



October 15, 2019

Tarik Rahmani

Finance Director

City of Carson

701 E. Carson Street

Carson, CA 90745

RE PERS Unfunded ctuarial Liability  
:

Dear Tarik:

The City has requested an analysis of the potential benefit of funding all or a portion of its current PERS unfunded actuarial liability (UAL) using proceeds of a pension obligation bond (POB).

#### Executive Summary

In its simplest form, this transaction exchanges one outstanding debt (UAL) that has a higher implicit interest rate for a new debt (Bonds) that accrues interest at a lower rate. It is only when the structure of each debt is looked at that we can come to a conclusion about the benefit to the City of such an undertaking.

As described in this report, while there are options for selecting which portions of the existing UAL to fund and how to structure the bonds in terms of maturity and amortization, the ultimate decision to reduce the UAL by issuing the Bonds will have a positive impact on the City's cashflow in the near term over the next 5 years and is expected to provide a cost benefit for funding the UAL over 30 years depending on PERS performance and stability in actuarial assumptions.

#### PERS UAL Calculation

As we have discussed, first and foremost, the funding plan being considered by the City is a debt management plan. The interest rate differential between (1) what PERS is charging the City on its Unfunded Actuarial Liability (UAL) and (2) what the City's borrowing costs are for the Bonds, is what provides the basis for creating cashflow benefit, and ultimately lower pension costs.

The City has one PERS plan, the "Miscellaneous Plan" that includes all non-safety employees (classic and PEPRA). As of June 30, 2018, the plan was 65% funded.

The plan's UAL as of June 30, 2018 will be made up of multiple "amortization bases," which are positive and negative amounts generated each year based on the performance of the PERS Investment Fund and changes in the actukrial assumptions. Each amortization base has a separate payment schedule over a fixed period of years. Because of the PERS methodology, some of the payments continue to increase each year while others will drop off. Issuing debt to fund both the shorter maturing amortization bases as well as the

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longer bases will allow the City to consolidate those balances and create a level repayment schedule rather than one that escalates over time.

In addition to the amortization bases shown on the June 30, 2018 PERS valuation report (the most current report since PERS reporting lags by over a year), there will be future additional amortization bases created each June 30. The first is a "gain" or "loss" based on the actual PERS investment return for the fiscal year, compared to the investment target in effect for that year (currently 7%). A gain will be a credit, that is, a reduction in the UAL and a loss will be an addition to the UAL. Further, there will be an additional base for and change in assumptions, such as any further reduction in the discount rate. PERS will also create amortization bases as a result of changes in other assumptions like mortality rates or a City approved increase in retirement benefits. Even if the City prepays the existing UAL, every future year there will continue to be additions and subtractions.

Exhibit A shows the PERS UAL by amortization base from the PERS report for June 30, 2018.

If the City were to only partially fund the UAL instead of fully funding the UAL, the amortization bases that would be selected for funding are the ones that provide the most cashflow benefit, subject to the PERS limitation on the use of asset gains (created from returns above the discount rate) to offset only asset losses (created by returns below the discount rate). To achieve an approximate 90% funding level, the bases that would generally be prepaid would be all of the bases through 2014, excluding the method change in 2004 and the special gain in 2010. This totals \$85.8 million on the net \$107.1 million UAL. And would leave the large investment gains in 2014, 2017 and 2018 to offset the remaining UAL bases.

#### Funding Options

Two funding scenarios have been created for review on the impact on the City's pension costs. Which debt structure the City chooses depends on how much capacity you desire to leave for future UAL layers that will be created. For now, it is sufficient to demonstrate that under either scenario, the concept of using issuing POBs to fund the UAL creates a significant cashflow benefit that is useful in managing the City's budget and retirement costs.

Included in Exhibits Band Care two debt structures for the POB, comparing the POB debt service to (1) the existing PERS payments required to repay the current UAL and (2) the UAL reduction in the event of the partial prepayment. In each funding scenario, there will be no savings from issuing a POB in Fiscal Year 2019-20.

The existing UAL is repaid in 24 years under the PERS schedule of payments (the payments for any bases due in years 25 through 30 are less than the credits for UAL gain bases so there are no payments at this time in the 5 final years). The first option presented on Exhibit B funds 100% of the UAL and shows level debt service through 2038 (18 years) and then debt service declines in proportion to the existing UAL payment schedule for the final 6 years. The expected bond issue is approximately \$108 million. This structure has the potential to save an estimated \$45 million dollars compared to the PERS payment schedule, assuming that the discount rate and the investment rate are equivalent in future years (risks related to this are discussed later in this report). The debt service in future years would be roughly comparable to the 2019-20 UAL payment with no step up in payments over time. This is important because it provides

capacity to fund new UAL amortization bases that will be added over time - each one with a new 20 year amortization schedule.

