City of Carroll

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MEMO TO: Honorable Mayor and City Council Members

FROM: Mike Pogge-Weaver, City Manager MSP-W

DATE: January 26, 2018

SUBJECT: PFM General Obligation Bonding Scenarios

Susanne Gerlach, of PFM Financial Advisors LLC, was scheduled to attend the January 22nd meeting; however, due to weather conditions she was unable to attend. Staff has received questions and comments on the material that Susanne prepared and based on those comments Susanne has revised her bonding scenarios. Attached to this memo are revised General Obligation Bonding Scenarios for the City of Carroll developed by Susanne in consultation with City Staff. While Scenarios 1-3 follow the scenarios that were previously presented, they are revised from what was in the January 22nd council packet.

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

Issuance #1	FY 2019 All Scenarios
Library/City Hall	$3,765,000
Youth Complex Lighting	$ 375,000
Pickleball Courts	$ 175,000
Trails	$ 120,000
Total	**$4,435,000**

Issuance #2	FY 2020 All Scenarios
Street Maintenance Garage	$ 700,000
Fire Truck	$ 375,000
Total	**$1,075,000**

Issuance #3	Pool & Locker Room FY 2024 Scenario 1 & 2	All Rec Projects FY 2024 Scenario 1a & 2a	All Rec Projects FY 2028 Scenario 3	All Rec Projects FY 2021 Scenario 4
Pool	$7,428,000	$7,428,000	$9,030,000	$6,110,000
Locker Room	$1,246,000	$1,246,000	$1,517,000	$1,023,000
East Side Gym	$ n/a	$2,389,000	$2,906,000	$1,963,000
Total	**$8,674,000**	**$11,063,000**	**$13,453,000**	**$9,096,000**

Note that the above figures are estimated construction costs. The individual amounts listed in the bonding scenarios includes estimated construction costs and bond issuance fees.

The scenarios are as follows:

Scenario 1 (15-year bonds with Fall 2023 Rec Center Start)

- 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 (pool and locker room only)
- Debt Service Levy Rate starts at $1.28, then to $1.30 in FY 2024, then to $1.33 in FY 2025, and then remains in the 1.33-1.30 range through FY 2039
- All debt paid off in FY 2039
- Highest level to the City legal debt limits is 29.68% in FY 2024

Scenario 1a (15-year bonds with Fall 2023 Rec Center Start)

- 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 (All rec center projects)
- Debt Service Levy rate starts at $1.28, then to $1.40 in FY 2024, then to $1.74 in FY 2025, and then remains $1.74 or less through FY 2039
- All debt paid off in FY 2039
- Highest level to the City legal debt limits is 35.27% in FY 2024

Scenario 2 (20-year bonds with Fall 2023 Rec Center Start)

- 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 (pool and locker room only)
- Debt Service Levy rate starts at $1.28, then to $1.11 in FY 2026, and then to $0.60 in FY 2039 through FY 2043
- All debt paid off in FY 2043
- Highest level to the City legal debt limits is 29.71% in FY 2024

Scenario 2a (20-year bonds with Fall 2023 Rec Center Start)

- 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 (All rec center projects)
- Debt Service Levy rate starts at $1.28, then to $1.40 in FY 2024, then to $1.47 in FY 2025, then $0.99 in FY 2039 through FY 2043
- All debt paid off in FY 2043
- Highest level to the City legal debt limits is 35.30% in FY 2024

Scenario 3 (Accelerated bonds with Fall 2027 Rec Center Start)

- 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 19-year bond (All rec center projects)
- Maximum Debt Service Levy rate is kept at $1.28 each year with the last year at 0.27 in FY 2046
- All debt paid off in FY 2046
- Highest level to the City legal debt limits is 31.30% in FY 2028

Scenario 4 (Early Rec Center with Spring 2021 Rec Center Start)

- 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 2021 as a 20-year bond (All rec center projects)
- Debt Service Levy rate starts at $1.76, then to $1.58 in FY 2024, then to $1.42 in FY 2026, then end at $0.91 in FY 2039
- All debt paid off in FY 2039
- Highest level to the City legal debt limits is 38.23% in FY 2021

Along with the General Obligation Bonding Scenarios from PFM there is a worksheet that shows the projected future cost for the Recreation Center projects and the Street Maintenance Building projects. These projections use the original estimate of probable costs as the base and then inflates the construction cost 5% annually in future years.

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

Projected future cost for City Building Projects

Including original estimate of probable costs

Rec Center

	Pool [1]	Locker Rooms [2]	East Side Addition [3]	All Rec Center Projects
FY 2015			$ 1,536,600	
FY 2016	$ 5,025,408	$ 840,000	$ 1,614,000	$ 7,479,408
FY 2017	$ 5,277,000	$ 882,000	$ 1,695,000	$ 7,854,000
FY 2018	$ 5,541,000	$ 927,000	$ 1,780,000	$ 8,248,000
FY 2019	$ 5,819,000	$ 974,000	$ 1,869,000	$ 8,662,000
FY 2020	$ 6,110,000	$ 1,023,000	$ 1,963,000	$ 9,096,000
FY 2021	$ 6,416,000	$ 1,075,000	$ 2,062,000	$ 9,553,000
FY 2022	$ 6,737,000	$ 1,129,000	$ 2,166,000	$ 10,032,000
FY 2023	$ 7,074,000	$ 1,186,000	$ 2,275,000	$ 10,535,000
FY 2024	$ 7,428,000	$ 1,246,000	$ 2,389,000	$ 11,063,000
FY 2025	$ 7,800,000	$ 1,309,000	$ 2,509,000	$ 11,618,000
FY 2026	$ 8,190,000	$ 1,375,000	$ 2,635,000	$ 12,200,000
FY 2027	$ 8,600,000	$ 1,444,000	$ 2,767,000	$ 12,811,000
FY 2028	$ 9,030,000	$ 1,517,000	$ 2,906,000	$ 13,453,000
FY 2029	$ 9,482,000	$ 1,593,000	$ 3,052,000	$ 14,127,000

Notes:

[1] Based on February 2016 cost estimate from Waters Edge

[2] Based on Verbal estimate in February 2016 from FEH

[3] Based on July 2015 cost estimate from FEH

Future years are based on a 5% annual construction inflation.

Street Maintenance Building

	Street Maintenance	Aggregate Bins	Cold Storage	Full Street Maint. Project
FY 2016	$ 3,924,957	$ 145,000	$ 216,000	$ 4,285,957
FY 2017	$ 4,122,000	$ 153,000	$ 227,000	$ 4,502,000
FY 2018	$ 4,329,000	$ 161,000	$ 239,000	$ 4,729,000
FY 2019	$ 4,546,000	$ 170,000	$ 251,000	$ 4,967,000
FY 2020	$ 4,774,000	$ 179,000	$ 264,000	$ 5,217,000
FY 2021	$ 5,013,000	$ 188,000	$ 278,000	$ 5,479,000
FY 2022	$ 5,264,000	$ 198,000	$ 292,000	$ 5,754,000

Notes: Based on May 2016 cost estimate from FEH. Future years are based on a 5% annual construction inflation.

City of Carroll, Iowa

General Obligation Bonding Scenarios

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January 29, 2018

Summary of Bonding Options

Scenario	Year Issued	Term	Par Amount of Bonds	Total Interest	Total Debt Service	Maximum Levy Rate
Scenario 1 - 15 Year Bonds	Total	Years	$ 14,440,000	$ 4,991,717	$ 19,431,717	$1.33
Library & FY19 CIP	Series 2018B	15.6	$ 4,480,000	$ 1,207,735	$ 5,687,735	$1.28
Street Maintenance Building & Fire Truck	Series 2019A	5.7	$ 1,120,000	$ 137,729	$ 1,257,729	$1.28
Rec Center Pool & Locker Room Improvements	Series 2023A	15.5	$ 8,840,000	$ 3,646,253	$ 12,486,253	$1.33
Scenario 1a - 15 Year Bonds + Rec Cntr East Gym	Total	Years	$ 16,860,000	$ 5,882,280	$ 22,742,280	$1.74
Library & FY19 CIP	Series 2018B	15.6	$ 4,480,000	$ 1,207,735	$ 5,687,735	$1.28
Street Maintenance Building & Fire Truck	Series 2019A	5.7	$ 1,120,000	$ 137,729	$ 1,257,729	$1.28
Rec Center Pool, Locker Room & East Side Gym Improvements	Series 2023A	15.5	$ 11,260,000	$ 4,536,816	$ 15,796,816	$1.74
Scenario 2 - 20 Year Bonds	Total	Years	$ 14,440,000	$ 5,898,771	$ 20,338,771	$1.28
Library & FY19 CIP	Series 2018B	19.6	$ 4,480,000	$ 1,480,756	$ 5,960,756	$1.28
Street Maintenance Building & Fire Truck	Series 2019A	5.7	$ 1,120,000	$ 138,266	$ 1,258,266	$1.28
Rec Center Pool & Locker Room Improvements	Series 2023A	19.5	$ 8,840,000	$ 4,279,749	$ 13,119,749	$1.28
Scenario 2a - 20 Year Bonds + Rec Cntr East Gym	Total	Years	$ 16,860,000	$ 7,111,561	$ 23,971,561	$1.47
Library & FY19 CIP	Series 2018B	19.6	$ 4,480,000	$ 1,479,268	$ 5,959,268	$1.28
Street Maintenance Building & Fire Truck	Series 2019A	5.7	$ 1,120,000	$ 138,266	$ 1,258,266	$1.28
Rec Center Pool, Locker Room & East Side Gym Improvements	Series 2023A	19.5	$ 11,260,000	$ 5,494,027	$ 16,754,027	$1.47
Scenario 3 - 2027 Rec Center	Total	Years	$ 19,280,000	$ 6,554,342	$ 25,834,342	$1.28
Library & FY19 CIP	Series 2018B	8.6	$ 4,480,000	$ 776,657	$ 5,256,657	$1.28
Street Maintenance Building & Fire Truck	Series 2019A	5.7	$ 1,120,000	$ 138,266	$ 1,258,266	$1.28
Rec Center Pool, Locker Room & East Side Gym Improvements	Series 2027A	18.5	$ 13,680,000	$ 5,639,419	$ 19,319,419	$1.28
Scenario 4 - 2021 Rec Center	Total	Years	$ 15,330,000	$ 6,330,294	$ 21,660,294	$1.76
Library & FY19 CIP	Series 2018B	19.6	$ 4,480,000	$ 1,280,096	$ 5,760,096	$1.76
Street Maintenance Building & Fire Truck	Series 2019A	5.7	$ 1,120,000	$ 138,266	$ 1,258,266	$1.76
Rec Center Pool, Locker Room & East Side Gym Improvements	Series 2021A	19.1	$ 9,730,000	$ 4,911,932	$ 14,641,932	$1.76

