

# South San Antonio Independent School District

Current Market Update, Preliminary Refunding Analysis,  
and Creative Capital Financing Ideas

June 17, 2020

**STRICTLY PRIVATE AND CONFIDENTIAL**



**Capital  
Markets**

**Richard Acosta**  
Director

RBC Capital Markets, LLC  
303 Pearl Parkway  
Suite 220  
San Antonio, TX 78215

Tel: (210) 805-1148  
Fax: (210) 805-1119

[richard.acosta@rbccm.com](mailto:richard.acosta@rbccm.com)

## Table of Contents

---

1. Economic Conditions and Market Update
2. Preliminary Refunding Analysis
3. Creative Capital Financing Ideas

# Economic Conditions and Market Update

Section 1



Capital  
Markets

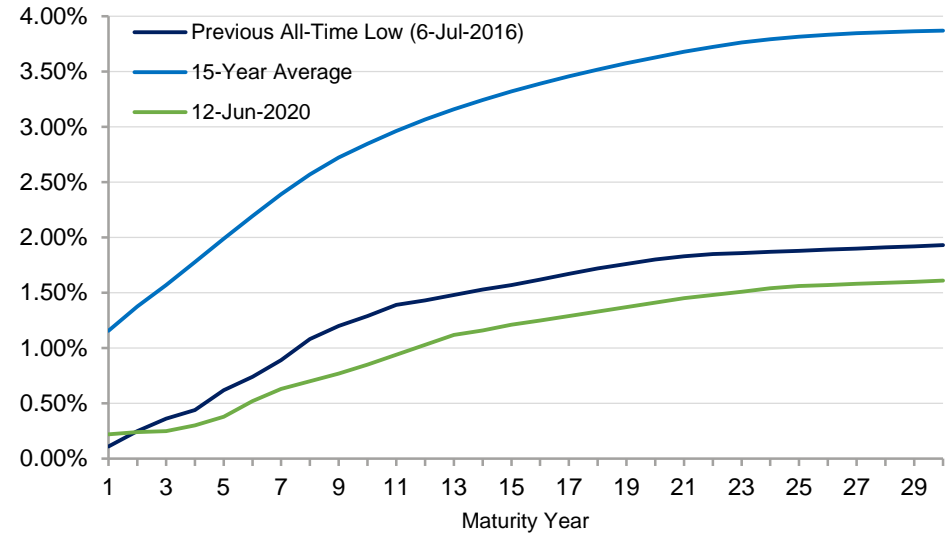
# Economic Conditions and Market Update

## Overview of Municipal Market Themes

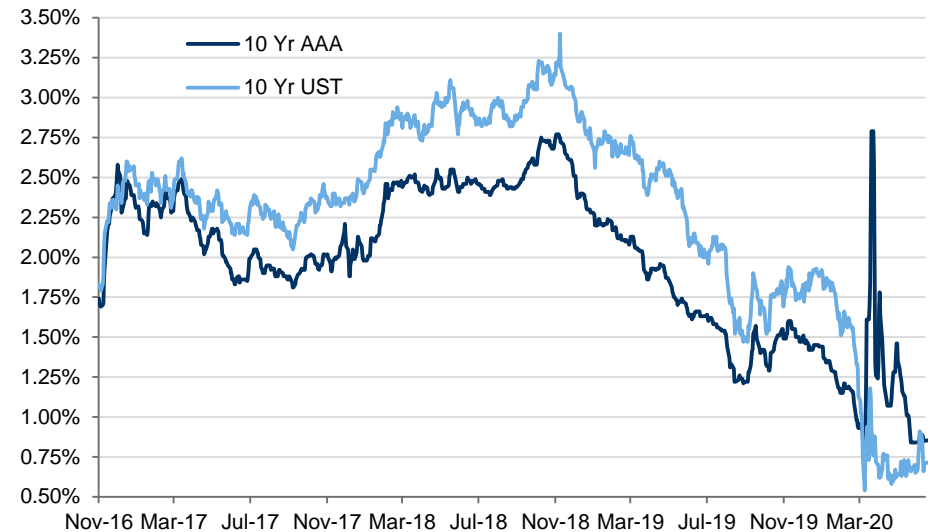
### Municipal Markets Commentary

- Fixed income yields moved lower last week as the equity sell-off fostered a decidedly risk-off environment.
- Treasury yields moved sharply lower on Wednesday and Thursday to close the week considerably lower, particularly in the longer maturity ranges.
  - By the close of the week, US Treasuries were 163 basis points lower in the five year range, 19 basis point lower in the ten year range and 21 basis points lower in the thirty year range.
- The municipal curve flattened as well, but municipals generally underperformed Treasuries despite another week of significant mutual fund inflows as the market looked ahead to a very full forward calendar.
  - As a result, municipal/Treasury yield ratios moved higher, especially in the short to intermediate maturities.
  - The Municipal Market Data AAA yield closed five basis points higher in the two year range, unchanged in the five year range, and four basis points lower in the ten and nine basis points lower in the thirty year range.
- Municipal supply totaled \$10.7bn last week, and new issues were well-received by the market.
  - Taxable supply accounted for one third of last week's volume, and high-grade spreads tightened despite weakness in IG.
- Primary supply this week is expected to total \$11.7bn, and taxable bonds will comprise 28% of the volume.
  - This week's supply will bring June's volume to \$32.6bn, and supply is tracking to an annualized total of \$381bn.
- Municipal bond funds reported robust inflows of \$2.8bn last week, the largest since January 8th.
  - Last week marked the fourth consecutive municipal fund inflow greater than \$1bn.

### Today's MMD Curve in Context



### Tax-Exempt and Taxable Yield Trends: November 1, 2016 - Present



Source: RBC Capital Markets, Thomson Reuters and Bloomberg. For more sources, see disclaimer slide.

# Economic Conditions and Market Update

## Post COVID-19 | Texas School District's Accessing the Capital Markets

### Texas K-12 Transactions (February 1, 2020 - May 20, 2020)

Sale Date	Issuer	Par Amount	Issue
