



City of Carroll, Iowa

Bonding Scenarios

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Summary of Bond Options

Scenario	Year Issued	Par Amount of Bonds	Construction Proceeds	Total Interest	Total Debt Service	Maximum Tax Rate	Est Annual Tax Impact City Resident
Scenario 1	2018 Issuance	\$ 9,315,000	\$ 9,150,000	\$ 3,784,876	\$ 13,099,876	\$1.28	\$ -
Scenario 2	2018 Issuance	\$ 9,880,000	\$ 9,708,500	\$ 4,528,570	\$ 14,408,570		\$ 40.57
	2021 Issuance	\$ 9,775,000	\$ 9,600,000	\$ 5,070,192	\$ 14,845,192		\$ 33.45
	Total	\$ 19,655,000	\$ 19,308,500	\$ 9,598,762	\$ 29,253,762	\$2.32	\$ 74.02
Scenario 3	2018 Issuance	\$ 17,475,000	\$ 17,208,500	\$ 9,195,221	\$ 26,670,221	\$2.23	\$ 66.90
Scenario 4	2018 Issuance	\$ 5,115,000	\$ 5,000,000	\$ 2,227,258	\$ 7,342,258		\$ -
	2021 Issuance	\$ 7,650,000	\$ 7,500,000	\$ 4,141,231	\$ 11,791,231		\$ -
	Total	\$ 12,765,000	\$ 12,500,000	\$ 6,368,489	\$ 19,133,489	\$1.28	\$ -
Scenario 1a	2018 Issuance	\$ 6,455,000	\$ 6,340,000	\$ 1,642,578	\$ 8,097,578	\$1.28	\$ -
Scenario 2a	2018 Issuance	\$ 9,860,000	\$ 9,708,500	\$ 1,807,118	\$ 11,667,118		\$ 125.27
	2021 Issuance	\$ 9,750,000	\$ 9,600,000	\$ 2,317,987	\$ 12,067,987		\$ 39.86
	Total	\$ 19,610,000	\$ 19,308,500	\$ 4,125,105	\$ 23,735,105	\$3.60	\$ 165.13
Scenario 3a	2018 Issuance	\$ 17,435,000	\$ 17,208,500	\$ 3,975,300	\$ 21,410,300	\$3.67	\$ 170.82
Scenario 4a	2018 Issuance	\$ 3,080,000	\$ 3,000,000	\$ 575,428	\$ 3,655,428		\$ -
	2021 Issuance	\$ 5,610,000	\$ 5,500,000	\$ 1,509,780	\$ 7,119,780		\$ -
	Total	\$ 8,690,000	\$ 8,500,000	\$ 2,085,208	\$ 10,775,208	\$1.28	\$ -



Scenario 1: Capacity within the Current Tax Rate for the Proposed 2018 GO Bonds

City of Carroll, Iowa
Projection of G.O. Debt Capacity

EXHIBIT 2a

Scenario 1 - 2018 GO Bond Capacity within Current Tax Rate

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

FY18 CIP

Beginning of Fiscal Year	Actual Valuation	Historical Valuation Growth	Gross Debt Limit	Effective Debt Limit	DEBT ISSUES SUBJECT TO DEBT LIMIT *			Proposed Series 2017	Proposed Series 2018	TOTAL G.O. DEBT OUTST'NDG	Available Effective Capacity	Percent /Debt Gross Debt Limit	Beginning of Fiscal Year
					G.O. - TAXES -	G.O. - TIF -	Sales Tax Bonds						
2011 - 2012	632,429,951	1.89%	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	2.49%	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	1.00%	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	14.91%	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	0.72%	37,881,592	30,305,274	3,630,000					3,630,000	26,675,274	9.58%	2015
2016 - 2017	775,612,596	2.37%	38,780,630	31,024,504	4,895,000					4,895,000	26,129,504	12.62%	2016
2017 - 2018	781,063,284	0.70%	39,053,164	31,242,531	3,880,000			420,000		4,300,000	26,942,531	11.01%	2017
2018 - 2019	784,600,798	0.45%	39,230,040	31,384,032	3,045,000			215,000	9,315,000	12,575,000	18,809,032	32.05%	2018
2019 - 2020	788,155,999	0.45%	39,407,800	31,526,240	2,515,000			110,000	9,140,000	11,765,000	19,761,240	29.85%	2019
2020 - 2021	791,728,977	0.45%	39,586,449	31,669,159	1,975,000				9,105,000	11,080,000	20,589,159	27.99%	2020
2021 - 2022	795,319,819	0.45%	39,765,991	31,812,793	1,430,000				8,960,000	10,390,000	21,422,793	26.13%	2021
2022 - 2023	798,928,616	0.45%	39,946,431	31,957,145	865,000				8,815,000	9,680,000	22,277,145	24.23%	2022
2023 - 2024	802,555,456	0.45%	40,127,773	32,102,218	295,000				8,685,000	8,980,000	23,122,218	22.38%	2023
2024 - 2025	802,555,456		40,127,773	32,102,218					8,270,000	8,270,000	23,832,218	20.61%	2024
2025 - 2026	802,555,456		40,127,773	32,102,218					7,545,000	7,545,000	24,557,218	18.80%	2025
2026 - 2027	802,555,456		40,127,773	32,102,218					6,795,000	6,795,000	25,307,218	16.93%	2026
2027 - 2028	802,555,456		40,127,773	32,102,218					6,020,000	6,020,000	26,082,218	15.00%	2027
2028 - 2029	802,555,456		40,127,773	32,102,218					5,255,000	5,255,000	26,847,218	13.10%	2028
2029 - 2030	802,555,456		40,127,773	32,102,218					4,460,000	4,460,000	27,642,218	11.11%	2029
2030 - 2031	802,555,456		40,127,773	32,102,218					3,635,000	3,635,000	28,467,218	9.06%	2030
2031 - 2032	802,555,456		40,127,773	32,102,218					2,780,000	2,780,000	29,322,218	6.93%	2031
2032 - 2033	802,555,456		40,127,773	32,102,218					1,890,000	1,890,000	30,212,218	4.71%	2032
2033 - 2034	802,555,456		40,127,773	32,102,218					965,000	965,000	31,137,218	2.40%	2033
2034 - 2035	802,555,456		40,127,773	32,102,218							32,102,218		2034
2035 - 2036	802,555,456		40,127,773	32,102,218							32,102,218		2035
2036 - 2037	802,555,456		40,127,773	32,102,218							32,102,218		2036
2037 - 2038	802,555,456		40,127,773	32,102,218							32,102,218		2037
2038 - 2039	802,555,456		40,127,773	32,102,218							32,102,218		2038
2039 - 2040	802,555,456		40,127,773	32,102,218							32,102,218		2039
2040 - 2041	802,555,456		40,127,773	32,102,218							32,102,218		2040

* - Represents G.O. principal outstanding as of the BEGINNING of the fiscal year.

** - Project is subject to voter approval.

City of Carroll, Iowa

Proposed G. O. Capital Loan Notes, Series 2018

EXHIBIT 3a

Scenario 1 - 2018 GO Bond Capacity within Current Tax Rate

SOURCES & USES			DEBT SERVICE SCHEDULE					
SOURCES			Date	Principal	Coupon	Interest	Debt Service	Annual Debt Service
Par Amount of Bonds	9,315,000.00							
Accrued Interest								
Premium		0.58	6/1/2019	175,000	2.160%	202,335	377,335	377,335
			12/1/2019			171,540	171,540	
Total Sources	9,315,000.00	1.58	6/1/2020	35,000	2.340%	171,540	206,540	378,080
			12/1/2020			171,130	171,130	
		2.58	6/1/2021	145,000	2.530%	171,130	316,130	487,261
			12/1/2021			169,296	169,296	
		3.58	6/1/2022	145,000	2.710%	169,296	314,296	483,592
			12/1/2022			167,331	167,331	
Deposit to Construction Account	9,150,000.00		6/1/2023	130,000	2.920%	167,331	297,331	464,663
Deposit to Reserve Account		4.58	12/1/2023			165,433	165,433	
Capitalized Interest Account	0.00		6/1/2024	415,000	3.120%	165,433	580,433	745,867
Municipal Bond Insurance		5.58	12/1/2024			158,959	158,959	
Underwriters' Discount (\$12.50 per bond)	116,437.50		6/1/2025	725,000	3.320%	158,959	883,959	1,042,919
Costs of Issuance	48,000.00	6.58	12/1/2025			146,924	146,924	
Accrued Interest			6/1/2026	750,000	3.490%	146,924	896,924	1,043,849
Rounding Amount	562.50	7.58	12/1/2026			133,837	133,837	
Total Uses	9,315,000.00	8.58	6/1/2027	775,000	3.630%	133,837	908,837	1,042,674
			12/1/2027			119,771	119,771	
		9.58	6/1/2028	765,000	3.730%	119,771	884,771	1,004,541
			12/1/2028			105,503	105,503	
		10.58	6/1/2029	795,000	3.810%	105,503	900,503	1,006,007
Dated Date	11/1/2018		12/1/2029			90,359	90,359	
Delivery Date	11/1/2018	11.58	6/1/2030	825,000	3.890%	90,359	915,359	1,005,717
First Interest Date	6/1/2019		12/1/2030			74,312	74,312	
First Principal Date	6/1/2019	12.58	6/1/2031	855,000	3.970%	74,312	929,312	1,003,625
Last Principal Date	6/1/2034		12/1/2031			57,341	57,341	
		13.58	6/1/2032	890,000	4.050%	57,341	947,341	1,004,681
			12/1/2032			39,318	39,318	
		14.58	6/1/2033	925,000	4.130%	39,318	964,318	1,003,636
			12/1/2033			20,217	20,217	
		15.58	6/1/2034	965,000	4.190%	20,217	985,217	1,005,434
			12/1/2034					
Arbitrage Yield	3.85450%		6/1/2035					
TIC	4.00408%	16.58	12/1/2035					
AIC	4.06646%		6/1/2036					
Average Life	10.49 Years	17.58	12/1/2036					
		18.58	6/1/2037					
			12/1/2037					
		19.58	6/1/2038					
			12/1/2038					
				9,315,000		3,784,876	13,099,876	13,099,876
Scale : MMD as of 2-15-2017 + 45 bps for credit (Aa2/BQ) + 100 bps timing.								