The second option presented on Exhibit D funds approximately \$85.8 million of the UAL, bringing the funding level from 65% to 90%. Unfortunately, by prepaying just a portion of the UAL, a proportionate level of savings is not achieved compared to the other option, primarily because the City has to select specific amortization bases to fund with the bonds, and that does not produce a proportionate reduction in annual payments because not all amortization bases are paid over the same time frame. Also, the City is not allowed to offset asset gains against asset losses in this scenario under the PERS funding parameters, and so is left with a large portion of the benefit of the asset gains out in the later years. If the City were to choose this option, you would likely ask for a "Fresh Start" for the remaining balance.

PERS has a "Fresh Start" program that would allow the City to re-amortize the entire remaining UAL after the partial payment as if one lump sum. This Fresh Start program allows the remaining UAL to be amortized over any period the City selects, as long as the total payments do not exceed the current payments. The structure of a Fresh Start payment plan starts with fixed payment in the first year, which increases with the COLA adjustment used by PERS (currently 2.75%). This idea for this amortization schedule being that the UAL payment would go up in proportion to payroll, not using the ramp-up ramp-down methodology factors in some of the existing bases, but more along the lines of the percentage of payroll used in other existing bases. The Fresh Start program has the benefit of capturing the asset gain reduction payments currently being amortized over 30 years earlier to offset assumption changes being amortized over 20 years.

Other debt service and repayment options can be calculated at the City's request for comparison to the schedules included in Exhibit B and D.

#### Future UAL

There are future layers of the UAL bases that will be created over time which the City will have to manage as part of future budgets. However, these new layers will be created with or without the additional funding. It is also important to recognize how PERS is changing certain amortization periods (beginning in 2020, investment gains and losses will be amortized ~ver 30 years instead of 20 years) and how to make the most of any anticipated future net pension asset. There has been some discussion of reducing the PERS discount rate to 6% over the next 20 years, which will have the impact of increasing the existing UAL.

One of the criticisms of pension funding through debt issuance is the possibility that future PERS Investment Fund low performance could lead to increased costs over the long-term. The POB debt payment schedule tries to mitigate the possibility of increased costs by having the benefit of level debt service for the first 18 years, but then decreasing the payments over time to mirror the expected decrease in cashflow savings after most of the original amortization bases would have been paid off under the PERS methodology. Once again, this is consistent with the cashflow benefit strategy for the funding plan.

The City can of course have a different amortization, say 30 years, but it does create a situation where the combined UAL and debt service payments are greater than the existing remaining UAL amortization payments in some years. Since every year new amortization bases will be created and amortized over new 20 year periods, it would be best not to create extra payments in the later years when there will be other amortization payments to be layered on. Similarly, the City can reduce the payback period to 20 years, but

this structure provides higher debt service in the early years and reduced flexibility to use potential savings to fund new UAL bases that we know will be created in the future.

In addition, the City should be aware that there is always the possibility that a net pension asset will be created and the City will end up with "stranded" pension assets that are only available to offset future investment losses or assumptions changes. This is likely to occur with or without the POB funding of the UAL, since the PERS system is geared toward 100% funding as soon as practicable - a formula designed to create net pension assets over a 30 year time horizon.

#### GFOA Concerns about Pension Obligation Bonds

There has been a lot of discussion about the issuance of debt to fund unfunded pension liabilities. For example, the Government Finance Officers Association (GFOA) has the following statements on their website:

*Pension obligation bonds (POEs) are taxable bonds that some state and local governments have issued as part of an overall strategy to fund the unfunded portion of their pension liabilities by creating debt. The use of POEs rests on the assumption that the bond proceeds, when invested with pension assets in higher-yielding asset classes, will be able to achieve a rate of return that is greater than the interest rate owed over the term of the bonds. However, POEs involve considerable investment risk, making this goal very speculative. Failing to achieve the targeted rate of return burdens the issuer with both the debt service requirements of the taxable bonds and the unfunded pension liabilities that remain unmet because the investment portfolio did not perform as anticipated. In recent years, local jurisdictions across the country have faced increased financial stress as a result of their reliance on POEs, demonstrating the significant risks associated with these instruments for both small and large governments.*

#### *Recommendation:*

*The GFOA recommends that state and local governments do not issue POEs for the following reasons:*

