City of Carroll

112 E. 5th Street Carroll, Iowa 51401-2799 (712) 792-1000 FAX: (712) 792-0139

MEMO TO: Honorable Mayor and City Council Members

FROM: Mike Pogge-Weaver, City Manager

DATE: January 18, 2018

SUBJECT: PFM General Obligation Bonding Scenarios

Attached to this memo is General Obligation Bonding Scenarios for the City of Carroll developed by Susanne Gerlach of PFM Financial Advisors LLC in consultation with City Staff.

There is a total of three scenarios included in the information from PFM. Each scenario includes the same three sets of potential G.O. bond issuance to cover various projects as follows:

Issuance #1		Issuance #2	
Library/City Hall	$3,765,000	Street Maintenance Garage	$ 700,000
Youth Complex Lighting	$ 375,000	Fire Truck	$ 375,000
Pickleball Courts	$ 175,000	**Total**	**$1,075,000**
Trails	$ 120,000		
Total	**$4,435,000**	Issuance #3	
		Recreation Center	$8,300,000
		Total	**$8,300,000**

The three scenarios on the possible debt issuances are as follows:

Scenario 1 (15-year bonds)
Issuance #1 issued in FY 2019 as a 15-year bond
Issuance #2 issued in FY 2020 as a 6-year bond
Issuance #3 issued in FY 2024 as a 15-year bond
Maximum Debt Service Levy Rate is $1.28975 and fairly study at that rate through 2039
Highest level to the City legal debt limits is 28.80% in FY 2024

Scenario 2 (20 year bonds)
Issuance #1 issued in FY 2019 as a 20-year bond
Issuance #2 issued in FY 2020 as a 6-year bond
Issuance #3 issued in FY 2024 as a 20-year bond
Maximum Debt Service Levy Rate is $ 1.28781 but falls to $1.06318 in FY 2026
Highest level to the City legal debt limits is 28.84% in FY 2024

Scenario 3 (Accelerated bonds)
Issuance #1 issued in FY 2019 as a 9-year bond
Issuance #2 issued in FY 2020 as a 6-year bond
Issuance #3 issued in FY 2028 as a 12-year bond
Maximum Debt Service Levy Rate is $ 1.28991 but falls to $0.9560 in FY 2028
Highest level to the City legal debt limits is 19.36% in FY 2028
While interest costs are listed lower in this scenario, a four year delay in the rec center project will likely increase the construction costs more than any interest savings.

RECOMMENDATION: Council should review these scenarios and consider providing direction to PFM on how to structure the possible general obligation bond issuances.

City of Carroll, Iowa

General Obligation Bonding Scenarios

PFM Financial Advisors LLC
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January 22, 2018

Summary of Bonding Options

Scenario	Year Issued	Par Amount of Bonds	Total Interest	Total Debt Service
Scenario 1 - 15 Year Bonds	Total	$ 14,060,000	$ 4,818,839	$ 18,878,839
Library & FY19 CIP	Series 2018B	$ 4,480,000	$ 1,207,735	$ 5,687,735
Street Maintenance Building & Fire Truck	Series 2019A	$ 1,120,000	$ 137,729	$ 1,257,729
Recreation Center Improvements & Addition	Series 2023A	$ 8,460,000	$ 3,473,375	$ 11,933,375
Scenario 2 - 20 Year Bonds	Total	$ 14,060,000	$ 5,693,958	$ 19,753,958
Library & FY19 CIP	Series 2018B	$ 4,480,000	$ 1,479,268	$ 5,959,268
Street Maintenance Building & Fire Truck	Series 2019A	$ 1,120,000	$ 138,266	$ 1,258,266
Recreation Center Improvements & Addition	Series 2023A	$ 8,460,000	$ 4,076,424	$ 12,536,424
Scenario 3 - Accelerated	Total	$ 14,060,000	$ 2,950,010	$ 17,010,010
Library & FY19 CIP	Series 2018B	$ 4,480,000	$ 776,657	$ 5,256,657
Street Maintenance Building & Fire Truck	Series 2019A	$ 1,120,000	$ 138,266	$ 1,258,266
Recreation Center Improvements & Addition	Series 2027A	$ 8,460,000	$ 2,035,087	$ 10,495,087

Scenario 1:
Assumes 15 year bonds

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CITY OF CARROLL, IOWA

Projection of Debt Service Levy & Tax Rate Impact

EXHIBIT 1-1

Assumes 15 Year Bonds

TAX RATE IMPACT	
Fiscal Year 2018-19	($0.40)
Fiscal Year 2019-20	$0.40
Fiscal Year 2020-21	$0.01
Fiscal Year 2021-22	($0.01)

FY18 Pre-Levy => *$ 209,778* *Trails* | *Library & FY19 CIP* | *Str Mnt Gar Fire Truck* | *Rec Pool** Rec Addn***

						Abatements					Outstanding Debt Issues															
Fiscal Year Payable	Total Tax Valuation	Historical Taxable Valuation Growth	Tax Rate Per $1,000	Current Taxes Levied	LOST Revenues	(1) 2006 Ashwood TIF	2007 & 2008 Westfield TIF	2008 Assisted Living TIF	Other Sources	TOTAL Resources	TIF Series 2006	TIF/Taxes Series 2008	Series 2010A/13	Ref & Streets Series 2014	Advance Ref 2008 Series 2015A	GO Series 2016A	GO Series 2016B	Proposed GO Note 2018A	Proposed GO Bonds 2018B	Proposed GO Bonds 2019A	Proposed GO Series 2023A	Fiscal Fees	Other Uses	TOTAL Uses	Surplus (Deficit)	Ending Balance
2011 - 2012	400,172,509	4.0%	1.32429	529,944	388,173 *		151,876	3,369	118,638	1,192,000	52,738	399,723	93,150									2,500		1,193,608	(1,608)	44,913
2012 - 2013	423,107,377	5.7%	1.31815	557,719	304,449 *		118,512	54,924	11,806	1,047,410	51,338	451,168	91,710									2,000		1,035,585	11,825	56,738
2013 - 2014	436,313,737	3.1%	1.31482	573,673	375,661 *	31,660		53,413	84,224	1,118,631	54,938	385,518	580,107									2,000	27,033	1,049,595	69,035	125,773
2014 - 2015	509,745,241	16.8%	1.31502	670,325	346,694 *	35,439		56,838	16,285	1,125,581	2,922	231,068	428,205	509,710								1,500	(1,747,680)	(574,275)	1,699,856	1,825,629
2015 - 2016	505,407,544	(0.9%)	1.28846	651,197	399,730 *	34,318			35,328	1,120,573	0	170,953	236,293	308,848	0	386,070						2,500	1,746,128	2,850,790	(1,730,217)	95,412
2016 - 2017	507,314,135	0.4%	1.28762	653,228	352,736 *	32,207			21,996	1,060,167	0			312,170	179,990	268,933	298,745					2,500		1,062,337	(2,169)	93,243
2017 - 2018	515,496,419	1.6%	1.28014	659,908	379,255 *	32,731			27,508	1,099,402	0				283,828	262,210	340,058	210,280				3,000	(29,210)	1,070,165	29,237	122,480
2018 - 2019	550,295,467	6.8%	0.87898	483,696	400,694 *	32,552			52,302	969,244	0				281,228		292,223		394,294			1,500		969,244		122,480
2019 - 2020	560,507,303	1.9%	1.28171	718,407	373,802 *	32,552				1,124,761	0				282,978		294,523		367,351	177,911		2,000		1,124,761		122,480
2020 - 2021	554,452,445	(1.1%)	1.28874	714,544	374,302 *	32,552				1,121,398	0				284,400		291,498		355,967	187,534		2,000		1,121,398		122,480
2021 - 2022	562,597,960	1.5%	1.28047	720,389	374,302 *	32,552				1,127,243					290,080		298,060		354,622	182,481		2,000		1,127,243		122,480
2022 - 2023	544,711,687	(3.2%)	1.28473	699,808	374,302 *	32,552				1,106,662					285,180		299,070		358,046	162,366		2,000		1,106,662		122,480
2023 - 2024	540,107,495	(0.8%)	1.28714	695,193	374,302 *	32,552				1,102,047							299,720		356,096	252,690	191,542	2,000		1,102,047		122,480
2024 - 2025	522,752,576	(3.2%)	1.28484	671,655	374,302 *	32,552				1,078,509									348,905	294,747	433,358	1,500		1,078,509		122,480
2025 - 2026	521,962,440	(0.2%)	1.28454	670,484	374,302 *	32,552				1,077,338									351,561		724,777	1,000		1,077,338		122,480
2026 - 2027	521,962,440		1.28150	668,893	374,302 *	32,552				1,075,747									348,770		725,977	1,000		1,075,747		122,480
2027 - 2028	521,962,440		1.28138	668,834	374,302 *	0				1,043,136									350,643		691,494	1,000		1,043,136		122,480
2028 - 2029	521,962,440		1.28604	671,267	374,302 *					1,045,569									352,019		692,550	1,000		1,045,569		122,480
2029 - 2030	521,962,440		1.28845	672,524	374,302 *					1,046,826									347,913		697,913	1,000		1,046,826		122,480
2030 - 2031	521,962,440		1.28836	672,475	374,302 *					1,046,777									348,473		697,304	1,000		1,046,777		122,480
2031 - 2032	521,962,440		1.28563	671,050	374,302 *					1,045,352									348,469		695,884	1,000		1,045,352		122,480
2032 - 2033	521,962,440		1.28975	673,202	374,302 *					1,047,504									352,916		693,588	1,000		1,047,504		122,480
2033 - 2034	521,962,440		1.28130	668,789	374,302 *					1,043,091									351,696		690,395	1,000		1,043,091		122,480
2034 - 2035	521,962,440		1.20226	627,532	374,302 *					1,001,834											1,001,334	500		1,001,834		122,480
2035 - 2036	521,962,440		1.19768	625,142	374,302 *					999,444											998,944	500		999,444		122,480
2036 - 2037	521,962,440		1.19910	625,887	374,302 *					1,000,189											999,689	500		1,000,189		122,480
2037 - 2038	521,962,440		1.19664	624,602	374,302 *					998,904											998,404	500		998,904		122,480
2038 - 2039	521,962,440		1.20013	626,422	374,302 *					1,000,724											1,000,224	500		1,000,724		122,480
																			5,687,735	1,257,729	11,933,375					