Scenario 2: Proposed 2018 & 2021 GO Bonds

City of Carroll, Iowa
Projection of G.O. Debt Capacity

EXHIBIT 2b

Scenario 2 - GO Bonds Issued in 2018 & 2021

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

FY18 CIP

Beginning of Fiscal Year	Actual Valuation	Historical Valuation Growth	Gross Debt Limit	Effective Debt Limit	DEBT ISSUES SUBJECT TO DEBT LIMIT *			Proposed Series 2017	Proposed Series 2018	Proposed Series 2021	TOTAL G.O. DEBT OUTST'NDG	Available Effective Capacity	Percent /Debt Gross Debt Limit	Beginning of Fiscal Year
					G.O. - TAXES -	G.O. - TIF -	Sales Tax Bonds							
2011 - 2012	632,429,951	1.89%	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	2.49%	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	1.00%	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	14.91%	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	0.72%	37,881,592	30,305,274	3,630,000						3,630,000	26,675,274	9.58%	2015
2016 - 2017	775,612,596	2.37%	38,780,630	31,024,504	4,895,000						4,895,000	26,129,504	12.62%	2016
2017 - 2018	781,063,284	0.70%	39,053,164	31,242,531	3,880,000			420,000			4,300,000	26,942,531	11.01%	2017
2018 - 2019	784,600,798	0.45%	39,230,040	31,384,032	3,045,000			215,000	9,880,000		13,140,000	18,244,032	33.49%	2018
2019 - 2020	788,155,999	0.45%	39,407,800	31,526,240	2,515,000			110,000	9,425,000		12,050,000	19,476,240	30.58%	2019
2020 - 2021	791,728,977	0.45%	39,586,449	31,669,159	1,975,000				9,105,000		11,080,000	20,589,159	27.99%	2020
2021 - 2022	795,319,819	0.45%	39,765,991	31,812,793	1,430,000				8,675,000	9,775,000	19,880,000	11,932,793	49.99%	2021
2022 - 2023	798,928,616	0.45%	39,946,431	31,957,145	865,000				8,325,000	9,675,000	18,865,000	13,092,145	47.23%	2022
2023 - 2024	802,555,456	0.45%	40,127,773	32,102,218	295,000				8,165,000	9,575,000	18,035,000	14,067,218	44.94%	2023
2024 - 2025	802,555,456		40,127,773	32,102,218					7,750,000	9,450,000	17,200,000	14,902,218	42.86%	2024
2025 - 2026	802,555,456		40,127,773	32,102,218					7,320,000	9,025,000	16,345,000	15,757,218	40.73%	2025
2026 - 2027	802,555,456		40,127,773	32,102,218					6,875,000	8,585,000	15,460,000	16,642,218	38.53%	2026
2027 - 2028	802,555,456		40,127,773	32,102,218					6,415,000	8,125,000	14,540,000	17,562,218	36.23%	2027
2028 - 2029	802,555,456		40,127,773	32,102,218					5,940,000	7,680,000	13,620,000	18,482,218	33.94%	2028
2029 - 2030	802,555,456		40,127,773	32,102,218					5,445,000	7,220,000	12,665,000	19,437,218	31.56%	2029
2030 - 2031	802,555,456		40,127,773	32,102,218					4,930,000	6,745,000	11,675,000	20,427,218	29.09%	2030
2031 - 2032	802,555,456		40,127,773	32,102,218					4,395,000	6,250,000	10,645,000	21,457,218	26.53%	2031
2032 - 2033	802,555,456		40,127,773	32,102,218					3,840,000	5,735,000	9,575,000	22,527,218	23.86%	2032
2033 - 2034	802,555,456		40,127,773	32,102,218					3,265,000	5,200,000	8,465,000	23,637,218	21.10%	2033
2034 - 2035	802,555,456		40,127,773	32,102,218					2,665,000	4,640,000	7,305,000	24,797,218	18.20%	2034
2035 - 2036	802,555,456		40,127,773	32,102,218					2,040,000	4,060,000	6,100,000	26,002,218	15.20%	2035
2036 - 2037	802,555,456		40,127,773	32,102,218					1,390,000	3,455,000	4,845,000	27,257,218	12.07%	2036
2037 - 2038	802,555,456		40,127,773	32,102,218					710,000	2,825,000	3,535,000	28,567,218	8.81%	2037
2038 - 2039	802,555,456		40,127,773	32,102,218						2,165,000	2,165,000	29,937,218	5.40%	2038
2039 - 2040	802,555,456		40,127,773	32,102,218						1,475,000	1,475,000	30,627,218	3.68%	2039
2040 - 2041	802,555,456		40,127,773	32,102,218						755,000	755,000	31,347,218	1.88%	2040

* - Represents G.O. principal outstanding as of the BEGINNING of the fiscal year.

** - Project is subject to voter approval.

City of Carroll, Iowa

Proposed G. O. Capital Loan Notes, Series 2018

EXHIBIT 3b

Scenario 2 - GO Bonds Issued in 2018 & 2021

SOURCES & USES	
SOURCES	
Par Amount of Bonds	9,880,000.00
Accrued Interest	
Premium	
Total Sources	9,880,000.00
USES	
Deposit to Construction Account	9,708,500.00
Deposit to Reserve Account	
Capitalized Interest Account	0.00
Municipal Bond Insurance	
Underwriters' Discount (\$12.50 per bond)	123,500.00
Costs of Issuance	48,000.00
Accrued Interest	
Rounding Amount	
Total Uses	9,880,000.00
ASSUMPTIONS	
Dated Date	11/1/2018
Delivery Date	11/1/2018
First Interest Date	6/1/2019
First Principal Date	6/1/2019
Last Principal Date	6/1/2038

Arbitrage Yield	3.99479%
TIC	4.13954%
AIC	4.19653%
Average Life	11.38 Years

Estimated Annual Tax Impact for City Resident	
Average 100% Value for Homes	\$125,000
FY 2017-18 Residential Rollback %	56.9391%
Average Taxable Value for Homes	\$71,174
Maximum Debt Service Levy Increase	\$0.57
Estimated Annual Tax Impact:	\$40.57

DEBT SERVICE SCHEDULE					
Date	Principal	Coupon	Interest	Debt Service	Annual Debt Service
6/1/2019	455,000	2.160%	213,541	668,541	668,541
12/1/2019			178,122	178,122	
6/1/2020	320,000	2.340%	178,122	498,122	676,243
12/1/2020			174,378	174,378	
6/1/2021	430,000	2.530%	174,378	604,378	778,755
12/1/2021			168,938	168,938	
6/1/2022	350,000	2.710%	168,938	518,938	687,876
12/1/2022			164,196	164,196	
6/1/2023	160,000	2.920%	164,196	324,196	488,391
12/1/2023			161,860	161,860	
6/1/2024	415,000	3.120%	161,860	576,860	738,719
12/1/2024			155,386	155,386	
6/1/2025	430,000	3.320%	155,386	585,386	740,771
12/1/2025			148,248	148,248	
6/1/2026	445,000	3.490%	148,248	593,248	741,495
12/1/2026			140,482	140,482	
6/1/2027	460,000	3.630%	140,482	600,482	740,965
12/1/2027			132,133	132,133	
6/1/2028	475,000	3.730%	132,133	607,133	739,267
12/1/2028			123,275	123,275	
6/1/2029	495,000	3.810%	123,275	618,275	741,549
12/1/2029			113,845	113,845	
6/1/2030	515,000	3.890%	113,845	628,845	742,690
12/1/2030			103,828	103,828	
6/1/2031	535,000	3.970%	103,828	638,828	742,656
12/1/2031			93,208	93,208	
6/1/2032	555,000	4.050%	93,208	648,208	741,417
12/1/2032			81,970	81,970	
6/1/2033	575,000	4.130%	81,970	656,970	738,939
12/1/2033			70,096	70,096	
6/1/2034	600,000	4.190%	70,096	670,096	740,192
12/1/2034			57,526	57,526	
6/1/2035	625,000	4.250%	57,526	682,526	740,052
12/1/2035			44,245	44,245	
6/1/2036	650,000	4.300%	44,245	694,245	738,489
12/1/2036			30,270	30,270	
6/1/2037	680,000	4.340%	30,270	710,270	740,539
12/1/2037			15,514	15,514	
6/1/2038	710,000	4.370%	15,514	725,514	741,027
12/1/2038					
	9,880,000		4,528,570	14,408,570	14,408,570

Scale : MMD as of 2-15-2017 + 30 bps for credit (Aa2/BQ) + 100 bps timing.