Scenario 1: Assumes 15 Year Bonds

- 2018B Bonds – Library & FY19 CIP
- 2019A Bonds – Street Maintenance Building & Fire Truck
- 2023A Bonds - Rec Center Pool & Locker Room Improvements

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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*

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 (Trails)	Proposed GO Bonds 2018B (Library & FY19 CIP)	Proposed GO Bonds 2019A (Str Mnt Gar Fire Truck)	Proposed GO Series 2023A (Rec Pool** Rec Addn**)	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			23,092	940,034	0				281,228		292,223		394,294			1,500		969,244	(29,210)	93,270
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		93,270
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		93,270
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		93,270
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		93,270
2023 - 2024	540,107,495	(0.8%)	1.30332	703,935	374,302 *	32,552				1,110,789							299,720		356,096	252,690	200,283	2,000		1,110,789		93,270
2024 - 2025	522,752,576	(3.2%)	1.33264	696,641	374,302 *	32,552				1,103,495									348,905	294,747	458,343	1,500		1,103,495		93,270
2025 - 2026	521,962,440	(0.2%)	1.33176	695,128	374,302 *	32,552				1,101,982									351,561		749,422	1,000		1,101,982		93,270
2026 - 2027	521,962,440		1.33763	698,192	374,302 *	32,552				1,105,046									348,770		755,277	1,000		1,105,046		93,270
2027 - 2028	521,962,440		1.33651	697,610	374,302 *	0				1,071,912									350,643		720,270	1,000		1,071,912		93,270
2028 - 2029	521,962,440		1.33058	694,513	374,302 *					1,068,815									352,019		715,797	1,000		1,068,815		93,270
2029 - 2030	521,962,440		1.33230	695,413	374,302 *					1,069,715									347,913		720,803	1,000		1,069,715		93,270
2030 - 2031	521,962,440		1.33152	695,001	374,302 *					1,069,303									348,473		719,831	1,000		1,069,303		93,270
2031 - 2032	521,962,440		1.33766	698,208	374,302 *					1,072,510									348,469		723,041	1,000		1,072,510		93,270
2032 - 2033	521,962,440		1.33112	694,795	374,302 *					1,069,097									352,916		715,181	1,000		1,069,097		93,270
2033 - 2034	521,962,440		1.33151	695,000	374,302 *					1,069,302									351,696		716,606	1,000		1,069,302		93,270
2034 - 2035	521,962,440		1.31841	688,159	374,302 *					1,062,461											1,061,961	500		1,062,461		93,270
2035 - 2036	521,962,440		1.31004	683,794	374,302 *					1,058,096											1,057,596	500		1,058,096		93,270
2036 - 2037	521,962,440		1.30761	682,524	374,302 *					1,056,826											1,056,326	500		1,056,826		93,270
2037 - 2038	521,962,440		1.31080	684,189	374,302 *					1,058,491											1,057,991	500		1,058,491		93,270
2038 - 2039	521,962,440		1.30992	683,727	374,302 *					1,058,029											1,057,529	500		1,058,029		93,270
																			5,687,735	1,257,729	12,486,253					

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 Pool & Locker Rooms Improvements (15 Yr)

SOURCES & USES

SOURCES	
Par Amount of Bonds	8,840,000.00
Accrued Interest	
Premium	
Total Sources	8,840,000.00
USES	
Deposit to Construction Account	8,674,000.00
Deposit to Reserve Account	
Capitalized Interest Account	0.00
Municipal Bond Insurance	
Underwriters' Discount ($12.50 per bond)	110,500.00
Costs of Issuance	52,000.00
Accrued Interest	
Rounding Amount	3,500.00
Total Uses	8,840,000.00
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	3.96915%
TIC	4.12239%
AIC	4.19542%
Average Life	10.36 Years

FY 2018 PROJECTS FINANCED:	
Recreation Center Pool & Locker Rooms	$ 8,674,000
Reserved	-
Reserved	-
Reserved	-
	$ 8,674,000

DEBT SERVICE SCHEDULE

	Date	Principal	Coupon	Interest	Debt Service	Annual Debt Service
0.58	6/1/2024	0	3.270%	200,283	200,283	200,283
	12/1/2024			171,672	171,672	
1.58	6/1/2025	115,000	3.410%	171,672	286,672	458,343
	12/1/2025			169,711	169,711	
2.58	6/1/2026	410,000	3.450%	169,711	579,711	749,422
	12/1/2026			162,638	162,638	
3.58	6/1/2027	430,000	3.490%	162,638	592,638	755,277
	12/1/2027			155,135	155,135	
4.58	6/1/2028	410,000	3.530%	155,135	565,135	720,270
	12/1/2028			147,898	147,898	
5.58	6/1/2029	420,000	3.570%	147,898	567,898	715,797
	12/1/2029			140,401	140,401	
6.58	6/1/2030	440,000	3.630%	140,401	580,401	720,803
	12/1/2030			132,415	132,415	
7.58	6/1/2031	455,000	3.690%	132,415	587,415	719,831
	12/1/2031			124,021	124,021	
8.58	6/1/2032	475,000	3.760%	124,021	599,021	723,041
	12/1/2032			115,091	115,091	
9.58	6/1/2033	485,000	3.830%	115,091	600,091	715,181
	12/1/2033			105,803	105,803	
10.58	6/1/2034	505,000	3.890%	105,803	610,803	716,606
	12/1/2034			95,981	95,981	
11.58	6/1/2035	870,000	3.950%	95,981	965,981	1,061,961
	12/1/2035			78,798	78,798	
12.58	6/1/2036	900,000	4.030%	78,798	978,798	1,057,596
	12/1/2036			60,663	60,663	
13.58	6/1/2037	935,000	4.100%	60,663	995,663	1,056,326
	12/1/2037			41,496	41,496	
14.58	6/1/2038	975,000	4.150%	41,496	1,016,496	1,057,991
	12/1/2038			21,264	21,264	
15.58	6/1/2039	1,015,000	4.190%	21,264	1,036,264	1,057,529
	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					
		8,840,000		3,646,253	12,486,253	12,486,253

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: 25-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	8,840,000		12,855,000	21,794,505	29.68%	2023
2024 - 2025	870,200,010	0.5%	43,510,001	34,808,000				2,945,000	285,000	8,840,000		12,070,000	22,738,000	27.74%	2024
2025 - 2026	874,182,210	0.5%	43,709,111	34,967,288				2,690,000		8,725,000		11,415,000	23,552,288	26.12%	2025
2026 - 2027	874,182,210		43,709,111	34,967,288				2,425,000		8,315,000		10,740,000	24,227,288	24.57%	2026
2027 - 2028	874,182,210		43,709,111	34,967,288				2,155,000		7,885,000		10,040,000	24,927,288	22.97%	2027
2028 - 2029	874,182,210		43,709,111	34,967,288				1,875,000		7,475,000		9,350,000	25,617,288	21.39%	2028
2029 - 2030	874,182,210		43,709,111	34,967,288				1,585,000		7,055,000		8,640,000	26,327,288	19.77%	2029
2030 - 2031	874,182,210		43,709,111	34,967,288				1,290,000		6,615,000		7,905,000	27,062,288	18.09%	2030
2031 - 2032	874,182,210		43,709,111	34,967,288				985,000		6,160,000		7,145,000	27,822,288	16.35%	2031
2032 - 2033	874,182,210		43,709,111	34,967,288				670,000		5,685,000		6,355,000	28,612,288	14.54%	2032
2033 - 2034	874,182,210		43,709,111	34,967,288				340,000		5,200,000		5,540,000	29,427,288	12.67%	2033
2034 - 2035	874,182,210		43,709,111	34,967,288						4,695,000		4,695,000	30,272,288	10.74%	2034
2035 - 2036	874,182,210		43,709,111	34,967,288						3,825,000		3,825,000	31,142,288	8.75%	2035
2036 - 2037	874,182,210		43,709,111	34,967,288						2,925,000		2,925,000	32,042,288	6.69%	2036
2037 - 2038	874,182,210		43,709,111	34,967,288						1,990,000		1,990,000	32,977,288	4.55%	2037
2038 - 2039	874,182,210		43,709,111	34,967,288						1,015,000		1,015,000	33,952,288	2.32%	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 1a: Assumes 15 Year Bonds

