Warren County School District

Maximum Parameters Bond Sale Document

June 12, 2017

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MUNICIPAL MARKET UPDATE

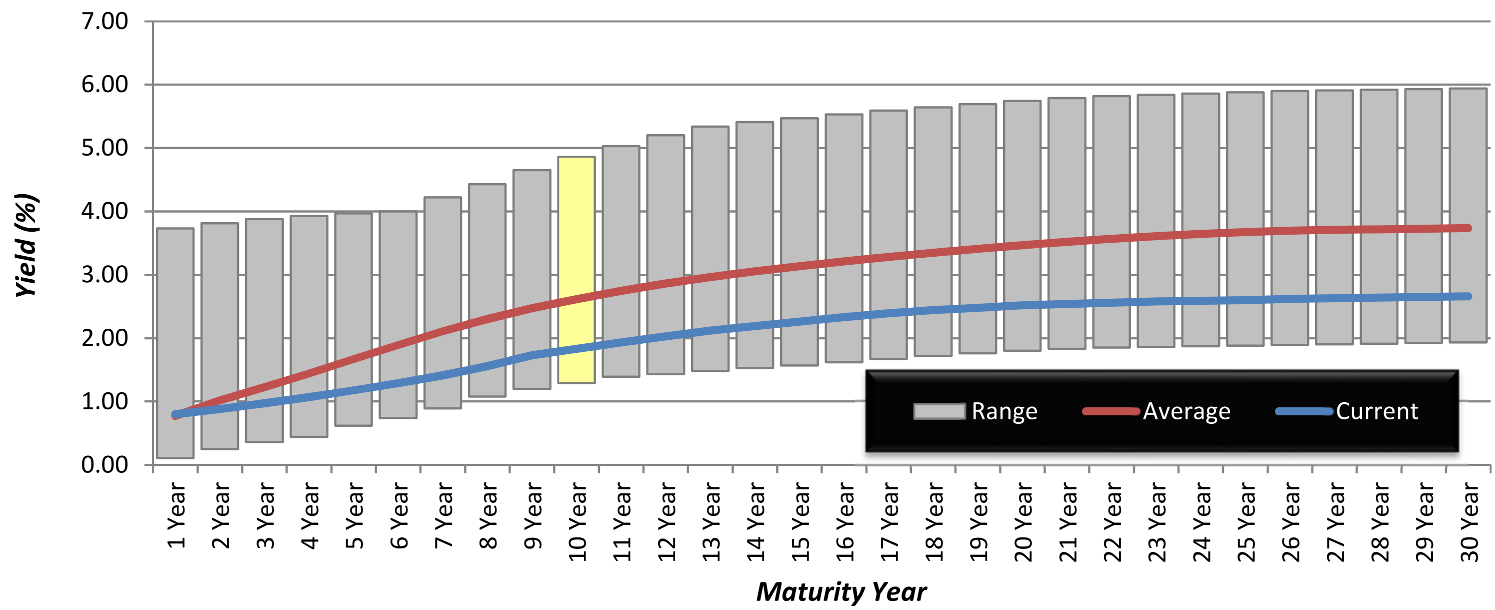
June 7, 2017

MMD YIELD CURVE

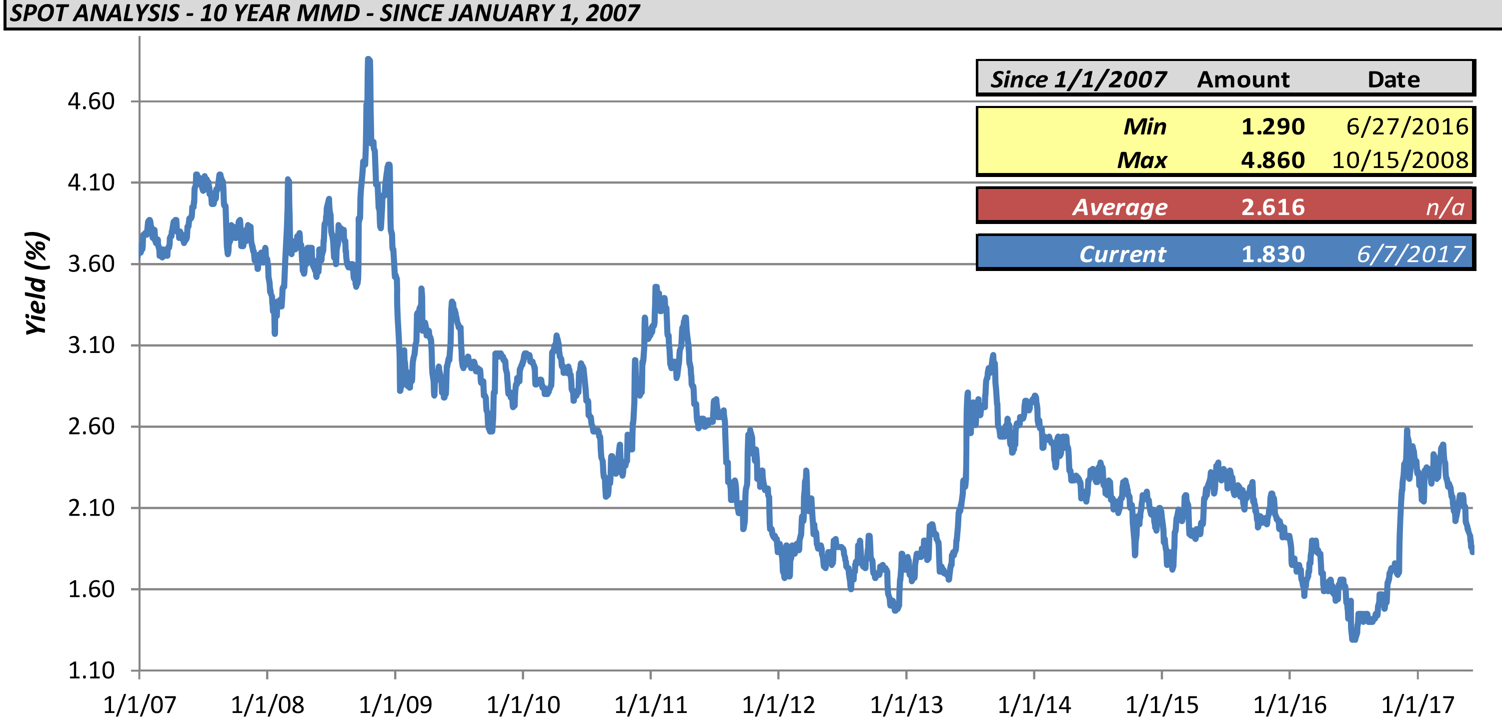
The MMD Yield Curve is a high grade municipal yield curve published daily by Municipal Market Data. It is one of the most commonly used benchmarks in municipal finance. The yields within the curve reflect the current yields for each maturity year at which bondholders would be likely to sell high quality (AAA rated) general obligation backed bonds. The yield curve is typically influenced by new issuances in the primary market as well as post-issuance trading in the secondary market.

Municipal bonds typically trade at a "spread to MMD", meaning the difference between the yield in a specific year of a bond issue and the respective yield in the MMD Yield Curve. While these spreads vary over time, they can be a meaningful and powerful tool in trying to compare relative yield levels in a volatile interest rate environment.