City of Carroll, Iowa

Proposed G. O. Capital Loan Notes, Series 2021

EXHIBIT 4b

Scenario 2 - GO Bonds Issued in 2018 & 2021

SOURCES & USES	
SOURCES	
Par Amount of Notes	9,775,000.00
Accrued Interest	
Premium	

Total Sources	9,775,000.00
USES	
Deposit to Construction Account	9,600,000.00
Deposit to Reserve Account	
Capitalized Interest Account	(0.00)
Municipal Bond Insurance	0.00
Underwriters' Discount (\$12.50 per bond)	122,187.50
Costs of Issuance	51,000.00
Accrued Interest	
Rounding Amount	1,812.50

Total Uses	9,775,000.00
ASSUMPTIONS	
Dated Date	11/1/2021
Delivery Date	11/1/2021
First Interest Date	6/1/2022
First Principal Date	6/1/2022
Last Principal Date	6/1/2041
Yield Calculations:	
Arbitrage Yield	4.25177%
TIC	4.39026%
AIC	4.44880%
Average Life	12.11 Years

Estimated Annual Tax Impact for City Resident	
Average 100% Value for Homes	\$125,000
FY 2017-18 Residential Rollback %	56.9391%
Average Taxable Value for Homes	\$71,174
Maximum Debt Service Levy Increase	\$0.47
Estimated Annual Tax Impact:	\$33.45

DEBT SERVICE SCHEDULE							
	Date	Principal	Coupon	Interest	Debt Service	Annual Debt Service	
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	6/1/2022	100,000	2.410%	231,497	331,497	331,497	
	12/1/2022			197,221	197,221		
	6/1/2023	100,000	2.590%	197,221	297,221	494,442	
	12/1/2023			195,926	195,926		
	6/1/2024	125,000	2.780%	195,926	320,926	516,852	
	12/1/2024			194,188	194,188		
	6/1/2025	425,000	2.960%	194,188	619,188	813,377	
	12/1/2025			187,898	187,898		
	6/1/2026	440,000	3.170%	187,898	627,898	815,797	
	12/1/2026			180,924	180,924		
	6/1/2027	460,000	3.370%	180,924	640,924	821,849	
	12/1/2027			173,173	173,173		
	6/1/2028	445,000	3.570%	173,173	618,173	791,347	
	12/1/2028			165,230	165,230		
	6/1/2029	460,000	3.740%	165,230	625,230	790,460	
	12/1/2029			156,628	156,628		
	6/1/2030	475,000	3.880%	156,628	631,628	788,256	
	12/1/2030			147,413	147,413		
	6/1/2031	495,000	3.980%	147,413	642,413	789,826	
	12/1/2031			137,563	137,563		
	6/1/2032	515,000	4.060%	137,563	652,563	790,125	
	12/1/2032			127,108	127,108		
	6/1/2033	535,000	4.140%	127,108	662,108	789,216	
	12/1/2033			116,034	116,034		
	6/1/2034	560,000	4.220%	116,034	676,034	792,067	
	12/1/2034			104,218	104,218		
	6/1/2035	580,000	4.300%	104,218	684,218	788,435	
	12/1/2035			91,748	91,748		
	6/1/2036	605,000	4.380%	91,748	696,748	788,495	
	12/1/2036			78,498	78,498		
	6/1/2037	630,000	4.440%	78,498	708,498	786,996	
	12/1/2037			64,512	64,512		
	6/1/2038	660,000	4.500%	64,512	724,512	789,024	
	12/1/2038			49,662	49,662		
	6/1/2039	690,000	4.550%	49,662	739,662	789,324	
	12/1/2039			33,965	33,965		
	6/1/2040	720,000	4.590%	33,965	753,965	787,929	
	12/1/2040			17,441	17,441		
	6/1/2041	755,000	4.620%	17,441	772,441	789,881	
	12/1/2041						
	-----	9,775,000		5,070,192	14,845,192	14,845,192	
Scale : MMD as of 2-15-17 + 30 bps for credit (Aa2/BQ) + 125 bps timing.							



Scenario 3: Proposed 2018 GO Bonds for All Projects

City of Carroll, Iowa
Projection of G.O. Debt Capacity

EXHIBIT 2c

Scenario 3 - GO Bonds for All Projects Issued in 2018

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

FY18 CIP

Beginning of Fiscal Year	Actual Valuation	Historical Valuation Growth	Gross Debt Limit	Effective Debt Limit	DEBT ISSUES SUBJECT TO DEBT LIMIT *			Proposed Series 2017	Proposed Series 2018	TOTAL G.O. DEBT OUTST'NDG	Available Effective Capacity	Percent /Debt Gross Debt Limit	Beginning of Fiscal Year
					G.O. - TAXES -	G.O. - TIF -	Sales Tax Bonds						
2011 - 2012	632,429,951	1.89%	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	2.49%	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	1.00%	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	14.91%	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	0.72%	37,881,592	30,305,274	3,630,000					3,630,000	26,675,274	9.58%	2015
2016 - 2017	775,612,596	2.37%	38,780,630	31,024,504	4,895,000					4,895,000	26,129,504	12.62%	2016
2017 - 2018	781,063,284	0.70%	39,053,164	31,242,531	3,880,000		420,000			4,300,000	26,942,531	11.01%	2017
2018 - 2019	784,600,798	0.45%	39,230,040	31,384,032	3,045,000		215,000	17,475,000		20,735,000	10,649,032	52.85%	2018
2019 - 2020	788,155,999	0.45%	39,407,800	31,526,240	2,515,000		110,000	17,025,000		19,650,000	11,876,240	49.86%	2019
2020 - 2021	791,728,977	0.45%	39,586,449	31,669,159	1,975,000			16,845,000		18,820,000	12,849,159	47.54%	2020
2021 - 2022	795,319,819	0.45%	39,765,991	31,812,793	1,430,000			16,560,000		17,990,000	13,822,793	45.24%	2021
2022 - 2023	798,928,616	0.45%	39,946,431	31,957,145	865,000			16,270,000		17,135,000	14,822,145	42.89%	2022
2023 - 2024	802,555,456	0.45%	40,127,773	32,102,218	295,000			16,000,000		16,295,000	15,807,218	40.61%	2023
2024 - 2025	802,555,456		40,127,773	32,102,218				15,450,000		15,450,000	16,652,218	38.50%	2024
2025 - 2026	802,555,456		40,127,773	32,102,218				14,580,000		14,580,000	17,522,218	36.33%	2025
2026 - 2027	802,555,456		40,127,773	32,102,218				13,680,000		13,680,000	18,422,218	34.09%	2026
2027 - 2028	802,555,456		40,127,773	32,102,218				12,745,000		12,745,000	19,357,218	31.76%	2027
2028 - 2029	802,555,456		40,127,773	32,102,218				11,805,000		11,805,000	20,297,218	29.42%	2028
2029 - 2030	802,555,456		40,127,773	32,102,218				10,830,000		10,830,000	21,272,218	26.99%	2029
2030 - 2031	802,555,456		40,127,773	32,102,218				9,815,000		9,815,000	22,287,218	24.46%	2030
2031 - 2032	802,555,456		40,127,773	32,102,218				8,760,000		8,760,000	23,342,218	21.83%	2031
2032 - 2033	802,555,456		40,127,773	32,102,218				7,660,000		7,660,000	24,442,218	19.09%	2032
2033 - 2034	802,555,456		40,127,773	32,102,218				6,515,000		6,515,000	25,587,218	16.24%	2033
2034 - 2035	802,555,456		40,127,773	32,102,218				5,320,000		5,320,000	26,782,218	13.26%	2034
2035 - 2036	802,555,456		40,127,773	32,102,218				4,075,000		4,075,000	28,027,218	10.16%	2035
2036 - 2037	802,555,456		40,127,773	32,102,218				2,775,000		2,775,000	29,327,218	6.92%	2036
2037 - 2038	802,555,456		40,127,773	32,102,218				1,420,000		1,420,000	30,682,218	3.54%	2037
2038 - 2039	802,555,456		40,127,773	32,102,218							32,102,218		2038
2039 - 2040	802,555,456		40,127,773	32,102,218							32,102,218		2039
2040 - 2041	802,555,456		40,127,773	32,102,218							32,102,218		2040

* - Represents G.O. principal outstanding as of the BEGINNING of the fiscal year.