- 1. The invested POE proceeds might fail to earn more than the interest rate owed over the term of the bonds, leading to increased overall liabilities for the government.*
- 2. POEs are complex instruments that carry considerable risk. POE structures may incorporate the use of guaranteed investment contracts, swaps, or derivatives, which must be intensively scrutinized as these embedded products can introduce counterparty risk, credit risk and interest rate risk.*
- 3. Issuing taxable debt to fund the pension liability increases the jurisdiction's bonded debt burden and potentially uses up debt capacity that could be used for other purposes. In addition, taxable debt is typically issued without call options or with "make-whole" calls, which can make it more difficult and costly to refund or restructure than traditional tax-exempt debt.*

4. *POBs are frequently structured in a manner that defers the principal payments or extends repayment over a period longer than the actuarial amortization period, thereby increasing the sponsor's overall costs.*
5. *Rating agencies may not view the proposed issuance of POBs as credit positive, particularly if the issuance is not part of a more comprehensive plan to address pension funding shortfalls.*

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The following discussion addresses these issues one-by-one as they relate to the City's issuance of POBs to reduce its UAt

***Investment rate***

*GFOA: The invested POB proceeds might fail to earn more than the interest rate owed over the term of the bonds, leading to increased overall liabilities for the government.*

The City's issuance of POBs is not as an investment vehicle, it is primarily a debt management tool. However, the effect of the PERS investment return cannot be ignored. Ideally the PERS Fund investment rate of return should align with the discount rate (interest rate) charged to the City on its pension liability. PERS has reduced its discount rate from time to time based on revised estimates of its long term investment return potential. A history of the changes in the PERS discount rate and actual investment return is shown below and on the following page.

**PERS HISTORICAL DISCOUNT RATES**

| <b>Fiscal</b> | <b>Discoun<br/>Rate</b> |
|---------------|-------------------------|
| Prior         | 8.50%                   |
| 1997-98       | 8.25                    |
| 2003-04       | 7.75                    |
| 2011-12       | 7.50                    |
| 2016-17       | 7.375                   |
| 2017-18       | 7.25                    |
| 2018-19       | 7.00                    |

**PERS HISTORICAL INVESTMENT RETURNS**

| <b>Fiscal Year</b> | <b>Rate of</b> | <b>10 Year</b> | <b>Fiscal</b>  | <b>Rate of</b> | <b>10 Year</b> |
|--------------------|----------------|----------------|----------------|----------------|----------------|
| <b>June 30</b>     | <b>Return</b>  | <b>Average</b> | <b>June 30</b> | <b>Return</b>  | <b>Average</b> |
| 1998               | 19.5%          |                | 2009           | (24.0)%        | 3.24%          |
| 1999               | 12.5           |                | 2010           | 13.3           | 3.52           |
| 2000               | 10.5           |                | 2011           | 21.7           | 6.41           |
| 2001               | (7.2)          |                | 2012           | 0.1            | 7.03           |
| 2002               | (6.1)          |                | 2013           | 13.2           | 7.98           |
| 2003               | 3.7            |                | 2014           | 18.4           | 8.16           |
| 2004               | 16.6           |                | 2015           | 2.4            | 7.14           |
| 2005               | 12.6           |                | 2016           | 0.6            | 5.97           |
| 2006               | 12.3           |                | 2017           | 11.2           | 5.18           |
| 2007               | 19.1           | 9.35%          | 2018           | 8.6            | 6.55           |
| 2008               | (5.1)          | 6.89           |                |                |                |

20 Year Average 6.72%

The investment rate of return is important since any time the PERS Investment Fund rate of return is less than the discount rate, a new amortization base layer is created and funding is amortized over a period of time (existing period is 30 years, but that will be reduced to 20 years starting in with the 2019 PERS valuation). If additional City funds are deposited in PERS and PERS fails to achieve a 7% return in every year going forward, a new amortization base will be created in each year - and the resulting increase in the annual UAL payment will reduce the cashflow savings shown on the charts in this report, which are expected from the difference in the City's borrowing and the reduction in UAL payments as a result of the additional contribution.

Conversely, investment gains from achieving a higher rate of return will provide a credit amortization base to the UAL to be used to offset future amortization bases. However, in no event does a credit amortization base resulting from an investment gain ever offset the City's normal pension cost. Because of this policy, if the investment return is consistently higher, it could ultimately create a net pension asset which is effectively "stranded" until there is another UAL amortization base to apply it to. Meanwhile, the City will still be paying the normal pension cost as well as the debt service on the POB, neither of which benefit from any net pension asset. Some cities use a Section 115 trust to help eliminate the potential for stranded net assets.