- 2018B Bonds – Library & FY19 CIP
- 2019A Bonds – Street Maintenance Building & Fire Truck
- 2023A Bonds - Rec Center Pool, Locker Room & East Gym Improvements

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CITY OF CARROLL, IOWA

Projection of Debt Service Levy & Tax Rate Impact

EXHIBIT 1a-1

Assumes 15 Year Bonds
Additional Rec Center Project

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*

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 (Trails)	Proposed GO Bonds 2018B (Library & FY19 CIP)	Proposed GO Bonds 2019A (Str Mnt Gar Fire Truck)	Proposed GO Series 2023A (Rec Pool** Rec Addn**)	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			23,092	940,034	0				281,228		292,223		394,294			1,500		969,244	(29,210)	93,270
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		93,270
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		93,270
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		93,270
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		93,270
2023 - 2024	540,107,495	(0.8%)	1.40324	757,902	374,302 *	32,552				1,164,756							299,720		356,096	252,690	254,251	2,000		1,164,756		93,270
2024 - 2025	522,752,576	(3.2%)	1.74873	914,156	374,302 *	32,552				1,321,010									348,905	294,747	675,858	1,500		1,321,010		93,270
2025 - 2026	521,962,440	(0.2%)	1.74032	908,381	374,302 *	32,552				1,315,235									351,561		962,674	1,000		1,315,235		93,270
2026 - 2027	521,962,440		1.74751	912,132	374,302 *	32,552				1,318,986									348,770		969,217	1,000		1,318,986		93,270
2027 - 2028	521,962,440		1.74728	912,013	374,302 *	0				1,286,315									350,643		934,673	1,000		1,286,315		93,270
2028 - 2029	521,962,440		1.74179	909,151	374,302 *					1,283,453									352,019		930,434	1,000		1,283,453		93,270
2029 - 2030	521,962,440		1.74352	910,053	374,302 *					1,284,355									347,913		935,442	1,000		1,284,355		93,270
2030 - 2031	521,962,440		1.74223	909,377	374,302 *					1,283,679									348,473		934,207	1,000		1,283,679		93,270
2031 - 2032	521,962,440		1.74735	912,049	374,302 *					1,286,351									348,469		936,882	1,000		1,286,351		93,270
2032 - 2033	521,962,440		1.74880	912,808	374,302 *					1,287,110									352,916		933,194	1,000		1,287,110		93,270
2033 - 2034	521,962,440		1.74666	911,693	374,302 *					1,285,995									351,696		933,299	1,000		1,285,995		93,270
2034 - 2035	521,962,440		1.73047	903,240	374,302 *					1,277,542											1,277,042	500		1,277,542		93,270
2035 - 2036	521,962,440		1.73760	906,962	374,302 *					1,281,264											1,280,764	500		1,281,264		93,270
2036 - 2037	521,962,440		1.73008	903,035	374,302 *					1,277,337											1,276,837	500		1,277,337		93,270
2037 - 2038	521,962,440		1.73711	906,705	374,302 *					1,281,007											1,280,507	500		1,281,007		93,270
2038 - 2039	521,962,440		1.73908	907,735	374,302 *					1,282,037											1,281,537	500		1,282,037		93,270
																			5,687,735	1,257,729	15,796,816					

City of Carroll, Iowa

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

EXHIBIT 1a-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 1a-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 1a-4

Recreation Center Pool, Locker Rooms & East Side Gym (15 Yr)

SOURCES & USES

SOURCES	
Par Amount of Bonds	11,260,000.00
Accrued Interest	
Premium	

Total Sources	11,260,000.00
USES	
Deposit to Construction Account	11,063,000.00
Deposit to Reserve Account	
Capitalized Interest Account	0.00
Municipal Bond Insurance	
Underwriters' Discount ($12.50 per bond)	140,750.00
Costs of Issuance	52,000.00
Accrued Interest	
Rounding Amount	4,250.00

Total Uses	11,260,000.00
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	3.96053%	
TIC	4.11662%	
AIC	4.17497%	
Average Life	10.14	Years

FY 2018 PROJECTS FINANCED:	
Rec Cntr Pool, Locker Rooms & E Gym	$ 11,063,000
Reserved	-
Reserved	-
Reserved	-
	$ 11,063,000

DEBT SERVICE SCHEDULE

	Date	Principal	Coupon	Interest	Debt Service	Annual Debt Service
0.58	6/1/2024	0	3.270%	254,251	254,251	254,251
	12/1/2024			217,929	217,929	
1.58	6/1/2025	240,000	3.410%	217,929	457,929	675,858
	12/1/2025			213,837	213,837	
2.58	6/1/2026	535,000	3.450%	213,837	748,837	962,674
	12/1/2026			204,608	204,608	
3.58	6/1/2027	560,000	3.490%	204,608	764,608	969,217
	12/1/2027			194,836	194,836	
4.58	6/1/2028	545,000	3.530%	194,836	739,836	934,673
	12/1/2028			185,217	185,217	
5.58	6/1/2029	560,000	3.570%	185,217	745,217	930,434
	12/1/2029			175,221	175,221	
6.58	6/1/2030	585,000	3.630%	175,221	760,221	935,442
	12/1/2030			164,603	164,603	
7.58	6/1/2031	605,000	3.690%	164,603	769,603	934,207
	12/1/2031			153,441	153,441	
8.58	6/1/2032	630,000	3.760%	153,441	783,441	936,882
	12/1/2032			141,597	141,597	
9.58	6/1/2033	650,000	3.830%	141,597	791,597	933,194
	12/1/2033			129,150	129,150	
10.58	6/1/2034	675,000	3.890%	129,150	804,150	933,299
	12/1/2034			116,021	116,021	
11.58	6/1/2035	1,045,000	3.950%	116,021	1,161,021	1,277,042
	12/1/2035			95,382	95,382	
12.58	6/1/2036	1,090,000	4.030%	95,382	1,185,382	1,280,764
	12/1/2036			73,419	73,419	
13.58	6/1/2037	1,130,000	4.100%	73,419	1,203,419	1,276,837
	12/1/2037			50,254	50,254	
14.58	6/1/2038	1,180,000	4.150%	50,254	1,230,254	1,280,507
	12/1/2038			25,769	25,769	
15.58	6/1/2039	1,230,000	4.190%	25,769	1,255,769	1,281,537
	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					
		11,260,000		4,536,816	15,796,816	15,796,816

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 1a-5

Assumes 15 Year Bonds
Additional Rec Center Project

Updated: 25-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	11,260,000		15,275,000	19,374,505	35.27%	2023
2024 - 2025	870,200,010	0.5%	43,510,001	34,808,000				2,945,000	285,000	11,260,000		14,490,000	20,318,000	33.30%	2024
2025 - 2026	874,182,210	0.5%	43,709,111	34,967,288				2,690,000		11,020,000		13,710,000	21,257,288	31.37%	2025
2026 - 2027	874,182,210		43,709,111	34,967,288				2,425,000		10,485,000		12,910,000	22,057,288	29.54%	2026
2027 - 2028	874,182,210		43,709,111	34,967,288				2,155,000		9,925,000		12,080,000	22,887,288	27.64%	2027
2028 - 2029	874,182,210		43,709,111	34,967,288				1,875,000		9,380,000		11,255,000	23,712,288	25.75%	2028
2029 - 2030	874,182,210		43,709,111	34,967,288				1,585,000		8,820,000		10,405,000	24,562,288	23.81%	2029
2030 - 2031	874,182,210		43,709,111	34,967,288				1,290,000		8,235,000		9,525,000	25,442,288	21.79%	2030
2031 - 2032	874,182,210		43,709,111	34,967,288				985,000		7,630,000		8,615,000	26,352,288	19.71%	2031
2032 - 2033	874,182,210		43,709,111	34,967,288				670,000		7,000,000		7,670,000	27,297,288	17.55%	2032
2033 - 2034	874,182,210		43,709,111	34,967,288				340,000		6,350,000		6,690,000	28,277,288	15.31%	2033
2034 - 2035	874,182,210		43,709,111	34,967,288						5,675,000		5,675,000	29,292,288	12.98%	2034
2035 - 2036	874,182,210		43,709,111	34,967,288						4,630,000		4,630,000	30,337,288	10.59%	2035
2036 - 2037	874,182,210		43,709,111	34,967,288						3,540,000		3,540,000	31,427,288	8.10%	2036
2037 - 2038	874,182,210		43,709,111	34,967,288						2,410,000		2,410,000	32,557,288	5.51%	2037
2038 - 2039	874,182,210		43,709,111	34,967,288						1,230,000		1,230,000	33,737,288	2.81%	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