** - Project is subject to voter approval.

City of Carroll, Iowa

Proposed G. O. Capital Loan Notes, Series 2018

EXHIBIT 3c

Scenario 3 - GO Bonds for All Projects Issued in 2018

SOURCES & USES	
SOURCES	
Par Amount of Bonds	17,475,000.00
Accrued Interest	
Premium	0.58

Total Sources	17,475,000.00
USES	
Deposit to Construction Account	17,208,500.00
Deposit to Reserve Account	4.58
Capitalized Interest Account	0.00
Municipal Bond Insurance	5.58
Underwriters' Discount (\$12.50 per bond)	218,437.50
Costs of Issuance	48,000.00
Accrued Interest	
Rounding Amount	62.50

Total Uses	17,475,000.00
ASSUMPTIONS	
Dated Date	11/1/2018
Delivery Date	11/1/2018
First Interest Date	6/1/2019
First Principal Date	6/1/2019
Last Principal Date	6/1/2038

Arbitrage Yield	4.18461%	
TIC	4.31902%	16.58
AIC	4.34888%	
Average Life	12.49 Years	17.58

Estimated Annual Tax Impact for City Resident		
Average 100% Value for Homes	\$125,000	19.58
FY 2017-18 Residential Rollback %	56.9391%	
Average Taxable Value for Homes	\$71,174	
Maximum Debt Service Levy Increase	\$0.94	
Estimated Annual Tax Impact:	\$66.90	

DEBT SERVICE SCHEDULE					
Date	Principal	Coupon	Interest	Debt Service	Annual Debt Service

6/1/2019	450,000	2.310%	408,130	858,130	858,130
12/1/2019			344,628	344,628	
6/1/2020	180,000	2.490%	344,628	524,628	869,257
12/1/2020			342,387	342,387	
6/1/2021	285,000	2.680%	342,387	627,387	969,775
12/1/2021			338,568	338,568	
6/1/2022	290,000	2.860%	338,568	628,568	967,137
12/1/2022			334,421	334,421	
6/1/2023	270,000	3.070%	334,421	604,421	938,843
12/1/2023			330,277	330,277	
6/1/2024	550,000	3.270%	330,277	880,277	1,210,554
12/1/2024			321,284	321,284	
6/1/2025	870,000	3.470%	321,284	1,191,284	1,512,569
12/1/2025			306,190	306,190	
6/1/2026	900,000	3.640%	306,190	1,206,190	1,512,380
12/1/2026			289,810	289,810	
6/1/2027	935,000	3.780%	289,810	1,224,810	1,514,620
12/1/2027			272,138	272,138	
6/1/2028	940,000	3.880%	272,138	1,212,138	1,484,277
12/1/2028			253,902	253,902	
6/1/2029	975,000	3.960%	253,902	1,228,902	1,482,805
12/1/2029			234,597	234,597	
6/1/2030	1,015,000	4.040%	234,597	1,249,597	1,484,195
12/1/2030			214,094	214,094	
6/1/2031	1,055,000	4.120%	214,094	1,269,094	1,483,189
12/1/2031			192,361	192,361	
6/1/2032	1,100,000	4.200%	192,361	1,292,361	1,484,723
12/1/2032			169,261	169,261	
6/1/2033	1,145,000	4.280%	169,261	1,314,261	1,483,523
12/1/2033			144,758	144,758	
6/1/2034	1,195,000	4.340%	144,758	1,339,758	1,484,517
12/1/2034			118,827	118,827	
6/1/2035	1,245,000	4.400%	118,827	1,363,827	1,482,654
12/1/2035			91,437	91,437	
6/1/2036	1,300,000	4.450%	91,437	1,391,437	1,482,874
12/1/2036			62,512	62,512	
6/1/2037	1,355,000	4.490%	62,512	1,417,512	1,480,024
12/1/2037			32,092	32,092	
6/1/2038	1,420,000	4.520%	32,092	1,452,092	1,484,184
12/1/2038					

			17,475,000	9,195,221	26,670,221
				26,670,221	26,670,221

Scale : MMD as of 2-15-2017 + 45 bps for credit (Aa2/NonBQ)
+ 100 bps timing.



Scenario 4: Proposed 2018 & 2021 Capacity for GO Bonds

City of Carroll, Iowa
Projection of G.O. Debt Capacity

EXHIBIT 2b

Scenario 4 - GO Bonds Issue Capacity in 2018 & 2021

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

FY18 CIP

Beginning of Fiscal Year	Actual Valuation	Historical Valuation Growth	Gross Debt Limit	Effective Debt Limit	DEBT ISSUES SUBJECT TO DEBT LIMIT *			Proposed Series 2017	Proposed Series 2018	Proposed Series 2021	TOTAL G.O. DEBT OUTST'NDG	Available Effective Capacity	Percent /Debt Gross Debt Limit	Beginning of Fiscal Year
					G.O. - TAXES -	G.O. - TIF -	Sales Tax Bonds							
2011 - 2012	632,429,951	1.89%	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	2.49%	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	1.00%	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	14.91%	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	0.72%	37,881,592	30,305,274	3,630,000						3,630,000	26,675,274	9.58%	2015
2016 - 2017	775,612,596	2.37%	38,780,630	31,024,504	4,895,000						4,895,000	26,129,504	12.62%	2016
2017 - 2018	781,063,284	0.70%	39,053,164	31,242,531	3,880,000			420,000			4,300,000	26,942,531	11.01%	2017
2018 - 2019	784,600,798	0.45%	39,230,040	31,384,032	3,045,000		215,000	5,115,000			8,375,000	23,009,032	21.35%	2018
2019 - 2020	788,155,999	0.45%	39,407,800	31,526,240	2,515,000		110,000				7,475,000	24,051,240	18.97%	2019
2020 - 2021	791,728,977	0.45%	39,586,449	31,669,159	1,975,000				4,655,000		6,630,000	25,039,159	16.75%	2020
2021 - 2022	795,319,819	0.45%	39,765,991	31,812,793	1,430,000				4,345,000	7,650,000	13,425,000	18,387,793	33.76%	2021
2022 - 2023	798,928,616	0.45%	39,946,431	31,957,145	865,000				4,215,000	7,650,000	12,730,000	19,227,145	31.87%	2022
2023 - 2024	802,555,456	0.45%	40,127,773	32,102,218	295,000				4,215,000	7,650,000	12,160,000	19,942,218	30.30%	2023
2024 - 2025	802,555,456		40,127,773	32,102,218					4,050,000	7,550,000	11,600,000	20,502,218	28.91%	2024
2025 - 2026	802,555,456		40,127,773	32,102,218					3,800,000	7,225,000	11,025,000	21,077,218	27.47%	2025
2026 - 2027	802,555,456		40,127,773	32,102,218					3,545,000	6,890,000	10,435,000	21,667,218	26.00%	2026
2027 - 2028	802,555,456		40,127,773	32,102,218					3,280,000	6,545,000	9,825,000	22,277,218	24.48%	2027
2028 - 2029	802,555,456		40,127,773	32,102,218					3,005,000	6,220,000	9,225,000	22,877,218	22.99%	2028
2029 - 2030	802,555,456		40,127,773	32,102,218					2,720,000	5,885,000	8,605,000	23,497,218	21.44%	2029
2030 - 2031	802,555,456		40,127,773	32,102,218					2,425,000	5,540,000	7,965,000	24,137,218	19.85%	2030
2031 - 2032	802,555,456		40,127,773	32,102,218					2,120,000	5,180,000	7,300,000	24,802,218	18.19%	2031
2032 - 2033	802,555,456		40,127,773	32,102,218					1,800,000	4,805,000	6,605,000	25,497,218	16.46%	2032
2033 - 2034	802,555,456		40,127,773	32,102,218					1,470,000	4,415,000	5,885,000	26,217,218	14.67%	2033
2034 - 2035	802,555,456		40,127,773	32,102,218					1,125,000	4,010,000	5,135,000	26,967,218	12.80%	2034
2035 - 2036	802,555,456		40,127,773	32,102,218					765,000	3,585,000	4,350,000	27,752,218	10.84%	2035
2036 - 2037	802,555,456		40,127,773	32,102,218					390,000	3,145,000	3,535,000	28,567,218	8.81%	2036
2037 - 2038	802,555,456		40,127,773	32,102,218						2,685,000	2,685,000	29,417,218	6.69%	2037
2038 - 2039	802,555,456		40,127,773	32,102,218						1,830,000	1,830,000	30,272,218	4.56%	2038
2039 - 2040	802,555,456		40,127,773	32,102,218						935,000	935,000	31,167,218	2.33%	2039
2040 - 2041	802,555,456		40,127,773	32,102,218								32,102,218		2040

* - Represents G.O. principal outstanding as of the BEGINNING of the fiscal year.