HISTORICAL MMD CURVE ILLUSTRATION - SINCE JANUARY 1, 2007



SPOT ANALYSIS - 10 YEAR MMD - SINCE JANUARY 1, 2007



Project Summaries

- Warren Area High School project
  - As of April 2017, project had $11 million of remaining expenditures, approximately $4.6 million of which still needs financed

Potential Use of Proceeds	
High School Project	
Available 2014 Bond Proceeds (4/5/2016)	1,758,326
Available 2016 Bond Proceeds (4/5/2016)	2,207,636
Future 2017 QZAB	2,428,440
Future 2017 Tax Exempt Issue	4,629,088
Estimated Remaining High School Costs	11,023,490
Career Center	
Future 2017 QZAB	4,900,000
Future 2017 Tax Exempt Issue	5,137,746
Total Available for Project	10,037,746

- Warren County Career Center submitted PlanCon A & B in 2015 (bids must be awarded by July 1, 2019 per Act 25 of 2016)
  - Waiting for results of survey in June to proceed with design

ESTIMATED TIMELINE

Step 1: Tax Exempt Financing

Finance Committee Meeting	April 24, 2017
Authorize Finance Team to Proceed	May 8, 2017
Parameters Bond Sale	June 12, 2017
Bond Sale (Lock in Rates)	June 26, 2017 or later
Settlement (District Receives Funds)	July 31, 2017 or later

