

ACTUARIAL VALUATION REPORT

**FIREFIGHTERS' PENSION AND
RELIEF FUND FOR THE CITY
OF NEW ORLEANS
[NEW FUND]**

Annual Actuarial Valuation
as of January 1, 2020

CONEFRY & COMPANY, LLC

ACTUARIAL AND EMPLOYEE BENEFIT CONSULTING
NEW ORLEANS, LOUISIANA

INTRODUCTION

We present in this report the results of our actuarial valuation of the Firefighters' Pension and Relief Fund of the City of New Orleans as of January 1, 2020. The New Fund plan is intended to be actuarially funded, and we have performed this actuarial valuation using conventional and generally accepted actuarial methods, assumptions, and principles as would typically be applied to a qualified defined benefit pension plan subject to the funding standards of the Employee Retirement Income Security Act of 1974 (ERISA). We have performed the New Fund actuarial valuation using the Entry Age Normal Cost Method effective with the January 1, 2015 actuarial valuation (the method formerly used through and including the January 1, 2014 actuarial valuation was the Aggregate Level Cost Method). A full description of the funding method is contained in the body of the report.

The Summary of Plan Provisions presented in the Appendix is intended to describe the principal benefits provided by the plan, particularly from the perspective of their significance in affecting the actuarial liability and cost of the plan. The summary is not, of course, intended to be a comprehensive or complete description of all benefits payable under all circumstances under the pension plan.

FIREFIGHTERS' PENSION AND RELIEF FUND
FOR THE CITY OF NEW ORLEANS
New System

SUMMARY

I. FINANCIAL AND ACTUARIAL STATUS
as of January 1, 2020

Market Value of Assets	\$ 42,036,380	Page 4
Actuarial Value of Assets	\$ 42,036,380	Page 5

II. EMPLOYER AND EMPLOYEE CONTRIBUTIONS for the
Plan Year Beginning January 1, 2020 - New Fund

Total Plan Contribution (As % of Payroll)	\$ 38,310,448 (132.948%)	Page 7
Employee Plan Contribution (As % of Payroll)	\$ 2,881,604 (10.000%)	Page 7
Employer Plan Contribution Including Expenses (As % of Payroll)	\$ 35,428,844 (122.948%)	Page 7

APPENDIX

SUMMARY OF PLAN PROVISIONS	Exhibit I
STATEMENT OF ACTUARIAL BASIS FOR FUNDING PURPOSES	Exhibit II
ACTIVE AND INACTIVE PARTICIPANT PROFILES	Exhibit III
ACCOUNTING INFORMATION AND FUNDING PROGRESS	Exhibit IV

CERTIFICATION

I. FINANCIAL AND ACTUARIAL STATUS as of January 1, 2020
New Fund

We have conducted this actuarial valuation using employee data and asset information furnished by the plan administrator and the auditors. This section of the report presents a summary of the assets of the plan at Fair Market Value. The funding method used to determine the actuarial liabilities is described in Section II and the actuarial assumptions upon which the liabilities are based are summarized in Exhibit II of the report.

ASSETS

The following table showing the composition of the assets as of December 31, 2019 is based on information supplied by the auditors through the System administrative staff.

Table 1
Market Value of Assets
As of December 31, 2019
New Fund

CURRENT ASSETS

	Cash in Banks	\$	376,550	
	Accrued investment income		25,606	
	Receivables		<u>-928,669</u>	
(1)	Total Current Assets			\$ -526,513

INVESTMENTS

	Cash equivalents	\$	8,616,973	
	Bonds		221,012	
	Stock		390	
	Hedge Funds		29,874,998	
	Notes receivable		0	
	Investment in partnerships, LLC, etc.		9,088,799	
	Real Estate		<u>301,000</u>	
(2)	Total Investments			\$ 48,103,172

CURRENT LIABILITIES

	Accounts payable	\$	5,540,279	
	Due to Old system		0	
	Notes Payable		0	
	Accrued Interest Payable		<u>0</u>	
(3)	Total Current Liabilities			\$ <u>5,540,279</u>

NET ASSETS AVAILABLE FOR PENSION BENEFITS:

(1) + (2) - (3)				\$ <u>42,036,380</u>
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* The actuarial value of assets used in this valuation is Market Value as set forth in Table 2.

ACTUARIAL VALUE OF ASSETS

Beginning with the January 1, 1999 actuarial valuation, the method of determining the actuarial value of assets was changed to adjusted market value from the former basis involving the average of cost and market values of securities. This method reflected actual market value performance over a rolling three year period ending on the valuation date. The realized and unrealized market to market performance is smoothed over the three years immediately preceding the valuation date.

For purposes of settlement discussions in conjunction with mandamus litigation involving determination of the funding contributions, the three year smoothing period was changed to a seven year period. Recent substantial changes in the valuation of certain assets of the fund, however, causes retrospective smoothing of the asset value to be inappropriate and, accordingly, the board of trustees has selected actual market value for commencing with the January 1, 2015 actuarial valuation. The use of a smoothing feature in future valuations in determining the actuarial valuation of assets will be addressed by the board as investment conditions in the fund are stabilized.

The following table develops the Actual Market Value of Assets to be used as the Actuarial Value of Assets in this actuarial valuation.

Table 2
Actuarial Value of Assets
As of December 31, 2019
New Fund

Current Assets	\$	-526,513
Investments		48,103,172
Inventory and Intangible Assets		0
Property & Equipment, Net of Depreciation		0
Smoothing Adjustment		<u>0</u>
TOTAL ASSETS	\$	47,576,659
Less,		
TOTAL LIABILITIES		<u>-5,540,279</u>
Actuarial Value of Assets (Market Value)	\$	<u>42,036,380</u>

II.

EMPLOYER CONTRIBUTIONS

for the Plan Year Beginning January 1, 2020

New Fund

DESCRIPTION OF ACTUARIAL COST METHOD

Under the Entry Age Normal Cost Method, the normal cost of the plan is designed to be a level percentage of payroll, calculated on an individual basis, spread over the entire working lifetime of each participant. The future working lifetime is determined from each participant's hypothetical entry age into the plan assuming the plan had always been in existence, to his expected retirement date. The actuarial accrued liability is the amount of total liability not covered by future entry age normal costs. This amount is composed of the actuarial value of benefits already funded (assets) and those not yet funded (unfunded actuarial liability).