** - Project is subject to voter approval.

City of Carroll, Iowa

Proposed G. O. Capital Loan Notes, Series 2018

EXHIBIT 3b

Scenario 4 - GO Bonds Issue Capacity in 2018 & 2021

SOURCES & USES			DEBT SERVICE SCHEDULE					
SOURCES			Date	Principal	Coupon	Interest	Debt Service	Annual Debt Service
Par Amount of Bonds	5,115,000.00							
Accrued Interest								
Premium		0.58	6/1/2019	265,000	2.160%	109,501	374,501	374,501
			12/1/2019			90,996	90,996	
Total Sources	5,115,000.00	1.58	6/1/2020	195,000	2.340%	90,996	285,996	376,992
			12/1/2020			88,714	88,714	
		2.58	6/1/2021	310,000	2.530%	88,714	398,714	487,429
			12/1/2021			84,793	84,793	
USES		3.58	6/1/2022	130,000	2.710%	84,793	214,793	299,586
Deposit to Construction Account	5,000,000.00		12/1/2022			83,031	83,031	
Deposit to Reserve Account		4.58	6/1/2023	0	2.920%	83,031	83,031	166,063
Capitalized Interest Account	0.00		12/1/2023			83,031	83,031	
Municipal Bond Insurance		5.58	6/1/2024	165,000	3.120%	83,031	248,031	331,063
Underwriters' Discount (\$12.50 per bond)	63,937.50		12/1/2024			80,457	80,457	
Costs of Issuance	48,000.00	6.58	6/1/2025	250,000	3.320%	80,457	330,457	410,915
Accrued Interest			12/1/2025			76,307	76,307	
Rounding Amount	3,062.50	7.58	6/1/2026	255,000	3.490%	76,307	331,307	407,615
			12/1/2026			71,858	71,858	
Total Uses	5,115,000.00	8.58	6/1/2027	265,000	3.630%	71,858	336,858	408,715
			12/1/2027			67,048	67,048	
		9.58	6/1/2028	275,000	3.730%	67,048	342,048	409,096
			12/1/2028			61,919	61,919	
ASSUMPTIONS		10.58	6/1/2029	285,000	3.810%	61,919	346,919	408,838
Dated Date	11/1/2018		12/1/2029			56,490	56,490	
Delivery Date	11/1/2018	11.58	6/1/2030	295,000	3.890%	56,490	351,490	407,980
First Interest Date	6/1/2019		12/1/2030			50,752	50,752	
First Principal Date	6/1/2019	12.58	6/1/2031	305,000	3.970%	50,752	355,752	406,504
Last Principal Date	6/1/2037		12/1/2031			44,698	44,698	
		13.58	6/1/2032	320,000	4.050%	44,698	364,698	409,396
			12/1/2032			38,218	38,218	
		14.58	6/1/2033	330,000	4.130%	38,218	368,218	406,436
			12/1/2033			31,403	31,403	
		15.58	6/1/2034	345,000	4.190%	31,403	376,403	407,807
Arbitrage Yield	3.96471%		12/1/2034			24,176	24,176	
TIC	4.11407%	16.58	6/1/2035	360,000	4.250%	24,176	384,176	408,351
AIC	4.22804%		12/1/2035			16,526	16,526	
Average Life	10.90 Years	17.58	6/1/2036	375,000	4.300%	16,526	391,526	408,051
			12/1/2036			8,463	8,463	
		18.58	6/1/2037	390,000	4.340%	8,463	398,463	406,926
			12/1/2037					
		19.58	6/1/2038					
			12/1/2038					
				5,115,000		2,227,258	7,342,258	7,342,258
			Scale : MMD as of 2-15-2017 + 30 bps for credit (Aa2/BQ) + 100 bps timing.					

SOURCES & USES	
SOURCES	
Par Amount of Notes	7,650,000.00
Accrued Interest	
Premium	

Total Sources	7,650,000.00
USES	
Deposit to Construction Account	7,500,000.00
Deposit to Reserve Account	
Capitalized Interest Account	(0.00)
Municipal Bond Insurance	0.00
Underwriters' Discount (\$12.50 per bond)	95,625.00
Costs of Issuance	51,000.00
Accrued Interest	
Rounding Amount	3,375.00

Total Uses	7,650,000.00
ASSUMPTIONS	
Dated Date	11/1/2021
Delivery Date	11/1/2021
First Interest Date	6/1/2022
First Principal Date	6/1/2022
Last Principal Date	6/1/2040
Yield Calculations:	
Arbitrage Yield	4.27523%
TIC	4.40923%
AIC	4.48166%
Average Life	12.58 Years

DEBT SERVICE SCHEDULE							
	Date	Principal	Coupon	Interest	Debt Service	Annual Debt Service	

	6/1/2022	0	2.410%	183,772	183,772	183,772	
	12/1/2022			157,519	157,519		
	6/1/2023	0	2.590%	157,519	157,519	315,039	
	12/1/2023			157,519	157,519		
	6/1/2024	100,000	2.780%	157,519	257,519	415,039	
	12/1/2024			156,129	156,129		
	6/1/2025	325,000	2.960%	156,129	481,129	637,259	
	12/1/2025			151,319	151,319		
	6/1/2026	335,000	3.170%	151,319	486,319	637,639	
	12/1/2026			146,010	146,010		
	6/1/2027	345,000	3.370%	146,010	491,010	637,019	
	12/1/2027			140,196	140,196		
	6/1/2028	325,000	3.570%	140,196	465,196	605,393	
	12/1/2028			134,395	134,395		
	6/1/2029	335,000	3.740%	134,395	469,395	603,790	
	12/1/2029			128,131	128,131		
	6/1/2030	345,000	3.880%	128,131	473,131	601,261	
	12/1/2030			121,438	121,438		
	6/1/2031	360,000	3.980%	121,438	481,438	602,875	
	12/1/2031			114,274	114,274		
	6/1/2032	375,000	4.060%	114,274	489,274	603,547	
	12/1/2032			106,661	106,661		
	6/1/2033	390,000	4.140%	106,661	496,661	603,322	
	12/1/2033			98,588	98,588		
	6/1/2034	405,000	4.220%	98,588	503,588	602,176	
	12/1/2034			90,043	90,043		
	6/1/2035	425,000	4.300%	90,043	515,043	605,085	
	12/1/2035			80,905	80,905		
	6/1/2036	440,000	4.380%	80,905	520,905	601,810	
	12/1/2036			71,269	71,269		
	6/1/2037	460,000	4.440%	71,269	531,269	602,538	
	12/1/2037			61,057	61,057		
	6/1/2038	855,000	4.500%	61,057	916,057	977,114	
	12/1/2038			41,820	41,820		
	6/1/2039	895,000	4.550%	41,820	936,820	978,639	
	12/1/2039			21,458	21,458		
	6/1/2040	935,000	4.590%	21,458	956,458	977,917	
	12/1/2040						
	6/1/2041						
	12/1/2041						
				7,650,000	4,141,231	11,791,231	11,791,231

Scale : MMD as of 2-15-17 + 30 bps for credit (Aa2/BQ) + 125 bps timing.							



**Scenario 1a: 10 Year Bonds
Capacity within the Current Tax Rate for
the Proposed 2018 GO Bonds**

City of Carroll, Iowa
Projection of G.O. Debt Capacity

EXHIBIT 2a

Scenario 1a - 2018 GO Bond Capacity within Current Tax Rate
 10 Year Bonds

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

FY18 CIP

Beginning of Fiscal Year	Actual Valuation	Historical Valuation Growth	Gross Debt Limit	Effective Debt Limit	DEBT ISSUES SUBJECT TO DEBT LIMIT *			Proposed Series 2017	Proposed Series 2018	TOTAL G.O. DEBT OUTST'NDG	Available Effective Capacity	Percent /Debt Gross Debt Limit	Beginning of Fiscal Year
					G.O. - TAXES -	G.O. - TIF -	Sales Tax Bonds						
2011 - 2012	632,429,951	1.89%	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	2.49%	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	1.00%	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	14.91%	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	0.72%	37,881,592	30,305,274	3,630,000					3,630,000	26,675,274	9.58%	2015
2016 - 2017	775,612,596	2.37%	38,780,630	31,024,504	4,895,000					4,895,000	26,129,504	12.62%	2016
2017 - 2018	781,063,284	0.70%	39,053,164	31,242,531	3,880,000			420,000		4,300,000	26,942,531	11.01%	2017
2018 - 2019	784,600,798	0.45%	39,230,040	31,384,032	3,045,000			215,000	6,455,000	9,715,000	21,669,032	24.76%	2018
2019 - 2020	788,155,999	0.45%	39,407,800	31,526,240	2,515,000			110,000	6,205,000	8,830,000	22,696,240	22.41%	2019
2020 - 2021	791,728,977	0.45%	39,586,449	31,669,159	1,975,000				6,035,000	8,010,000	23,659,159	20.23%	2020
2021 - 2022	795,319,819	0.45%	39,765,991	31,812,793	1,430,000				5,755,000	7,185,000	24,627,793	18.07%	2021
2022 - 2023	798,928,616	0.45%	39,946,431	31,957,145	865,000				5,470,000	6,335,000	25,622,145	15.86%	2022
2023 - 2024	802,555,456	0.45%	40,127,773	32,102,218	295,000				5,195,000	5,490,000	26,612,218	13.68%	2023
2024 - 2025	802,555,456		40,127,773	32,102,218					4,635,000	4,635,000	27,467,218	11.55%	2024
2025 - 2026	802,555,456		40,127,773	32,102,218					3,760,000	3,760,000	28,342,218	9.37%	2025
2026 - 2027	802,555,456		40,127,773	32,102,218					2,855,000	2,855,000	29,247,218	7.11%	2026
2027 - 2028	802,555,456		40,127,773	32,102,218					1,915,000	1,915,000	30,187,218	4.77%	2027
2028 - 2029	802,555,456		40,127,773	32,102,218					975,000	975,000	31,127,218	2.43%	2028
2029 - 2030	802,555,456		40,127,773	32,102,218							32,102,218		2029

* - Represents G.O. principal outstanding as of the BEGINNING of the fiscal year.