In the projections of debt service, the all-in effective interest rate (with all costs of issuance factored in) is 3.58% based on interest rates in the last week of September 2019, with a 0.25% interest rate contingency built in. This interest rate may increase before the bonds are issued depending on US and global economic factors. The bonds are being based on a taxable bond interest rate because the City is borrowing to make a direct deposit to the PERS Investment Fund, not the typical tax-exempt rate for issuers borrowing governmental capital improvements. Taxable interest rates can be 1.25% higher than tax-exempt interest rates, and therefore, there is less differential between the long term 7% return and a taxable interest rate. The long term rate of return would need to be below 3.6% to turn the estimated long term benefit into a long term cost.

The longer the maturity of the bonds and the longer that the PERS rate of return is lower than the bond yield, the greater the potential increase in costs. That is one reason to recommend a somewhat shorter than 30 year maturity that mirrors the estimated reduction in UAL payments over time.

### **POB Structure**

*GFOA: IPOBs are complex instruments that carry considerable risk. POE structures may incorporate the use of guaranteed investment contracts, swaps, or derivatives, which must be intensively scrutinized as these embedded products can introduce counterparty risk, credit risk and interest rate risk.*

The City's debt service will be structured conventionally - that is, a fixed rate over a fixed maturity with no swaps, derivatives or other hedging mechanisms.

*GFOA: In addition, taxable debt is typically issued without call options or with "make-whole" calls, which can make it more difficult and costly to refund or restructure than traditional tax-exempt debt.*

The City's debt service will be structured with typical call options and not with a "make-whole" provision.

*GFOA: POBs are frequently structured in a manner that defers the principal payments or extends repayment over a period longer than the actuarial amortization period, thereby increasing the sponsor's overall costs.*

The debt repayment contemplated is intended to mirror the existing UAL payments, and not defer or extend payments.

### **Debt Profile**

*GFOA: Issuing taxable debt to fund the pension liability increases the jurisdiction's bonded debt burden and potentially uses up debt capacity that could be used for other purposes*

The last time that the City accessed the debt markets using its General Fund for security to raise capital was in 2009, for the issuance of Revenue Bonds to fund certain redevelopment activities. Those bonds were refinanced by the Successor Agency in 2017. The City recently sold its Measure Mand Measure R Revenue Bonds to fund \$22 million of street improvements, which was assigned a AA-minus rating. The City has not indicated a need for additional general fund debt. The City's debt per capita is somewhat elevated due to the significant redevelopment debt incurred prior to redevelopment dissolution.

*GFOA: Rating agencies may not view the proposed issuance of POBs as credit positive, particularly if the issuance is not part of a more comprehensive plan to address pension funding shortfalls.*

The City's current PERS funding ratio is slightly less than 65% as of June 30, 2018. This funding plan will increase the funding ratio to 100% (or 90% depending on the direction of the City Council). Increasing the funding ratio should be a credit positive. Providing some cashflow savings by increasing the funding of the UAL will afford some budgetary flexibility to pay new amortization bases as they come on line.

### *S&P Rating Criteria*

S&P uses a combination of factors to assess the City's credit rating. These factors are given an assessment number from 1 to 6 (1 is best) and each factor is then weighted. The combined weighted factor gives an initial assessment which can be modified by other qualitative factors.

Recently, S&P has changed their methodology for rating pension obligation bonds of the same character as the City's proposed POB. In the past, the POB rating would be one rating notch lower than a city's general obligation bond rating. In 2017, S&P differentiated between a bond secured by a leased asset (such as a lease revenue bond) with payment subject to appropriation, and a nonleased-back obligation (such as the POB) with payment backed by the General Fund or legally available funds. Under the newer criteria, the POB rating would be the same as the City's implicit general obligation bond rating.

Exhibit D provides an overview of the factors and their weight in the assessment of the City's general obligation bond credit rating. In the S&P analytical framework for general obligation bond ratings, there are many factors that are considered, not just the City's debt. The local economy, over which the City has no control, is generally 30% of the rating, with management being another 20%. Financial measures account for another 30% (10% for liquidity, 10% for budgetary performance and 10% for budget flexibility). The institutional framework score is 10% of the rating and assesses the legal and practical environment in which the local government operates. Accordingly, all governments of the same type within the same state receive the same score-therefore, the City has no input on this factor. The final 10% of the rating is related to debt and contingent liabilities. Due to the relative weight of the debt component, it does not appear that issuing the POBs and converting the UAL to bonded debt will have a significant impact on the overall credit rating. In addition, S&P just reviewed the City's General Fund as part of its rating of the

Measure M and Measure R Bonds. It is likely that the City could anticipate the same credit rating of AA.

In addition, to address future UAL layers, some public agencies have adopted an UAL Funding Policy. An example of such policy language that the City could consider and tailor to its own needs is included as Exhibit E.