The plan's funding cost for the year is the sum of the Entry Age Normal Cost and the amount necessary to amortize the remaining unfunded actuarial liability as of the valuation date over the adopted amortization period.

The basis used to amortize the unfunded actuarial liability can be "open" (that is, a constant number of years) or "closed" (that is, with the remaining period reducing by one each year). The basis may also be either a level dollar amortization method (more conservative) or a method based on increasing valuation payroll (less conservative). The amortization period and method adopted and used in this valuation is 30 year, level dollar open amortization.

Table 3
Entry Age Normal Cost for Plan Year
Beginning January 1, 2020

(1)	Total Entry Age Normal Cost of all active participants, assumed payable monthly	\$ 6,289,441
(2)	Current annual payroll of active participants *	\$ 28,816,039
(3)	Composite Entry Age Normal Cost Percentage: (1) divided by (2)	21.826%

* There are 461 active participants.

Table 4
Entry Age Normal Cost Unfunded Actuarial Liability
as of January 1, 2020

(1)	Actuarial Present Value of Expected Benefits to Active Plan Participants (Excluding D.R.O.P.)	
	(a) Retirement Benefits	\$ 145,112,580
	(b) Survivor Benefits	7,159,310
	(c) Disability Benefits	43,779,769
	(d) Vesting Benefit	2,061,152
	(e) Refunds of Employee Contributions	<u>157,107</u>
	Total Active	\$ 198,269,918
(2)	Actuarial Present Value of Expected Benefits to Inactive Plan Participants (Including D.R.O.P.)	
	(a) Service Retirement *	125,592,740
	(b) Disability Retirement	50,827,691
	(c) Survivors and Widows	24,401,077
	(d) Terminated Vested	140,551
	(e) P.L.O.P. Account Balances	9,205,961
	(f1) D.R.O.P. Account Balances (Retired)	6,983,678
	(f2) D.R.O.P. Account Balances (Not Retired)	12,861,728
	(g) D.R.O.P. PV of Future Benefits	<u>55,519,824</u>
	Total Inactive	\$ 285,533,540
(3)	Grand Total Active and Inactive: (1) + (2)	\$ 483,803,458
(4)	Actuarial Present Value of Future Employer Normal Cost Contributions:	51,018,906
(5)	Entry Age Normal Cost Accrued Actuarial Liability as of January 1, 2020: (3) - (4)	432,784,552
(6)	Actuarial Value of Assets (from Table 2)	42,036,380
(7)	Unfunded Entry Age Normal Cost Actuarial Liability as of January 1, 2020: (5) - (6)	390,748,172

* Includes 379 retirees (of a total of 622 retirees) who retired under service retirement benefit formula and who are now classified as disabled as of the valuation date. Disabled mortality assumptions have been applied in calculating the actuarial present value of benefits for these participants. (See page 20 for age grid).

TOTAL REQUIRED CONTRIBUTION FOR PLAN YEAR BEGINNING January 1, 2020

The contribution for a plan year equals the normal cost, plus the expense assumption cost, plus the amount necessary to amortize the Entry Age Normal Cost (EAN) Unfunded Actuarial Liability. This Unfunded Liability for funding purposes is \$ 390,748,172, as developed in Table 4. The annual amount, payable monthly, required to amortize this EAN Unfunded Liability over the open 30 year period ending December 31, 2049 at 7.50% annual interest is \$31,821,007.

The total plan contribution on this basis is developed in the following Table 5.

Table 5
Total Required Contribution for the
Plan Year Beginning January 1, 2020

(1)	Normal Cost (From Table 3)	6,289,441	
(2)	Expense Assumption Cost	200,000	
(3)	Net Annual charge Required for 30 Year Amortization of EAN Unfunded Liability assumed payable monthly (See Above)	31,821,007	
(4)	Total Plan Contribution assumed payable monthly: (1) + (2) + (3)	\$ 38,310,448	(132.948%) *
(5)	Weighted Average of Expected Employee Contributions (Based on Present Value) as of January 1, 2020	\$ 2,881,604	(10.000%) *
(6)	Employer Contribution assumed payable monthly: (4) - (5)	\$ 35,428,844	(122.948%) *
*	Expressed as a percentage of annual participant payroll of \$28,816,039.		

June 28, 2019

A P P E N D I X

EXHIBIT I
FIREFIGHTERS' PENSION AND RELIEF FUND
OF THE CITY OF NEW ORLEANS
SUMMARY OF PLAN PROVISIONS
[NEW FUND]

COVERAGE

Firefighters employed after December 31, 1967 or transferred into the New Fund from the Old Fund.

EMPLOYEE CONTRIBUTIONS:

Through December 31, 2013, 6% of salary for members with less than 20 years of service. Effective January 1, 2014, 10% of salary for all members, implemented on a graded schedule as follows:

For members with less than 20 years of service: 8% effective January 1, 2014 and 10% effective January 1, 2015 and thereafter.

For members with at least 20 years of service: 3.33% effective January 1, 2014; 6.66% effective January 1, 2015; and 10% effective January 1, 2016 and thereafter.

EMPLOYER CONTRIBUTIONS:

Employer contributions are made monthly during any given calendar fiscal year to pay the actuarially determined contributions based on the actuarial valuation as of January 1st of the immediately preceding calendar year. Actuarially determined contributions in the January 1, 1987 through January 1, 2014 actuarial valuations had been based on the Aggregate Actuarial Cost Method. Effective with the January 1, 2015 actuarial valuation, actuarially determined contributions have been based on the Entry Age Normal Cost Method with thirty year, level dollar open amortization of the unfunded actuarial liability.

RETIREMENT BENEFITS:

Eligibility:

Age 50 and 12 years of service. For active members entering employment on and after January 1, 2015, age 52 and 12 years of service. For active members entering employment on and after August 15, 2016, Social Security Retirement Age less 10 years.

Benefits:

Retirement allowance equal to 2 1/2% of average compensation based on five highest consecutive years times creditable service. For members retiring after age 50 with over 12 years of service, benefit is 3 1/3% for each year of service over 12. For members with 30 or more years of service, benefit is 3 1/3% for each year of service.