** - Project is subject to voter approval.

City of Carroll, Iowa

Proposed G. O. Capital Loan Notes, Series 2018

EXHIBIT 3a

Scenario 1a - 2018 GO Bond Capacity within Current Tax Rate
10 Year Bonds

SOURCES & USES			DEBT SERVICE SCHEDULE					
SOURCES			Date	Principal	Coupon	Interest	Debt Service	Annual Debt Service
Par Amount of Bonds	6,455,000.00							
Accrued Interest								
Premium		0.58	6/1/2019	250,000	2.160%	126,381	376,381	376,381
			12/1/2019			105,627	105,627	
Total Sources	6,455,000.00	1.58	6/1/2020	170,000	2.340%	105,627	275,627	381,254
			12/1/2020			103,638	103,638	
		2.58	6/1/2021	280,000	2.530%	103,638	383,638	487,276
			12/1/2021			100,096	100,096	
		3.58	6/1/2022	285,000	2.710%	100,096	385,096	485,192
			12/1/2022			96,234	96,234	
Deposit to Construction Account	6,340,000.00		6/1/2023	275,000	2.920%	96,234	371,234	467,468
Deposit to Reserve Account		4.58	12/1/2023			92,219	92,219	
Capitalized Interest Account	0.00		6/1/2024	560,000	3.120%	92,219	652,219	744,438
Municipal Bond Insurance		5.58	12/1/2024			83,483	83,483	
Underwriters' Discount (\$10.00 per bond)	64,550.00		6/1/2025	875,000	3.320%	83,483	958,483	1,041,966
Costs of Issuance	48,000.00	6.58	12/1/2025			68,958	68,958	
Accrued Interest			6/1/2026	905,000	3.490%	68,958	973,958	1,042,916
Rounding Amount	2,450.00	7.58	12/1/2026			53,166	53,166	
Total Uses	6,455,000.00	8.58	6/1/2027	940,000	3.630%	53,166	993,166	1,046,332
			12/1/2027			36,105	36,105	
		9.58	6/1/2028	940,000	3.730%	36,105	976,105	1,012,210
			12/1/2028			18,574	18,574	
		10.58	6/1/2029	975,000	3.810%	18,574	993,574	1,012,148
			12/1/2029					
Dated Date	11/1/2018		6/1/2030					
Delivery Date	11/1/2018	11.58	12/1/2030					
First Interest Date	6/1/2019		6/1/2031					
First Principal Date	6/1/2019	12.58	12/1/2031					
Last Principal Date	6/1/2029	13.58	6/1/2032					
			12/1/2032					
		14.58	6/1/2033					
			12/1/2033					
		15.58	6/1/2034					
			12/1/2034					
Arbitrage Yield	3.51620%		6/1/2035					
TIC	3.67752%	16.58	12/1/2035					
AIC	3.79886%		6/1/2036					
Average Life	7.21 Years	17.58	12/1/2036					
		18.58	6/1/2037					
			12/1/2037					
		19.58	6/1/2038					
			12/1/2038					
				6,455,000		1,642,578	8,097,578	8,097,578
Scale : MMD as of 2-15-2017 + 30 bps for credit (Aa2/BQ) + 100 bps timing.								



Scenario 2a: 10 Year Bonds **Proposed 2018 & 2021 GO Bonds**

City of Carroll, Iowa
Projection of G.O. Debt Capacity

EXHIBIT 2b

Scenario 2a - GO Bonds Issued in 2018 & 2021
 10 Year Bonds

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

FY18 CIP

Beginning of Fiscal Year	Actual Valuation	Historical Valuation Growth	Gross Debt Limit	Effective Debt Limit	DEBT ISSUES SUBJECT TO DEBT LIMIT *			Proposed Series 2017	Proposed Series 2018	Proposed Series 2021	TOTAL G.O. DEBT OUTST'NDG	Available Effective Capacity	Percent /Debt Gross Debt Limit	Beginning of Fiscal Year
					G.O. - TAXES -	G.O. - TIF -	Sales Tax Bonds							
2011 - 2012	632,429,951	1.89%	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	2.49%	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	1.00%	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	14.91%	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	0.72%	37,881,592	30,305,274	3,630,000						3,630,000	26,675,274	9.58%	2015
2016 - 2017	775,612,596	2.37%	38,780,630	31,024,504	4,895,000						4,895,000	26,129,504	12.62%	2016
2017 - 2018	781,063,284	0.70%	39,053,164	31,242,531	3,880,000			420,000			4,300,000	26,942,531	11.01%	2017
2018 - 2019	784,600,798	0.45%	39,230,040	31,384,032	3,045,000			215,000	9,860,000		13,120,000	18,264,032	33.44%	2018
2019 - 2020	788,155,999	0.45%	39,407,800	31,526,240	2,515,000			110,000	8,790,000		11,415,000	20,111,240	28.97%	2019
2020 - 2021	791,728,977	0.45%	39,586,449	31,669,159	1,975,000				7,795,000		9,770,000	21,899,159	24.68%	2020
2021 - 2022	795,319,819	0.45%	39,765,991	31,812,793	1,430,000				6,660,000	9,750,000	17,840,000	13,972,793	44.86%	2021
2022 - 2023	798,928,616	0.45%	39,946,431	31,957,145	865,000				5,915,000	9,225,000	16,005,000	15,952,145	40.07%	2022
2023 - 2024	802,555,456	0.45%	40,127,773	32,102,218	295,000				5,150,000	8,900,000	14,345,000	17,757,218	35.75%	2023
2024 - 2025	802,555,456		40,127,773	32,102,218					4,360,000	8,285,000	12,645,000	19,457,218	31.51%	2024
2025 - 2026	802,555,456		40,127,773	32,102,218					3,545,000	7,360,000	10,905,000	21,197,218	27.18%	2025
2026 - 2027	802,555,456		40,127,773	32,102,218					2,705,000	6,410,000	9,115,000	22,987,218	22.71%	2026
2027 - 2028	802,555,456		40,127,773	32,102,218					1,835,000	5,430,000	7,265,000	24,837,218	18.10%	2027
2028 - 2029	802,555,456		40,127,773	32,102,218					935,000	4,450,000	5,385,000	26,717,218	13.42%	2028
2029 - 2030	802,555,456		40,127,773	32,102,218						3,435,000	3,435,000	28,667,218	8.56%	2029
2030 - 2031	802,555,456		40,127,773	32,102,218						2,335,000	2,335,000	29,767,218	5.82%	2030
2031 - 2032	802,555,456		40,127,773	32,102,218						1,190,000	1,190,000	30,912,218	2.97%	2031

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

City of Carroll, Iowa

Proposed G. O. Capital Loan Notes, Series 2018

EXHIBIT 3b

Scenario 2a - GO Bonds Issued in 2018 & 2021
10 Year Bonds

SOURCES & USES	
SOURCES	
Par Amount of Bonds	9,860,000.00
Accrued Interest	
Premium	
Total Sources	9,860,000.00
USES	
Deposit to Construction Account	9,708,500.00
Deposit to Reserve Account	
Capitalized Interest Account	0.00
Municipal Bond Insurance	
Underwriters' Discount (\$10.00 per bond)	98,600.00
Costs of Issuance	48,000.00
Accrued Interest	
Rounding Amount	4,900.00
Total Uses	9,860,000.00
ASSUMPTIONS	
Dated Date	11/1/2018
Delivery Date	11/1/2018
First Interest Date	6/1/2019
First Principal Date	6/1/2019
Last Principal Date	6/1/2029
Arbitrage Yield	3.36171%
TIC	3.57182%
AIC	3.67528%
Average Life	5.42 Years

Estimated Annual Tax Impact for City Resident	
Average 100% Value for Homes	\$125,000
FY 2017-18 Residential Rollback %	56.9391%
Average Taxable Value for Homes	\$71,174
Maximum Debt Service Levy Increase	\$1.76
Estimated Annual Tax Impact:	\$125.27

DEBT SERVICE SCHEDULE					
Date	Principal	Coupon	Interest	Debt Service	Annual Debt Service
6/1/2019	1,070,000	2.160%	174,670	1,244,670	1,244,670
12/1/2019			138,161	138,161	
6/1/2020	995,000	2.340%	138,161	1,133,161	1,271,323
12/1/2020			126,520	126,520	
6/1/2021	1,135,000	2.530%	126,520	1,261,520	1,388,040
12/1/2021			112,162	112,162	
6/1/2022	745,000	2.710%	112,162	857,162	969,324
12/1/2022			102,067	102,067	
6/1/2023	765,000	2.920%	102,067	867,067	969,135
12/1/2023			90,898	90,898	
6/1/2024	790,000	3.120%	90,898	880,898	971,797
12/1/2024			78,574	78,574	
6/1/2025	815,000	3.320%	78,574	893,574	972,149
12/1/2025			65,045	65,045	
6/1/2026	840,000	3.490%	65,045	905,045	970,091
12/1/2026			50,387	50,387	
6/1/2027	870,000	3.630%	50,387	920,387	970,775
12/1/2027			34,597	34,597	
6/1/2028	900,000	3.730%	34,597	934,597	969,194
12/1/2028			17,812	17,812	
6/1/2029	935,000	3.810%	17,812	952,812	970,624
12/1/2029					
6/1/2030					
12/1/2030					
6/1/2031					
12/1/2031					
6/1/2032					
12/1/2032					
6/1/2033					
12/1/2033					
6/1/2034					
12/1/2034					
6/1/2035					
12/1/2035					
6/1/2036					
12/1/2036					
6/1/2037					
12/1/2037					
6/1/2038					
12/1/2038					
	9,860,000		1,807,118	11,667,118	11,667,118

Scale : MMD as of 2-15-2017 + 30 bps for credit (Aa2/BQ) + 100 bps timing.