- 2018B Bonds – Library & FY19 CIP
- 2019A Bonds – Street Maintenance Building & Fire Truck
- 2023A Bonds - Rec Center Pool & Locker Room Improvements

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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

Fiscal Year Payable	Total Tax Valuation	Historical Taxable Valuation Growth	Tax Rate Per $1,000	Current Taxes Levied	LOST Revenues	Abatements: (1) 2006 Ashwood TIF	Abatements: 2007 & 2008 Westfield TIF	Abatements: 2008 Assisted Living TIF	Other Sources	TOTAL Resources	Outstanding Debt Issues: TIF Series 2006	TIF/Taxes Series 2008	Series 2010A/13	Ref & Streets Series 2014	Advance Ref 2008 Series 2015A	GO Series 2016A	GO Series 2016B	Proposed GO Note 2018A	Proposed GO Bonds 2018B	Proposed GO Bonds 2019A	Proposed GO Series 2023A	Fiscal Fees	Other Uses	TOTAL Uses	Surplus (Deficit)	Ending Balance
																		FY18 Pre-Levy =>	*$ 209,778*	*Library & FY19 CIP*	*Str Mnt Gar Fire Truck*	*Rec Pool** Rec Addn****				
																			Trails							
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%	0.87342	480,641	400,694 *	32,552			52,302	966,189	0				281,228		292,223		391,239			1,500		966,189		122,480
2019 - 2020	560,507,303	1.9%	1.28786	721,855	373,802 *	32,552				1,128,209	0				282,978		294,523		370,794	177,915		2,000		1,128,209		122,480
2020 - 2021	554,452,445	(1.1%)	1.28594	712,994	374,302 *	32,552				1,119,848	0				284,400		291,498		354,410	187,540		2,000		1,119,848		122,480
2021 - 2022	562,597,960	1.5%	1.28684	723,973	374,302 *	32,552				1,130,827					290,080		298,060		358,200	182,487		2,000		1,130,827		122,480
2022 - 2023	544,711,687	(3.2%)	1.28213	698,392	374,302 *	32,552				1,105,246					285,180		299,070		361,624	157,372		2,000		1,105,246		122,480
2023 - 2024	540,107,495	(0.8%)	1.28875	696,064	374,302 *	32,552				1,102,918							299,720		349,674	247,863	203,661	2,000		1,102,918		122,480
2024 - 2025	522,752,576	(3.2%)	1.28480	671,633	374,302 *	32,552				1,078,487									267,765	305,089	504,133	1,500		1,078,487		122,480
2025 - 2026	521,962,440	(0.2%)	1.11284	580,863	374,302 *	32,552				987,717									267,869		718,848	1,000		987,717		122,480
2026 - 2027	521,962,440		1.11652	582,780	374,302 *	32,552				989,634									267,724		720,910	1,000		989,634		122,480
2027 - 2028	521,962,440		1.11369	581,303	374,302 *	0				955,605									272,306		682,299	1,000		955,605		122,480
2028 - 2029	521,962,440		1.11611	582,567	374,302 *					956,869									271,454		684,415	1,000		956,869		122,480
2029 - 2030	521,962,440		1.11670	582,878	374,302 *					957,180									270,331		685,849	1,000		957,180		122,480
2030 - 2031	521,962,440		1.11529	582,139	374,302 *					956,441									268,931		686,510	1,000		956,441		122,480
2031 - 2032	521,962,440		1.11174	580,286	374,302 *					954,588									272,207		681,381	1,000		954,588		122,480
2032 - 2033	521,962,440		1.11558	582,292	374,302 *					956,594									270,005		685,589	1,000		956,594		122,480
2033 - 2034	521,962,440		1.10728	577,960	374,302 *					952,262									267,525		683,737	1,000		952,262		122,480
2034 - 2035	521,962,440		1.11602	582,520	374,302 *					956,822									269,785		686,038	1,000		956,822		122,480
2035 - 2036	521,962,440		1.11235	580,603	374,302 *					954,905									271,630		682,275	1,000		954,905		122,480
2036 - 2037	521,962,440		1.11556	582,281	374,302 *					956,583									268,055		687,528	1,000		956,583		122,480
2037 - 2038	521,962,440		1.11568	582,341	374,302 *					956,643									269,230		686,413	1,000		956,643		122,480
2038 - 2039	521,962,440		0.60427	315,409	374,302 *					689,711											689,211	500		689,711		122,480
2039 - 2040	521,962,440		0.59764	311,945	374,302 *					686,247											685,747	500		686,247		122,480
2040 - 2041	521,962,440		0.59864	312,469	374,302 *					686,771											686,271	500		686,771		122,480
2041 - 2042	521,962,440		0.60686	316,756	374,302 *					691,058											690,558	500		691,058		122,480
2042 - 2043	521,962,440		0.60268	314,578	374,302 *					688,880											688,380	500		688,880		122,480
																			5,960,756	1,258,266	13,119,749					

* - 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	3.27890%
TIC	3.40339%
AIC	3.53042%
Average Life	10.02 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%	81,239	391,239	391,239
	12/1/2019			65,397	65,397	
1.6	6/1/2020	240,000	2.660%	65,397	305,397	370,794
	12/1/2020			62,205	62,205	
2.6	6/1/2021	230,000	2.700%	62,205	292,205	354,410
	12/1/2021			59,100	59,100	
3.6	6/1/2022	240,000	2.740%	59,100	299,100	358,200
	12/1/2022			55,812	55,812	
4.6	6/1/2023	250,000	2.780%	55,812	305,812	361,624
	12/1/2023			52,337	52,337	
5.6	6/1/2024	245,000	2.820%	52,337	297,337	349,674
	12/1/2024			48,883	48,883	
6.6	6/1/2025	170,000	2.880%	48,883	218,883	267,765
	12/1/2025			46,435	46,435	
7.6	6/1/2026	175,000	2.940%	46,435	221,435	267,869
	12/1/2026			43,862	43,862	
8.6	6/1/2027	180,000	3.010%	43,862	223,862	267,724
	12/1/2027			41,153	41,153	
9.6	6/1/2028	190,000	3.080%	41,153	231,153	272,306
	12/1/2028			38,227	38,227	
10.6	6/1/2029	195,000	3.140%	38,227	233,227	271,454
	12/1/2029			35,166	35,166	
11.6	6/1/2030	200,000	3.200%	35,166	235,166	270,331
	12/1/2030			31,966	31,966	
12.6	6/1/2031	205,000	3.280%	31,966	236,966	268,931
	12/1/2031			28,604	28,604	
13.6	6/1/2032	215,000	3.350%	28,604	243,604	272,207
	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		1,480,756	5,960,756	5,960,756

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 Pool & Locker Room Improvements (20 Yr)

SOURCES & USES

SOURCES	
Par Amount of Bonds	8,840,000.00
Accrued Interest	
Premium	
Total Sources	8,840,000.00
USES	
Deposit to Construction Account	8,674,000.00
Deposit to Reserve Account	
Capitalized Interest Account	0.00
Municipal Bond Insurance	
Underwriters' Discount ($12.50 per bond)	110,500.00
Costs of Issuance	52,000.00
Accrued Interest	
Rounding Amount	3,500.00
Total Uses	8,840,000.00
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	4.05897%
TIC	4.19864%
AIC	4.26524%
Average Life	11.87 Years

FY 2018 PROJECTS FINANCED:

Recreation Center Pool & Locker Room	$ 8,674,000
Reserved	-
Reserved	-
Reserved	-
	$ 8,674,000