City of Carroll, Iowa

Proposed G. O. Capital Loan Notes, Series 2018B

EXHIBIT 1-2

Library (15 Year Bonds) & FY 2019 CIP

SOURCES & USES

SOURCES	
Par Amount of Notes	4,480,000.00
Cash on Hand	45,000.00
Premium	
Total Sources	4,525,000.00
USES	
Deposit to Construction Account	4,435,000.00
Deposit to Reserve Account	
Capitalized Interest Account	(0.00)
Municipal Bond Insurance	0.00
Underwriters' Discount ($10.00 per bond)	44,800.00
Costs of Issuance	45,000.00
Accrued Interest	
Rounding Amount	200.00
Total Uses	4,525,000.00
ASSUMPTIONS	
Dated Date	10/31/2018
Delivery Date	10/31/2018
First Interest Date	6/1/2019
First Principal Date	6/1/2019
Last Principal Date	6/1/2034

Yield Calculations:

Arbitrage Yield	3.16382%
TIC	3.30467%
AIC	3.44828%
Average Life	8.49 Years

PROJECTS FINANCED:

Library	$ 3,765,000
Youth Complex Lighting	375,000
Pickleball Courts	175,000
Trails	120,000
	$ 4,435,000

DEBT SERVICE SCHEDULE

	Date	Principal	Coupon	Interest	Debt Service	Annual Debt Service
0.6	6/1/2019	315,000	2.520%	79,294	394,294	394,294
	12/1/2019			63,675	63,675	
1.6	6/1/2020	240,000	2.660%	63,675	303,675	367,351
	12/1/2020			60,483	60,483	
2.6	6/1/2021	235,000	2.700%	60,483	295,483	355,967
	12/1/2021			57,311	57,311	
3.6	6/1/2022	240,000	2.740%	57,311	297,311	354,622
	12/1/2022			54,023	54,023	
4.6	6/1/2023	250,000	2.780%	54,023	304,023	358,046
	12/1/2023			50,548	50,548	
5.6	6/1/2024	255,000	2.820%	50,548	305,548	356,096
	12/1/2024			46,952	46,952	
6.6	6/1/2025	255,000	2.880%	46,952	301,952	348,905
	12/1/2025			43,280	43,280	
7.6	6/1/2026	265,000	2.940%	43,280	308,280	351,561
	12/1/2026			39,385	39,385	
8.6	6/1/2027	270,000	3.010%	39,385	309,385	348,770
	12/1/2027			35,321	35,321	
9.6	6/1/2028	280,000	3.080%	35,321	315,321	350,643
	12/1/2028			31,009	31,009	
10.6	6/1/2029	290,000	3.140%	31,009	321,009	352,019
	12/1/2029			26,456	26,456	
11.6	6/1/2030	295,000	3.200%	26,456	321,456	347,913
	12/1/2030			21,736	21,736	
12.6	6/1/2031	305,000	3.280%	21,736	326,736	348,473
	12/1/2031			16,734	16,734	
13.6	6/1/2032	315,000	3.350%	16,734	331,734	348,469
	12/1/2032			11,458	11,458	
14.6	6/1/2033	330,000	3.400%	11,458	341,458	352,916
	12/1/2033			5,848	5,848	
15.6	6/1/2034	340,000	3.440%	5,848	345,848	351,696
	12/1/2034					
16.6	6/1/2035					
	12/1/2035					
17.6	6/1/2036					
	12/1/2036					
18.6	6/1/2037					
	12/1/2037					
19.6	6/1/2038					
	12/1/2038					
		4,480,000		1,207,735	5,687,735	5,687,735

Scale : MMD Aaa as of 01-02-2018 + 35 bps for credit (Aa2/BQ) + 75 bps for timing.

City of Carroll, Iowa

Proposed General Obligation Bonds, Series 2019A

EXHIBIT 1-3

Street Maintenance Garage & Fire Truck

SOURCES & USES

SOURCES	
Par Amount of Bonds	1,120,000.00
Accrued Interest	
Other Monies	
Total Sources	1,120,000.00
USES	
Deposit to Construction Account	1,075,000.00
Deposit to Reserve Account	
Capitalized Interest Account	0.00
Municipal Bond Insurance	
Underwriters' Discount ($7.50 per bond)	8,400.00
Costs of Issuance	33,000.00
Accrued Interest	
Rounding Amount	3,600.00
Total Uses	1,120,000.00
ASSUMPTIONS	
Dated Date	9/1/2019
Delivery Date	9/1/2019
First Interest Date	6/1/2020
First Principal Date	6/1/2020
Last Principal Date	6/1/2025

Arbitrage Yield	3.36297%	
TIC	3.58683%	
AIC	4.49005%	
Average Life	3.65	Years

PROJECTS FINANCED:

Street Maintenance Garage	$ 700,000
Fire Truck	375,000
Reserved	-
Reserved	-
	$ 1,075,000

DEBT SERVICE SCHEDULE

	Date	Principal	Coupon	Interest	Debt Service	Annual Debt Service
0.75	6/1/2020	150,000	3.120%	27,911	177,911	177,911
	12/1/2020			16,267	16,267	
1.75	6/1/2021	155,000	3.260%	16,267	171,267	187,534
	12/1/2021			13,741	13,741	
2.75	6/1/2022	155,000	3.300%	13,741	168,741	182,481
	12/1/2022			11,183	11,183	
3.75	6/1/2023	140,000	3.340%	11,183	151,183	162,366
	12/1/2023			8,845	8,845	
4.75	6/1/2024	235,000	3.380%	8,845	243,845	252,690
	12/1/2024			4,874	4,874	
5.75	6/1/2025	285,000	3.420%	4,874	289,874	294,747
	12/1/2025					
6.75	6/1/2026					
	12/1/2026					
7.75	6/1/2027					
	12/1/2027					
8.75	6/1/2028					
	12/1/2028					
9.75	6/1/2029					
	12/1/2029					
10.75	6/1/2030					
	12/1/2030					
11.75	6/1/2031					
	12/1/2031					
12.75	6/1/2032					
	12/1/2032					
13.75	6/1/2033					
	12/1/2033					
14.75	6/1/2034					
	12/1/2034					
15.75	6/1/2035					
	12/1/2035					
16.75	6/1/2036					
	12/1/2036					
17.75	6/1/2037					
	12/1/2037					
18.75	6/1/2038					
	12/1/2038					
19.75	6/1/2039					
	12/1/2039					
		1,120,000		137,729	1,257,729	1,257,729

Scale : MMD Aaa as of 01-02-2018 + NR/BQ credit + 125 bps for timing.