Scenario 3a: 10 Year Bonds Proposed 2018 GO Bonds for All Projects

City of Carroll, Iowa
Projection of G.O. Debt Capacity

EXHIBIT 2c

Scenario 3a - GO Bonds for All Projects Issued in 2018
 10 Year Bonds

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

FY18 CIP

Beginning of Fiscal Year	Actual Valuation	Historical Valuation Growth	Gross Debt Limit	Effective Debt Limit	DEBT ISSUES SUBJECT TO DEBT LIMIT *			Proposed Series 2017	Proposed Series 2018	TOTAL G.O. DEBT OUTST'NDG	Available Effective Capacity	Percent /Debt Gross Debt Limit	Beginning of Fiscal Year
					G.O. - TAXES -	G.O. - TIF -	Sales Tax Bonds						
2011 - 2012	632,429,951	1.89%	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	2.49%	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	1.00%	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	14.91%	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	0.72%	37,881,592	30,305,274	3,630,000					3,630,000	26,675,274	9.58%	2015
2016 - 2017	775,612,596	2.37%	38,780,630	31,024,504	4,895,000					4,895,000	26,129,504	12.62%	2016
2017 - 2018	781,063,284	0.70%	39,053,164	31,242,531	3,880,000			420,000		4,300,000	26,942,531	11.01%	2017
2018 - 2019	784,600,798	0.45%	39,230,040	31,384,032	3,045,000			215,000	17,435,000	20,695,000	10,689,032	52.75%	2018
2019 - 2020	788,155,999	0.45%	39,407,800	31,526,240	2,515,000			110,000	16,180,000	18,805,000	12,721,240	47.72%	2019
2020 - 2021	791,728,977	0.45%	39,586,449	31,669,159	1,975,000				15,115,000	17,090,000	14,579,159	43.17%	2020
2021 - 2022	795,319,819	0.45%	39,765,991	31,812,793	1,430,000				13,930,000	15,360,000	16,452,793	38.63%	2021
2022 - 2023	798,928,616	0.45%	39,946,431	31,957,145	865,000				12,700,000	13,565,000	18,392,145	33.96%	2022
2023 - 2024	802,555,456	0.45%	40,127,773	32,102,218	295,000				11,490,000	11,785,000	20,317,218	29.37%	2023
2024 - 2025	802,555,456		40,127,773	32,102,218					9,970,000	9,970,000	22,132,218	24.85%	2024
2025 - 2026	802,555,456		40,127,773	32,102,218					8,105,000	8,105,000	23,997,218	20.20%	2025
2026 - 2027	802,555,456		40,127,773	32,102,218					6,175,000	6,175,000	25,927,218	15.39%	2026
2027 - 2028	802,555,456		40,127,773	32,102,218					4,175,000	4,175,000	27,927,218	10.40%	2027

* - Represents G.O. principal outstanding as of the BEGINNING of the fiscal year.

** - Project is subject to voter approval.

City of Carroll, Iowa

Proposed G. O. Capital Loan Notes, Series 2018

EXHIBIT 3c

Scenario 3a - GO Bonds for All Projects Issued in 2018
10 Year Bonds

SOURCES & USES	
SOURCES	
Par Amount of Bonds	17,435,000.00
Accrued Interest	
Premium	0.58

Total Sources	17,435,000.00
USES	
Deposit to Construction Account	17,208,500.00
Deposit to Reserve Account	4.58
Capitalized Interest Account	0.00
Municipal Bond Insurance	5.58
Underwriters' Discount (\$10.00 per bond)	174,350.00
Costs of Issuance	48,000.00
Accrued Interest	
Rounding Amount	4,150.00

Total Uses	17,435,000.00
ASSUMPTIONS	
Dated Date	11/1/2018
Delivery Date	11/1/2018
First Interest Date	6/1/2019
First Principal Date	6/1/2019
Last Principal Date	6/1/2029

Arbitrage Yield	3.59323%	
TIC	3.77662%	16.58
AIC	3.82756%	
Average Life	6.32 Years	17.58

Estimated Annual Tax Impact for City Resident		
Average 100% Value for Homes	\$125,000	19.58
FY 2017-18 Residential Rollback %	56.9391%	
Average Taxable Value for Homes	\$71,174	
Maximum Debt Service Levy Increase	\$2.40	
Estimated Annual Tax Impact:	\$170.82	

DEBT SERVICE SCHEDULE					
Date	Principal	Coupon	Interest	Debt Service	Annual Debt Service

6/1/2019	1,255,000	2.310%	340,406	1,595,406	1,595,406
12/1/2019			277,282	277,282	
6/1/2020	1,065,000	2.490%	277,282	1,342,282	1,619,563
12/1/2020			264,022	264,022	
6/1/2021	1,185,000	2.680%	264,022	1,449,022	1,713,045
12/1/2021			248,143	248,143	
6/1/2022	1,230,000	2.860%	248,143	1,478,143	1,726,287
12/1/2022			230,554	230,554	
6/1/2023	1,210,000	3.070%	230,554	1,440,554	1,671,109
12/1/2023			211,981	211,981	
6/1/2024	1,520,000	3.270%	211,981	1,731,981	1,943,962
12/1/2024			187,129	187,129	
6/1/2025	1,865,000	3.470%	187,129	2,052,129	2,239,258
12/1/2025			154,771	154,771	
6/1/2026	1,930,000	3.640%	154,771	2,084,771	2,239,542
12/1/2026			119,645	119,645	
6/1/2027	2,000,000	3.780%	119,645	2,119,645	2,239,290
12/1/2027			81,845	81,845	
6/1/2028	2,050,000	3.880%	81,845	2,131,845	2,213,690
12/1/2028			42,075	42,075	
6/1/2029	2,125,000	3.960%	42,075	2,167,075	2,209,150
12/1/2029					
6/1/2030					
12/1/2030					
6/1/2031					
12/1/2031					
6/1/2032					
12/1/2032					
6/1/2033					
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6/1/2034					
12/1/2034					
6/1/2035					
12/1/2035					
6/1/2036					
12/1/2036					
6/1/2037					
12/1/2037					
6/1/2038					
12/1/2038					

	17,435,000		3,975,300	21,410,300	21,410,300

Scale : MMD as of 2-15-2017 + 45 bps for credit (Aa2/NonBQ)
+ 100 bps timing.