Effective January 1, 2017, for currently active who entered employment prior to January 1, 2015 and future payments to previously retired and D.R.O.P. members, retirement allowance equal to 2 1/2% of average compensation based on five highest consecutive years times creditable service before the later of age 50 and completion of 12 years of service, plus 3 1/3% times creditable service after the later of age 50 and completion of 12 years of service.

EXHIBIT I
FIREFIGHTERS' PENSION AND RELIEF FUND
OF THE CITY OF NEW ORLEANS
SUMMARY OF PLAN PROVISIONS
[NEW FUND]
(Continued)

Benefits (cont.):

For active members entering employment on and after January 1, 2015 and retiring after age 52 and 12 years of service, retirement allowance is equal to 2 3/4% of average compensation based on five highest consecutive years times creditable service. The 2 3/4% percentage has been amended to 2 1/2% for members entering employment on and after August 15, 2016.

Maximum Benefit payable is 100% of highest five year average compensation preceding retirement.

Minimum Benefit

Benefit of retirees and widows shall not be less than \$1,200 per month.

Cost-of-living: Board is authorized (by a two-thirds vote of the entire board) to provide annual increases to retirees and widows based on excess earnings in an amount not to exceed 3% of the original benefit. For retirees and widows age 65 and older, the board is authorized to provide an additional amount not to exceed 2% of the original benefit.

DISABILITY BENEFITS:

Eligibility:

1. Service-related physically and mentally permanently incapacitated for performance of duties as a member of the fire department. (certified by civil service physician and board).
2. Non-service related physically and mentally permanently incapacitated for performance of duties as a member of the fire department.

Benefit:

1. benefits are equal to the greater of two-thirds of monthly compensation or a regular retirement benefit if the member is eligible.
If able to work, benefits are equal to the greater of one-half of monthly compensation or a regular retirement benefit if the member is so eligible.
2. members with 10 years of service or less receive 30% of average compensation during the last year of service immediately preceding disability; 40% of average compensation for members with more than 10 years but less than 15 years of service; and 50% of average compensation for members with 15 or more years of service.

DEATH BENEFITS:

Eligibility:

1. Death of an active member killed while performing duties as a firefighter.
2. Non-duty related death of active or former firefighter entitled to benefits.

Benefit:

1. Surviving widow receives 66 2/3% of salary at time of death. Each child under age 18 receives \$300 per month.
2. 50% of salary at the time of death. If eligible for retirement, widow shall receive an automatic Option 2 benefit.

Effective July 1, 1977, a death benefit of \$3,000 is paid to the beneficiary of the deceased active or retired firefighter.

EXHIBIT I
FIREFIGHTERS' PENSION AND RELIEF FUND
OF THE CITY OF NEW ORLEANS
SUMMARY OF PLAN PROVISIONS
[NEW FUND]
(Continued)

SEPARATION BENEFIT:

Eligibility:

1. withdrawal from service with 12 years of service prior to age 50.
2. Separation of service.

Benefit:

1. Employee may allow contributions to remain on deposit and receive benefit at age 50.
2. refund of accumulated contributions.

DEFERRED RETIREMENT OPTION PLAN:

Any member who has twelve years of service and who is eligible for a service retirement allowance may participate in the DROP plan. Effective July 1, 2008, a member may participate in the DROP plan retroactively based on the pension calculated as of the retroactive date selected.

- 1) A member can only participant once, and only up to five years.
- 2) When a member joins the DROP, he stops contributing to and earning benefits in the system. Employer contributions also stop. His retirement benefit is paid into his DROP account.
- 3) Members of the DROP do not receive cost-of-living increases.
- 4) Upon termination of employment at the end of the specified period of DROP participation, the DROP account is paid out in a lump sum payment.
- 5) If at the end of a Member's period of DROP participation he does not terminate employment, payments into the DROP account shall cease and he shall resume active contributing membership in the system.
- 6) There are no payments made from the DROP account until employment is terminated. Effective for DROP participation commencing on and after January 1, 2016, after employment termination DROP account balances are placed in a separate liquid asset money market investment account. Alternatively, if irrevocably elected by the member, the DROP account may continue participation in the actual investment performance (positive and negative) earned by the fund after the completion of DROP participation based on the five-year rolling average of the composite rate of return of the pension fund, less an administrative fee as determined by the board.
- 7) An additional benefit is paid based on the additional service, using the method of computation for his original benefit if the additional service is less than 60 months. If the additional service is 60 months or more, the average compensation is based on the additional service period.

EXHIBIT II
FIREFIGHTERS' PENSION AND RELIEF FUND
FOR THE CITY OF NEW ORLEANS
STATEMENT OF ACTUARIAL BASIS FOR FUNDING PURPOSES
[NEW FUND]

Actuarial Funding Method:

Cost Method:	Individual Entry Age Normal Cost Method with level dollar, open 30 year amortization of unfunded actuarial liability (effective January 1, 2015).
Asset Valuation Method:	Actual Market Value (effective January 1, 2015).

Actuarial Assumptions

Interest:	7.5% compounded annually.
Mortality:	1994 Uninsured Pensioner Table for males and females for active and retired except disabled; disabled mortality is the same with ages set forward five years. 5% of all deaths of active members are assumed to be service related. 50% of deaths of service retirees and 75% of deaths of disability retirees are assumed to be service related.
Turnover:	The Table of withdrawal rates is included later in this Exhibit. Additional turnover rates for active members with less than five years of service were eliminated effective with the January 1, 2015 actuarial valuation.
Salary Increases:	5.0% compounded annually.
Retirement:	Employees are assumed to retire after the earliest of: first, attainment of age 50 and 30 years of service; second, the later of age 55 and completion of 25 years of service; third, attainment of age 60 and completion of 12 years of service.

STATEMENT OF ACTUARIAL BASIS FOR FUNDING PURPOSES

Actuarial Assumptions (Continued)

Disability Incidence:	The Table of disability incidence rates is included later in this exhibit. 80% of disabilities are assumed to be service related.
Marriage Statistics:	80% of members are assumed to be married.
Cost of Living Benefits:	Only cost of living increases previously granted by the Board have been included in the valuation and it has not been assumed that there will be any future increases. Any such increases will be included in the valuation if, as, and when granted by the Board.
Vesting Electing Percentage:	75% of vested terminations elect deferred benefits in lieu of contribution refunds.