City of Carroll, Iowa

Proposed G. O. Capital Loan Notes, Series 2023A

EXHIBIT 1-4

Recreation Center Addition & Improvements (15 Year Bonds)

SOURCES & USES

SOURCES	
Par Amount of Bonds	8,460,000.00
Accrued Interest	
Premium	
Total Sources	8,460,000.00
USES	
Deposit to Construction Account	8,300,000.00
Deposit to Reserve Account	
Capitalized Interest Account	0.00
Municipal Bond Insurance	
Underwriters' Discount ($12.50 per bond)	105,750.00
Costs of Issuance	52,000.00
Accrued Interest	
Rounding Amount	2,250.00
Total Uses	8,460,000.00
ASSUMPTIONS	
Dated Date	11/1/2023
Delivery Date	11/1/2023
First Interest Date	6/1/2024
First Principal Date	6/1/2024
Last Principal Date	6/1/2039

Arbitrage Yield	3.96679%
TIC	4.12053%
AIC	4.19710%
Average Life	10.32 Years

FY 2018 PROJECTS FINANCED:	
Recreation Center	$ 8,300,000
Reserved	-
Reserved	-
Reserved	-
	$ 8,300,000

DEBT SERVICE SCHEDULE

	Date	Principal	Coupon	Interest	Debt Service	Annual Debt Service
0.58	6/1/2024	0	3.270%	191,542	191,542	191,542
	12/1/2024			164,179	164,179	
1.58	6/1/2025	105,000	3.410%	164,179	269,179	433,358
	12/1/2025			162,389	162,389	
2.58	6/1/2026	400,000	3.450%	162,389	562,389	724,777
	12/1/2026			155,489	155,489	
3.58	6/1/2027	415,000	3.490%	155,489	570,489	725,977
	12/1/2027			148,247	148,247	
4.58	6/1/2028	395,000	3.530%	148,247	543,247	691,494
	12/1/2028			141,275	141,275	
5.58	6/1/2029	410,000	3.570%	141,275	551,275	692,550
	12/1/2029			133,957	133,957	
6.58	6/1/2030	430,000	3.630%	133,957	563,957	697,913
	12/1/2030			126,152	126,152	
7.58	6/1/2031	445,000	3.690%	126,152	571,152	697,304
	12/1/2031			117,942	117,942	
8.58	6/1/2032	460,000	3.760%	117,942	577,942	695,884
	12/1/2032			109,294	109,294	
9.58	6/1/2033	475,000	3.830%	109,294	584,294	693,588
	12/1/2033			100,198	100,198	
10.58	6/1/2034	490,000	3.890%	100,198	590,198	690,395
	12/1/2034			90,667	90,667	
11.58	6/1/2035	820,000	3.950%	90,667	910,667	1,001,334
	12/1/2035			74,472	74,472	
12.58	6/1/2036	850,000	4.030%	74,472	924,472	998,944
	12/1/2036			57,345	57,345	
13.58	6/1/2037	885,000	4.100%	57,345	942,345	999,689
	12/1/2037			39,202	39,202	
14.58	6/1/2038	920,000	4.150%	39,202	959,202	998,404
	12/1/2038			20,112	20,112	
15.58	6/1/2039	960,000	4.190%	20,112	980,112	1,000,224
	12/1/2039					
16.58	6/1/2040					
	12/1/2040					
17.58	6/1/2041					
	12/1/2041					
18.58	6/1/2042					
	12/1/2042					
19.58	6/1/2043					
	12/1/2043					
		8,460,000		3,473,375	11,933,375	11,933,375

Scale : MMD Aaa as of 01-02-2018 + 35 bps for credit (Aa2/BQ) + 150 bps for timing.

City of Carroll, Iowa

EXHIBIT 1-5

Projection of G.O. Debt Capacity

Assumes 15 Year Bonds

Updated: 17-Jan-18

Valuation Growth & Debt Limit Assumptions	
Legal Debt Limit	5.00%
Effective Limit	4.00%

Beginning of Fiscal Year	Actual Valuation	Historical Valuation Growth	Gross Debt Limit	Effective Debt Limit	DEBT ISSUES SUBJECT TO DEBT LIMIT * G.O. - TAXES -	G.O. - TIF -	Sales Tax Bonds	*$3.8 M Library* Proposed GO Bonds 2018B	*Str Mnt Gar Fire Truck* Proposed GO Bonds 2019A	*Rec Pool** Rec Addn*** Proposed GO Bonds 2023A	Reserved	TOTAL G.O. DEBT OUTST'NDG	Available Effective Capacity	Percent /Debt Gross Debt Limit	Beginning of Fiscal Year
2011 - 2012	632,429,951	1.9%	31,621,498	25,297,198	4,235,000	945,000	1,650,000					6,830,000	18,467,198	21.60%	2011
2012 - 2013	648,166,368	2.5%	32,408,318	25,926,655	3,520,000	655,000	1,110,000					5,285,000	20,641,655	16.31%	2012
2013 - 2014	654,646,146	1.0%	32,732,307	26,185,846	3,400,000	455,000	560,000					4,415,000	21,770,846	13.49%	2013
2014 - 2015	752,235,898	14.9%	37,611,795	30,089,436	3,750,000	55,000						3,805,000	26,284,436	10.12%	2014
2015 - 2016	757,631,838	0.7%	37,881,592	30,305,274	3,630,000							3,630,000	26,675,274	9.58%	2015
2016 - 2017	775,612,596	2.4%	38,780,630	31,024,504	5,105,000							5,105,000	25,919,504	13.16%	2016
2017 - 2018	781,063,284	0.7%	39,053,164	31,242,531	4,090,000							4,090,000	27,152,531	10.47%	2017
2018 - 2019	846,719,429	8.4%	42,335,971	33,868,777	3,045,000			4,480,000				7,525,000	26,343,777	17.77%	2018
2019 - 2020	850,584,226	0.5%	42,529,211	34,023,369	2,515,000			4,165,000	1,120,000			7,800,000	26,223,369	18.34%	2019
2020 - 2021	854,468,347	0.5%	42,723,417	34,178,734	1,975,000			3,925,000	970,000			6,870,000	27,308,734	16.08%	2020
2021 - 2022	858,371,889	0.5%	42,918,594	34,334,876	1,430,000			3,690,000	815,000			5,935,000	28,399,876	13.83%	2021
2022 - 2023	862,294,948	0.5%	43,114,747	34,491,798	865,000			3,450,000	660,000			4,975,000	29,516,798	11.54%	2022
2023 - 2024	866,237,622	0.5%	43,311,881	34,649,505	295,000			3,200,000	520,000	8,460,000		12,475,000	22,174,505	28.80%	2023
2024 - 2025	870,200,010	0.5%	43,510,001	34,808,000				2,945,000	285,000	8,460,000		11,690,000	23,118,000	26.87%	2024
2025 - 2026	874,182,210	0.5%	43,709,111	34,967,288				2,690,000		8,355,000		11,045,000	23,922,288	25.27%	2025
2026 - 2027	874,182,210		43,709,111	34,967,288				2,425,000		7,955,000		10,380,000	24,587,288	23.75%	2026
2027 - 2028	874,182,210		43,709,111	34,967,288				2,155,000		7,540,000		9,695,000	25,272,288	22.18%	2027
2028 - 2029	874,182,210		43,709,111	34,967,288				1,875,000		7,145,000		9,020,000	25,947,288	20.64%	2028
2029 - 2030	874,182,210		43,709,111	34,967,288				1,585,000		6,735,000		8,320,000	26,647,288	19.03%	2029
2030 - 2031	874,182,210		43,709,111	34,967,288				1,290,000		6,305,000		7,595,000	27,372,288	17.38%	2030
2031 - 2032	874,182,210		43,709,111	34,967,288				985,000		5,860,000		6,845,000	28,122,288	15.66%	2031
2032 - 2033	874,182,210		43,709,111	34,967,288				670,000		5,400,000		6,070,000	28,897,288	13.89%	2032
2033 - 2034	874,182,210		43,709,111	34,967,288				340,000		4,925,000		5,265,000	29,702,288	12.05%	2033
2034 - 2035	874,182,210		43,709,111	34,967,288						4,435,000		4,435,000	30,532,288	10.15%	2034
2035 - 2036	874,182,210		43,709,111	34,967,288						3,615,000		3,615,000	31,352,288	8.27%	2035
2036 - 2037	874,182,210		43,709,111	34,967,288						2,765,000		2,765,000	32,202,288	6.33%	2036
2037 - 2038	874,182,210		43,709,111	34,967,288						1,880,000		1,880,000	33,087,288	4.30%	2037
2038 - 2039	874,182,210		43,709,111	34,967,288						960,000		960,000	34,007,288	2.20%	2038
2039 - 2040	874,182,210		43,709,111	34,967,288									34,967,288		2039

*** - Represents G.O. principal outstanding as of the BEGINNING of the fiscal year.**
**** - Project is subject to voter approval.**

Scenario 2:
Assumes 20 year bonds

© PFM

CITY OF CARROLL, IOWA

Projection of Debt Service Levy & Tax Rate Impact

EXHIBIT 2-1

Assumes 20 Year Bonds

TAX RATE IMPACT	
Fiscal Year 2018-19	($0.41)
Fiscal Year 2019-20	$0.41
Fiscal Year 2020-21	($0.00)
Fiscal Year 2021-22	$0.00