DEBT SERVICE SCHEDULE

	Date	Principal	Coupon	Interest	Debt Service	Annual Debt Service
0.58	6/1/2024	0	3.270%	203,661	203,661	203,661
	12/1/2024			174,567	174,567	
1.58	6/1/2025	155,000	3.410%	174,567	329,567	504,133
	12/1/2025			171,924	171,924	
2.58	6/1/2026	375,000	3.450%	171,924	546,924	718,848
	12/1/2026			165,455	165,455	
3.58	6/1/2027	390,000	3.490%	165,455	555,455	720,910
	12/1/2027			158,650	158,650	
4.58	6/1/2028	365,000	3.530%	158,650	523,650	682,299
	12/1/2028			152,207	152,207	
5.58	6/1/2029	380,000	3.570%	152,207	532,207	684,415
	12/1/2029			145,424	145,424	
6.58	6/1/2030	395,000	3.630%	145,424	540,424	685,849
	12/1/2030			138,255	138,255	
7.58	6/1/2031	410,000	3.690%	138,255	548,255	686,510
	12/1/2031			130,691	130,691	
8.58	6/1/2032	420,000	3.760%	130,691	550,691	681,381
	12/1/2032			122,795	122,795	
9.58	6/1/2033	440,000	3.830%	122,795	562,795	685,589
	12/1/2033			114,369	114,369	
10.58	6/1/2034	455,000	3.890%	114,369	569,369	683,737
	12/1/2034			105,519	105,519	
11.58	6/1/2035	475,000	3.950%	105,519	580,519	686,038
	12/1/2035			96,138	96,138	
12.58	6/1/2036	490,000	4.030%	96,138	586,138	682,275
	12/1/2036			86,264	86,264	
13.58	6/1/2037	515,000	4.100%	86,264	601,264	687,528
	12/1/2037			75,707	75,707	
14.58	6/1/2038	535,000	4.150%	75,707	610,707	686,413
	12/1/2038			64,605	64,605	
15.58	6/1/2039	560,000	4.190%	64,605	624,605	689,211
	12/1/2039			52,873	52,873	
16.58	6/1/2040	580,000	4.220%	52,873	632,873	685,747
	12/1/2040			40,635	40,635	
17.58	6/1/2041	605,000	4.250%	40,635	645,635	686,271
	12/1/2041			27,779	27,779	
18.58	6/1/2042	635,000	4.280%	27,779	662,779	690,558
	12/1/2042			14,190	14,190	
19.58	6/1/2043	660,000	4.300%	14,190	674,190	688,380
	12/1/2043					
		8,840,000		4,279,749	13,119,749	13,119,749

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

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

Updated: 26-Jan-18

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	8,840,000		12,870,000	21,779,505	29.71%	2023
2024 - 2025	870,200,010	0.5%	43,510,001	34,808,000				2,965,000	295,000	8,840,000		12,100,000	22,708,000	27.81%	2024
2025 - 2026	874,182,210	0.5%	43,709,111	34,967,288				2,795,000		8,685,000		11,480,000	23,487,288	26.26%	2025
2026 - 2027	874,182,210		43,709,111	34,967,288				2,620,000		8,310,000		10,930,000	24,037,288	25.01%	2026
2027 - 2028	874,182,210		43,709,111	34,967,288				2,440,000		7,920,000		10,360,000	24,607,288	23.70%	2027
2028 - 2029	874,182,210		43,709,111	34,967,288				2,250,000		7,555,000		9,805,000	25,162,288	22.43%	2028
2029 - 2030	874,182,210		43,709,111	34,967,288				2,055,000		7,175,000		9,230,000	25,737,288	21.12%	2029
2030 - 2031	874,182,210		43,709,111	34,967,288				1,855,000		6,780,000		8,635,000	26,332,288	19.76%	2030
2031 - 2032	874,182,210		43,709,111	34,967,288				1,650,000		6,370,000		8,020,000	26,947,288	18.35%	2031
2032 - 2033	874,182,210		43,709,111	34,967,288				1,435,000		5,950,000		7,385,000	27,582,288	16.90%	2032
2033 - 2034	874,182,210		43,709,111	34,967,288				1,215,000		5,510,000		6,725,000	28,242,288	15.39%	2033
2034 - 2035	874,182,210		43,709,111	34,967,288				990,000		5,055,000		6,045,000	28,922,288	13.83%	2034
2035 - 2036	874,182,210		43,709,111	34,967,288				755,000		4,580,000		5,335,000	29,632,288	12.21%	2035
2036 - 2037	874,182,210		43,709,111	34,967,288				510,000		4,090,000		4,600,000	30,367,288	10.52%	2036
2037 - 2038	874,182,210		43,709,111	34,967,288				260,000		3,575,000		3,835,000	31,132,288	8.77%	2037
2038 - 2039	874,182,210		43,709,111	34,967,288						3,040,000		3,040,000	31,927,288	6.96%	2038
2039 - 2040	874,182,210		43,709,111	34,967,288						2,480,000		2,480,000	32,487,288	5.67%	2039
2040 - 2041	874,182,210		43,709,111	34,967,288						1,900,000		1,900,000	33,067,288	4.35%	2040
2041 - 2042	874,182,210		43,709,111	34,967,288						1,295,000		1,295,000	33,672,288	2.96%	2041
2042 - 2043	874,182,210		43,709,111	34,967,288						660,000		660,000	34,307,288	1.51%	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 2a: Assumes 20 Year Bonds

- 2018B Bonds – Library & FY19 CIP
- 2019A Bonds – Street Maintenance Building & Fire Truck
- 2023A Bonds - Rec Center Pool, Locker Room & East Gym Improvements

© PFM

CITY OF CARROLL, IOWA

Projection of Debt Service Levy & Tax Rate Impact

EXHIBIT 2a-1

Assumes 20 Year Bonds
Additional Rec Center Project

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%)	1.40174	757,091	374,302 *	32,552				1,163,945							299,720		354,648	247,863	259,714	2,000		1,163,945		122,480
2024 - 2025	522,752,576	(3.2%)	1.47786	772,557	374,302 *	32,552				1,179,411									267,598	305,089	605,225	1,500		1,179,411		122,480
2025 - 2026	521,962,440	(0.2%)	1.47830	771,616	374,302 *	32,552				1,178,470									267,702		909,769	1,000		1,178,470		122,480
2026 - 2027	521,962,440		1.47569	770,256	374,302 *	32,552				1,177,110									267,557		908,554	1,000		1,177,110		122,480
2027 - 2028	521,962,440		1.47609	770,464	374,302 *	0				1,144,766									272,139		871,627	1,000		1,144,766		122,480
2028 - 2029	521,962,440		1.47175	768,197	374,302 *					1,142,499									271,287		870,213	1,000		1,142,499		122,480
2029 - 2030	521,962,440		1.47508	769,938	374,302 *					1,144,240									270,164		873,077	1,000		1,144,240		122,480
2030 - 2031	521,962,440		1.47595	770,388	374,302 *					1,144,690									268,764		874,927	1,000		1,144,690		122,480
2031 - 2032	521,962,440		1.47420	769,476	374,302 *					1,143,778									267,040		875,739	1,000		1,143,778		122,480
2032 - 2033	521,962,440		1.47930	772,137	374,302 *					1,146,439									270,005		875,435	1,000		1,146,439		122,480
2033 - 2034	521,962,440		1.47177	768,209	374,302 *					1,142,511									267,525		873,987	1,000		1,142,511		122,480
2034 - 2035	521,962,440		1.47119	767,907	374,302 *					1,142,209									269,785		871,425	1,000		1,142,209		122,480
2035 - 2036	521,962,440		1.47722	771,053	374,302 *					1,145,355									271,630		872,725	1,000		1,145,355		122,480
2036 - 2037	521,962,440		1.47959	772,290	374,302 *					1,146,592									268,055		877,537	1,000		1,146,592		122,480
2037 - 2038	521,962,440		1.47829	771,610	374,302 *					1,145,912									269,230		875,682	1,000		1,145,912		122,480
2038 - 2039	521,962,440		0.99367	518,660	374,302 *					892,962											892,462	500		892,962		122,480
2039 - 2040	521,962,440		0.99295	518,283	374,302 *					892,585											892,085	500		892,585		122,480
2040 - 2041	521,962,440		0.98938	516,422	374,302 *					890,724											890,224	500		890,724		122,480
2041 - 2042	521,962,440		0.99252	518,059	374,302 *					892,361											891,861	500		892,361		122,480
2042 - 2043	521,962,440		0.99234	517,963	374,302 *					892,265											891,765	500		892,265		122,480
																			5,959,268	1,258,266	16,754,027					

* - 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 2a-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 2a-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 2a-4

Recreation Center Pool, Locker Rooms & East Side Gym (20 Yr)

SOURCES & USES

SOURCES	
Par Amount of Bonds	11,260,000.00
Accrued Interest	
Premium	
Total Sources	11,260,000.00
USES	
Deposit to Construction Account	11,063,000.00
Deposit to Reserve Account	
Capitalized Interest Account	0.00
Municipal Bond Insurance	
Underwriters' Discount ($12.50 per bond)	140,750.00
Costs of Issuance	52,000.00
Accrued Interest	
Rounding Amount	4,250.00
Total Uses	11,260,000.00
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	4.06138%
TIC	4.20018%
AIC	4.25209%
Average Life	11.96 Years

FY 2018 PROJECTS FINANCED:	
Rec Cntr Pool, Locker Rooms & E Gym	$ 11,063,000
Reserved	-
Reserved	-
Reserved	-
	$ 11,063,000