Step 2: Taxable QZAB Financing

Authorize Finance Team to Proceed	September 11, 2017 or later
Sale (Lock in Rates)	November 6, 2017 or later
Settlement (District Receives Funds)	December 11, 2017 or later

WARREN COUNTY SCHOOL DISTRICT
SUMMARY OF OUTSTANDING INDEBTEDNESS

Debt Service Requirements

1	2	3	4	5	6	7	8	9	10
Fiscal Year Ended	QZAB Series of 2011 (1)	QZAB Series of 2012(2)	G.O. Bonds Series of 2013	G.O. Bonds Series A of 2013	G.O. Bonds Series of 2014	QZAB Series of 2015	G.O. Notes Series of 2015	QZAB Series of 2016	Total Debt Service
6/30/2017	1,040,700	105,966	295,830	862,875	406,850	125,821	1,185,975		4,024,016
6/30/2018	1,045,300	105,966	295,755	862,750	406,760	125,721	1,215,890	149,000	4,207,141
6/30/2019	1,777,800	180,000	295,680		406,670	125,621	1,216,100	164,000	4,165,871
6/30/2020	1,315,700	1,215,000	295,583		406,580	125,521	710,807	159,000	4,228,190
6/30/2021	762,100	1,825,000	295,463		406,460	125,421	704,166	159,000	4,277,609
6/30/2022	789,000	1,764,254	295,343		406,310	125,321	706,321	168,000	4,254,548
6/30/2023	720,000	1,802,781	295,223		406,160	125,221	711,159	172,000	4,232,543
6/30/2024	702,000	1,797,494	295,103		425,710	125,121	705,745	172,000	4,223,172
6/30/2025	684,000	2,559,846	294,983		449,535	125,021		172,000	4,285,384
6/30/2026	666,000	2,016,867	792,273		487,273	124,921		172,000	4,259,333
6/30/2027	648,000	639,871	1,397,523		1,062,210	124,821		172,000	4,044,424
6/30/2028	630,000	599,733	1,363,323		1,133,010	124,721		172,000	4,022,786
6/30/2029	612,000	559,595	1,329,123		1,194,910	124,621		172,000	3,992,248
6/30/2030	594,000	514,639	1,294,923		1,267,710	124,521		173,000	3,968,792
6/30/2031		479,501	1,260,723		1,777,110	124,421		173,000	3,814,754
6/30/2032		439,363	1,231,448		1,827,595	124,321		173,000	3,795,726
6/30/2033		399,225	1,197,098		1,887,285	124,221			3,607,828
6/30/2034		359,087	1,162,461		1,490,295	284,121			3,295,964
6/30/2035						2,775,821			2,775,821
6/30/2036						2,777,621			2,777,621
6/30/2037						2,771,910			2,771,910
6/30/2038									
6/30/2039									
6/30/2040									
6/30/2041									
6/30/2042									
6/30/2043									
TOTAL	11,986,600	17,364,185	13,687,851	1,725,625	15,848,433	10,734,824	7,156,163	2,522,000	81,025,681