05/20/2020	Ingleside ISD	\$4,650,000	U/L Tax Ref Bds Ser 2020
05/20/2020	Harlingen CISD	63,170,000	U/L Tax Ref Bds Ser 2020
05/19/2020	Aledo ISD	133,590,000	U/L Tax Sch Bldg Bds Ser 2020
05/19/2020	Skidmore-Tynan ISD	6,015,000	U/L Tax Ref Bds Ser 2020
05/19/2020	Spring ISD	29,425,000	U/L Tax Ref Bds Ser 2020
05/18/2020	West Orange-Cove CISD	9,490,000	U/L Tax Sch Bldg Bds Ser 2020
05/18/2020	Luling ISD	22,400,000	U/L Tax Sch Bldg Bds Ser 2020
05/15/2020	Socorro ISD	107,380,000	U/L Tax Ref Bds Taxable Ser 2020B
05/13/2020	Socorro ISD	10,815,000	U/L Tax Ref Bds Ser 2020A
05/13/2020	La Joya ISD	4,715,000	Mtc Tax Notes Ser 2020
05/12/2020	Point Isabel ISD	2,670,000	Mc Tax Ref Bds Ser 2020
05/11/2020	Somerset ISD	27,120,000	U/L Tax Sch Bldg & Ref Bds Ser 2020
05/11/2020	Plains ISD	6,745,000	U/L Tax Ref Bds Ser 2020
05/11/2020	Brownsboro ISD	12,175,000	U/L Tax Ref Bds Ser 2020
05/11/2020	San Marcos CISD	4,385,000	U/L Tax Ref Bds Ser 2020
05/07/2020	Lubbock ISD	57,610,000	U/L Tax Sch Bldg Bds Ser 2020
05/06/2020	El Paso ISD	37,850,000	U/L Tax Ref Bds Ser 2020
05/05/2020	East Central ISD	9,335,000	U/L Tax Ref Bds Ser 2020
<b>May Subtotal</b>		<b>\$549,540,000</b>	
04/29/2020	Blue Ridge ISD	7,155,000	U/L Tax Ref Bds Ser 2020
04/29/2020	Channelview ISD	26,735,000	U/L Tax Ref Bds Ser 2020
04/29/2020	Royse City ISD	8,825,000	U/L Tax Ref Bds Ser 2020
04/28/2020	Keene ISD	10,765,000	U/L Tax Ref Bds Ser 2020
04/28/2020	Deer Park ISD	26,605,000	U/L Tax Sch Bldg Bds Ser 2020
04/28/2020	George West ISD	6,260,000	U/L Tax Ref Bds Ser 2020
04/28/2020	Brock ISD	25,043,438	U/L Tax Sch Bldg & Ref Bds Ser 2020
04/27/2020	Fort Bend ISD	167,050,000	U/L Tax Ref Bds Ser 2020
04/27/2020	West Oso ISD	6,785,000	U/L Tax Sch Bldg & Ref Bds Ser 2020
04/23/2020	Nixon-Smiley CISD	2,210,000	U/L Tax Ref Bds Ser 2020
04/22/2020	Port Neches-Groves ISD	64,225,000	U/L Tax Sch Bldg Bds Ser 2020
04/22/2020	Canyon ISD	83,740,000	U/L Tax Sch Bldg Bds Ser 2020
04/22/2020	San Diego ISD	3,950,000	U/L Tax Ref Bds Ser 2020
04/21/2020	Hico ISD	1,930,000	U/L Tax Ref Bds Ser 2020
04/21/2020	Caddo Mills ISD	2,210,000	U/L Tax Ref Bds Ser 2020A
04/21/2020	Crane ISD	3,440,000	U/L Tax Ref Bds Ser 2020
04/21/2020	Katy ISD	141,240,000	U/L Tax Sch Bldg Bds Ser 2020
04/21/2020	Taft ISD	8,860,000	U/L Tax Ref Bds Ser 2020
04/20/2020	Tomball ISD	108,355,000	U/L Tax Sch Bldg Bds Ser 2020
04/20/2020	Weimar ISD	8,100,000	U/L Tax Sch Bldg Bds Ser 2020
04/16/2020	Klein ISD	139,510,000	U/L Tax Schhse & Ref Bds Ser 2020
04/16/2020	Anna ISD	18,835,000	U/L Tax Ref Bds Ser 2020
04/16/2020	Waxahachie ISD	18,825,000	U/L Tax Ref Bds Ser 2020
04/15/2020	Rice ISD	7,905,000	U/L Tax Ref Bds Ser 2020
04/15/2020	Burleson ISD	17,700,000	U/L Tax Ref Bds Ser 2020
04/15/2020	Pearsall ISD	10,370,000	U/L Tax Sch Bldg Bds Ser 2020