FY18 Pre-Levy => *$ 209,778* *Trails* | *Library & FY19 CIP* | *Str Mnt Gar Fire Truck* | *Rec Pool** Rec Addn***

Fiscal Year Payable	Total Tax Valuation	Historical Taxable Valuation Growth	Tax Rate Per $1,000	Current Taxes Levied	LOST Revenues	Abatements: (1) 2006 Ashwood TIF	Abatements: 2007 & 2008 Westfield TIF	Abatements: 2008 Assisted Living TIF	Other Sources	TOTAL Resources	Outstanding Debt Issues: TIF Series 2006	TIF/Taxes Series 2008	Series 2010A/13	Ref & Streets Series 2014	Advance Ref 2008 Series 2015A	GO Series 2016A	GO Series 2016B	Proposed GO Note 2018A	Proposed GO Bonds 2018B	Proposed GO Bonds 2019A	Proposed GO Series 2023A	Fiscal Fees	Other Uses	TOTAL Uses	Surplus (Deficit)	Ending Balance
2011 - 2012	400,172,509	4.0%	1.32429	529,944	388,173 *		151,876	3,369	118,638	1,192,000	52,738	399,723	93,150									2,500		1,193,608	(1,608)	44,913
2012 - 2013	423,107,377	5.7%	1.31815	557,719	304,449 *		118,512	54,924	11,806	1,047,410	51,338	451,168	91,710									2,000		1,035,585	11,825	56,738
2013 - 2014	436,313,737	3.1%	1.31482	573,673	375,661 *	31,660		53,413	84,224	1,118,631	54,938	385,518	580,107									2,000	27,033	1,049,595	69,035	125,773
2014 - 2015	509,745,241	16.8%	1.31502	670,325	346,694 *	35,439		56,838	16,285	1,125,581	2,922	231,068	428,205	509,710								1,500	(1,747,680)	(574,275)	1,699,856	1,825,629
2015 - 2016	505,407,544	(0.9%)	1.28846	651,197	399,730 *	34,318			35,328	1,120,573	0	170,953	236,293	308,848	0	386,070						2,500	1,746,128	2,850,790	(1,730,217)	95,412
2016 - 2017	507,314,135	0.4%	1.28762	653,228	352,736 *	32,207			21,996	1,060,167	0			312,170	179,990	268,933	298,745					2,500		1,062,337	(2,169)	93,243
2017 - 2018	515,496,419	1.6%	1.28014	659,908	379,255 *	32,731			27,508	1,099,402	0				283,828	262,210	340,058	210,280				3,000	(29,210)	1,070,165	29,237	122,480
2018 - 2019	550,295,467	6.8%	0.87339	480,625	400,694 *	32,552			52,302	966,173	0				281,228		292,223		391,223			1,500		966,173		122,480
2019 - 2020	560,507,303	1.9%	1.28781	721,829	373,802 *	32,552				1,128,183	0				282,978		294,523		370,768	177,915		2,000		1,128,183		122,480
2020 - 2021	554,452,445	(1.1%)	1.28589	712,967	374,302 *	32,552				1,119,821	0				284,400		291,498		354,384	187,540		2,000		1,119,821		122,480
2021 - 2022	562,597,960	1.5%	1.28679	723,947	374,302 *	32,552				1,130,801					290,080		298,060		358,174	182,487		2,000		1,130,801		122,480
2022 - 2023	544,711,687	(3.2%)	1.28208	698,366	374,302 *	32,552				1,105,220					285,180		299,070		361,598	157,372		2,000		1,105,220		122,480
2023 - 2024	540,107,495	(0.8%)	1.28150	692,146	374,302 *	32,552				1,099,000							299,720		354,648	247,863	194,769	2,000		1,099,000		122,480
2024 - 2025	522,752,576	(3.2%)	1.28402	671,223	374,302 *	32,552				1,078,077									267,598	305,089	503,891	1,500		1,078,077		122,480
2025 - 2026	521,962,440	(0.2%)	1.06318	554,941	374,302 *	32,552				961,795									267,702		693,094	1,000		961,795		122,480
2026 - 2027	521,962,440		1.05794	552,204	374,302 *	32,552				959,058									267,557		690,501	1,000		959,058		122,480
2027 - 2028	521,962,440		1.05611	551,250	374,302 *	0				925,552									272,139		652,414	1,000		925,552		122,480
2028 - 2029	521,962,440		1.05955	553,043	374,302 *					927,345									271,287		655,059	1,000		927,345		122,480
2029 - 2030	521,962,440		1.05159	548,890	374,302 *					923,192									270,164		652,028	1,000		923,192		122,480
2030 - 2031	521,962,440		1.05156	548,877	374,302 *					923,179									268,764		653,416	1,000		923,179		122,480
2031 - 2032	521,962,440		1.04943	547,762	374,302 *					922,064									267,040		654,025	1,000		922,064		122,480
2032 - 2033	521,962,440		1.05467	550,499	374,302 *					924,801									270,005		653,797	1,000		924,801		122,480
2033 - 2034	521,962,440		1.04784	546,933	374,302 *					921,235									267,525		652,711	1,000		921,235		122,480
2034 - 2035	521,962,440		1.05807	552,272	374,302 *					926,574									269,785		655,789	1,000		926,574		122,480
2035 - 2036	521,962,440		1.05591	551,145	374,302 *					925,447									271,630		652,817	1,000		925,447		122,480
2036 - 2037	521,962,440		1.05109	548,629	374,302 *					922,931									268,055		653,876	1,000		922,931		122,480
2037 - 2038	521,962,440		1.05317	549,714	374,302 *					924,016									269,230		653,786	1,000		924,016		122,480
2038 - 2039	521,962,440		0.53417	278,819	374,302 *					653,121											652,621	500		653,121		122,480
2039 - 2040	521,962,440		0.53952	281,612	374,302 *					655,914											655,414	500		655,914		122,480
2040 - 2041	521,962,440		0.53297	278,191	374,302 *					652,493											651,993	500		652,493		122,480
2041 - 2042	521,962,440		0.53405	278,753	374,302 *					653,055											652,555	500		653,055		122,480
2042 - 2043	521,962,440		0.53275	278,073	374,302 *					652,375											651,875	500		652,375		122,480
																			5,959,268	1,258,266	12,536,424					

* - Reflects the 25% local option sales tax receipts plus some excess of the 75% portion.

** - Project is subject to voter approval.

(1) Incorporated TIF revenue from the Urban Renewal Area to abate a portion of the $515,000 General Obligation Capital Loan Notes, Series 2006

City of Carroll, Iowa

Proposed G. O. Capital Loan Notes, Series 2018B

EXHIBIT 2-2

Library (20 Year Bonds) & FY 2019 CIP

SOURCES & USES

SOURCES	
Par Amount of Notes	4,480,000.00
Cash on Hand	45,000.00
Premium	
Total Sources	4,525,000.00
USES	
Deposit to Construction Account	4,435,000.00
Deposit to Reserve Account	
Capitalized Interest Account	(0.00)
Municipal Bond Insurance	0.00
Underwriters' Discount ($10.00 per bond)	44,800.00
Costs of Issuance	45,000.00
Accrued Interest	
Rounding Amount	200.00
Total Uses	4,525,000.00
ASSUMPTIONS	
Dated Date	10/31/2018
Delivery Date	10/31/2018
First Interest Date	6/1/2019
First Principal Date	6/1/2019
Last Principal Date	6/1/2038

Yield Calculations:

Arbitrage Yield	3.27847%
TIC	3.40305%
AIC	3.53018%
Average Life	10.01 Years

PROJECTS FINANCED:

Library	$ 3,765,000
Youth Complex Lighting	375,000
Pickleball Courts	175,000
Trails	120,000
	$ 4,435,000