FIREFIGHTERS' PENSION AND RELIEF FUND
 JANUARY 1, 2020 ACTUARIAL VALUATION
 ASSUMED RATES OF MORTALITY, WITHDRAWAL AND DISABILITY INCIDENCE BY AGE AND GENDER

AGE	MORTALITY		WITHDRAWAL	DISABILITY INCIDENCE
	MALE	FEMALE		
15	.000371	.000233	.010000	.003150
16	.000421	.000261	.010000	.003150
17	.000463	.000281	.010000	.003150
18	.000495	.000293	.010000	.003150
19	.000521	.000301	.010000	.003150
20	.000545	.000305	.010000	.003150
21	.000570	.000308	.010000	.003150
22	.000598	.000311	.010000	.003150
23	.000633	.000313	.010000	.003150
24	.000671	.000313	.010000	.003150
25	.000711	.000313	.010000	.003150
26	.000749	.000316	.010000	.003150
27	.000782	.000324	.010000	.003150
28	.000811	.000338	.010000	.003270
29	.000838	.000356	.010000	.003450
30	.000862	.000377	.010000	.003690
31	.000883	.000401	.009700	.003990
32	.000902	.000427	.009300	.004350
33	.000912	.000454	.009000	.004740
34	.000913	.000482	.008700	.005190
35	.000915	.000514	.008300	.005670
36	.000927	.000550	.008000	.006180
37	.000958	.000593	.007700	.006750
38	.001010	.000643	.007300	.007500
39	.001075	.000701	.007300	.012500
40	.001153	.000763	.006700	.025000
41	.001243	.000826	.006000	.025000
42	.001346	.000888	.005300	.025000
43	.001454	.000943	.004700	.025000
44	.001568	.000992	.004000	.025000
45	.001697	.001046	.003300	.025000
46	.001852	.001111	.003300	.025000
47	.002042	.001196	.003300	.025000
48	.002260	.001297	.003300	.025000
49	.002501	.001408	.003300	.025000
50	.002773	.001536	.003300	.037500
51	.003088	.001686	.003300	.037500
52	.003455	.001864	.003300	.037500
53	.003854	.002051	.003300	.037500
54	.004278	.002241	.003300	.037500
55	.004758	.002466	.003300	.037500
56	.005322	.002755	.003300	.037500
57	.006001	.003139	.003300	.037500
58	.006774	.003612	.003300	.037500
59	.007623	.004154	.003300	.037500
60	.008576	.004773	.003300	.037500
61	.009663	.005476	.003300	.037500
62	.010911	.006271	.003300	.037500
63	.012335	.007179	.003300	.037500
64	.013914	.008194	.003300	.037500
65	.015629	.009286	.003300	.037500

June 28, 2019

FIREFIGHTERS' PENSION AND RELIEF FUND
JANUARY 1, 2020 ACTUARIAL VALUATION
ASSUMED RATES OF MORTALITY, WITHDRAWAL AND DISABILITY INCIDENCE BY AGE AND GENDER

MORTALITY			WITHDRAWAL	DISABILITY INCIDENCE
AGE	MALE	FEMALE		
66	.017462	.010423	0.000000	.037500
67	.019391	.011574	0.000000	.037500
68	.021354	.012648	0.000000	.037500
69	.023364	.013665	0.000000	.037500
70	.025516	.014763	0.000000	.037500
71	.027905	.016079	0.000000	.037500
72	.030625	.017748	0.000000	.037500
73	.033549	.019724	0.000000	.037500
74	.036614	.021915	0.000000	.037500
75	.040012	.024393	0.000000	.037500
76	.043933	.027231	0.000000	.037500
77	.048570	.030501	0.000000	.037500
78	.053991	.034115	0.000000	.037500
79	.060066	.038024	0.000000	.037500
80	.066696	.042361	0.000000	.037500
81	.073780	.047260	0.000000	.037500
82	.081217	.052853	0.000000	.037500
83	.088721	.058986	0.000000	.037500
84	.096358	.065569	0.000000	.037500
85	.104559	.072836	0.000000	.037500
86	.113755	.081018	0.000000	.037500
87	.124377	.090348	0.000000	.037500
88	.136537	.100882	0.000000	.037500
89	.149949	.112467	0.000000	.037500
90	.164442	.125016	0.000000	.037500
91	.179849	.138442	0.000000	.037500
92	.196001	.152660	0.000000	.037500
93	.213325	.167668	0.000000	.037500
94	.231936	.183524	0.000000	.037500
95	.251189	.200229	0.000000	.037500
96	.270441	.217783	0.000000	.037500
97	.289048	.236188	0.000000	.037500
98	.306750	.255605	0.000000	.037500
99	.323976	.276035	0.000000	.037500
100	.341116	.297233	0.000000	.037500

EXHIBIT III

ACTIVE AND INACTIVE PARTICIPANT PROFILES

FIREFIGHTERS' PENSION AND RELIEF FUND FOR THE CITY OF NEW ORLEANS
 1/1/2020 ACTIVE PARTICIPANT AGE VS SERVICE GRID
 JANUARY 1, 2020 ACTUARIAL VALUATION
 NEW FUND

----- ALL ACTIVE PARTICIPANTS -----

AGE	YEARS OF SERVICE										TOTAL	TOTAL ANNUAL SALARIES	AVERAGE SALARY
	0-4	5-9	10-14	15-19	20-24	25-29	30-34	35-39	40+				
20-24	5	0	0	0	0	0	0	0	0	0	5	219,511.53	43,902.31
25-29	30	2	0	0	0	0	0	0	0	0	32	1,455,489.46	45,484.05
30-34	24	24	32	0	0	0	0	0	0	0	80	4,123,044.75	51,538.06
35-39	12	21	49	14	0	0	0	0	0	0	96	5,479,322.64	57,076.28
40-44	0	11	21	27	15	1	0	0	0	0	75	4,899,665.33	65,328.87
45-49	0	4	16	30	22	7	4	0	0	0	83	5,874,799.24	70,780.71
50-54	0	2	7	10	18	16	3	1	0	0	57	4,137,007.07	72,579.07
55-59	0	0	2	3	5	13	1	3	1	1	28	2,256,791.20	80,599.69
60-64	0	0	0	0	4	1	0	0	0	0	5	370,408.20	74,081.64
	71	64	127	84	64	38	8	4	1	461	28,816,039.42	61,507.68	

