(122,868)	(0.13)%
2029	10/1/2027	114,760,114	28,980,792	25.25%	155,192,035	86%	114,891,183	28,843,167	25.10%	155,111,976	86%	(137,625)	(0.15)%
2030	10/1/2028	117,829,009	28,527,747	24.21%	143,670,283	87%	118,050,061	28,377,851	24.04%	143,589,320	87%	(149,896)	(0.17)%
2031	10/1/2029	121,122,122	28,144,729	23.24%	131,574,265	89%	121,423,773	27,986,648	23.05%	131,496,701	89%	(158,081)	(0.19)%
2032	10/1/2030	124,418,181	27,850,917	22.38%	119,064,401	90%	124,766,753	27,686,527	22.19%	118,995,793	90%	(164,390)	(0.19)%
2033	10/1/2031	127,793,270	27,466,178	21.49%	106,144,942	91%	128,164,769	27,293,593	21.30%	106,087,959	91%	(172,585)	(0.20)%
2034	10/1/2032	131,233,770	25,560,644	19.48%	92,621,216	93%	131,613,232	25,379,682	19.28%	92,574,333	92%	(180,962)	(0.19)%
2035	10/1/2033	134,703,149	23,672,987	17.57%	78,695,358	94%	135,083,020	23,483,211	17.38%	78,658,103	94%	(189,777)	(0.19)%
2036	10/1/2034	138,171,847	22,366,256	16.19%	65,877,120	95%	138,549,469	22,166,914	16.00%	65,848,894	95%	(199,341)	(0.19)%
2037	10/1/2035	141,826,976	21,186,341	14.94%	54,246,853	96%	142,199,494	20,978,442	14.75%	54,226,962	96%	(207,899)	(0.19)%
2038	10/1/2036	145,660,835	18,021,419	12.37%	43,231,422	97%	146,025,689	17,806,121	12.19%	43,220,922	97%	(215,298)	(0.18)%
2039	10/1/2037	149,483,929	18,234,595	12.20%	32,708,262	98%	149,837,699	18,012,228	12.02%	32,707,303	98%	(222,367)	(0.18)%
2040	10/1/2038	153,553,939	16,236,673	10.57%	24,952,385	98%	153,896,761	16,007,983	10.40%	24,960,693	98%	(228,690)	(0.17)%
2041	10/1/2039	157,643,496	14,507,434	9.20%	16,533,497	99%	157,978,876	14,273,051	9.03%	16,550,435	99%	(234,383)	(0.17)%
2042	10/1/2040	161,930,195	13,136,797	8.11%	9,942,134	99%	162,260,249	12,897,297	7.95%	9,966,714	99%	(239,500)	(0.16)%
2043	10/1/2041	165,833,309	12,213,695	7.37%	5,145,596	100%	166,158,687	11,969,176	7.20%	5,176,713	100%	(244,519)	(0.16)%
2044	10/1/2042	170,146,628	11,563,415	6.80%	2,025,674	100%	170,468,511	11,311,052	6.64%	2,062,168	100%	(252,364)	(0.16)%
2045	10/1/2043	174,069,128	11,514,400	6.61%	80,571	100%	174,388,313	11,259,435	6.46%	120,296	100%	(254,965)	(0.16)%
2046	10/1/2044	177,412,555	11,833,362	6.67%	(846,980)	100%	177,730,463	11,555,924	6.50%	(802,441)	100%	(277,438)	(0.17)%
2047	10/1/2045	181,349,494	12,052,179	6.65%	(1,442,760)	100%	181,667,979	11,764,965	6.48%	(1,398,531)	100%	(287,214)	(0.17)%
2048	10/1/2046	185,325,421	12,257,598	6.61%	(2,206,376)	100%	185,646,545	11,960,592	6.44%	(2,148,120)	100%	(297,006)	(0.17)%
2049	10/1/2047	189,679,309	12,407,795	6.54%	(3,056,090)	100%	190,005,135	12,099,394	6.37%	(2,982,060)	100%	(308,401)	(0.17)%
2050	10/1/2048	194,360,591	12,627,756	6.50%	(4,039,106)	100%	194,693,287	12,309,272	6.32%	(3,949,015)	100%	(318,483)	(0.17)%
Total:			649,053,907					643,598,379				(5,455,529)	
Total Present Value:			328,261,337					326,582,183				(1,679,154)	