Local Effort Requirements

11	12	13	14	15	16	17	18	19	20
Fiscal Year Ended	QZAB Series of 2011 (1)	QZAB Series of 2012(2)	G.O. Bonds Series of 2013	G.O. Bonds Series A of 2013	G.O. Bonds Series of 2014	QZAB Series of 2015	G.O. Notes Series of 2015	QZAB Series of 2016	Total Local Effort
6/30/2017	772,709	84,928	243,593	649,405	358,013	105,680	888,743		3,103,070
6/30/2018	776,124	84,928	243,532	649,311	357,933	105,596	911,160	125,149	3,253,733
6/30/2019	1,319,997	144,264	243,470		357,854	105,512	911,318	137,748	3,220,163
6/30/2020	976,893	973,783	243,390		357,775	105,428	532,663	133,548	3,323,480
6/30/2021	565,851	1,462,679	243,291		357,669	105,344	527,686	133,548	3,396,068
6/30/2022	585,824	1,413,992	243,192		357,537	105,260	529,301	141,108	3,376,215
6/30/2023	534,592	1,444,871	243,093		357,405	105,176	532,926	144,467	3,362,531
6/30/2024	521,227	1,440,633	242,994		374,609	105,092	528,870	144,467	3,357,893
6/30/2025	507,863	2,051,634	242,895		395,574	105,008		144,467	3,447,441
6/30/2026	494,498	1,616,454	652,376		428,781	104,924		144,467	3,441,500
6/30/2027	481,133	512,836	1,150,753		934,705	104,840		144,467	3,328,734
6/30/2028	467,768	480,667	1,122,591		997,006	104,756		144,467	3,317,256
6/30/2029	454,403	448,497	1,094,430		1,051,476	104,672		144,467	3,297,946
6/30/2030	441,039	412,466	1,066,269		1,115,537	104,588		145,307	3,285,207
6/30/2031		384,304	1,038,108		1,563,790	104,504		145,307	3,236,014
6/30/2032		352,135	1,014,003		1,608,215	104,420		145,307	3,224,079
6/30/2033		319,966	985,718		1,660,740	104,336			3,070,759
6/30/2034		287,796	957,198		1,311,403	238,640			2,795,038
6/30/2035						2,331,483			2,331,483
6/30/2036						2,332,995			2,332,995
6/30/2037						2,328,199			2,328,199
6/30/2038									
6/30/2039									
6/30/2040									
6/30/2041									
6/30/2042									
6/30/2043									
TOTAL	8,899,922	13,916,834	11,270,895	1,298,716	13,946,022	9,016,455	5,362,666	2,118,293	65,829,803

Principal *:	16,200,000	23,180,000	9,685,000	850,000	9,970,000	8,449,000	5,631,000	2,522,000	76,487,000
PE%:	35.89%	27.67%	24.61%	34.48%	16.73%	22.31%	34.93%	22.31%	
PE% Status:	Temporary	Permanent	Temporary	Temporary	Temporary	Temporary	Permanent	Temporary	
AR%	71.75%	71.75%	71.75%	71.75%	71.75%	71.75%	71.75%	71.75%	
Call Date:	Non-Callable	Non-Callable	5/15/2018	Non-Callable	5/15/2019	9/1/2025	Anytime	Anytime	
Purpose:	New Money	New Money	New Money	Cur Ref 08	New Money	New Money	Cur Ref 2010	New Money	

* Outstanding as of June 7, 2017

(1) QZAB debt service is net of Fed. Reimbursement Subsidy 5.138% & est. sinking fund earnings of 2.00%

(1A) Assumes Fed. Reimbursement Subsidy for 9/1/13 payments reduced by 8.70% ($36,207.49 per payment)

(1B) Assumes Fed. Reimbursement Subsidy for 3/1/14 & 9/1/14 payments reduced by 7.20% ($29,964.82 per payment)

(1C) Assumes Fed. Reimbursement Subsidy for 3/1/15 & 9/1/15 payments reduced by 7.30% ($30,380.99 per payment)

(1D) Assumes Fed. Reimbursement Subsidy for 3/1/16 & 9/1/2016 payment reduced by 6.80% ($28,300.10 per payment)

(1E) Assumes Fed. Reimbursement Subsidy for 3/1/17 & 9/1/2017 payment reduced by 6.80% ($28,300.10 per payment) (ESTIMATE ONLY)

(1F) Assumes Fed. Reimbursement Subsidy for 3/1/18 payment reduced by 6.80% ($28,300.10 per payment) (ESTIMATE ONLY)

(2) QZAB debt service is net of Fed. Reimbursement Subsidy 4.185% & sinking fund earnings of 3.14%

(2A) Assumes Fed. Reimbursement Subsidy for 11/1/13 & 5/1/14 payments reduced by 7.20% ($34,922.99 per payment)

(2B) Assumes Fed. Reimbursement Subsidy for11/1/214 & 5/1/2015 payments reduced by 7.30% ($35,408.03 per payment)

(2C) Assumes Fed. Reimbursement Subsidy for 11/1/2015 & 5/1/2016 payments reduced by 6.80% ($32,982.82 per payment)

(2D) Assumes Fed. Reimbursement Subsidy for 11/1/2016 & 5/1/2017 payments reduced by 6.80% ($32,982.82 per payment) (ESTIMATE ONLY)

(2E) Assumes Fed. Reimbursement Subsidy for 11/1/2017 & 5/1/2018 payments reduced by 6.80% ($32,982.82 per payment) (ESTIMATE ONLY)

WARREN COUNTY SCHOOL DISTRICT
SUMMARY OF NEW MONEY **Tax Exempt For High School + Career Center, 15 Year Term QZAB**