Sale Date	Issuer	Par Amount	Issue
04/15/2020	Northwest ISD	\$181,545,000	U/L Tax Sch Bldg & Ref Bds Ser 2020
04/14/2020	Galena Park ISD	14,850,000	U/L Tax Ref Bds Ser 2020
04/14/2020	Muleshoe ISD	13,475,000	U/L Tax Ref Bds Ser 2020
04/13/2020	Lovelady ISD	6,795,000	U/L Tax Sch Bldg Bds Ser 2020
04/08/2020	Lumberton ISD	37,790,000	U/L Tax Sch Bldg Bds Ser 2020
04/08/2020	Sierra Blanca ISD	8,700,000	U/L Tax Sch Bldg Bds Ser 2020
04/07/2020	Sabine Pass ISD	8,785,000	U/L Tax Sch Bldg Bds Ser 2020
<b>April Subtotal</b>		<b>\$1,198,568,438</b>	
03/31/2020	Angleton ISD	37,530,000	U/L Tax Sch Bldg Bds Ser 2020
03/31/2020	San Felipe Del Rio CISD	16,520,000	U/L Tax Sch Bldg Bds Ser 2020
03/25/2020	Darrouzett ISD	1,950,000	U/L Tax Sch Bldg Bds Ser 2020
03/17/2020	Sweeny ISD	8,710,000	U/L Tax Sch Bldg Bds Ser 2020
03/11/2020	Hillsboro ISD	26,950,000	U/L Tax Sch Bldg Bds Ser 2020
03/10/2020	Dumas ISD	67,295,000	U/L Tax Sch Bldg Bds Ser 2020
03/03/2020	Austin ISD	66,590,000	U/L Tax Ref Bds Taxable Ser 2020
03/03/2020	Midlothian ISD	105,005,000	U/L Tax Sch Bldg Bds Ser 2020
03/02/2020	Comfort ISD	17,040,000	U/L Tax Sch Bldg Bds Ser 2020
<b>March Subtotal</b>		<b>\$347,590,000</b>	
02/27/2020	Socorro ISD	85,540,000	U/L Tax Sch Bldg Bds Ser 2020
02/26/2020	La Poynor ISD	6,610,000	U/L Tax Ref Bds Ser 2020
02/25/2020	Midway ISD [McLennan]	125,395,000	U/L Tax Sch Bldg Bds Ser 2020
02/25/2020	Coupland ISD	4,550,000	U/L Tax Sch Bldg Bds Ser 2020
02/19/2020	Sinton ISD	15,165,000	U/L Tax Ref Bds Taxable Ser 2020A
02/19/2020	Nacogdoches ISD	7,815,000	U/L Tax Ref Bds Ser 2020
02/18/2020	Alto ISD	9,930,000	U/L Tax Sch Bldg Bds Ser 2020
02/18/2020	Columbia-Brazoria ISD	10,190,000	U/L Tax Sch Bldg Bds Ser 2020
02/18/2020	San Benito CISD	8,470,000	U/L Tax Sch Bldg Bds Ser 2020
02/18/2020	Bridgeport ISD	14,560,000	U/L Tax Ref Bds Ser 2020
02/13/2020	Cleveland ISD	114,155,000	U/L Tax Sch Bldg Bds Ser 2020A
02/13/2020	Manor ISD	181,715,000	U/L Tax Sch Bldg Bds Ser 2020
02/12/2020	El Paso ISD	17,390,000	Var Rate Mtc Tax Notes Ser 2020
02/11/2020	Del Valle ISD	109,150,000	U/L Tax Sch Bldg Bds Ser 2020
02/11/2020	United ISD	95,255,000	U/L Tax Ref Bds Taxable Ser 2020
02/10/2020	Sunray ISD	8,855,000	U/L Tax Sch Bldg Bds Ser 2020A
02/10/2020	Joaquin ISD	3,550,000	U/L Tax Sch Bldg & Ref Bds Ser 2020
02/10/2020	Sunray ISD	1,460,000	U/L Tax Ref Bds Taxable Ser 2020B
02/06/2020	Dime Box ISD	2,900,000	U/L Tax Sch Bldg Bds Ser 2020
02/06/2020	Arlington ISD	273,790,000	U/L Tax Sch Bldg & Ref Bds Ser 2020
02/05/2020	Waller ISD	205,805,000	U/L Tax Sch Bldg Bds Ser 2020
02/05/2020	Dilley ISD	20,335,000	U/L Tax Ref Bds Taxable Ser 2020
02/04/2020	Lufkin ISD	24,435,000	U/L Tax Sch Bldg Bds Ser 2020
02/04/2020	Forney ISD	65,200,000	U/L Tax Sch Bldg Bds Ser 2020
02/04/2020	McAllen ISD	24,010,000	Mtc Tax Notes Ser 2020
<b>February Subtotal</b>		<b>\$1,436,230,000</b>	
<b>Total</b>		<b>\$3,531,928,438</b>	