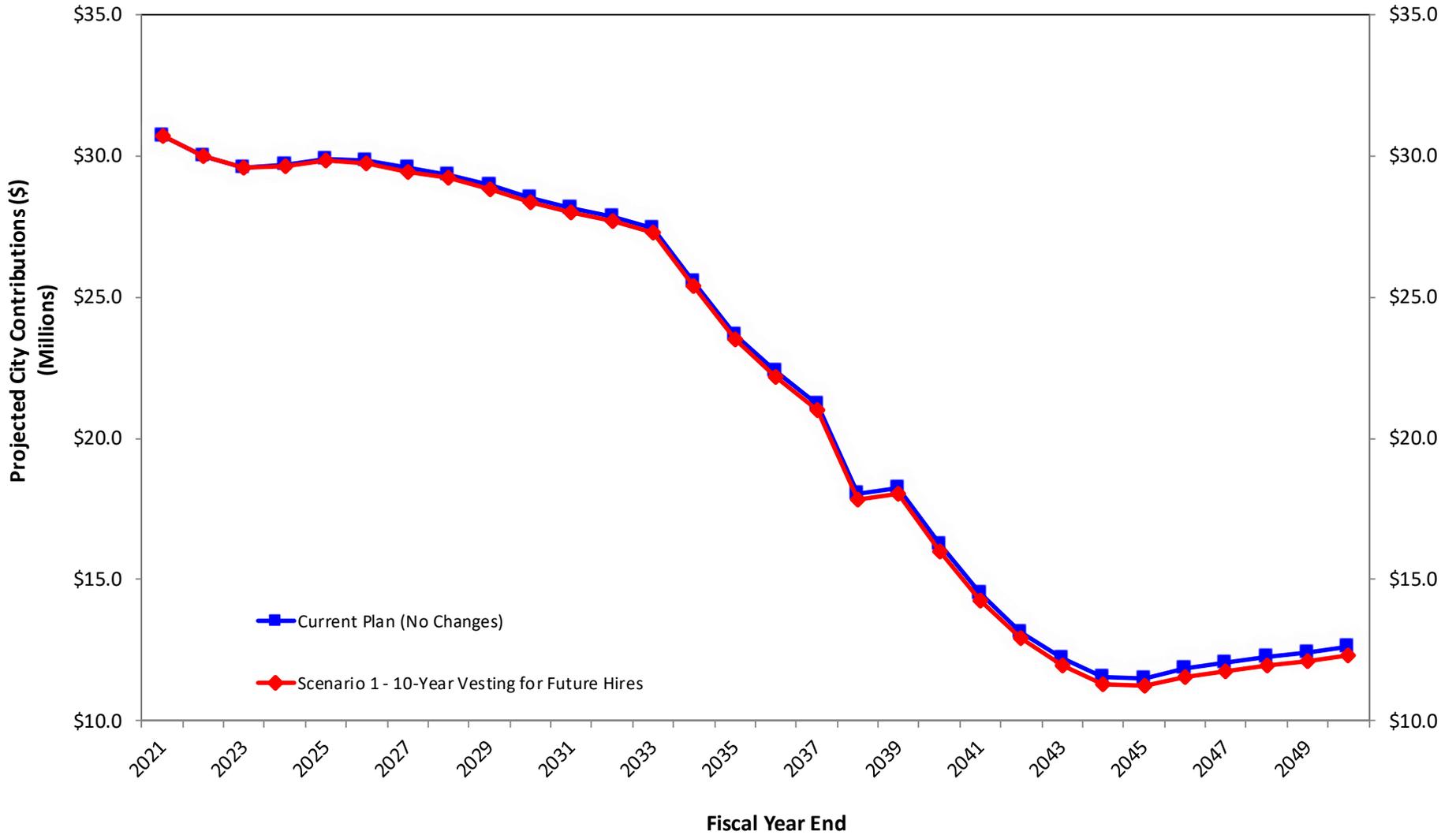
¹ Assumptions

Mortality Assumption: FRS Mortality for Non-Special Risk Class
 Payroll Growth Assumption: 2.5%
 Investment Return Assumption and Actual Return on Plan Assets: 7.40%
 Administrative Expenses: Projected to increase 2.5% annually
 No future actuarial experience gains or losses are assumed.

² Description of Proposed Plan Changes

Future Hires: 10 Years of Service Required to Vest Benefits.

City of Miami Beach Employees' Retirement Plan 30-Year Projection of City Contribution Requirement



City of Boynton Beach Municipal Police Officers's Retirement Fund 30-Year Projection of Unfunded Actuarial Accrued Liability