In addition, I mentioned that some states have POB policies. Michigan, for example, allows funding of 95% of the UAL and the savings must be at least 15% when the POB is issued.

### Timing

Issuance of bonds can be completed generally within 120 days from the time the City's financing team is in place. The primary services required are bond counsel, disclosure counsel and financial advisor. A validation timeline is included as Exhibit F. Validation must be completed prior to issuance of the bonds.

The debt service included in the analysis was based on recent interest rates plus 25 basis points (one-quarter percent). For every additional 25 basis point increase in interest rates, the annual debt service will increase by approximately \$200,000.



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I look forward to /discussing any questions you have on this  
information. Very truly yours,

A handwritten signature in black ink, appearing to read "Suzanne Harrell". The signature is fluid and cursive, with the first name "Suzanne" and last name "Harrell" clearly distinguishable.

Suzanne Harrell

# Exhibit A

## PERS UAL by Amortization Base

| Reason for Base        | Date<br>Established | Amortization<br>Period* | Base          |
|------------------------|---------------------|-------------------------|---------------|
| ASSUMPTION CHANGE      | 6/30/2003           | 5                       | \$ 1,958,210  |
| BENEFIT CHANGE         | 6/30/2004           | 6                       | 1,071,559     |
| METHOD CHANGE          | 6/30/2004           | 6                       | (244,733)     |
| ASSUMPTION CHANGE      | 6/30/2009           | 11                      | 6,528,506     |
| SPECIAL {GAIN}/LOSS    | 6/30/2009           | 21                      | 5,530,016     |
| SPECIAL (GAIN)/LOSS    | 6/30/2010           | 22                      | (810,314)     |
| ASSUMPTION CHANGE      | 6/30/201 I          | 13                      | 3,972,440     |
| PRE-RET OPT 2W DTH BEN | 6/30/201 I          | 13                      | 725,617       |
| SPECIAL (GAIN)/LOSS    | 6/30/2011           | 23                      | 1,031,589     |
| PAYMENT (GAIN)/LOSS    | 6/30/2012           | 24                      | 1,550,504     |
| (GAIN)/LOSS            | 6/30/2012           | 24                      | 26,423,97     |
| (GAIN)/LOSS            | 6/30/2013           | 25                      | 20,041,00     |
| ASSUMPTION CHANGE      | 6/30/2014           | 16                      | 16,981,01     |
| (GAIN)/LOSS            | 6/30/2014           | 26                      | (13,698,955)  |
| (GAIN)/LOSS            | 6/30/2015           | 27                      | 13,853,45     |
| ASSUMPTION CHANGE      | 6/30/2016           | 18                      | 5,174,956     |
| {GAIN}/LOSS            | 6/30/2016           | 28                      | 14,626,39     |
| ASSUMPTION CHANGE      | 6/30/2017           | 19                      | 5,592,774     |
| {GAIN}/LOSS            | 6/30/2017           | 29                      | (IO ,682,654) |
| METHOD CHANGE          | 6/30/2018           | 20                      | 2,298,811     |
| ASSUMPTION CHANGE      | 6/30/2018           | 20                      | 9,373,835     |
| (GAIN)/LOSS            | 6/30/2018           | 30                      | (4,189,05     |
|                        |                     |                         | \$107,108,953 |

\* Remaining as of June 30, 2018.