Source: Municipal Advisory Council of Texas

# Preliminary Refunding Analysis

Section 2



Capital  
Markets

# Preliminary Refunding Analysis

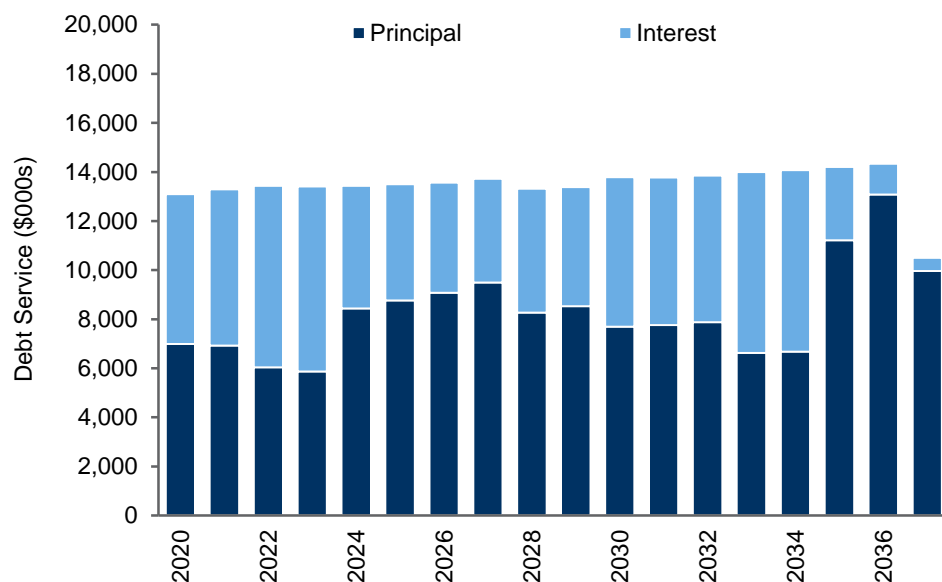
## Outstanding Debt Profile ("A / A")