FIREFIGHTERS' PENSION AND RELIEF FUND FOR THE CITY OF NEW ORLEANS
 1/1/2020 INACTIVE PARTICIPANT PROFILE
 JANUARY 1, 2020 ACTUARIAL VALUATION
 NEW FUND

AGE	YEARS SINCE RETIREMENT										TOTAL	TOTAL ANNUAL BENEFIT	AVERAGE ANNUAL BENEFIT
	0-4	5-9	10-14	15-19	20-24	25-29	30-34	35-39	40+	TOTAL			
50-54	3	0	0	0	0	0	0	0	0	0	3	82,138.20	27,379.40
55-59	19	11	0	0	0	0	0	0	0	0	30	1,380,335.04	46,011.17
60-64	15	55	13	0	0	0	0	0	0	0	83	3,877,482.84	46,716.66
65-69	10	35	42	14	0	0	0	0	0	0	101	4,222,706.16	41,808.97
70-74	1	14	50	43	14	0	0	0	0	0	122	5,124,652.80	42,005.35
75-79	0	1	3	6	13	6	0	0	0	0	29	1,322,241.12	45,594.52
80-84	0	0	0	3	6	2	0	0	0	0	11	537,240.84	48,840.08
	48	116	108	66	33	8	0	0	0	0	379	16,546,797.00	43,659.09

FIREFIGHTERS' PENSION AND RELIEF FUND FOR THE CITY OF NEW ORLEANS
 1/1/2020 INACTIVE PARTICIPANT PROFILE
 JANUARY 1, 2020 ACTUARIAL VALUATION
 NEW FUND

AGE	YEARS SINCE RETIREMENT										TOTAL	TOTAL ANNUAL BENEFIT	AVERAGE ANNUAL BENEFIT
	0-4	5-9	10-14	15-19	20-24	25-29	30-34	35-39	40+	40+			
35-39	1	1	1	0	0	0	0	0	0	0	3	51,708.60	17,236.20
40-44	4	3	4	0	0	0	0	0	0	0	11	216,791.76	19,708.34
45-49	3	5	10	5	0	0	0	0	0	0	23	407,997.24	17,739.01
50-54	1	4	7	11	1	0	1	0	0	0	25	430,073.52	17,202.94
55-59	3	3	5	9	2	2	1	0	0	0	25	678,672.24	27,146.89
60-64	10	0	1	12	5	2	4	2	0	0	36	1,147,380.72	31,871.69
65-69	2	0	0	10	11	8	8	1	4	4	44	1,280,689.80	29,106.59
70-74	0	0	0	0	4	15	23	6	8	56	1,498,086.60	26,751.55	
75-79	0	0	0	0	0	6	8	2	2	18	520,934.04	28,940.78	
80-84	0	0	0	0	0	0	0	1	1	2	38,482.20	19,241.10	
	24	16	28	47	23	33	45	12	15	243	6,270,816.72	25,805.83	

FIREFIGHTERS' PENSION AND RELIEF FUND FOR THE CITY OF NEW ORLEANS
 1/1/2020 INACTIVE PARTICIPANT PROFILE
 JANUARY 1, 2020 ACTUARIAL VALUATION
 NEW FUND

AGE	YEARS SINCE RETIREMENT										TOTAL	TOTAL ANNUAL BENEFIT	AVERAGE ANNUAL BENEFIT
	0-4	5-9	10-14	15-19	20-24	25-29	30-34	35-39	40+	TOTAL			
0-19	3	3	0	0	0	0	0	0	0	0	6	21,600.00	3,600.00
30-34	0	1	0	0	0	0	0	0	0	0	1	9,259.08	9,259.08
35-39	1	2	1	0	1	0	0	0	0	0	5	68,378.52	13,675.70
40-44	0	1	1	0	0	2	0	0	0	0	4	52,444.32	13,111.08
45-49	0	0	1	0	0	0	0	0	0	0	1	33,496.32	33,496.32
50-54	1	1	0	1	1	0	0	0	0	0	4	58,272.36	14,568.09
55-59	2	5	0	0	2	0	0	0	0	0	9	157,317.00	17,479.67
60-64	9	4	1	5	0	2	0	1	0	0	22	450,828.00	20,492.18
65-69	7	7	9	4	2	3	0	2	0	0	34	751,815.24	22,112.21
70-74	13	4	2	2	5	3	1	0	1	0	31	603,380.88	19,463.90
75-79	7	3	3	1	1	0	0	0	1	1	16	277,062.84	17,316.43
80-84	2	0	0	0	0	1	0	0	0	0	3	88,771.44	29,590.48
	45	31	18	13	12	11	1	3	2	136	2,572,626.00	18,916.37	

FIREFIGHTERS' PENSION AND RELIEF FUND FOR THE CITY OF NEW ORLEANS
 1/1/2020 INACTIVE PARTICIPANT PROFILE
 JANUARY 1, 2020 ACTUARIAL VALUATION
 NEW FUND

AGE	YEARS SINCE RETIREMENT							TOTAL	TOTAL ANNUAL BENEFIT	AVERAGE ANNUAL BENEFIT		
	0-4	5-9	10-14	15-19	20-24	25-29	30-34				35-39	40+
45-49	0	0	1	0	0	0	0	0	0	1	12,947.28	12,947.28
	0	0	1	0	0	0	0	0	0	2	12,947.28	12,947.28

FIREFIGHTERS' PENSION AND RELIEF FUND FOR THE CITY OF NEW ORLEANS
 1/1/2020 INACTIVE PARTICIPANT PROFILE
 JANUARY 1, 2020 ACTUARIAL VALUATION
 NEW FUND

----- D.R.O.P. -----

AGE	YEARS SINCE RETIREMENT										TOTAL	TOTAL ANNUAL BENEFIT	AVERAGE ANNUAL BENEFIT
	0-4	5-9	10-14	15-19	20-24	25-29	30-34	35-39	40+	TOTAL			
50-54	25	0	0	0	0	0	0	0	0	0	25	1,526,579.04	61,063.16
55-59	30	5	0	0	0	0	0	0	0	0	35	2,225,266.92	63,579.05
60-64	16	6	0	0	0	0	0	0	0	0	22	1,238,958.48	56,316.29
65-69	2	1	0	0	0	0	0	0	0	0	3	222,185.76	74,061.92
	73	12	0	0	0	0	0	0	0	0	85	5,212,990.20	61,329.30