DEBT SERVICE SCHEDULE

	Date	Principal	Coupon	Interest	Debt Service	Annual Debt Service
0.58	6/1/2024	0	3.270%	259,714	259,714	259,714
	12/1/2024			222,612	222,612	
1.58	6/1/2025	160,000	3.410%	222,612	382,612	605,225
	12/1/2025			219,884	219,884	
2.58	6/1/2026	470,000	3.450%	219,884	689,884	909,769
	12/1/2026			211,777	211,777	
3.58	6/1/2027	485,000	3.490%	211,777	696,777	908,554
	12/1/2027			203,314	203,314	
4.58	6/1/2028	465,000	3.530%	203,314	668,314	871,627
	12/1/2028			195,106	195,106	
5.58	6/1/2029	480,000	3.570%	195,106	675,106	870,213
	12/1/2029			186,538	186,538	
6.58	6/1/2030	500,000	3.630%	186,538	686,538	873,077
	12/1/2030			177,463	177,463	
7.58	6/1/2031	520,000	3.690%	177,463	697,463	874,927
	12/1/2031			167,869	167,869	
8.58	6/1/2032	540,000	3.760%	167,869	707,869	875,739
	12/1/2032			157,717	157,717	
9.58	6/1/2033	560,000	3.830%	157,717	717,717	875,435
	12/1/2033			146,993	146,993	
10.58	6/1/2034	580,000	3.890%	146,993	726,993	873,987
	12/1/2034			135,712	135,712	
11.58	6/1/2035	600,000	3.950%	135,712	735,712	871,425
	12/1/2035			123,862	123,862	
12.58	6/1/2036	625,000	4.030%	123,862	748,862	872,725
	12/1/2036			111,269	111,269	
13.58	6/1/2037	655,000	4.100%	111,269	766,269	877,537
	12/1/2037			97,841	97,841	
14.58	6/1/2038	680,000	4.150%	97,841	777,841	875,682
	12/1/2038			83,731	83,731	
15.58	6/1/2039	725,000	4.190%	83,731	808,731	892,462
	12/1/2039			68,542	68,542	
16.58	6/1/2040	755,000	4.220%	68,542	823,542	892,085
	12/1/2040			52,612	52,612	
17.58	6/1/2041	785,000	4.250%	52,612	837,612	890,224
	12/1/2041			35,931	35,931	
18.58	6/1/2042	820,000	4.280%	35,931	855,931	891,861
	12/1/2042			18,383	18,383	
19.58	6/1/2043	855,000	4.300%	18,383	873,383	891,765
	12/1/2043					
		11,260,000		5,494,027	16,754,027	16,754,027

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 2a-5

Assumes 20 Year Bonds
Additional Rec Center Project

Updated: 25-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	11,260,000		15,290,000	19,359,505	35.30%	2023
2024 - 2025	870,200,010	0.5%	43,510,001	34,808,000				2,960,000	295,000	11,260,000		14,515,000	20,293,000	33.36%	2024
2025 - 2026	874,182,210	0.5%	43,709,111	34,967,288				2,790,000		11,100,000		13,890,000	21,077,288	31.78%	2025
2026 - 2027	874,182,210		43,709,111	34,967,288				2,615,000		10,630,000		13,245,000	21,722,288	30.30%	2026
2027 - 2028	874,182,210		43,709,111	34,967,288				2,435,000		10,145,000		12,580,000	22,387,288	28.78%	2027
2028 - 2029	874,182,210		43,709,111	34,967,288				2,245,000		9,680,000		11,925,000	23,042,288	27.28%	2028
2029 - 2030	874,182,210		43,709,111	34,967,288				2,050,000		9,200,000		11,250,000	23,717,288	25.74%	2029
2030 - 2031	874,182,210		43,709,111	34,967,288				1,850,000		8,700,000		10,550,000	24,417,288	24.14%	2030
2031 - 2032	874,182,210		43,709,111	34,967,288				1,645,000		8,180,000		9,825,000	25,142,288	22.48%	2031
2032 - 2033	874,182,210		43,709,111	34,967,288				1,435,000		7,640,000		9,075,000	25,892,288	20.76%	2032
2033 - 2034	874,182,210		43,709,111	34,967,288				1,215,000		7,080,000		8,295,000	26,672,288	18.98%	2033
2034 - 2035	874,182,210		43,709,111	34,967,288				990,000		6,500,000		7,490,000	27,477,288	17.14%	2034
2035 - 2036	874,182,210		43,709,111	34,967,288				755,000		5,900,000		6,655,000	28,312,288	15.23%	2035
2036 - 2037	874,182,210		43,709,111	34,967,288				510,000		5,275,000		5,785,000	29,182,288	13.24%	2036
2037 - 2038	874,182,210		43,709,111	34,967,288				260,000		4,620,000		4,880,000	30,087,288	11.16%	2037
2038 - 2039	874,182,210		43,709,111	34,967,288						3,940,000		3,940,000	31,027,288	9.01%	2038
2039 - 2040	874,182,210		43,709,111	34,967,288						3,215,000		3,215,000	31,752,288	7.36%	2039
2040 - 2041	874,182,210		43,709,111	34,967,288						2,460,000		2,460,000	32,507,288	5.63%	2040
2041 - 2042	874,182,210		43,709,111	34,967,288						1,675,000		1,675,000	33,292,288	3.83%	2041
2042 - 2043	874,182,210		43,709,111	34,967,288						855,000		855,000	34,112,288	1.96%	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 2027 Rec Center Bonds

- 2018B Bonds – Library & FY19 CIP
- 2019A Bonds – Street Maintenance Building & Fire Truck
- 2027A Bonds - Rec Center Pool, Locker Room & East Gym Improvements

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CITY OF CARROLL, IOWA

Projection of Debt Service Levy & Tax Rate Impact

EXHIBIT 3-1
2027 Rec Center

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*

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 (Trails)	Proposed GO Bonds 2018B (Library & FY19 CIP)	Proposed GO Bonds 2019A (Str Mnt Gar Fire Truck)	Proposed GO Series 2027A (Rec Pool** Rec Addn**)	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		1.28278	669,564	374,302 *	0				1,043,866											1,043,366	500		1,043,866		122,480
2028 - 2029	521,962,440		1.28513	670,792	374,302 *					1,045,094											1,044,594	500		1,045,094		122,480
2029 - 2030	521,962,440		1.28817	672,378	374,302 *					1,046,680											1,046,180	500		1,046,680		122,480
2030 - 2031	521,962,440		1.28947	673,058	374,302 *					1,047,360											1,046,860	500		1,047,360		122,480
2031 - 2032	521,962,440		1.28901	672,816	374,302 *					1,047,118											1,046,618	500		1,047,118		122,480
2032 - 2033	521,962,440		1.28675	671,636	374,302 *					1,045,938											1,045,438	500		1,045,938		122,480
2033 - 2034	521,962,440		1.28266	669,502	374,302 *					1,043,804											1,043,304	500		1,043,804		122,480
2034 - 2035	521,962,440		1.28605	671,270	374,302 *					1,045,572											1,045,072	500		1,045,572		122,480
2035 - 2036	521,962,440		1.28693	671,731	374,302 *					1,046,033											1,045,533	500		1,046,033		122,480
2036 - 2037	521,962,440		1.28513	670,787	374,302 *					1,045,089											1,044,589	500		1,045,089		122,480
2037 - 2038	521,962,440		1.28056	668,403	374,302 *					1,042,705											1,042,205	500		1,042,705		122,480
2038 - 2039	521,962,440		1.28288	669,617	374,302 *					1,043,919											1,043,419	500		1,043,919		122,480
2039 - 2040	521,962,440		1.28113	668,702	374,302 *					1,043,004											1,043,004	0		1,043,004		122,480
2040 - 2041	521,962,440		1.28642	671,462	374,302 *					1,045,764											1,045,764	0		1,045,764		122,480
2041 - 2042	521,962,440		1.28788	672,227	374,302 *					1,046,529											1,046,529	0		1,046,529		122,480
2042 - 2043	521,962,440		1.28577	671,122	374,302 *					1,045,424											1,045,424	0		1,045,424		122,480
2043 - 2044	521,962,440		1.28017	668,202	374,302 *					1,042,504											1,042,504	0		1,042,504		122,480
2044 - 2045	521,962,440		1.28081	668,534	374,302 *					1,042,836											1,042,836	0		1,042,836		122,480
2045 - 2046	521,962,440		0.27183	141,884	374,302 *					516,186											516,186	0		516,186		122,480
																			5,256,657	1,258,266	17,760,397					

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 Pool, Locker Rooms & East Side Gym

SOURCES & USES

SOURCES	
Par Amount of Bonds	13,680,000.00
Accrued Interest	
Premium	

Total Sources	13,680,000.00
USES	
Deposit to Construction Account	13,453,000.00
Deposit to Reserve Account	
Capitalized Interest Account	0.00
Municipal Bond Insurance	
Underwriters' Discount ($12.50 per bond)	171,000.00
Costs of Issuance	52,000.00
Accrued Interest	
Rounding Amount	4,000.00

Total Uses	13,680,000.00
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	6/1/2046

Arbitrage Yield	4.00845%	
TIC	4.16667%	
AIC	4.21538%	
Average Life	10.24	Years

FY 2018 PROJECTS FINANCED:	
Rec Cntr Pool, Locker Rooms & E Gym	$ 13,453,000
Reserved	-
Reserved	-
Reserved	-
	$ 13,453,000