DEBT SERVICE SCHEDULE

	Date	Principal	Coupon	Interest	Debt Service	Annual Debt Service
0.6	6/1/2019	310,000	2.520%	81,223	391,223	391,223
	12/1/2019			65,384	65,384	
1.6	6/1/2020	240,000	2.660%	65,384	305,384	370,768
	12/1/2020			62,192	62,192	
2.6	6/1/2021	230,000	2.700%	62,192	292,192	354,384
	12/1/2021			59,087	59,087	
3.6	6/1/2022	240,000	2.740%	59,087	299,087	358,174
	12/1/2022			55,799	55,799	
4.6	6/1/2023	250,000	2.780%	55,799	305,799	361,598
	12/1/2023			52,324	52,324	
5.6	6/1/2024	250,000	2.820%	52,324	302,324	354,648
	12/1/2024			48,799	48,799	
6.6	6/1/2025	170,000	2.880%	48,799	218,799	267,598
	12/1/2025			46,351	46,351	
7.6	6/1/2026	175,000	2.940%	46,351	221,351	267,702
	12/1/2026			43,778	43,778	
8.6	6/1/2027	180,000	3.010%	43,778	223,778	267,557
	12/1/2027			41,069	41,069	
9.6	6/1/2028	190,000	3.080%	41,069	231,069	272,139
	12/1/2028			38,143	38,143	
10.6	6/1/2029	195,000	3.140%	38,143	233,143	271,287
	12/1/2029			35,082	35,082	
11.6	6/1/2030	200,000	3.200%	35,082	235,082	270,164
	12/1/2030			31,882	31,882	
12.6	6/1/2031	205,000	3.280%	31,882	236,882	268,764
	12/1/2031			28,520	28,520	
13.6	6/1/2032	210,000	3.350%	28,520	238,520	267,040
	12/1/2032			25,002	25,002	
14.6	6/1/2033	220,000	3.400%	25,002	245,002	270,005
	12/1/2033			21,262	21,262	
15.6	6/1/2034	225,000	3.440%	21,262	246,262	267,525
	12/1/2034			17,392	17,392	
16.6	6/1/2035	235,000	3.470%	17,392	252,392	269,785
	12/1/2035			13,315	13,315	
17.6	6/1/2036	245,000	3.500%	13,315	258,315	271,630
	12/1/2036			9,028	9,028	
18.6	6/1/2037	250,000	3.530%	9,028	259,028	268,055
	12/1/2037			4,615	4,615	
19.6	6/1/2038	260,000	3.550%	4,615	264,615	269,230
	12/1/2038					
		4,480,000		1,479,268	5,959,268	5,959,268

Scale : MMD Aaa as of 01-02-2018 + 35 bps for credit (Aa2/BQ) + 75 bps for timing.

City of Carroll, Iowa

Proposed General Obligation Bonds, Series 2019A

EXHIBIT 2-3

Street Maintenance Garage & Fire Truck

SOURCES & USES

SOURCES	
Par Amount of Bonds	1,120,000.00
Accrued Interest	
Other Monies	
Total Sources	1,120,000.00
USES	
Deposit to Construction Account	1,075,000.00
Deposit to Reserve Account	
Capitalized Interest Account	0.00
Municipal Bond Insurance	
Underwriters' Discount ($7.50 per bond)	8,400.00
Costs of Issuance	33,000.00
Accrued Interest	
Rounding Amount	3,600.00
Total Uses	1,120,000.00
ASSUMPTIONS	
Dated Date	9/1/2019
Delivery Date	9/1/2019
First Interest Date	6/1/2020
First Principal Date	6/1/2020
Last Principal Date	6/1/2025

Arbitrage Yield	3.36376%
TIC	3.58687%
AIC	4.48711%
Average Life	3.67 Years

PROJECTS FINANCED:

Street Maintenance Garage	$ 700,000
Fire Truck	375,000
Reserved	-
Reserved	-
	$ 1,075,000

DEBT SERVICE SCHEDULE

	Date	Principal	Coupon	Interest	Debt Service	Annual Debt Service
0.75	6/1/2020	150,000	3.120%	27,915	177,915	177,915
	12/1/2020			16,270	16,270	
1.75	6/1/2021	155,000	3.260%	16,270	171,270	187,540
	12/1/2021			13,744	13,744	
2.75	6/1/2022	155,000	3.300%	13,744	168,744	182,487
	12/1/2022			11,186	11,186	
3.75	6/1/2023	135,000	3.340%	11,186	146,186	157,372
	12/1/2023			8,932	8,932	
4.75	6/1/2024	230,000	3.380%	8,932	238,932	247,863
	12/1/2024			5,045	5,045	
5.75	6/1/2025	295,000	3.420%	5,045	300,045	305,089
	12/1/2025					
6.75	6/1/2026					
	12/1/2026					
7.75	6/1/2027					
	12/1/2027					
8.75	6/1/2028					
	12/1/2028					
9.75	6/1/2029					
	12/1/2029					
10.75	6/1/2030					
	12/1/2030					
11.75	6/1/2031					
	12/1/2031					
12.75	6/1/2032					
	12/1/2032					
13.75	6/1/2033					
	12/1/2033					
14.75	6/1/2034					
	12/1/2034					
15.75	6/1/2035					
	12/1/2035					
16.75	6/1/2036					
	12/1/2036					
17.75	6/1/2037					
	12/1/2037					
18.75	6/1/2038					
	12/1/2038					
19.75	6/1/2039					
	12/1/2039					
		1,120,000		138,266	1,258,266	1,258,266

Scale : MMD Aaa as of 01-02-2018 + NR/BQ credit + 125 bps for timing.

City of Carroll, Iowa

Proposed G. O. Capital Loan Notes, Series 2023A

EXHIBIT 2-4

Recreation Center Addition & Improvements (20 Year Bonds)

SOURCES & USES

SOURCES	
Par Amount of Bonds	8,460,000.00
Accrued Interest	
Premium	
Total Sources	8,460,000.00
USES	
Deposit to Construction Account	8,300,000.00
Deposit to Reserve Account	
Capitalized Interest Account	0.00
Municipal Bond Insurance	
Underwriters' Discount ($12.50 per bond)	105,750.00
Costs of Issuance	52,000.00
Accrued Interest	
Rounding Amount	2,250.00
Total Uses	8,460,000.00
ASSUMPTIONS	
Dated Date	11/1/2023
Delivery Date	11/1/2023
First Interest Date	6/1/2024
First Principal Date	6/1/2024
Last Principal Date	6/1/2043

Arbitrage Yield	4.05771%
TIC	4.19794%
AIC	4.26782%
Average Life	11.82 Years

FY 2018 PROJECTS FINANCED:	
Recreation Center	$ 8,300,000
Reserved	-
Reserved	-
Reserved	-
	$ 8,300,000

DEBT SERVICE SCHEDULE

	Date	Principal	Coupon	Interest	Debt Service	Annual Debt Service
0.58	6/1/2024	0	3.270%	194,769	194,769	194,769
	12/1/2024			166,945	166,945	
1.58	6/1/2025	170,000	3.410%	166,945	336,945	503,891
	12/1/2025			164,047	164,047	
2.58	6/1/2026	365,000	3.450%	164,047	529,047	693,094
	12/1/2026			157,751	157,751	
3.58	6/1/2027	375,000	3.490%	157,751	532,751	690,501
	12/1/2027			151,207	151,207	
4.58	6/1/2028	350,000	3.530%	151,207	501,207	652,414
	12/1/2028			145,029	145,029	
5.58	6/1/2029	365,000	3.570%	145,029	510,029	655,059
	12/1/2029			138,514	138,514	
6.58	6/1/2030	375,000	3.630%	138,514	513,514	652,028
	12/1/2030			131,708	131,708	
7.58	6/1/2031	390,000	3.690%	131,708	521,708	653,416
	12/1/2031			124,512	124,512	
8.58	6/1/2032	405,000	3.760%	124,512	529,512	654,025
	12/1/2032			116,898	116,898	
9.58	6/1/2033	420,000	3.830%	116,898	536,898	653,797
	12/1/2033			108,855	108,855	
10.58	6/1/2034	435,000	3.890%	108,855	543,855	652,711
	12/1/2034			100,395	100,395	
11.58	6/1/2035	455,000	3.950%	100,395	555,395	655,789
	12/1/2035			91,408	91,408	
12.58	6/1/2036	470,000	4.030%	91,408	561,408	652,817
	12/1/2036			81,938	81,938	
13.58	6/1/2037	490,000	4.100%	81,938	571,938	653,876
	12/1/2037			71,893	71,893	
14.58	6/1/2038	510,000	4.150%	71,893	581,893	653,786
	12/1/2038			61,310	61,310	
15.58	6/1/2039	530,000	4.190%	61,310	591,310	652,621
	12/1/2039			50,207	50,207	
16.58	6/1/2040	555,000	4.220%	50,207	605,207	655,414
	12/1/2040			38,496	38,496	
17.58	6/1/2041	575,000	4.250%	38,496	613,496	651,993
	12/1/2041			26,278	26,278	
18.58	6/1/2042	600,000	4.280%	26,278	626,278	652,555
	12/1/2042			13,438	13,438	
19.58	6/1/2043	625,000	4.300%	13,438	638,438	651,875
	12/1/2043					
		8,460,000		4,076,424	12,536,424	12,536,424

Scale : MMD Aaa as of 01-02-2018 + 35 bps for credit (Aa2/BQ) + 150 bps for timing.