Scenario 4a: 10 Year Bonds **Proposed 2018 & 2021 Capacity for GO Bonds**

City of Carroll, Iowa
Projection of G.O. Debt Capacity

EXHIBIT 2b

Scenario 4a - GO Bonds Issue Capacity in 2018 & 2021
 10 Year Bonds

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

FY18 CIP

Beginning of Fiscal Year	Actual Valuation	Historical Valuation Growth	Gross Debt Limit	Effective Debt Limit	DEBT ISSUES SUBJECT TO DEBT LIMIT *			Proposed Series 2017	Proposed Series 2018	Proposed Series 2021	TOTAL G.O. DEBT OUTST'NDG	Available Effective Capacity	Percent /Debt Gross Debt Limit	Beginning of Fiscal Year
					G.O. - TAXES -	G.O. - TIF -	Sales Tax Bonds							
2011 - 2012	632,429,951	1.89%	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	2.49%	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	1.00%	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	14.91%	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	0.72%	37,881,592	30,305,274	3,630,000						3,630,000	26,675,274	9.58%	2015
2016 - 2017	775,612,596	2.37%	38,780,630	31,024,504	4,895,000						4,895,000	26,129,504	12.62%	2016
2017 - 2018	781,063,284	0.70%	39,053,164	31,242,531	3,880,000			420,000			4,300,000	26,942,531	11.01%	2017
2018 - 2019	784,600,798	0.45%	39,230,040	31,384,032	3,045,000		215,000	3,080,000			6,340,000	25,044,032	16.16%	2018
2019 - 2020	788,155,999	0.45%	39,407,800	31,526,240	2,515,000		110,000	2,760,000			5,385,000	26,141,240	13.66%	2019
2020 - 2021	791,728,977	0.45%	39,586,449	31,669,159	1,975,000			2,470,000			4,445,000	27,224,159	11.23%	2020
2021 - 2022	795,319,819	0.45%	39,765,991	31,812,793	1,430,000			2,065,000	5,610,000		9,105,000	22,707,793	22.90%	2021
2022 - 2023	798,928,616	0.45%	39,946,431	31,957,145	865,000			1,870,000	5,510,000		8,245,000	23,712,145	20.64%	2022
2023 - 2024	802,555,456	0.45%	40,127,773	32,102,218	295,000			1,770,000	5,410,000		7,475,000	24,627,218	18.63%	2023
2024 - 2025	802,555,456		40,127,773	32,102,218				1,385,000	5,310,000		6,695,000	25,407,218	16.68%	2024
2025 - 2026	802,555,456		40,127,773	32,102,218				1,125,000	4,770,000		5,895,000	26,207,218	14.69%	2025
2026 - 2027	802,555,456		40,127,773	32,102,218				855,000	4,215,000		5,070,000	27,032,218	12.63%	2026
2027 - 2028	802,555,456		40,127,773	32,102,218				580,000	3,640,000		4,220,000	27,882,218	10.52%	2027
2028 - 2029	802,555,456		40,127,773	32,102,218				295,000	3,075,000		3,370,000	28,732,218	8.40%	2028
2029 - 2030	802,555,456		40,127,773	32,102,218					2,485,000		2,485,000	29,617,218	6.19%	2029
2030 - 2031	802,555,456		40,127,773	32,102,218					1,690,000		1,690,000	30,412,218	4.21%	2030
2031 - 2032	802,555,456		40,127,773	32,102,218					860,000		860,000	31,242,218	2.14%	2031
2032 - 2033	802,555,456		40,127,773	32,102,218								32,102,218		2032
2033 - 2034	802,555,456		40,127,773	32,102,218								32,102,218		2033
2034 - 2035	802,555,456		40,127,773	32,102,218								32,102,218		2034
2035 - 2036	802,555,456		40,127,773	32,102,218								32,102,218		2035
2036 - 2037	802,555,456		40,127,773	32,102,218								32,102,218		2036
2037 - 2038	802,555,456		40,127,773	32,102,218								32,102,218		2037
2038 - 2039	802,555,456		40,127,773	32,102,218								32,102,218		2038
2039 - 2040	802,555,456		40,127,773	32,102,218								32,102,218		2039
2040 - 2041	802,555,456		40,127,773	32,102,218								32,102,218		2040

* - Represents G.O. principal outstanding as of the BEGINNING of the fiscal year.

** - Project is subject to voter approval.

City of Carroll, Iowa

Proposed G. O. Capital Loan Notes, Series 2018

EXHIBIT 3b

Scenario 4a - GO Bonds Issue Capacity in 2018 & 2021

10 Year Bonds

SOURCES & USES			DEBT SERVICE SCHEDULE					
SOURCES			Date	Principal	Coupon	Interest	Debt Service	Annual Debt Service
Par Amount of Bonds	3,080,000.00							
Accrued Interest								
Premium		0.58	6/1/2019	320,000	2.160%	54,873	374,873	374,873
			12/1/2019			43,578	43,578	
Total Sources	3,080,000.00	1.58	6/1/2020	290,000	2.340%	43,578	333,578	377,157
			12/1/2020			40,185	40,185	
		2.58	6/1/2021	405,000	2.530%	40,185	445,185	485,371
			12/1/2021			35,062	35,062	
USES		3.58	6/1/2022	195,000	2.710%	35,062	230,062	265,124
Deposit to Construction Account	3,000,000.00		12/1/2022			32,420	32,420	
Deposit to Reserve Account		4.58	6/1/2023	100,000	2.920%	32,420	132,420	164,840
Capitalized Interest Account	0.00		12/1/2023			30,960	30,960	
Municipal Bond Insurance		5.58	6/1/2024	385,000	3.120%	30,960	415,960	446,920
Underwriters' Discount (\$10.00 per bond)	30,800.00		12/1/2024			24,954	24,954	
Costs of Issuance	48,000.00	6.58	6/1/2025	260,000	3.320%	24,954	284,954	309,908
Accrued Interest			12/1/2025			20,638	20,638	
Rounding Amount	1,200.00	7.58	6/1/2026	270,000	3.490%	20,638	290,638	311,276
			12/1/2026			15,926	15,926	
Total Uses	3,080,000.00	8.58	6/1/2027	275,000	3.630%	15,926	290,926	306,853
			12/1/2027			10,935	10,935	
		9.58	6/1/2028	285,000	3.730%	10,935	295,935	306,870
			12/1/2028			5,620	5,620	
ASSUMPTIONS		10.58	6/1/2029	295,000	3.810%	5,620	300,620	306,240
Dated Date	11/1/2018		12/1/2029					
Delivery Date	11/1/2018	11.58	6/1/2030					
First Interest Date	6/1/2019		12/1/2030					
First Principal Date	6/1/2019	12.58	6/1/2031					
Last Principal Date	6/1/2029	13.58	12/1/2031					
		14.58	6/1/2032					
			12/1/2032					
		15.58	6/1/2033					
			12/1/2033					
Arbitrage Yield	3.37147%		6/1/2034					
TIC	3.57838%	16.58	12/1/2034					
AIC	3.90726%		6/1/2035					
Average Life	5.51 Years	17.58	12/1/2035					
		18.58	6/1/2036					
			12/1/2036					
		19.58	6/1/2037					
			12/1/2037					
			6/1/2038					
			12/1/2038					
				3,080,000		575,428	3,655,428	3,655,428
Scale : MMD as of 2-15-2017 + 30 bps for credit (Aa2/BQ) + 100 bps timing.								

City of Carroll, Iowa

Proposed G. O. Capital Loan Notes, Series 2021

EXHIBIT 4b

Scenario 4a - GO Bonds Issue Capacity in 2018 & 2021

10 Year Bonds

SOURCES & USES			DEBT SERVICE SCHEDULE					
SOURCES			Date	Principal	Coupon	Interest	Debt Service	Annual Debt Service
Par Amount of Notes	5,610,000.00							
Accrued Interest								
Premium		0.58	6/1/2022	100,000	2.410%	117,698	217,698	217,698
			12/1/2022			99,679	99,679	
Total Sources	5,610,000.00	1.58	6/1/2023	100,000	2.590%	99,679	199,679	299,358
			12/1/2023			98,384	98,384	
		2.58	6/1/2024	100,000	2.780%	98,384	198,384	296,768
			12/1/2024			96,994	96,994	
USES		3.58	6/1/2025	540,000	2.960%	96,994	636,994	733,988
Deposit to Construction Account	5,500,000.00		12/1/2025			89,002	89,002	
Deposit to Reserve Account		4.58	6/1/2026	555,000	3.170%	89,002	644,002	733,004
Capitalized Interest Account	(0.00)		12/1/2026			80,205	80,205	
Municipal Bond Insurance	0.00	5.58	6/1/2027	575,000	3.370%	80,205	655,205	735,410
Underwriters' Discount (\$10.00 per bond)	56,100.00		12/1/2027			70,516	70,516	
Costs of Issuance	51,000.00	6.58	6/1/2028	565,000	3.570%	70,516	635,516	706,033
Accrued Interest			12/1/2028			60,431	60,431	
Rounding Amount	2,900.00	7.58	6/1/2029	590,000	3.740%	60,431	650,431	710,862
			12/1/2029			49,398	49,398	
Total Uses	5,610,000.00	8.58	6/1/2030	795,000	3.880%	49,398	844,398	893,796
			12/1/2030			33,975	33,975	
		9.58	6/1/2031	830,000	3.980%	33,975	863,975	897,950
			12/1/2031			17,458	17,458	
ASSUMPTIONS		10.58	6/1/2032	860,000	4.060%	17,458	877,458	894,916
Dated Date	11/1/2021		12/1/2032					
Delivery Date	11/1/2021	11.58	6/1/2033					
First Interest Date	6/1/2022		12/1/2033					
First Principal Date	6/1/2022	12.58	6/1/2034					
Last Principal Date	6/1/2032		12/1/2034					
		13.58	6/1/2035					
			12/1/2035					
		14.58	6/1/2036					
			12/1/2036					
		15.58	6/1/2037					
			12/1/2037					
		16.58	6/1/2038					
			12/1/2038					
		17.58	6/1/2039					
			12/1/2039					
		18.58	6/1/2040					
			12/1/2040					
		19.58	6/1/2041					
			12/1/2041					
				5,610,000		1,509,780	7,119,780	7,119,780
Yield Calculations:								
Arbitrage Yield	3.73843%							
TIC	3.90171%							
AIC	4.05200%							
Average Life	7.17 Years							
Scale : MMD as of 2-15-17 + 30 bps for credit (Aa2/BQ) + 125 bps timing.								