### South San Antonio ISD Debt Profile

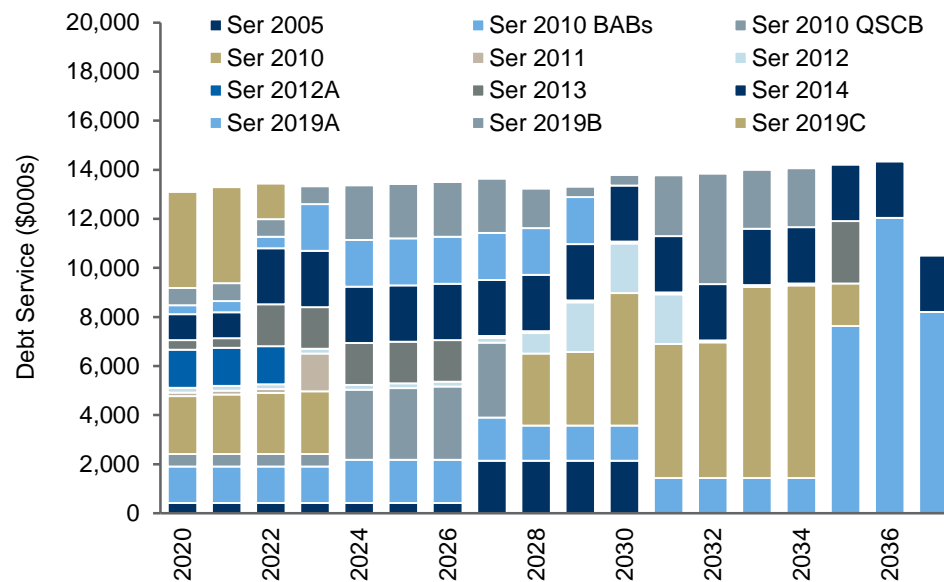
Issue	Issued Par Amount	Outstanding Par Amount	Coupon Range of Callable Bonds	First Call Date	Final Maturity	Structure	Use of Proceeds
U/L Tax Sch Bldg Bds Ser 2005	\$40,500,000	\$7,510,000	N/A	N/A	08/15/2030	Fixed Rate	School Building
U/L Tax Sch Bldg Taxable Ser 2010 (BABs)	26,095,000	26,095,000	4.607% - 5.740%	08/15/2020	08/15/2037	Fixed Rate	School Building
U/L Tax Sch Bldg QSCB Taxable Ser 2010	9,785,000	9,785,000	N/A	N/A	08/15/2027	Fixed Rate	School Building
U/L Tax Sch Bldg Bds Ser 2010	22,116,909	20,391,041	N/A	N/A	08/15/2035	Fixed Rate	School Building
U/L Tax Ref Bds Ser 2011	8,684,990	629,990	3.000%	02/15/2021	08/15/2023	Fixed Rate	Refunding
<b>U/L Tax Ref Bds Ser 2012</b>	<b>8,390,000</b>	<b>6,365,000</b>	<b>3.000% - 3.250%</b>	<b>08/15/2020</b>	<b>08/15/2031</b>	<b>Fixed Rate</b>	<b>Refunding</b>
U/L Tax Taxable Ref Bds Ser 2012A	24,815,000	4,350,000	N/A	N/A	08/15/2022	Fixed Rate	Refunding
U/L Tax Ref Bds Ser 2013	18,815,000	9,675,000	3.000% - 4.000%	08/15/2023	08/15/2035	Fixed Rate	Refunding
U/L Tax Ref Bds Ser 2014	25,835,000	25,510,000	4.000% - 5.000%	08/15/2024	08/15/2037	Fixed Rate	Refunding
U/L Tax Ref Bds Ser 2019A	11,460,000	11,460,000	N/A	N/A	08/15/2029	Fixed Rate	Refunding
U/L Tax Ref Bds Ser 2019C	9,185,000	9,185,000	N/A	N/A	08/15/2029	Fixed Rate	Refunding
U/L Tax Ref Bds Taxable Ser 2019B	18,360,000	18,360,000	4.000%	08/15/2030	08/15/2034	Fixed Rate	Refunding
<b>Total</b>	<b>\$224,041,899</b>	<b>\$149,316,031</b>					

### Refunding Candidates

### Outstanding Unlimited Tax Debt by Principal & Interest



### Outstanding Unlimited Tax Debt by Series



# Preliminary Refunding Analysis

## Preliminary Refunding Analysis

### Summary of Assumptions

Current refunding of the District's Unlimited Tax Refunding Bonds, Series 2012 debt on a tax-exempt basis to create level debt service savings in years 2021 – 2031. The refunding assumes current PSF rates with the District's underlying "A/A" ratings. The refunding bonds have substantially the same structure, maturity, and debt service schedule as the refunded bonds with a delivery date of August 5, 2020.