EXHIBIT IV

ACCOUNTING INFORMATION PURSUANT TO GASB STATEMENT NO. 50
Funded Status: Funding Progress and Funded Ratio

January 1, 2020 Actuarial Valuation - New Fund

This section is included to provide information required by the Governmental Accounting Standards Board Statement Number 25 and is provided for historical continuity and consistency. GASB Statements 25 and 27 have been replaced by GASB Statements 67 and 68. These two statements have made extensive and fundamental changes in the nature of the financial disclosure requirements and have effectively removed the actual funding aspects of the plan from any direct involvement. The effective date of GASB 67 (with respect to the plan itself) is the first Plan Year beginning after June 15, 2013 (namely, the Plan Year beginning January 1, 2014). The effective date of GASB 68 (with respect to the City of New Orleans as sponsoring employer) is the first Fiscal Year beginning after June 15, 2014 (namely, the Fiscal Year beginning January 1, 2015). The actuarial information for financial disclosure as required by these GASB Statements will be presented in a separate report.

"Funding Progress" is the ratio of the actuarial Unfunded Accrued Liability (UAL) under the Entry Age Normal Cost Method to the active valuation annual payroll. The UAL shown below has been determined on that basis.

The "Funded Ratio" is defined as the ratio of the actuarial value of assets to the "Projected Benefit Obligation", or PBO, within the meaning of Financial Accounting Standards Board Statement No. 87 and, in turn, the GASB Statement No. 5.

FUNDING PROGRESS (RATIO OF UAL TO VALUATION PAYROLL):

	<u>12/31/2018</u>	<u>12/31/2019</u>
Interest Assumption	7.50%	7.50%
[1]		
A. Entry Age Actuarial Accrued Liability (AAL)	\$ 408,576,739	\$ 432,784,552
B. Actuarial Value of Assets *	31,419,962	42,036,380
C. Unfunded Accrued Liability (UAL):		
[1A] - [1B]	\$ 377,156,777	\$ 390,748,172
[2] Valuation Annual Payroll	28,171,135	28,816,039
[3] Ratio: [1] divided by [2]	1,338.8%	1,356.0%

FUNDED RATIO:

[1] Projected Benefit Obligation (PBO)		
Inactive Plan Participants	\$ 272,885,754	\$ 285,533,540
Active Plan Participants	<u>114,618,088</u>	<u>124,808,838</u>
Total PBO	\$ 387,503,842	\$ 410,342,378
[2] Actuarial Value of Assets [Table 2] *	31,419,962	42,036,380
[3] Funded Ratio: [2] divided by [1]	8.1%	10.2%

FIREFIGHTERS' PENSION AND RELIEF FUND FOR THE CITY OF NEW ORLEANS
ESTIMATED MARKET VALUE INVESTMENT PERFORMANCE
BY CALENDAR YEAR

PLAN YEAR ENDING	BEGINNING MARKET VALUE	EMPLOYER CONTRIBUTIONS FOR YEAR	EMPLOYEE CONTRIBUTIONS FOR YEAR	TRANSFERS IN FOR YEAR	TOTAL BENEFIT PAYMENTS FOR YEAR	ADMIN. EXP. PAID FOR YEAR	TRANSFERS OUT FOR YEAR	NET EXTERNAL CASH FLOW FOR YEAR	MARKET VALUE INV. INCOME FOR YEAR	ENDING MARKET VALUE	MARKET VALUE INV. PERFORMANCE FOR YEAR
12/31/89	63,251,791	2,300,376	1,004,032	0	1,577,116	0	0	1,727,292	8,559,942	73,539,025	13.3508%
12/31/90	73,539,025	2,847,583	939,725	0	1,757,302	461,358	0	1,568,648	2,526,994	77,634,667	3.4000%
12/31/91	77,634,667	2,635,584	1,001,139	0	2,220,269	461,358	0	955,096	15,006,830	93,596,593	19.2119%
12/31/92	93,596,593	2,932,621	929,870	0	2,684,476	874,479	0	303,536	9,408,259	103,308,388	10.0357%
12/31/93	103,308,388	2,943,408	892,937	0	2,695,511	762,243	0	378,591	11,204,977	114,891,956	10.8263%
12/31/94	114,891,956	3,060,000	1,003,994	171,213	2,905,124	844,397	0	485,686	-1,488,823	113,888,819	-1.2931%
12/31/95	113,888,819	2,432,809	880,460	0	3,311,215	694,170	0	-692,116	21,286,694	134,483,397	18.7477%
12/31/96	134,483,397	3,156,371	947,985	172,480	3,883,545	105,923	0	287,368	17,209,517	151,980,282	12.7831%
12/31/97	151,980,282	3,003,240	824,895	21,212	4,245,951	154,421	22,411	-573,436	25,491,476	176,898,322	16.8046%
12/31/98	176,898,322	2,484,036	918,554	45,406	5,379,188	210,208	77,850	-2,219,250	15,114,355	189,793,427	8.5980%
12/31/99	189,793,427	3,518,964	877,143	442,875	7,126,322	276,321	13,155	-2,576,816	15,103,703	202,320,314	8.0124%
12/31/00	202,320,314	3,408,018	875,776	0	8,619,349	179,682	885,209	-5,400,446	-3,367,278	193,552,590	-1.6868%
12/31/01	193,552,590	3,013,446	870,889	66,809	8,281,637	425,740	614,570	-5,370,803	-6,804,360	181,377,427	-3.5650%
12/31/02	181,377,427	3,969,948	879,824	98,744	8,722,403	372,959	0	-4,146,846	-9,647,390	167,583,191	-5.3805%
12/31/03	167,583,191	5,176,521	993,560	0	10,915,756	325,982	23,611	-5,095,268	23,615,273	186,103,196	14.3092%
12/31/04	186,103,196	8,054,342	1,019,897	0	11,407,122	367,781	115,635	-2,816,299	17,726,263	201,013,160	9.5976%
12/31/05	201,013,160	8,086,423	956,839	19,248	12,778,332	313,531	0	-4,029,353	13,204,332	210,188,139	6.6354%
12/31/06	211,691,854	9,364,984	928,295	76,137	15,289,598	894,709	0	-5,814,891	10,172,594	216,049,557	4.8723%
12/31/07	216,049,557	8,883,070	1,035,535	85,453	15,709,765	857,876	474,174	-7,037,757	24,861,021	233,872,821	11.6976%
12/31/08	233,872,821	10,478,360	1,128,484	14,894	17,907,434	862,450	114,664	-7,262,810	-66,608,806	160,001,205	-28.9300%
12/31/09	160,001,205	10,983,038	1,244,825	76,512	22,755,378	904,888	0	-11,355,891	10,135,175	158,780,489	6.5675%
12/31/10	158,780,489	11,431,455	1,372,954	25,746	22,423,348	664,812	0	-10,258,005	11,751,117	160,273,601	7.6479%
12/31/11	160,273,601	11,986,688	1,496,021	0	24,324,080	684,779	0	-11,526,150	9,738,617	158,486,068	6.3029%
12/31/12	158,486,068	12,158,524	1,379,957	33,190	28,825,866	1,315,010	0	-16,569,205	1,619,255	143,536,118	1.0781%
12/31/13	143,536,118	12,312,710	1,392,726	40,015	31,312,865	934,816	13,702	-18,515,932	-40,244,278	84,775,908	-29.9708%
12/31/14	84,775,908	20,648,538	2,038,542	134,100	38,979,029	600,909	43,819	-16,802,577	-5,328,054	62,645,277	-6.9762%
12/31/15	65,377,497	30,579,281	2,576,572	0	40,732,649	822,056	27,390	-8,426,242	-6,683,482	50,267,773	-10.9271%
12/31/16	50,267,773	32,278,593	2,729,769	34,007	39,663,316	879,623	251,070	-5,751,640	-1,518,395	42,997,738	-3.2039%
12/31/17	42,997,738	36,328,853	3,011,193	343,828	33,990,727	1,272,510	89,985	4,330,652	-5,133,786	42,194,604	-11.3672%
12/31/18	42,735,736	34,102,867	3,052,370	92,069	35,248,912	565,575	100,056	1,332,763	-12,648,537	31,419,962	-29.1427%
12/31/19	31,419,962	34,177,543	3,123,545	91,950	36,032,532	862,441	0	498,065	10,118,353	42,036,380	31.9503%
No. of Years:	31	338,738,194	42,328,307					-140,374,036	114,381,558		