DEBT SERVICE SCHEDULE

	Date	Principal	Coupon	Interest	Debt Service	Annual Debt Service
0.58	6/1/2028	735,000	3.270%	308,366	1,043,366	1,043,366
	12/1/2028			252,297	252,297	
1.58	6/1/2029	540,000	3.410%	252,297	792,297	1,044,594
	12/1/2029			243,090	243,090	
2.58	6/1/2030	560,000	3.450%	243,090	803,090	1,046,180
	12/1/2030			233,430	233,430	
3.58	6/1/2031	580,000	3.490%	233,430	813,430	1,046,860
	12/1/2031			223,309	223,309	
4.58	6/1/2032	600,000	3.530%	223,309	823,309	1,046,618
	12/1/2032			212,719	212,719	
5.58	6/1/2033	620,000	3.570%	212,719	832,719	1,045,438
	12/1/2033			201,652	201,652	
6.58	6/1/2034	640,000	3.630%	201,652	841,652	1,043,304
	12/1/2034			190,036	190,036	
7.58	6/1/2035	665,000	3.690%	190,036	855,036	1,045,072
	12/1/2035			177,767	177,767	
8.58	6/1/2036	690,000	3.760%	177,767	867,767	1,045,533
	12/1/2036			164,795	164,795	
9.58	6/1/2037	715,000	3.830%	164,795	879,795	1,044,589
	12/1/2037			151,102	151,102	
10.58	6/1/2038	740,000	3.890%	151,102	891,102	1,042,205
	12/1/2038			136,709	136,709	
11.58	6/1/2039	770,000	3.950%	136,709	906,709	1,043,419
	12/1/2039			121,502	121,502	
12.58	6/1/2040	800,000	4.030%	121,502	921,502	1,043,004
	12/1/2040			105,382	105,382	
13.58	6/1/2041	835,000	4.100%	105,382	940,382	1,045,764
	12/1/2041			88,264	88,264	
14.58	6/1/2042	870,000	4.150%	88,264	958,264	1,046,529
	12/1/2042			70,212	70,212	
15.58	6/1/2043	905,000	4.190%	70,212	975,212	1,045,424
	12/1/2043			51,252	51,252	
16.58	6/1/2044	940,000	4.220%	51,252	991,252	1,042,504
	12/1/2044			31,418	31,418	
17.58	6/1/2045	980,000	4.250%	31,418	1,011,418	1,042,836
	12/1/2045			10,593	10,593	
18.58	6/1/2046	495,000	4.280%	10,593	505,593	516,186
	12/1/2046					
19.58	6/1/2047					
	12/1/2047					
		13,680,000		5,639,419	19,319,419	19,319,419

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

City of Carroll, Iowa

EXHIBIT 3-5

Projection of G.O. Debt Capacity

2027 Rec Center

Updated: 25-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						13,680,000		13,680,000	21,287,288	31.30%	2027
2028 - 2029	874,182,210		43,709,111	34,967,288						12,945,000		12,945,000	22,022,288	29.62%	2028
2029 - 2030	874,182,210		43,709,111	34,967,288						12,405,000		12,405,000	22,562,288	28.38%	2029
2030 - 2031	874,182,210		43,709,111	34,967,288						11,845,000		11,845,000	23,122,288	27.10%	2030
2031 - 2032	874,182,210		43,709,111	34,967,288						11,265,000		11,265,000	23,702,288	25.77%	2031
2032 - 2033	874,182,210		43,709,111	34,967,288						10,665,000		10,665,000	24,302,288	24.40%	2032
2033 - 2034	874,182,210		43,709,111	34,967,288						10,045,000		10,045,000	24,922,288	22.98%	2033
2034 - 2035	874,182,210		43,709,111	34,967,288						9,405,000		9,405,000	25,562,288	21.52%	2034
2035 - 2036	874,182,210		43,709,111	34,967,288						8,740,000		8,740,000	26,227,288	20.00%	2035
2036 - 2037	874,182,210		43,709,111	34,967,288						8,050,000		8,050,000	26,917,288	18.42%	2036
2037 - 2038	874,182,210		43,709,111	34,967,288						7,335,000		7,335,000	27,632,288	16.78%	2037
2038 - 2039	874,182,210		43,709,111	34,967,288						6,595,000		6,595,000	28,372,288	15.09%	2038
2039 - 2040	874,182,210		43,709,111	34,967,288						5,825,000		5,825,000	29,142,288	13.33%	2039

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

Scenario 4: Assumes 2021 Rec Center Bonds

- 2018B Bonds – Library & FY19 CIP
- 2019A Bonds – Street Maintenance Building & Fire Truck
- 2021A Bonds - Rec Center Pool, Locker Room & East Gym Improvements

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CITY OF CARROLL, IOWA

Projection of Debt Service Levy & Tax Rate Impact

EXHIBIT 4-1

Assumes 20 Year Bonds
2021 Rec Center Projects

TAX RATE IMPACT	
Fiscal Year 2018-19	($0.41)
Fiscal Year 2019-20	$0.89
Fiscal Year 2020-21	($0.00)
Fiscal Year 2021-22	$0.00

FY18 Pre-Levy => *$ 209,778*

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 (Trails)	Proposed GO Bonds 2018B (Library & FY19 CIP)	Proposed GO Bonds 2019A (Str Mnt Gar Fire Truck)	Proposed GO Series 2021A (Rec Pool** Rec Addn**)	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%	0.87058	479,077	400,694 *	32,552			52,302	964,625	0				281,228		292,223		389,675			1,500		964,625		122,480
2019 - 2020	560,507,303	1.9%	1.76481	989,188	373,802 *	32,552				1,395,542	0				282,978		294,523		638,127	177,915		2,000		1,395,542		122,480
2020 - 2021	554,452,445	(1.1%)	1.76416	978,144	374,302 *	32,552				1,384,998	0				284,400		291,498		619,561	187,540		2,000		1,384,998		122,480
2021 - 2022	562,597,960	1.5%	1.76693	994,072	374,302 *	32,552				1,400,926					290,080		298,060		210,926	182,487	417,373	2,000		1,400,926		122,480
2022 - 2023	544,711,687	(3.2%)	1.74394	949,947	374,302 *	32,552				1,356,801					285,180		299,070		227,912	157,372	385,268	2,000		1,356,801		122,480
2023 - 2024	540,107,495	(0.8%)	1.58727	857,294	374,302 *	32,552				1,264,148							299,720		229,298	247,863	485,268	2,000		1,264,148		122,480
2024 - 2025	522,752,576	(3.2%)	1.58209	827,043	374,302 *	32,552				1,233,897									270,491	305,089	656,818	1,500		1,233,897		122,480
2025 - 2026	521,962,440	(0.2%)	1.42093	741,673	374,302 *	32,552				1,148,527									300,307		847,220	1,000		1,148,527		122,480
2026 - 2027	521,962,440		1.42459	743,584	374,302 *	32,552				1,150,438									303,986		845,453	1,000		1,150,438		122,480
2027 - 2028	521,962,440		1.42131	741,871	374,302 *	0				1,116,173									267,213		847,960	1,000		1,116,173		122,480
2028 - 2029	521,962,440		1.42223	742,352	374,302 *					1,116,654									266,207		849,447	1,000		1,116,654		122,480
2029 - 2030	521,962,440		1.42063	741,515	374,302 *					1,115,817									269,927		844,890	1,000		1,115,817		122,480
2030 - 2031	521,962,440		1.42597	744,303	374,302 *					1,118,605									273,207		844,398	1,000		1,118,605		122,480
2031 - 2032	521,962,440		1.42816	745,447	374,302 *					1,119,749									270,991		847,758	1,000		1,119,749		122,480
2032 - 2033	521,962,440		1.42723	744,959	374,302 *					1,119,261									273,454		844,807	1,000		1,119,261		122,480
2033 - 2034	521,962,440		1.42323	742,874	374,302 *					1,117,176									270,464		845,712	1,000		1,117,176		122,480
2034 - 2035	521,962,440		1.41586	739,027	374,302 *					1,113,329									267,208		845,122	1,000		1,113,329		122,480
2035 - 2036	521,962,440		1.41479	738,466	374,302 *					1,112,768									263,706		848,062	1,000		1,112,768		122,480
2036 - 2037	521,962,440		1.04621	546,081	374,302 *					920,383									74,956		844,427	1,000		920,383		122,480
2037 - 2038	521,962,440		1.05113	548,651	374,302 *					922,953									72,485		849,468	1,000		922,953		122,480
2038 - 2039	521,962,440		0.90814	474,016	374,302 *					848,318											847,818	500		848,318		122,480
																			5,760,096	1,258,266	13,797,264					