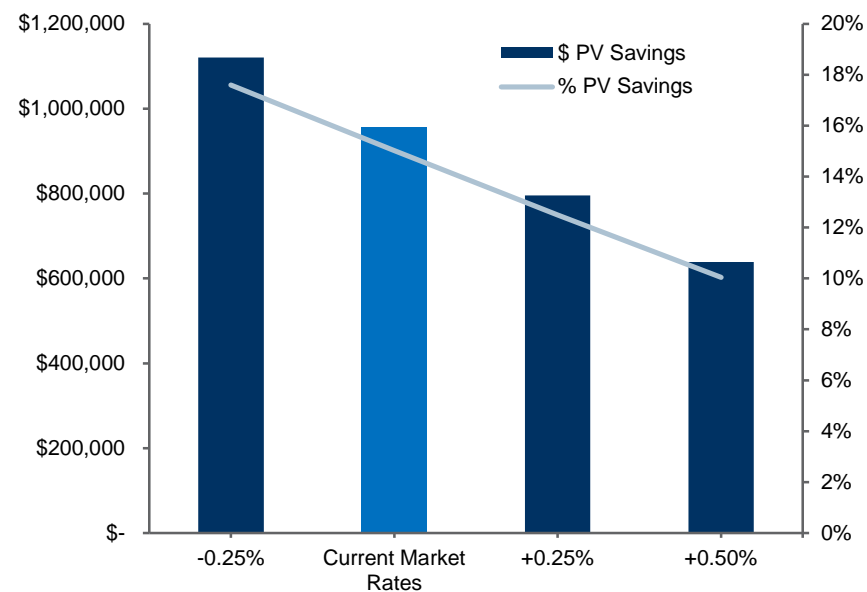
### Refunding Candidates

Series	Maturities to be Refunded	Refunded Par Amount	Coupon Range	Call Date	Call Price
U/L Tax Ref Bds Ser 2012	2028 - 2031	\$6,365,000	3.000% - 3.250%	08/15/2020	100.00%
<b>Total</b>		<b>\$6,365,000</b>			

### Refunding Results

Delivery Date	08/05/2020
Refunded Par Amount	\$6,365,000
Average Coupon of Refunded Bonds	3.09%
All-In TIC	1.47%
Arbitrage Yield	1.15%
Escrow Yield	0.00%
Net Debt Service Savings	\$1,050,888
Average Annual Debt Service Savings	\$95,535
<b>Present Value Savings</b>	<b>\$955,851</b>
<b>PV Savings as % of Refunded Par</b>	<b>15.02%</b>
<b>Negative Arbitrage</b>	<b>\$0</b>
<b>Negative Arbitrage as % of PV Savings</b>	<b>0.00%</b>

### Sensitivity Analysis



Preliminary; subject to change.





# Creative Capital Financing Ideas

*Maintenance & Operation Tax - New Money Bond Considerations*

Section 3



Capital  
Markets

# Creative Capital Financing Ideas

---

## Time Warrants

### Authority

---

- Pursuant to Section 45.103 of the Texas Education Code, Texas school districts are granted the ability to issue Interest Bearing Time Warrants (“Warrants”) to finance real and personal property. Voter approval is **not** required for the issuance of Warrants.

### Security

---

- Warrants are payable from anticipated surplus maintenance taxes of the District. Payment in any year may not exceed the anticipated surplus income of the District for the year in which the Warrants are issued, based on the budget of the District for said year.

### Purpose

---

- Proceeds of Warrants may be used to construct, purchase, repair, renovate, and equip school buildings.

### Term

---

- The maximum maturity of the Warrants is 15 years.

### Timing

---

- School districts may issue Warrants at any time throughout the year. The District will receive the proceeds approximately 30 days after approval by the Board of Trustees.

### Rating

---

- Warrants are sold based upon the District’s underlying credit rating, as they **do not qualify for the Permanent School Fund Guarantee.**

### Benefits

---

- Provides District with ability to finance real property without need for voter approval.
- Legislation was enacted that extended the amortization from 5 to 15 years and increased the maximum amount from \$500,000 to \$1,000,000 in 2013.

# Creative Capital Financing Ideas

---

## Maintenance Tax Notes

### Authority

---

- Pursuant to Section Section 45.108 of the Texas Education Code, as amended, Texas school districts are authorized to issue Maintenance Tax Notes (the "Notes"). Voter approval is **not** required for the issuance of Maintenance Tax Notes.

### Security

---

- The Notes are payable from a continuing, direct ad valorem tax levied for maintenance and operations purposes (M&O tax). Most school districts are limited in the amount of maintenance and operation tax rate that they may levy. Budgetary considerations need to be made prior to issuing the Notes.

### Purpose

---

- Notes may be issued to pay any lawful expenditure of the school district (other than debt service on bonds), including costs incurred in connection with the maintenance, repair, rehabilitation, or replacement of heating, air conditioning, water, sanitation, roofing, electric, or other building systems of existing school properties; however, Notes may not be used for the construction of school buildings or additions to existing buildings. Notes may be issued to renovate an existing school facility. Also, such Notes may be issued for the payment of any lawful operations and maintenance expenditures.