City of Carroll, Iowa

Projection of G.O. Debt Capacity

EXHIBIT 2-5

Assumes 20 Year Bonds

Updated: 17-Jan-18

Valuation Growth & Debt Limit Assumptions	
Legal Debt Limit	5.00%
Effective Limit	4.00%

Beginning of Fiscal Year	Actual Valuation	Historical Valuation Growth	Gross Debt Limit	Effective Debt Limit	DEBT ISSUES SUBJECT TO DEBT LIMIT * G.O. - TAXES -	G.O. - TIF -	Sales Tax Bonds	*$3.8 M Library* Proposed GO Bonds 2018B	*Str Mnt Gar Fire Truck* Proposed GO Bonds 2019A	*Rec Pool** Rec Addn*** Proposed GO Bonds 2023A	Reserved	TOTAL G.O. DEBT OUTST'NDG	Available Effective Capacity	Percent /Debt Gross Debt Limit	Beginning of Fiscal Year
2011 - 2012	632,429,951	1.9%	31,621,498	25,297,198	4,235,000	945,000	1,650,000					6,830,000	18,467,198	21.60%	2011
2012 - 2013	648,166,368	2.5%	32,408,318	25,926,655	3,520,000	655,000	1,110,000					5,285,000	20,641,655	16.31%	2012
2013 - 2014	654,646,146	1.0%	32,732,307	26,185,846	3,400,000	455,000	560,000					4,415,000	21,770,846	13.49%	2013
2014 - 2015	752,235,898	14.9%	37,611,795	30,089,436	3,750,000	55,000						3,805,000	26,284,436	10.12%	2014
2015 - 2016	757,631,838	0.7%	37,881,592	30,305,274	3,630,000							3,630,000	26,675,274	9.58%	2015
2016 - 2017	775,612,596	2.4%	38,780,630	31,024,504	5,105,000							5,105,000	25,919,504	13.16%	2016
2017 - 2018	781,063,284	0.7%	39,053,164	31,242,531	4,090,000							4,090,000	27,152,531	10.47%	2017
2018 - 2019	846,719,429	8.4%	42,335,971	33,868,777	3,045,000			4,480,000				7,525,000	26,343,777	17.77%	2018
2019 - 2020	850,584,226	0.5%	42,529,211	34,023,369	2,515,000			4,170,000	1,120,000			7,805,000	26,218,369	18.35%	2019
2020 - 2021	854,468,347	0.5%	42,723,417	34,178,734	1,975,000			3,930,000	970,000			6,875,000	27,303,734	16.09%	2020
2021 - 2022	858,371,889	0.5%	42,918,594	34,334,876	1,430,000			3,700,000	815,000			5,945,000	28,389,876	13.85%	2021
2022 - 2023	862,294,948	0.5%	43,114,747	34,491,798	865,000			3,460,000	660,000			4,985,000	29,506,798	11.56%	2022
2023 - 2024	866,237,622	0.5%	43,311,881	34,649,505	295,000			3,210,000	525,000	8,460,000		12,490,000	22,159,505	28.84%	2023
2024 - 2025	870,200,010	0.5%	43,510,001	34,808,000				2,960,000	295,000	8,460,000		11,715,000	23,093,000	26.92%	2024
2025 - 2026	874,182,210	0.5%	43,709,111	34,967,288				2,790,000		8,290,000		11,080,000	23,887,288	25.35%	2025
2026 - 2027	874,182,210		43,709,111	34,967,288				2,615,000		7,925,000		10,540,000	24,427,288	24.11%	2026
2027 - 2028	874,182,210		43,709,111	34,967,288				2,435,000		7,550,000		9,985,000	24,982,288	22.84%	2027
2028 - 2029	874,182,210		43,709,111	34,967,288				2,245,000		7,200,000		9,445,000	25,522,288	21.61%	2028
2029 - 2030	874,182,210		43,709,111	34,967,288				2,050,000		6,835,000		8,885,000	26,082,288	20.33%	2029
2030 - 2031	874,182,210		43,709,111	34,967,288				1,850,000		6,460,000		8,310,000	26,657,288	19.01%	2030
2031 - 2032	874,182,210		43,709,111	34,967,288				1,645,000		6,070,000		7,715,000	27,252,288	17.65%	2031
2032 - 2033	874,182,210		43,709,111	34,967,288				1,435,000		5,665,000		7,100,000	27,867,288	16.24%	2032
2033 - 2034	874,182,210		43,709,111	34,967,288				1,215,000		5,245,000		6,460,000	28,507,288	14.78%	2033
2034 - 2035	874,182,210		43,709,111	34,967,288				990,000		4,810,000		5,800,000	29,167,288	13.27%	2034
2035 - 2036	874,182,210		43,709,111	34,967,288				755,000		4,355,000		5,110,000	29,857,288	11.69%	2035
2036 - 2037	874,182,210		43,709,111	34,967,288				510,000		3,885,000		4,395,000	30,572,288	10.06%	2036
2037 - 2038	874,182,210		43,709,111	34,967,288				260,000		3,395,000		3,655,000	31,312,288	8.36%	2037
2038 - 2039	874,182,210		43,709,111	34,967,288						2,885,000		2,885,000	32,082,288	6.60%	2038
2039 - 2040	874,182,210		43,709,111	34,967,288						2,355,000		2,355,000	32,612,288	5.39%	2039
2040 - 2041	874,182,210		43,709,111	34,967,288						1,800,000		1,800,000	33,167,288	4.12%	2040
2041 - 2042	874,182,210		43,709,111	34,967,288						1,225,000		1,225,000	33,742,288	2.80%	2041
2042 - 2043	874,182,210		43,709,111	34,967,288						625,000		625,000	34,342,288	1.43%	2042
2043 - 2044	874,182,210		43,709,111	34,967,288									34,967,288		2043

*** - Represents G.O. principal outstanding as of the BEGINNING of the fiscal year.**
**** - Project is subject to voter approval.**

Scenario 3:
Assumes accelerated bonds

© PFM

CITY OF CARROLL, IOWA

Projection of Debt Service Levy & Tax Rate Impact

EXHIBIT 3-1

Accelerated Repayment of Bonds

TAX RATE IMPACT	
Fiscal Year 2018-19	($0.41)
Fiscal Year 2019-20	$0.42
Fiscal Year 2020-21	($0.00)
Fiscal Year 2021-22	$0.00

FY18 Pre-Levy => *$ 209,778* *Trails* | *Library & FY19 CIP* | *Str Mnt Gar Fire Truck* | *Rec Pool** Rec Addn***