	1	2	3	4
	STEP 1	STEP 2	STEP 2	
	High School/Career Center	*High School Portion*	*Career Center Portion*	Total
Principal	$9,995,000	$2,478,000	$5,000,000	$17,473,000
Type	Tax Exempt	QZAB	QZAB	
Millage Equivalent [1]	0.87	0.35	0.82	2.04

5	6	7	8	9	10	11	12	13	14	15	16
Fiscal Year Ending	**Existing Local Effort**	**Proposed Local Effort**	**Total Local Effort**	**Millage Equivalent [1]**	**Proposed Local Effort [2]**	**Total Local Effort**	**Millage Equivalent [1]**	**Proposed Local Effort [2]**	**Total Local Effort**	**Millage Equivalent [1]**	**Total Millage Equivalent**
6/30/2017	3,103,070		3,103,070			3,103,070			3,103,070		
6/30/2018	3,253,733	211,510	3,465,243	0.50	60,201	3,525,444	0.14	156,000	3,681,444	0.37	1.01
6/30/2019	3,220,163	365,484	3,585,647	0.37	147,923	3,733,570	0.21	346,000	4,079,570	0.45	1.03
6/30/2020	3,323,480	365,378	3,688,858		147,923	3,836,781		346,000	4,182,781		
6/30/2021	3,396,068	365,262	3,761,330		147,923	3,909,253		346,000	4,255,253		
6/30/2022	3,376,215	365,137	3,741,351		147,923	3,889,274		346,000	4,235,274		
6/30/2023	3,362,531	365,002	3,727,533		147,923	3,875,456		346,000	4,221,456		
6/30/2024	3,357,893	364,861	3,722,754		147,923	3,870,677		346,000	4,216,677		
6/30/2025	3,447,441	364,715	3,812,156		147,923	3,960,079		346,000	4,306,079		
6/30/2026	3,441,500	364,564	3,806,064		147,923	3,953,987		346,000	4,299,987		
6/30/2027	3,328,734	364,410	3,693,144		147,923	3,841,066		346,000	4,187,066		
6/30/2028	3,317,256	364,252	3,681,508		147,923	3,829,430		346,000	4,175,430		
6/30/2029	3,297,946	364,090	3,662,036		147,923	3,809,959		346,000	4,155,959		
6/30/2030	3,285,207	363,924	3,649,131		147,923	3,797,053		346,000	4,143,053		
6/30/2031	3,236,014	363,755	3,599,769		147,923	3,747,691		346,000	4,093,691		
6/30/2032	3,224,079	363,583	3,587,662		147,923	3,735,585		346,000	4,081,585		
6/30/2033	3,070,759	363,408	3,434,168			3,434,168			3,434,168		
6/30/2034	2,795,038	363,231	3,158,269			3,158,269			3,158,269		
6/30/2035	2,331,483	848,040	3,179,524			3,179,524			3,179,524		
6/30/2036	2,332,995	847,149	3,180,144			3,180,144			3,180,144		
6/30/2037	2,328,199	850,062	3,178,261			3,178,261			3,178,261		
6/30/2038		2,713,905	2,713,905			2,713,905			2,713,905		
6/30/2039		2,719,098	2,719,098			2,719,098			2,719,098		
6/30/2040		2,715,478	2,715,478			2,715,478			2,715,478		
6/30/2041											
6/30/2042											
6/30/2043											
6/30/2044											
6/30/2045											
6/30/2046											
6/30/2047											
6/30/2048											
6/30/2049											
6/30/2050											
TOTAL	**65,829,803**	**16,736,298**	**82,566,101**	**0.87**	**2,131,119**	**84,697,220**	**0.35**	**5,000,000**	**89,697,220**	**0.82**	**2.04**

[1] 1 Mill = 420,000
[2] Assumes District receives a bank loan proposal with a 0.0% supplemental coupon.
Assumes PE% of 19.51% on High School series, 0.00% on Career Center series
Actual rate to be determined at the time of pricing.