### Term

---

- The maximum maturity of the Notes is 20 years.

### Timing

---

- School districts may issue Notes at any time throughout the year. The school district will receive the proceeds from the sale approximately 30 days after the approval by the Board of Trustees

### Rating

---

- The Notes are **not PSF eligible** and sold based upon the issuer's credit rating for general obligation debt, but may be enhanced by a credit enhancement policy in the form of bond insurance.

### Benefits

---

- Relieves budget constraints by financing certain maintenance expenditures over their useful life, in comparison to paying as you go from current operating funds or depleting fund balance.
- Simplifies financing process as maintenance needs can be financed expeditiously without the necessity (or expense) of an election, etc. in contrast to traditional tax bond financings which require an election.
- May be refinanced by Limited Tax Bonds which are payable from a pledge of Interest & Sinking Fund taxes. The refinancing, however, is subject to voter approval.

# Creative Capital Financing Ideas

---

## Revenue Bonds

### Authority

---

- Pursuant to Section 130.123 of the Texas Education Code, Texas school districts are granted the ability to issue Revenue Bonds (“Revenue Bonds”). Voter approval is **not** required for the issuance of Revenue Bonds.

### Security

---

- Subject to satisfaction of and compliance with terms and conditions of any previously issued Revenue Bonds, Revenue Bonds are payable from and secured by all or any part of the revenues from any rentals, rates, charges, fees or other resources of the district’s governing board. The district’s board of trustees is also authorized to secure the Revenue Bonds by a pledge of (i) tuition charges in an amount not exceeding 25 percent of the tuition collected from each enrolled student, and (ii) to the extent not otherwise restricted, all or part of any grant, donation, or income received or to be received from the United States government or any other public or private source. Pursuant to Section 130.125 of the Texas Education Code, school districts may enter into credit agreements to provide additional security for Revenue Bonds.

### Purpose

---

- Proceeds of the Revenue Bonds may be used to acquire, purchase, construct, improve, enlarge, equip, operate, and/or maintain any property, buildings, structures, activities, operations, or facilities, of any nature, for and on behalf of the school district.

### Timing

---

- School districts may issue Revenue Bonds at any time throughout the year. The school district will receive the proceeds from the sale approximately 30 days after the approval by the Board of Trustees.

### Rating

---

- Revenue Bonds are **not PSF eligible** and sold based upon the issuer’s credit rating for revenue secured debt. Bond insurance may be purchased to enhance the credit rating for the Bonds.

### Benefits

---

- Permits (but does not require) capital improvements to be financed with revenues generated from facilities being financed. In addition, various revenue sources may be combined to leverage and enhance credit (as compared to any single revenue source).
- Does not require an increase in ad valorem tax levy to support repayment.
- Absence of election requirement provides greater flexibility in planning for and structuring bond issue.

# Creative Capital Financing Ideas

## Maintenance Tax Notes, Series 2020

### Preliminary Debt Service Comparison

FYE (8/31)	\$10MM Project Fund	\$15MM Project Fund	\$20MM Project Fund
2021	\$628,190	\$940,748	\$1,252,909
2022	632,700	945,000	1,251,900
2023	628,450	943,750	1,253,900
2024	628,700	941,500	1,254,400
2025	628,200	943,250	1,253,400
2026	631,950	943,750	1,255,900
2027	629,700	943,000	1,256,650
2028	631,700	941,000	1,255,650
2029	627,700	942,750	1,252,900
2030	627,950	943,000	1,253,400
2031	632,200	941,750	1,251,900
2032	629,600	940,550	1,252,100
2033	631,400	943,350	1,255,900
2034	632,400	939,950	1,253,100
2035	632,600	940,550	1,253,900
2036	632,000	939,950	1,253,100
2037	630,600	943,150	1,255,700
2038	628,400	939,950	1,256,500
2039	631,150	944,150	1,252,000
2040	628,300	942,450	1,256,600
<b>Total</b>	<b>\$12,603,890</b>	<b>\$18,843,548</b>	<b>\$25,081,809</b>

- In 1993, South San Antonio ISD issued M&O tax debt in the amount of \$1,375,000 with a 5-year amortization schedule.