FIREFIGHTERS' PENSION AND RELIEF FUND FOR THE CITY OF NEW ORLEANS
ESTIMATED INVESTMENT PERFORMANCE BY MARKET VALUE AND ACTUARIAL VALUE OF ASSETS
BY CALENDAR YEAR

YEAR ENDING	MARKET VALUE		NET EXTERNAL CASH FLOW DURING YEAR	MARKET VALUE INV. PERF. FOR YEAR	ACTUARIAL VALUE OF ASSETS		ACTUARIAL ASSETS INV. PERF. FOR YR
	BEGINNING MARKET VALUE	ENDING MARKET VALUE			BEGINNING ACTUARIAL VALUE OF ASSETS	ENDING ACTUARIAL VALUE OF ASSETS	
12/31/89	63,251,791	73,539,025	1,727,292	13.3508%	64,933,327	71,595,392	7.5000%
12/31/90	73,539,025	77,634,667	1,568,648	3.4000%	71,595,392	77,617,769	6.1533%
12/31/91	77,634,667	93,596,593	955,096	19.2119%	77,617,769	89,953,752	14.5731%
12/31/92	93,596,593	103,308,388	303,536	10.0357%	89,953,752	98,275,923	8.8992%
12/31/93	103,308,388	114,891,956	378,572	10.8263%	98,275,923	111,046,572	12.5852%
12/31/94	114,891,956	113,888,819	485,686	-1.2931%	111,046,572	113,763,854	2.0052%
12/31/95	113,888,819	134,483,397	-692,116	18.7477%	113,763,854	126,046,831	11.4401%
12/31/96	134,483,397	151,980,282	287,368	12.7831%	126,046,831	143,202,836	13.3676%
12/31/97	151,980,282	176,898,322	-573,436	16.8046%	143,202,836	165,130,539	15.7443%
12/31/98	176,898,322	189,793,427	-2,219,250	8.5980%	165,130,539	177,000,489	8.5899%
12/31/99	189,793,427	202,320,314	-2,576,816	8.0124%	177,000,489	189,850,815	8.7798%
12/31/00	202,320,314	193,552,590	-5,400,446	-1.6868%	189,850,815	190,974,538	3.4861%
12/31/01	193,552,590	181,377,427	-5,370,803	-3.5650%	190,974,538	193,426,182	4.1545%
12/31/02	181,377,427	167,583,191	-4,146,846	-5.3805%	193,426,182	180,377,277	-4.6522%
12/31/03	167,583,191	186,103,196	-5,095,268	14.3092%	180,377,277	189,292,029	7.8783%
12/31/04	186,103,196	201,013,160	-2,816,299	9.5976%	189,292,029	193,493,695	3.7553%
12/31/05	201,013,160	210,188,139	-4,029,353	6.6354%	193,493,695	196,533,991	3.6921%
12/31/06	211,691,854	216,049,557	-5,814,891	4.8723%	196,533,991	219,788,356	15.0131%
12/31/07	216,049,557	233,872,821	-7,037,757	11.6975%	219,788,356	229,316,592	7.6599%
12/31/08	233,872,821	160,001,205	-7,262,810	-28.9300%	229,316,592	212,727,368	-4.3255%
12/31/09	160,001,205	158,780,489	-11,355,891	6.5675%	212,727,368	189,802,659	-5.5875%
12/31/10	158,780,489	160,273,601	-10,258,005	7.6479%	189,802,659	160,645,159	-10.2340%
12/31/11	160,273,601	158,486,068	-11,526,150	6.3029%	160,645,159	159,645,451	6.7964%
12/31/12	158,486,068	143,536,118	-16,569,205	1.0781%	159,645,451	150,639,776	4.9970%
12/31/13	143,536,118	84,775,908	-18,515,932	-29.9708%	150,639,776	121,788,159	-7.3105%
12/31/14	84,775,908	62,645,277	-16,802,577	-6.9762%	121,788,159	62,645,277	-37.3415%
12/31/15	65,377,497	50,267,773	-8,426,242	-10.9271%	62,645,277	50,267,773	-6.7621%
12/31/16	50,267,773	42,997,738	-5,751,640	-3.2039%	50,267,773	42,997,738	-3.2039%
12/31/17	42,997,738	42,194,604	4,330,652	-11.3672%	42,997,738	42,194,604	-11.3672%
12/31/18	42,735,736	31,419,962	1,332,763	-29.1427%	42,735,736	31,419,962	-29.1427%
12/31/19	31,419,962	42,036,380	498,065	31.9503%	31,419,962	42,036,380	31.9503%