Fiscal Year Payable	Total Tax Valuation	Historical Taxable Valuation Growth	Tax Rate Per $1,000	Current Taxes Levied	LOST Revenues	Abatements: (1) 2006 Ashwood TIF	Abatements: 2007 & 2008 Westfield TIF	Abatements: 2008 Assisted Living TIF	Other Sources	TOTAL Resources	Outstanding Debt Issues: TIF Series 2006	TIF/Taxes Series 2008	Series 2010A/13	Ref & Streets Series 2014	Advance Ref 2008 Series 2015A	GO Series 2016A	GO Series 2016B	Proposed GO Note 2018A	Proposed GO Bonds 2018B	Proposed GO Bonds 2019A	Proposed GO Series 2027A	Fiscal Fees	Other Uses	TOTAL Uses	Surplus (Deficit)	Ending Balance
2011 - 2012	400,172,509	4.0%	1.32429	529,944	388,173 *		151,876	3,369	118,638	1,192,000	52,738	399,723	93,150									2,500		1,193,608	(1,608)	44,913
2012 - 2013	423,107,377	5.7%	1.31815	557,719	304,449 *		118,512	54,924	11,806	1,047,410	51,338	451,168	91,710									2,000		1,035,585	11,825	56,738
2013 - 2014	436,313,737	3.1%	1.31482	573,673	375,661 *	31,660		53,413	84,224	1,118,631	54,938	385,518	580,107									2,000	27,033	1,049,595	69,035	125,773
2014 - 2015	509,745,241	16.8%	1.31502	670,325	346,694 *	35,439		56,838	16,285	1,125,581	2,922	231,068	428,205	509,710								1,500	(1,747,680)	(574,275)	1,699,856	1,825,629
2015 - 2016	505,407,544	(0.9%)	1.28846	651,197	399,730 *	34,318			35,328	1,120,573	0	170,953	236,293	308,848	0	386,070						2,500	1,746,128	2,850,790	(1,730,217)	95,412
2016 - 2017	507,314,135	0.4%	1.28762	653,228	352,736 *	32,207			21,996	1,060,167	0			312,170	179,990	268,933	298,745					2,500		1,062,337	(2,169)	93,243
2017 - 2018	515,496,419	1.6%	1.28014	659,908	379,255 *	32,731			27,508	1,099,402	0				283,828	262,210	340,058	210,280				3,000	(29,210)	1,070,165	29,237	122,480
2018 - 2019	550,295,467	6.8%	0.87112	479,371	400,694 *	32,552			52,302	964,919	0				281,228		292,223		389,969			1,500		964,919		122,480
2019 - 2020	560,507,303	1.9%	1.28639	721,033	373,802 *	32,552				1,127,387	0				282,978		294,523		369,972	177,915		2,000		1,127,387		122,480
2020 - 2021	554,452,445	(1.1%)	1.28398	711,905	374,302 *	32,552				1,118,759	0				284,400		291,498		353,322	187,540		2,000		1,118,759		122,480
2021 - 2022	562,597,960	1.5%	1.28442	722,615	374,302 *	32,552				1,129,469					290,080		298,060		356,842	182,487		2,000		1,129,469		122,480
2022 - 2023	544,711,687	(3.2%)	1.28831	701,760	374,302 *	32,552				1,108,614					285,180		299,070		364,992	157,372		2,000		1,108,614		122,480
2023 - 2024	540,107,495	(0.8%)	1.28651	694,854	374,302 *	32,552				1,101,708							299,720		552,625	247,863		1,500		1,101,708		122,480
2024 - 2025	522,752,576	(3.2%)	1.28911	673,888	374,302 *	32,552				1,080,742									774,653	305,089		1,000		1,080,742		122,480
2025 - 2026	521,962,440	(0.2%)	1.28991	673,283	374,302 *	32,552				1,080,137									1,079,637			500		1,080,137		122,480
2026 - 2027	521,962,440		1.16540	608,295	374,302 *	32,552				1,015,149									1,014,649			500		1,015,149		122,480
2027 - 2028	521,962,440		0.95960	500,878	374,302 *	0				875,180											874,680	500		875,180		122,480
2028 - 2029	521,962,440		0.96078	501,494	374,302 *					875,796											875,296	500		875,796		122,480
2029 - 2030	521,962,440		0.96056	501,375	374,302 *					875,677											875,177	500		875,677		122,480
2030 - 2031	521,962,440		0.95855	500,330	374,302 *					874,632											874,132	500		874,632		122,480
2031 - 2032	521,962,440		0.96433	503,343	374,302 *					877,645											877,145	500		877,645		122,480
2032 - 2033	521,962,440		0.95835	500,221	374,302 *					874,523											874,023	500		874,523		122,480
2033 - 2034	521,962,440		0.96008	501,124	374,302 *					875,426											874,926	500		875,426		122,480
2034 - 2035	521,962,440		0.95929	500,714	374,302 *					875,016											874,516	500		875,016		122,480
2035 - 2036	521,962,440		0.95593	498,961	374,302 *					873,263											872,763	500		873,263		122,480
2036 - 2037	521,962,440		0.95938	500,761	374,302 *					875,063											874,563	500		875,063		122,480
2037 - 2038	521,962,440		0.95962	500,887	374,302 *					875,189											874,689	500		875,189		122,480
2038 - 2039	521,962,440		0.95673	499,378	374,302 *					873,680											873,180	500		873,680		122,480
																			5,256,657	1,258,266	10,495,087					

City of Carroll, Iowa

Proposed G. O. Capital Loan Notes, Series 2018B

EXHIBIT 3-2

Library (Accelerated Bonds) & FY 2019 CIP

SOURCES & USES

SOURCES	
Par Amount of Notes	4,480,000.00
Cash on Hand	45,000.00
Premium	
Total Sources	4,525,000.00
USES	
Deposit to Construction Account	4,435,000.00
Deposit to Reserve Account	
Capitalized Interest Account	(0.00)
Municipal Bond Insurance	0.00
Underwriters' Discount ($10.00 per bond)	44,800.00
Costs of Issuance	45,000.00
Accrued Interest	
Rounding Amount	200.00
Total Uses	4,525,000.00
ASSUMPTIONS	
Dated Date	10/31/2018
Delivery Date	10/31/2018
First Interest Date	6/1/2019
First Principal Date	6/1/2019
Last Principal Date	6/1/2027

Yield Calculations:

Arbitrage Yield	2.91095%
TIC	3.09898%
AIC	3.29041%
Average Life	5.95 Years

PROJECTS FINANCED:

Library	$ 3,765,000
Youth Complex Lighting	375,000
Pickleball Courts	175,000
Trails	120,000
	$ 4,435,000

DEBT SERVICE SCHEDULE

	Date	Principal	Coupon	Interest	Debt Service	Annual Debt Service
0.6	6/1/2019	315,000	2.520%	74,969	389,969	389,969
	12/1/2019			59,986	59,986	
1.6	6/1/2020	250,000	2.660%	59,986	309,986	369,972
	12/1/2020			56,661	56,661	
2.6	6/1/2021	240,000	2.700%	56,661	296,661	353,322
	12/1/2021			53,421	53,421	
3.6	6/1/2022	250,000	2.740%	53,421	303,421	356,842
	12/1/2022			49,996	49,996	
4.6	6/1/2023	265,000	2.780%	49,996	314,996	364,992
	12/1/2023			46,312	46,312	
5.6	6/1/2024	460,000	2.820%	46,312	506,312	552,625
	12/1/2024			39,826	39,826	
6.6	6/1/2025	695,000	2.880%	39,826	734,826	774,653
	12/1/2025			29,818	29,818	
7.6	6/1/2026	1,020,000	2.940%	29,818	1,049,818	1,079,637
	12/1/2026			14,824	14,824	
8.6	6/1/2027	985,000	3.010%	14,824	999,824	1,014,649
	12/1/2027					
9.6	6/1/2028					
	12/1/2028					
10.6	6/1/2029					
	12/1/2029					
11.6	6/1/2030					
	12/1/2030					
12.6	6/1/2031					
	12/1/2031					
13.6	6/1/2032					
	12/1/2032					
14.6	6/1/2033					
	12/1/2033					
15.6	6/1/2034					
	12/1/2034					
16.6	6/1/2035					
	12/1/2035					
17.6	6/1/2036					
	12/1/2036					
18.6	6/1/2037					
	12/1/2037					
19.6	6/1/2038					
	12/1/2038					
		4,480,000		776,657	5,256,657	5,256,657

Scale : MMD Aaa as of 01-02-2018 + 35 bps for credit (Aa2/BQ) + 75 bps for timing.

City of Carroll, Iowa

Proposed General Obligation Bonds, Series 2019A

EXHIBIT 3-3

Street Maintenance Garage & Fire Truck

SOURCES & USES

SOURCES	
Par Amount of Bonds	1,120,000.00
Accrued Interest	
Other Monies	
Total Sources	1,120,000.00
USES	
Deposit to Construction Account	1,075,000.00
Deposit to Reserve Account	
Capitalized Interest Account	0.00
Municipal Bond Insurance	
Underwriters' Discount ($7.50 per bond)	8,400.00
Costs of Issuance	33,000.00
Accrued Interest	
Rounding Amount	3,600.00
Total Uses	1,120,000.00
ASSUMPTIONS	
Dated Date	9/1/2019
Delivery Date	9/1/2019
First Interest Date	6/1/2020
First Principal Date	6/1/2020
Last Principal Date	6/1/2025

Arbitrage Yield	3.36376%
TIC	3.58687%
AIC	4.48711%
Average Life	3.67 Years

PROJECTS FINANCED:

Street Maintenance Garage	$ 700,000
Fire Truck	375,000
Reserved	-
Reserved	-
	$ 1,075,000

DEBT SERVICE SCHEDULE

	Date	Principal	Coupon	Interest	Debt Service	Annual Debt Service
0.75	6/1/2020	150,000	3.120%	27,915	177,915	177,915
	12/1/2020			16,270	16,270	
1.75	6/1/2021	155,000	3.260%	16,270	171,270	187,540
	12/1/2021			13,744	13,744	
2.75	6/1/2022	155,000	3.300%	13,744	168,744	182,487
	12/1/2022			11,186	11,186	
3.75	6/1/2023	135,000	3.340%	11,186	146,186	157,372
	12/1/2023			8,932	8,932	
4.75	6/1/2024	230,000	3.380%	8,932	238,932	247,863
	12/1/2024			5,045	5,045	
5.75	6/1/2025	295,000	3.420%	5,045	300,045	305,089
	12/1/2025					
6.75	6/1/2026					
	12/1/2026					
7.75	6/1/2027					
	12/1/2027					
8.75	6/1/2028					
	12/1/2028					
9.75	6/1/2029					
	12/1/2029					
10.75	6/1/2030					
	12/1/2030					
11.75	6/1/2031					
	12/1/2031					
12.75	6/1/2032					
	12/1/2032					
13.75	6/1/2033					
	12/1/2033					
14.75	6/1/2034					
	12/1/2034					
15.75	6/1/2035					
	12/1/2035					
16.75	6/1/2036					
	12/1/2036					
17.75	6/1/2037					
	12/1/2037					
18.75	6/1/2038					
	12/1/2038					
19.75	6/1/2039					
	12/1/2039					
		1,120,000		138,266	1,258,266	1,258,266

Scale : MMD Aaa as of 01-02-2018 + NR/BQ credit + 125 bps for timing.