### Bond Summary Statistics

	\$10MM Project Fund	\$15MM Project Fund	\$20MM Project Fund
Delivery Date	08/15/2020	08/15/2020	08/15/2020
<b>Project Fund</b>	<b>\$10,000,000</b>	<b>\$15,000,000</b>	<b>\$20,000,000</b>
Par Amount	\$8,630,000	\$12,905,000	\$17,175,000
Total Debt Service	\$12,603,890	\$18,843,548	\$25,081,809
<b>Average Debt Service</b>	<b>\$630,195</b>	<b>\$942,177</b>	<b>\$1,254,090</b>
Maximum Debt Service	\$632,700	\$945,000	\$1,256,650
Average Life (Years)	11.916	11.908	11.914
All-In TIC	2.319%	2.283%	2.267%

### Rating Grid

	S&P	Fitch
<b>Highest Quality</b>	AAA	AAA
<b>High Grade / High Quality</b>	AA+	AA+
	AA	AA
	AA-	AA-
<b>Upper Medium Grade</b>	A+	A+
	<b>A</b>	<b>A</b>
	A-	A-
<b>Minimum Investment Grade</b>	BBB+	BBB+
	BBB	BBB
	BBB-	BBB-
<b>Speculative Grade</b>	BB+	BB+
	BB	BB
	BB-	BB-
	B+	B+
	B	B
	B-	B-
<b>Highly Speculative Grade</b>	CCC (+,-), CC or C	CCC (+,-), CC or C
<b>Imminent default or in default</b>	SD or D	SD or D

### South San Antonio ISD's Underlying Credit Rating

Preliminary; subject to change.

## Disclaimer

---

Sources include: [https://www.rbccm.com/assets/rbccm/docs/uploads/2017/RBCCM\\_Muni\\_Markets\\_Weekly\\_Newsletter.pdf](https://www.rbccm.com/assets/rbccm/docs/uploads/2017/RBCCM_Muni_Markets_Weekly_Newsletter.pdf), <http://www.rbc.com/economics/>, RBC Capital Markets.

This communication is not a research report or a product of RBC Capital Markets' Research Department. This communication is intended for institutional investors and may not be independent of RBC Capital Markets' proprietary interests. RBC Capital Markets may trade the securities discussed in this communication for its own account and on a discretionary basis on behalf of certain clients.

This announcement is not an offer, solicitation, commitment or recommendation to buy or sell the bonds and does not purport to be a complete statement of all material facts relating to the bonds. The offering is made only by means of the Official Statement, copies of which may be obtained from RBC Capital Markets. This communication is not, and under no circumstances should be construed as, a solicitation to act as securities broker or dealer in any jurisdiction by any person or company that is not legally permitted to carry on the business of a securities broker or dealer in that jurisdiction. Bonds are subject to availability and price or yield may differ, as applicable.

Products and services are offered through RBC Capital Markets or RBC Wealth Management, as applicable. RBC Capital Markets may buy from or sell to customers on a principal basis in the securities or related derivatives that are the subject of this communication. RBC Capital Markets has or may have proprietary positions in the securities or in related derivatives that are the subject of this communication. RBC Capital Markets may have been manager or co-manager of a public offering of securities of the issuer within the past twelve months. Additional information is available upon request.

All information contained in this communication constitutes RBC Capital Markets' judgment as of the date of this communication, and is subject to change without notice and is provided in good faith but without legal responsibility. The information contained in this communication has been compiled by RBC Capital Markets from sources believed to be reliable, but no representation or warranty, express or implied, is made by RBC Capital Markets, its affiliates or any other person as to its accuracy, completeness or correctness.

The material contained herein is not a product of any research department of RBC Capital Markets or any of its affiliates. Nothing herein constitutes a recommendation of any security or regarding any issuer; nor is it intended to provide information sufficient to make an investment decision.

RBC Capital Markets is not acting as a fiduciary or as a municipal, financial, commodity or investment adviser. The information provided is not intended to be and should not be construed as "advice" within the meaning of Section 15B of the Securities Exchange Act of 1934. Nothing in this communication constitutes legal, accounting or tax advice or individually tailored investment advice. This material has been prepared without regard to the individual financial circumstances and objectives of persons who receive it and such investments or services may not be suitable for all investors. Past performance is not a guide to future performance, future returns are not guaranteed, and a loss of original capital may occur. Potential investors are advised to consult with their own legal, accounting, tax, financial and other advisors, as applicable, to the extent appropriate.

This document may not be reproduced, disclosed, distributed or summarized, whole or in part, to any third party without the prior consent of RBC Capital Markets. To the fullest extent permitted by law neither RBC Capital Markets, nor any of its affiliates, nor any other person, accepts any liability whatsoever for any direct or consequential loss arising from any use of this communication or the information contained herein.

This advertisement is for informational purposes only. RBC Capital Markets is the global brand name for the capital markets business of Royal Bank of Canada and its affiliates, including RBC Capital Markets, LLC (member FINRA, NYSE and SIPC). ®/™ Trademark(s) of Royal Bank of Canada. Used under license. © Copyright 2020. All rights reserved.