WARREN COUNTY SCHOOL DISTRICT
SERIES OF 2017

ESTIMATED

Settled 7/31/2017
Dated 7/31/2017

1 Date	2 Principal	3 Est. Rate	4 Interest	5 Semi-Annual Debt Service	6 Proposed Fiscal Year Debt Service	7 *Less:* State Aid	8 Proposed Local Effort	9 Existing Local Effort	10 Total Local Effort	11 Millage Equivalent
3/1/2018			226,702.50	226,702.50	226,702.50	(15,192.69)	211,509.81	3,253,733.02	3,465,242.84	0.50
9/1/2018	5,000	2.170	193,395.50	198,395.50						
3/1/2019			193,341.25	193,341.25	391,736.75	(26,252.62)	365,484.13	3,220,163.10	3,585,647.23	0.37
9/1/2019	5,000	2.380	193,341.25	198,341.25						
3/1/2020			193,281.75	193,281.75	391,623.00	(26,245.00)	365,378.00	3,323,479.91	3,688,857.91	
9/1/2020	5,000	2.590	193,281.75	198,281.75						
3/1/2021			193,217.00	193,217.00	391,498.75	(26,236.67)	365,262.08	3,396,067.80	3,761,329.88	
9/1/2021	5,000	2.790	193,217.00	198,217.00						
3/1/2022			193,147.25	193,147.25	391,364.25	(26,227.66)	365,136.59	3,376,214.53	3,741,351.12	
9/1/2022	5,000	2.960	193,147.25	198,147.25						
3/1/2023			193,073.25	193,073.25	391,220.50	(26,218.02)	365,002.48	3,362,530.92	3,727,533.40	
9/1/2023	5,000	3.090	193,073.25	198,073.25						
3/1/2024			192,996.00	192,996.00	391,069.25	(26,207.89)	364,861.36	3,357,892.51	3,722,753.87	
9/1/2024	5,000	3.190	192,996.00	197,996.00						
3/1/2025			192,916.25	192,916.25	390,912.25	(26,197.36)	364,714.89	3,447,441.03	3,812,155.92	
9/1/2025	5,000	3.270	192,916.25	197,916.25						
3/1/2026			192,834.50	192,834.50	390,750.75	(26,186.54)	364,564.21	3,441,500.17	3,806,064.38	
9/1/2026	5,000	3.350	192,834.50	197,834.50						
3/1/2027			192,750.75	192,750.75	390,585.25	(26,175.45)	364,409.80	3,328,733.72	3,693,143.52	
9/1/2027	5,000	3.430	192,750.75	197,750.75						
3/1/2028			192,665.00	192,665.00	390,415.75	(26,164.09)	364,251.66	3,317,255.84	3,681,507.50	
9/1/2028	5,000	3.510	192,665.00	197,665.00						
3/1/2029			192,577.25	192,577.25	390,242.25	(26,152.46)	364,089.79	3,297,946.30	3,662,036.09	
9/1/2029	5,000	3.590	192,577.25	197,577.25						
3/1/2030			192,487.50	192,487.50	390,064.75	(26,140.57)	363,924.18	3,285,206.50	3,649,130.68	
9/1/2030	5,000	3.660	192,487.50	197,487.50						
3/1/2031			192,396.00	192,396.00	389,883.50	(26,128.42)	363,755.08	3,236,013.60	3,599,768.68	
9/1/2031	5,000	3.720	192,396.00	197,396.00						
3/1/2032			192,303.00	192,303.00	389,699.00	(26,116.06)	363,582.94	3,224,079.46	3,587,662.40	
9/1/2032	5,000	3.770	192,303.00	197,303.00						
3/1/2033			192,208.75	192,208.75	389,511.75	(26,103.51)	363,408.24	3,070,759.34	3,434,167.58	
9/1/2033	5,000	3.810	192,208.75	197,208.75						
3/1/2034			192,113.50	192,113.50	389,322.25	(26,090.81)	363,231.44	2,795,037.63	3,158,269.07	
9/1/2034	535,000	3.840	192,113.50	727,113.50						
3/1/2035			181,841.50	181,841.50	908,955.00	(60,914.50)	848,040.50	2,331,483.28	3,179,523.78	
9/1/2035	555,000	3.850	181,841.50	736,841.50						
3/1/2036			171,157.75	171,157.75	907,999.25	(60,850.45)	847,148.80	2,332,995.15	3,180,143.95	
9/1/2036	580,000	3.860	171,157.75	751,157.75						
3/1/2037			159,963.75	159,963.75	911,121.50	(61,059.69)	850,061.81	2,328,198.88	3,178,260.69	
9/1/2037	2,640,000	3.870	159,963.75	2,799,963.75						
3/1/2038			108,879.75	108,879.75	2,908,843.50	(194,938.97)	2,713,904.53		2,713,904.53	
9/1/2038	2,750,000	3.880	108,879.75	2,858,879.75						
3/1/2039			55,529.75	55,529.75	2,914,409.50	(195,311.98)	2,719,097.52		2,719,097.52	
9/1/2039	2,855,000	3.890	55,529.75	2,910,529.75						
3/1/2040			0.00	0.00	2,910,529.75	(195,051.98)	2,715,477.77		2,715,477.77	
TOTALS	**9,995,000**		7,943,461.00	17,938,461.00	17,938,461.00	(1,202,163.39)	16,736,297.61	62,726,732.71	79,463,030.31	0.87