* - 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 4-2

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	3.23558%
TIC	3.37523%
AIC	3.51784%
Average Life	8.78 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%	79,675	389,675	389,675
	12/1/2019			64,063	64,063	
1.6	6/1/2020	510,000	2.660%	64,063	574,063	638,127
	12/1/2020			57,280	57,280	
2.6	6/1/2021	505,000	2.700%	57,280	562,280	619,561
	12/1/2021			50,463	50,463	
3.6	6/1/2022	110,000	2.740%	50,463	160,463	210,926
	12/1/2022			48,956	48,956	
4.6	6/1/2023	130,000	2.780%	48,956	178,956	227,912
	12/1/2023			47,149	47,149	
5.6	6/1/2024	135,000	2.820%	47,149	182,149	229,298
	12/1/2024			45,245	45,245	
6.6	6/1/2025	180,000	2.880%	45,245	225,245	270,491
	12/1/2025			42,653	42,653	
7.6	6/1/2026	215,000	2.940%	42,653	257,653	300,307
	12/1/2026			39,493	39,493	
8.6	6/1/2027	225,000	3.010%	39,493	264,493	303,986
	12/1/2027			36,107	36,107	
9.6	6/1/2028	195,000	3.080%	36,107	231,107	267,213
	12/1/2028			33,104	33,104	
10.6	6/1/2029	200,000	3.140%	33,104	233,104	266,207
	12/1/2029			29,964	29,964	
11.6	6/1/2030	210,000	3.200%	29,964	239,964	269,927
	12/1/2030			26,604	26,604	
12.6	6/1/2031	220,000	3.280%	26,604	246,604	273,207
	12/1/2031			22,996	22,996	
13.6	6/1/2032	225,000	3.350%	22,996	247,996	270,991
	12/1/2032			19,227	19,227	
14.6	6/1/2033	235,000	3.400%	19,227	254,227	273,454
	12/1/2033			15,232	15,232	
15.6	6/1/2034	240,000	3.440%	15,232	255,232	270,464
	12/1/2034			11,104	11,104	
16.6	6/1/2035	245,000	3.470%	11,104	256,104	267,208
	12/1/2035			6,853	6,853	
17.6	6/1/2036	250,000	3.500%	6,853	256,853	263,706
	12/1/2036			2,478	2,478	
18.6	6/1/2037	70,000	3.530%	2,478	72,478	74,956
	12/1/2037			1,243	1,243	
19.6	6/1/2038	70,000	3.550%	1,243	71,243	72,485
	12/1/2038					
		4,480,000		1,280,096	5,760,096	5,760,096

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 4-3

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 2021A

EXHIBIT 4-4

Recreation Center Pool, Locker Rooms & East Side Gym

SOURCES & USES

SOURCES	
Par Amount of Bonds	9,730,000.00
Accrued Interest	
Premium	

Total Sources	9,730,000.00
USES	
Deposit to Construction Account	9,553,000.00
Deposit to Reserve Account	
Capitalized Interest Account	0.00
Municipal Bond Insurance	
Underwriters' Discount ($12.50 per bond)	121,625.00
Costs of Issuance	52,000.00
Accrued Interest	
Rounding Amount	3,375.00

Total Uses	9,730,000.00
ASSUMPTIONS	
Dated Date	5/1/2021
Delivery Date	5/1/2021
First Interest Date	12/1/2021
First Principal Date	6/1/2022
Last Principal Date	6/1/2040

Arbitrage Yield	4.03674%
TIC	4.16949%
AIC	4.22693%
Average Life	12.45 Years

FY 2018 PROJECTS FINANCED:

Rec Cntr Pool, Locker Rooms & E Gym	$ 9,553,000
Reserved	-
Reserved	-
Reserved	-
	$ 9,553,000

DEBT SERVICE SCHEDULE

	Date	Principal	Coupon	Interest	Debt Service	Annual Debt Service
	12/1/2021			224,739	224,739	0
1.08	6/1/2022	0	3.270%	192,634	192,634	417,373
	12/1/2022			192,634	192,634	
2.08	6/1/2023	0	3.410%	192,634	192,634	385,268
	12/1/2023			192,634	192,634	
3.08	6/1/2024	100,000	3.450%	192,634	292,634	485,268
	12/1/2024			190,909	190,909	
4.08	6/1/2025	275,000	3.490%	190,909	465,909	656,818
	12/1/2025			186,110	186,110	
5.08	6/1/2026	475,000	3.530%	186,110	661,110	847,220
	12/1/2026			177,726	177,726	
6.08	6/1/2027	490,000	3.570%	177,726	667,726	845,453
	12/1/2027			168,980	168,980	
7.08	6/1/2028	510,000	3.630%	168,980	678,980	847,960
	12/1/2028			159,723	159,723	
8.08	6/1/2029	530,000	3.690%	159,723	689,723	849,447
	12/1/2029			149,945	149,945	
9.08	6/1/2030	545,000	3.760%	149,945	694,945	844,890
	12/1/2030			139,699	139,699	
10.08	6/1/2031	565,000	3.830%	139,699	704,699	844,398
	12/1/2031			128,879	128,879	
11.08	6/1/2032	590,000	3.890%	128,879	718,879	847,758
	12/1/2032			117,404	117,404	
12.08	6/1/2033	610,000	3.950%	117,404	727,404	844,807
	12/1/2033			105,356	105,356	
13.08	6/1/2034	635,000	4.030%	105,356	740,356	845,712
	12/1/2034			92,561	92,561	
14.08	6/1/2035	660,000	4.100%	92,561	752,561	845,122
	12/1/2035			79,031	79,031	
15.08	6/1/2036	690,000	4.150%	79,031	769,031	848,062
	12/1/2036			64,713	64,713	
16.08	6/1/2037	715,000	4.190%	64,713	779,713	844,427
	12/1/2037			49,734	49,734	
17.08	6/1/2038	750,000	4.220%	49,734	799,734	849,468
	12/1/2038			33,909	33,909	
18.08	6/1/2039	780,000	4.250%	33,909	813,909	847,818
	12/1/2039			17,334	17,334	
19.08	6/1/2040	810,000	4.280%	17,334	827,334	844,668
	12/1/2040					
20.08	6/1/2041					
		9,730,000		4,911,932	14,641,932	14,641,932

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 4-5

Assumes 20 Year Bonds
2021 Rec Center Projects

Updated: 26-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 2021A	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			3,660,000	970,000	9,730,000		16,335,000	17,843,734	38.23%	2020
2021 - 2022	858,371,889	0.5%	42,918,594	34,334,876	1,430,000			3,155,000	815,000	9,730,000		15,130,000	19,204,876	35.25%	2021
2022 - 2023	862,294,948	0.5%	43,114,747	34,491,798	865,000			3,045,000	660,000	9,730,000		14,300,000	20,191,798	33.17%	2022
2023 - 2024	866,237,622	0.5%	43,311,881	34,649,505	295,000			2,915,000	525,000	9,730,000		13,465,000	21,184,505	31.09%	2023
2024 - 2025	870,200,010	0.5%	43,510,001	34,808,000				2,780,000	295,000	9,630,000		12,705,000	22,103,000	29.20%	2024
2025 - 2026	874,182,210	0.5%	43,709,111	34,967,288				2,600,000		9,355,000		11,955,000	23,012,288	27.35%	2025
2026 - 2027	874,182,210		43,709,111	34,967,288				2,385,000		8,880,000		11,265,000	23,702,288	25.77%	2026
2027 - 2028	874,182,210		43,709,111	34,967,288				2,160,000		8,390,000		10,550,000	24,417,288	24.14%	2027
2028 - 2029	874,182,210		43,709,111	34,967,288				1,965,000		7,880,000		9,845,000	25,122,288	22.52%	2028
2029 - 2030	874,182,210		43,709,111	34,967,288				1,765,000		7,350,000		9,115,000	25,852,288	20.85%	2029
2030 - 2031	874,182,210		43,709,111	34,967,288				1,555,000		6,805,000		8,360,000	26,607,288	19.13%	2030
2031 - 2032	874,182,210		43,709,111	34,967,288				1,335,000		6,240,000		7,575,000	27,392,288	17.33%	2031
2032 - 2033	874,182,210		43,709,111	34,967,288				1,110,000		5,650,000		6,760,000	28,207,288	15.47%	2032
2033 - 2034	874,182,210		43,709,111	34,967,288				875,000		5,040,000		5,915,000	29,052,288	13.53%	2033
2034 - 2035	874,182,210		43,709,111	34,967,288				635,000		4,405,000		5,040,000	29,927,288	11.53%	2034
2035 - 2036	874,182,210		43,709,111	34,967,288				390,000		3,745,000		4,135,000	30,832,288	9.46%	2035
2036 - 2037	874,182,210		43,709,111	34,967,288				140,000		3,055,000		3,195,000	31,772,288	7.31%	2036
2037 - 2038	874,182,210		43,709,111	34,967,288				70,000		2,340,000		2,410,000	32,557,288	5.51%	2037
2038 - 2039	874,182,210		43,709,111	34,967,288						1,590,000		1,590,000	33,377,288	3.64%	2038
2039 - 2040	874,182,210		43,709,111	34,967,288						810,000		810,000	34,157,288	1.85%	2039
2040 - 2041	874,182,210		43,709,111	34,967,288									34,967,288		2040
2041 - 2042	874,182,210		43,709,111	34,967,288									34,967,288		2041
2042 - 2043	874,182,210		43,709,111	34,967,288									34,967,288		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.**