FIREFIIGHTERS' PENSION AND RELIEF FUND FOR THE CITY OF NEW ORLEANS
ESTIMATED MARKET VALUE INVESTMENT PERFORMANCE
BY CALENDAR YEAR

PLAN YEAR ENDING	NET EXTERNAL CASH FLOW FOR YEAR	MARKET VALUE BEGINNING MARKET VALUE	MARKET VALUE INV. INCOME FOR YEAR	ENDING MARKET VALUE	MARKET VALUE INV. PERFORMANCE FOR YEAR	INVESTMENT PERFORMANCE		YEAR
						CUMULATIVE	AVERAGE*	
12/31/1989	1,727,292	63,251,791	8,559,942	73,539,025	13.3508%	13.3508%	13.3508%	1
12/31/1990	1,568,648	73,539,025	2,526,994	77,634,667	3.4000%	17,2048%	8.2611%	2
12/31/1991	955,096	77,634,667	15,006,830	93,596,593	19.2111%	39.7220%	11.7948%	3
12/31/1992	303,536	93,596,593	9,408,259	103,308,388	10.0357%	53.7440%	11.3524%	4
12/31/1993	378,591	103,308,388	11,204,977	114,891,956	10.8263%	70.3888%	11.2470%	5
12/31/1994	485,686	114,891,956	-1,488,823	113,888,819	-1.2931%	68.1855%	9.0514%	6
12/31/1995	-692,116	113,888,819	21,286,694	134,483,397	18.7477%	99.7165%	10.3866%	7
12/31/1996	287,368	134,483,397	17,209,517	151,980,282	12.7831%	125.2464%	10.6833%	8
12/31/1997	-573,436	151,980,282	25,491,476	176,898,322	16.8046%	163.0982%	11.3473%	9
12/31/1998	-2,219,250	176,898,322	15,114,355	189,793,427	8.5980%	185.7194%	11.0693%	10
12/31/1999	-2,576,816	189,793,427	15,103,703	202,320,314	8.0124%	208.6123%	10.7878%	11
12/31/2000	-5,400,446	202,320,314	-3,367,278	193,552,590	-1.6868%	203.4065%	9.6904%	12
12/31/2001	-5,370,803	193,552,590	-6,804,360	181,377,427	-3.5650%	192.5901%	8.6091%	13
12/31/2002	-4,146,846	181,377,427	-9,647,390	167,583,191	-5.3805%	176.8474%	7.5446%	14
12/31/2003	-5,095,268	167,583,191	23,615,273	186,103,196	14.3092%	216.4621%	7.9828%	15
12/31/2004	-2,816,299	186,103,196	17,726,263	201,013,160	9.5976%	246.8348%	8.0831%	16
12/31/2005	-4,029,353	201,013,160	13,204,332	210,188,139	6.6354%	269.8486%	7.9974%	17
12/31/2006	-5,814,891	211,691,854	10,172,594	216,049,557	4.8723%	287.8687%	7.8213%	18
12/31/2007	-7,037,757	216,049,557	24,861,021	233,872,821	11.6976%	333.2401%	8.0220%	19
12/31/2008	-7,262,810	233,872,821	-66,608,806	160,001,205	-28.9300%	207.9038%	5.7842%	20
12/31/2009	-11,355,891	160,001,205	10,135,175	158,780,489	6.5675%	228.1254%	5.8214%	21
12/31/2010	-10,258,005	158,780,489	11,751,117	160,273,601	7.6479%	253.2201%	5.9037%	22
12/31/2011	-11,526,150	160,273,601	9,738,617	158,486,068	6.3029%	275.4832%	5.9210%	23
12/31/2012	-16,569,205	158,486,068	1,619,255	143,536,118	1.0781%	279.5311%	5.7147%	24
12/31/2013	-18,515,932	143,536,118	-40,244,278	84,775,908	-29.9708%	165.7825%	3.9875%	25
12/31/2014	-16,802,577	84,775,908	-5,328,054	62,645,277	-6.9762%	147.2409%	3.5428%	26
12/31/2015	-8,426,242	65,377,497	-6,683,482	50,267,773	-10.9271%	120.2247%	2.9672%	27
12/31/2016	-5,751,640	50,267,773	-1,518,395	42,997,738	-3.2039%	113.1689%	2.7401%	28
12/31/2017	4,330,652	42,997,738	-5,133,786	42,194,604	-11.3672%	88.9375%	2.2182%	29
12/31/2018	1,332,763	42,735,736	-12,648,537	31,419,962	-29.1427%	33.8761%	.9772%	30
12/31/2019	498,065	31,419,962	10,118,353	42,036,380	31.9503%	76.6499%	1.8524%	31

Number of Years Included: 31


* ANNUALIZED COMPOUND AVERAGE MODIFIED TIME-WEIGHTED RETURN 1/1/1989 THROUGH CURRENT YEAR
(WITHIN EACH YEAR RETURN IS DOLLAR-WEIGHTED ASSUMING UNIFORM EXTERNAL CASH FLOW)

June 28, 2019

CERTIFICATION

The foregoing report presents fairly the actuarial position of the Firefighters' Pension and Relief Fund for the City of New Orleans [New Fund] as of January 1, 2020 in accordance with generally accepted actuarial principles, applied on a basis consistent with that of the preceding valuation, except where noted. In our opinion, each of the assumptions used in preparing the liabilities and estimated costs is reasonably related to the experience of the plan and to reasonable expectations and represents our best estimate of anticipated experience under the plan.

CONEFRY & COMPANY, L.L.C.



Michael A. Conefry, FCA, ASA, MAAA, EA

Belle Chasse, Louisiana
June, 2020

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