City of Carroll, Iowa

Proposed G. O. Capital Loan Notes, Series 2027A

EXHIBIT 3-4

Recreation Center Addition & Improvements (Accelerated)

SOURCES & USES

SOURCES	
Par Amount of Bonds	8,460,000.00
Accrued Interest	
Premium	
Total Sources	8,460,000.00
USES	
Deposit to Construction Account	8,300,000.00
Deposit to Reserve Account	
Capitalized Interest Account	0.00
Municipal Bond Insurance	
Underwriters' Discount ($12.50 per bond)	105,750.00
Costs of Issuance	52,000.00
Accrued Interest	
Rounding Amount	2,250.00
Total Uses	8,460,000.00
ASSUMPTIONS	
Dated Date	11/1/2027
Delivery Date	11/1/2027
First Interest Date	6/1/2028
First Principal Date	6/1/2028
Last Principal Date	6/1/2039

Arbitrage Yield	3.74157%
TIC	3.97135%
AIC	4.08591%
Average Life	6.41 Years

FY 2018 PROJECTS FINANCED:	
Recreation Center	$ 8,300,000
Reserved	-
Reserved	-
Reserved	-
	$ 8,300,000

DEBT SERVICE SCHEDULE

	Date	Principal	Coupon	Interest	Debt Service	Annual Debt Service
0.58	6/1/2028	695,000	3.270%	179,680	874,680	874,680
	12/1/2028			142,648	142,648	
1.58	6/1/2029	590,000	3.410%	142,648	732,648	875,296
	12/1/2029			132,588	132,588	
2.58	6/1/2030	610,000	3.450%	132,588	742,588	875,177
	12/1/2030			122,066	122,066	
3.58	6/1/2031	630,000	3.490%	122,066	752,066	874,132
	12/1/2031			111,072	111,072	
4.58	6/1/2032	655,000	3.530%	111,072	766,072	877,145
	12/1/2032			99,512	99,512	
5.58	6/1/2033	675,000	3.570%	99,512	774,512	874,023
	12/1/2033			87,463	87,463	
6.58	6/1/2034	700,000	3.630%	87,463	787,463	874,926
	12/1/2034			74,758	74,758	
7.58	6/1/2035	725,000	3.690%	74,758	799,758	874,516
	12/1/2035			61,382	61,382	
8.58	6/1/2036	750,000	3.760%	61,382	811,382	872,763
	12/1/2036			47,282	47,282	
9.58	6/1/2037	780,000	3.830%	47,282	827,282	874,563
	12/1/2037			32,345	32,345	
10.58	6/1/2038	810,000	3.890%	32,345	842,345	874,689
	12/1/2038			16,590	16,590	
11.58	6/1/2039	840,000	3.950%	16,590	856,590	873,180
	12/1/2039					
12.58	6/1/2040					
	12/1/2040					
13.58	6/1/2041					
	12/1/2041					
14.58	6/1/2042					
	12/1/2042					
15.58	6/1/2043					
	12/1/2043					
16.58	6/1/2044					
	12/1/2044					
17.58	6/1/2045					
	12/1/2045					
18.58	6/1/2046					
	12/1/2046					
19.58	6/1/2047					
	12/1/2047					
		8,460,000		2,035,087	10,495,087	10,495,087

Scale : MMD Aaa as of 01-02-2018 + 35 bps for credit (Aa2/BQ) + 150 bps for timing.

City of Carroll, Iowa

Projection of G.O. Debt Capacity

EXHIBIT 3-5

Accelerated Repayment of Bonds

Updated: 17-Jan-18

Valuation Growth & Debt Limit Assumptions	
Legal Debt Limit	5.00%
Effective Limit	4.00%

Beginning of Fiscal Year	Actual Valuation	Historical Valuation Growth	Gross Debt Limit	Effective Debt Limit	DEBT ISSUES SUBJECT TO DEBT LIMIT * G.O. - TAXES -	G.O. - TIF -	Sales Tax Bonds	*$3.8 M Library* Proposed GO Bonds 2018B	*Str Mnt Gar Fire Truck* Proposed GO Bonds 2019A	*Rec Pool** Rec Addn**** Proposed GO Bonds 2023A	Reserved	TOTAL G.O. DEBT OUTST'NDG	Available Effective Capacity	Percent /Debt Gross Debt Limit	Beginning of Fiscal Year
2011 - 2012	632,429,951	1.9%	31,621,498	25,297,198	4,235,000	945,000	1,650,000					6,830,000	18,467,198	21.60%	2011
2012 - 2013	648,166,368	2.5%	32,408,318	25,926,655	3,520,000	655,000	1,110,000					5,285,000	20,641,655	16.31%	2012
2013 - 2014	654,646,146	1.0%	32,732,307	26,185,846	3,400,000	455,000	560,000					4,415,000	21,770,846	13.49%	2013
2014 - 2015	752,235,898	14.9%	37,611,795	30,089,436	3,750,000	55,000						3,805,000	26,284,436	10.12%	2014
2015 - 2016	757,631,838	0.7%	37,881,592	30,305,274	3,630,000							3,630,000	26,675,274	9.58%	2015
2016 - 2017	775,612,596	2.4%	38,780,630	31,024,504	5,105,000							5,105,000	25,919,504	13.16%	2016
2017 - 2018	781,063,284	0.7%	39,053,164	31,242,531	4,090,000							4,090,000	27,152,531	10.47%	2017
2018 - 2019	846,719,429	8.4%	42,335,971	33,868,777	3,045,000			4,480,000				7,525,000	26,343,777	17.77%	2018
2019 - 2020	850,584,226	0.5%	42,529,211	34,023,369	2,515,000			4,165,000	1,120,000			7,800,000	26,223,369	18.34%	2019
2020 - 2021	854,468,347	0.5%	42,723,417	34,178,734	1,975,000			3,915,000	970,000			6,860,000	27,318,734	16.06%	2020
2021 - 2022	858,371,889	0.5%	42,918,594	34,334,876	1,430,000			3,675,000	815,000			5,920,000	28,414,876	13.79%	2021
2022 - 2023	862,294,948	0.5%	43,114,747	34,491,798	865,000			3,425,000	660,000			4,950,000	29,541,798	11.48%	2022
2023 - 2024	866,237,622	0.5%	43,311,881	34,649,505	295,000			3,160,000	525,000			3,980,000	30,669,505	9.19%	2023
2024 - 2025	870,200,010	0.5%	43,510,001	34,808,000				2,700,000	295,000			2,995,000	31,813,000	6.88%	2024
2025 - 2026	874,182,210	0.5%	43,709,111	34,967,288				2,005,000				2,005,000	32,962,288	4.59%	2025
2026 - 2027	874,182,210		43,709,111	34,967,288				985,000				985,000	33,982,288	2.25%	2026
2027 - 2028	874,182,210		43,709,111	34,967,288						8,460,000		8,460,000	26,507,288	19.36%	2027
2028 - 2029	874,182,210		43,709,111	34,967,288						7,765,000		7,765,000	27,202,288	17.77%	2028
2029 - 2030	874,182,210		43,709,111	34,967,288						7,175,000		7,175,000	27,792,288	16.42%	2029
2030 - 2031	874,182,210		43,709,111	34,967,288						6,565,000		6,565,000	28,402,288	15.02%	2030
2031 - 2032	874,182,210		43,709,111	34,967,288						5,935,000		5,935,000	29,032,288	13.58%	2031
2032 - 2033	874,182,210		43,709,111	34,967,288						5,280,000		5,280,000	29,687,288	12.08%	2032
2033 - 2034	874,182,210		43,709,111	34,967,288						4,605,000		4,605,000	30,362,288	10.54%	2033
2034 - 2035	874,182,210		43,709,111	34,967,288						3,905,000		3,905,000	31,062,288	8.93%	2034
2035 - 2036	874,182,210		43,709,111	34,967,288						3,180,000		3,180,000	31,787,288	7.28%	2035
2036 - 2037	874,182,210		43,709,111	34,967,288						2,430,000		2,430,000	32,537,288	5.56%	2036
2037 - 2038	874,182,210		43,709,111	34,967,288						1,650,000		1,650,000	33,317,288	3.77%	2037
2038 - 2039	874,182,210		43,709,111	34,967,288						840,000		840,000	34,127,288	1.92%	2038
2039 - 2040	874,182,210		43,709,111	34,967,288									34,967,288		2039

*** - Represents G.O. principal outstanding as of the BEGINNING of the fiscal year.**
**** - Project is subject to voter approval.**