**Exhibit B**

**Level Debt Service to 2038; Declining to Maturity in 2044**

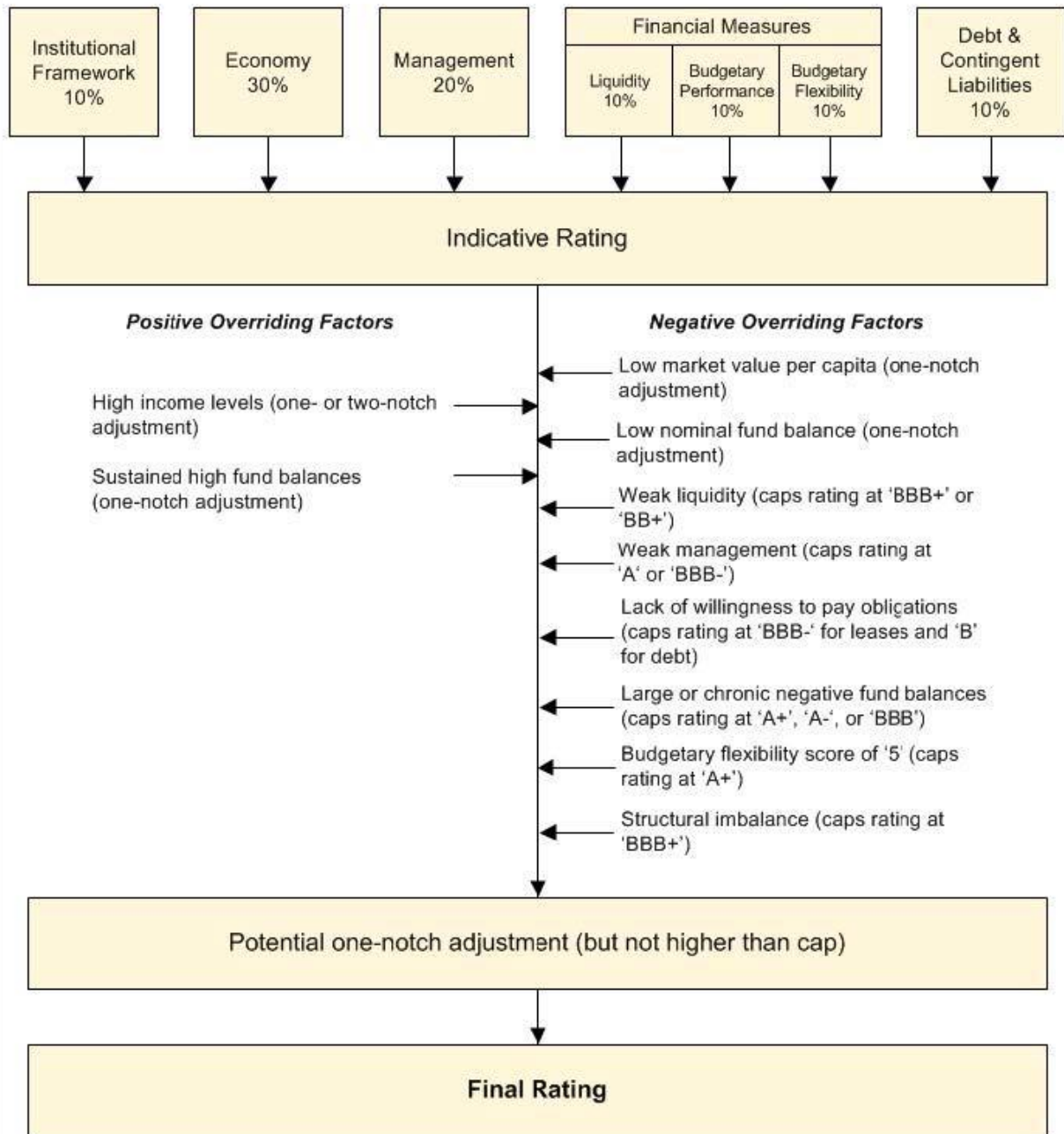
| <b>FYE June 30</b> | <b>UAL<br/>Payments</b> | <b>Debt<br/>Service</b> | <b>Reduction</b> |
|--------------------|-------------------------|-------------------------|------------------|
| 2021               | 7,800,842               | 6,960,000               | 840,842          |
| 2022               | 8,618,581               | 6,963,000               | 1,655,581        |
| 2023               | 9,284,153               | 6,959,000               | 2,325,153        |
| 2024               | 9,670,083               | 6,960,000               | 2,710,083        |
| 2025               | 10,114,816              | 6,959,000               | 3,155,816        |
| 2026               | 9,890,656               | 6,963,000               | 2,927,656        |
| 2027               | 9,977,460               | 6,959,000               | 3,018,460        |
| 2028               | 10,251,840              | 6,961,000               | 3,290,840        |
| 2029               | 10,533,767              | 6,962,000               | 3,571,767        |
| 2030               | 10,823,443              | 6,961,000               | 3,862,443        |
| 2031               | 11,121,087              | 6,962,000               | 4,159,087        |
| 2032               | 10,421,927              | 6,959,000               | 3,462,927        |
| 2033               | 10,261,326              | 6,961,000               | 3,300,326        |
| 2034               | 9,413,414               | 6,960,000               | 2,453,414        |
| 2035               | 9,062,837               | 6,959,000               | 2,103,837        |
| 2036               | 8,532,679               | 6,963,000               | 1,569,679        |
| 2037               | 7,630,590               | 6,962,000               | 668,590          |
| 2038               | 7,184,607               | 6,959,000               | 225,607          |
| 2039               | 6,708,324               | 6,703,000               | 5,324            |
| 2040               | 6,357,664               | 6,355,000               | 2,664            |
| 2041               | 6,158,081               | 6,156,000               | 2,081            |
| 2042               | 5,145,902               | 5,142,000               | 3,902            |
| 2043               | 5,225,106               | 5,223,000               | 2,106            |
| 2044               | 3,919,622               | 3,915,000               | 4,622            |
|                    | 204, 108,807            | 158,786,000             | 45,322,807       |
| Reduction          |                         |                         | 22.2%            |
| PV at 3%           |                         |                         | 34,930,000       |
| Principal (Net)    | 107,109,000             | 107,925,000             |                  |
| Effective Rate     | 7.00%                   | 3.56%                   |                  |