PE%= 9.34% Estimated
AR%= 71.75%
1 MILL= 420,000 Estimated
Estimated rates. Actual interest rates to be determined at the time of pricing

Maximum Parameters Schedule

WARREN COUNTY SCHOOL DISTRICT
SERIES OF 2017

MAXIMUM PARAMETERS	*Settled*	7/31/2017
	Dated	7/31/2017

1	2	3	4	5	6
				Semi-Annual	Proposed Fiscal Year
Date	Principal	Rate	Interest	Debt Service	Debt Service
3/1/2018			422,000.00	422,000.00	422,000.00
9/1/2018	10,000	6.000	360,000.00	370,000.00	
3/1/2019			359,700.00	359,700.00	729,700.00
9/1/2019	10,000	6.000	359,700.00	369,700.00	
3/1/2020			359,400.00	359,400.00	729,100.00
9/1/2020	10,000	6.000	359,400.00	369,400.00	
3/1/2021			359,100.00	359,100.00	728,500.00
9/1/2021	10,000	6.000	359,100.00	369,100.00	
3/1/2022			358,800.00	358,800.00	727,900.00
9/1/2022	10,000	6.000	358,800.00	368,800.00	
3/1/2023			358,500.00	358,500.00	727,300.00
9/1/2023	10,000	6.000	358,500.00	368,500.00	
3/1/2024			358,200.00	358,200.00	726,700.00
9/1/2024	10,000	6.000	358,200.00	368,200.00	
3/1/2025			357,900.00	357,900.00	726,100.00
9/1/2025	10,000	6.000	357,900.00	367,900.00	
3/1/2026			357,600.00	357,600.00	725,500.00
9/1/2026	10,000	6.000	357,600.00	367,600.00	
3/1/2027			357,300.00	357,300.00	724,900.00
9/1/2027	10,000	6.000	357,300.00	367,300.00	
3/1/2028			357,000.00	357,000.00	724,300.00
9/1/2028	10,000	6.000	357,000.00	367,000.00	
3/1/2029			356,700.00	356,700.00	723,700.00
9/1/2029	10,000	6.000	356,700.00	366,700.00	
3/1/2030			356,400.00	356,400.00	723,100.00
9/1/2030	10,000	6.000	356,400.00	366,400.00	
3/1/2031			356,100.00	356,100.00	722,500.00
9/1/2031	25,000	6.000	356,100.00	381,100.00	
3/1/2032			355,350.00	355,350.00	736,450.00
9/1/2032	100,000	6.000	355,350.00	455,350.00	
3/1/2033			352,350.00	352,350.00	807,700.00
9/1/2033	100,000	6.000	352,350.00	452,350.00	
3/1/2034			349,350.00	349,350.00	801,700.00
9/1/2034	640,000	6.000	349,350.00	989,350.00	
3/1/2035			330,150.00	330,150.00	1,319,500.00
9/1/2035	665,000	6.000	330,150.00	995,150.00	
3/1/2036			310,200.00	310,200.00	1,305,350.00
9/1/2036	695,000	6.000	310,200.00	1,005,200.00	
3/1/2037			289,350.00	289,350.00	1,294,550.00
9/1/2037	3,040,000	6.000	289,350.00	3,329,350.00	
3/1/2038			198,150.00	198,150.00	3,527,500.00
9/1/2038	3,225,000	6.000	198,150.00	3,423,150.00	
3/1/2039			101,400.00	101,400.00	3,524,550.00
9/1/2039	3,380,000	6.000	101,400.00	3,481,400.00	
3/1/2040			0.00	0.00	3,481,400.00
TOTALS	**12,000,000**		14,660,000.00	26,660,000.00	26,660,000.00