**Exhibit C**  
**Partial Funding**

| <b>FYE June 30</b>                | <b>UAL<br/>Payments</b> | <b>Prepaid<br/>Bases</b> | <b>Remaining<br/>UAL<br/>Payments</b> | <b>Debt<br/>Service</b> | <b>Total Costs</b> | <b>Reduction</b>    |
|-----------------------------------|-------------------------|--------------------------|---------------------------------------|-------------------------|--------------------|---------------------|
| 2021                              | 7,800,842               | (7,148,178)              | 652,664                               | 5,668,000               | 6,320,664          | 1,480,178           |
| 2022                              | 8,618,581               | (7,344,753)              | 1,273,828                             | 5,669,000               | 6,942,828          | 1,675,753           |
| 2023                              | 9,284,153               | (7,546,734)              | 1,737,419                             | 5,669,000               | 7,406,419          | 1,877,734           |
| 2024                              | 9,670,083               | (7,754,269)              | 1,915,814                             | 5,665,000               | 7,580,814          | 2,089,269           |
| 2025                              | 10,114,816              | (7,967,511)              | 2,147,305                             | 5,669,000               | 7,816,305          | 2,298,511           |
| 2026                              | 9,890,656               | (7,684,297)              | 2,206,359                             | 5,669,000               | 7,875,359          | 2,015,297           |
| 2027                              | 9,977,460               | (7,655,615)              | 2,321,845                             | 5,668,000               | 7,989,845          | 1,987,615           |
| 2028                              | 10,251,840              | (7,866,144)              | 2,385,696                             | 5,668,000               | 8,053,696          | 2,198,144           |
| 2029                              | 10,533,767              | (8,082,463)              | 2,451,304                             | 5,668,000               | 8,119,304          | 2,414,463           |
| 2030                              | 10,823,443              | (8,304,731)              | 2,518,712                             | 5,667,000               | 8,185,712          | 2,637,731           |
| 2031                              | 11,121,087              | (8,533,111)              | 2,587,976                             | 5,664,000               | 8,251,976          | 2,869,111           |
| 2032                              | 10,421,927              | (7,762,781)              | 2,659,146                             | 5,665,000               | 8,324,146          | 2,097,781           |
| 2033                              | 10,261,326              | (7,529,052)              | 2,732,274                             | 5,666,000               | 8,398,274          | 1,863,052           |
| 2034                              | 9,413,414               | (6,606,005)              | 2,807,409                             | 5,666,000               | 8,473,409          | 940,005             |
| 2035                              | 9,062,837               | (6,315,530)              | 2,747,307                             | 5,668,000               | 8,415,307          | 647,530             |
| 2036                              | 8,532,679               | (6,004,084)              | 2,528,595                             | 5,666,000               | 8,194,595          | 338,084             |
| 2037                              | 7,630,590               | (5,670,732)              | 1,959,858                             | 5,668,000               | 7,627,858          | 2,732               |
| 2038                              | 7,184,607               | (5,826,677)              | 1,357,930                             | 5,664,000               | 7,021,930          | 162,677             |
| 2039                              | 6,708,324               | (5,986,910)              | 721,414                               | 5,669,000               | 6,390,414          | 317,910             |
| 2040                              | 6,357,664               | (6,151,551)              | 206,113                               | 5,667,000               | 5,873,113          | 484,551             |
| 2041                              | 6,158,081               | (5,217,050)              | 941,031                               | 5,213,000               | 6,154,031          | 4,050               |
| 2042                              | 5,145,902               | (3,525,631)              | 1,620,271                             | 3,524,000               | 5,144,271          | 1,631               |
| 2043                              | 5,225,106               | (2,457,381)              | 2,767,725                             | 2,454,000               | 5,221,725          | 3,381               |
| 2044                              | 3,919,622               | (1,100,000)              | 2,819,622                             | 1,194,000               | 3,916,374          | 3,248               |
|                                   | 204,108,807             | (156,138,438)            | 47,970,369                            | 125,728,000             | 173,698,369        | 30,410,438          |
| Reduction<br>PY at 3%             |                         |                          |                                       |                         |                    | 14.9%<br>24,040,000 |
| Principal (Net)<br>Effective Rate | 107,109,000<br>7.00%    | 85,815,000               | 21,294,000                            | 86,525,000<br>3.56%     |                    |                     |

Chart 1

## Analytical Framework For Local GO Ratings



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## **Exhibit E**

### **Unfunded Accrued Liability Funding Policy**

*The purpose of this funding policy is to establish a framework for funding the City's defined benefit pension plan, taking into account factors that are relevant to the plan and the City. These factors include:*

- The financial position of the City.*
- *Stability of the plan and I or the affordability of the annual contributions.*
- *Benefit security.*  
*The terms of the PERS contract for the City, along with any related collective bargaining agreements.*
- *Minimum funding requirements under State law.*

*There are a number of advantages to developing a funding policy to address an unfunded accrued liability. These advantages include the following:*

- *Establishing a funding policy provides the framework to ensure proper management of future liabilities. The adoption of a funding policy will ensure a disciplined decision making process, which will contribute to better predictability in funding.*
- *Having a written summary of the funding policy that is accessible to the members will help improve the transparency of funding decisions and increase the members' understanding of pension funding issues.*  
*The exercise of developing this funding policy improves the identification, understanding, and management of the risk factors that affect the variability of funding requirements and the security of benefits to the members.*

*The City may incur additional new unfunded accrued liabilities from year to year, due to the following factors:*

- Changes in actuarial assumptions and experience changes (e.g., changes in the discount rate, changes in demographic experience, etc.).*
- Changes in actuarial gains and losses due to asset returns being higher or lower than expected.*
- Changes in plan benefits.*

*Any new increase or decrease in the liability resulting from the annual actuarial valuation is identified as a separate line item, or amortization base, on the annual PERS actuarial valuation report.*

*Due to the possibility of a new pension liability developing, the City desires to create an Unfunded Accrued Liability ("UAL") Funding Policy in order to immediately address any new pension liabilities, or amortization bases, that arise. This policy lays out the parameters for paying off the*

*. UAL in a designated amount of time, based on the amount of the UAL, as follows:*

| <b><i>Unfunded Accrued Amount<br/>(Separate Amortization Base<br/>From PERS Report)</i></b> | <b><i>Payoff Time Period</i></b> |
|---|----------------------------------|
| \$0 to \$5,000,000  | Between _ and _ years            |
| \$5,000,001 to \$10,000,000   | Between _ and _ years            |
| \$10,000,001 to   | Between _ and _ years            |
| \$15,000,000 \$15,000,001   | Between _ and _ years            |
| to \$20,000,000   | Between _ and _ years            |
| \$20,000,001 or more  |                                  |

*Under the new PERS policies, no amortization base will be amortized over more than 20 years, beginning with amortization bases created in 2019.*

*Each year, when the City is provided with the annual valuation report from PERS, staff will present to the City Counsel, as part of the next budgetary cycle, the following:*

- *The dollar amount of the new liability (new amortization base).*
- *The number of years that staff is recommending to pay off the liability.*
- *The dollar amount of the annual contribution to be made.*
- *The funding source(s) of the payments.*

*When an amortization base results in a credit balance, the credit will be applied, first, to any negative bases during the same period and, secondly, against any prior year bases until the credit is fully exhausted. The remaining outstanding liability will then be recalculated and a new payoff schedule and annual contribution will be determined based on the payoff schedule above.*

## Exhibit F

### Validation Timeline

| Document/Event   | Comment  |
|--|--|
| Bond Resolution  | Resolution adopted prior to validation action  |
| Summons and Complaint  | Beginning of validation proceedings to occur within 60 days of the adoption of the Resolution  |
| Application for Order of Publication   | Filed same day as summons and complaint  |
| Clerk Declaration in Support of Application for Order of Publication         | Filed same day as application for order of publication   |
| Order of Publication   | Court will grant after review of summons, complaint, application for order of publication, and clerk declaration in support                    |
| 1 <sup>st</sup> Publication  | Publication to begin once order of publication is received. Publication must occur once a week for three successive weeks pursuant to GC §6063 |
| 2 <sup>nd</sup> publication  | Week two   |
| 3 <sup>rd</sup> publication  | Week three   |
| 10 days period after final publication to answer complaint                   | Jurisdiction is complete 10 days after the completion of publication of the summons pursuant to GC §6063                                       |
| Declaration of Publication   | Filed once jurisdiction is complete  |
| Attorney Declarations of No Opposition                                       | Filed once jurisdiction is complete  |
| Memorandum of Points and Authorities in Support of Entry of Default Judgment | Filed once jurisdiction is complete  |
| Proposed Judgment  | Filed once jurisdiction is complete  |
| Signed Judgment  | Court grants Judgment after review of memorandum of points and authorities and a hearing   |
| Passive Validation   | 30 days after Judgment is entered  |