

Capital Improvements/Trans Trust Authority
AGENDA

Monday, April 13, 2020
4:00 PM
Council Chambers
201 E. Broadway, Excelsior Springs, MO 64024

NOTICE OF OPEN MEETING

Notice is hereby given that the **Excelsior Springs Capital Improvements/Trans Trust** will conduct a meeting at 4:00 PM on Monday, April 13, 2020 in the Hall of Waters Building, Council Chambers, 201 E. Broadway, Excelsior Springs, MO 64024.

AGENDA

April 13, 2020

1. Roll Call
2. Approval: Minutes of the Capital Improvements/Trans Trust Meeting - February 10, 2020
3. Approval: Capital Improvements Budget Spreadsheets - January, February, & March, 2020
4. Approval: Trans Trust Financials - January, February, & March 2020
5. Discussion: Purchase of Ambulance
6. Comments
7. Adjourn

Representatives of the news media may obtain copies of this notice by contacting the City Manager's Office, 201 E. Broadway, Excelsior Springs, MO 64024 (816)630-0752.

Date and time posted: AMENDED Friday, April 10, 2020 at 2:15pm

Capital Improvements/Trans Trust Authority

Minutes of Regular Meeting

February 10, 2020 at 4:00pm in the Council Chambers at the Hall of Waters

1. Roll Call:

Present: Mary Lou Greim, Tray Harkins, Reggie St.John, Lyndsey Baxter, Mayor Brad Eales, and Jason Cole.

Absent: Mike Edwards

Also Present: Public Works Director Chad Birdsong, Director of Administrative Services Steve Marriott, City Manager Molly McGovern, GIS Coordinator Andy Starkebaum, Fire Chief Paul Tribble, Director of Economic Development Melinda Mehaffy, Brian Rice of the Excelsior Springs Standard, and Authority Secretary Susan Conyers.

2. Approval of Minutes – December 9, 2019: Lyndsey Baxter motioned to approve the December 9, 2019 meeting minutes; Jason Cole seconded. Motion approved.

3. Approval of Capital Improvements Budget Spreadsheets – November & December of 2019: Steve Marriott, Director of Administrative Services briefed the Authority of the Capital Improvements Budget Spreadsheets from November and December of 2019. Tray Harkins motioned to approve the Capital Improvements Budget Spreadsheets from November and December of 2019 as presented. Mary Lou Greim seconded. Motion approved.

4. Approval of Trans Trust Financials –November & December, 2019 & January, 2020: Chad Birdsong, Director of Public Works briefed the Authority of the Transportation Trust Financials from November and December of 2019. November 2019 had previously been approved, but there had been corrections made. The January 2020 figures will be presented for approval at the next meeting. Tray Harkins motioned to approve the Transportation Trust financials from November and December of 2019. Reggie St.John seconded. Motion approved.

5. Approval of Cemetery GIS: Molly McGovern, City Manager briefed the Authority of the request of \$18,000 from Capital Improvements for the purpose of creating a GIS/Mapping database for the Crown Hill and Hillcrest Cemeteries. This allocation would include maintenance funds for infrastructure, concrete repairs, snow removal, the 2020 overlay project, and transportation operations. Tray Harkins motioned to approve the funding of GIS for cemetery mapping in the amount of \$18,000. Mary Lou Greim seconded. Motion approved.

6. Discussion of BUILD Planning Grant: Molly McGovern, City Manager discussed the details of the Better Utilizing Investments to Leverage Development (BUILD) Discretionary Grants program through the U.S. Department of Transportation. Examples of previously approved projects that have been funded through BUILD were provided in the packet. This may be an option for sidewalks in the neighborhood areas and busy intersections near the schools.

7. Comments: City Manager Molly McGovern updated the Authority on the digester grant. CDBG has awarded the City \$750,000 for the digester project.

8. Adjourn: The meeting adjourned at 4:47 pm. The next meeting is scheduled for Monday, March 9, 2020 at 4:00 pm.

Susan Conyers, Authority Secretary

CAPITAL IMPROVEMENTS SALES TAX
Transactions for January 2020

Beginning Balance:

Pooled Cash	1,690,927.80	
Investments	492,500.00	
Payables	<u>(7,980.00)</u>	
Available Beginning Balance		2,175,447.80

Revenues:

	<u>January</u>	
City Sales Tax	75,703.16	
TIF Allocations	(896.71)	
City Use Tax	4,224.23	
Interest Income	1,199.63	
Investment Interest	-	
Sale of properties (DEMO)	<u>-</u>	
Total Revenue	80,230.31	80,230.31

Expenditures:

Bank Charges	(108.23)	
Professional Services		Sidewalk replacement program
Labor and materials		Superior Well Pagoda
Labor and materials		Hall of Waters Roof
Materials	(1,825.00)	Building maintenance
Professional Services		Cemetery Mausoleum
Professional Services		Hall of Waters HVAC Engineering
Professional Services	(11,248.62)	Clubhouse and Subdivision
Professional Services		Hall of Waters Drainage Study
Professional Services	(134,808.50)	MARS Radio System Upgrade
Professional Services		Opportunity Zone Marketing
Professional Services		GFOA ERP Project
Labor and materials		Technology upgrade project
Property Purchases/Demos	(5,130.00)	Blighted Property Fund
Transfers		
Transfers - General Fund	(860.42)	Indirect cost allocation
Transfers - Pollution Control	<u></u>	<u>Sewer Extensions</u>
Total Expenditures		<u>(153,980.77)</u>

Ending Balance **2,101,697.34**

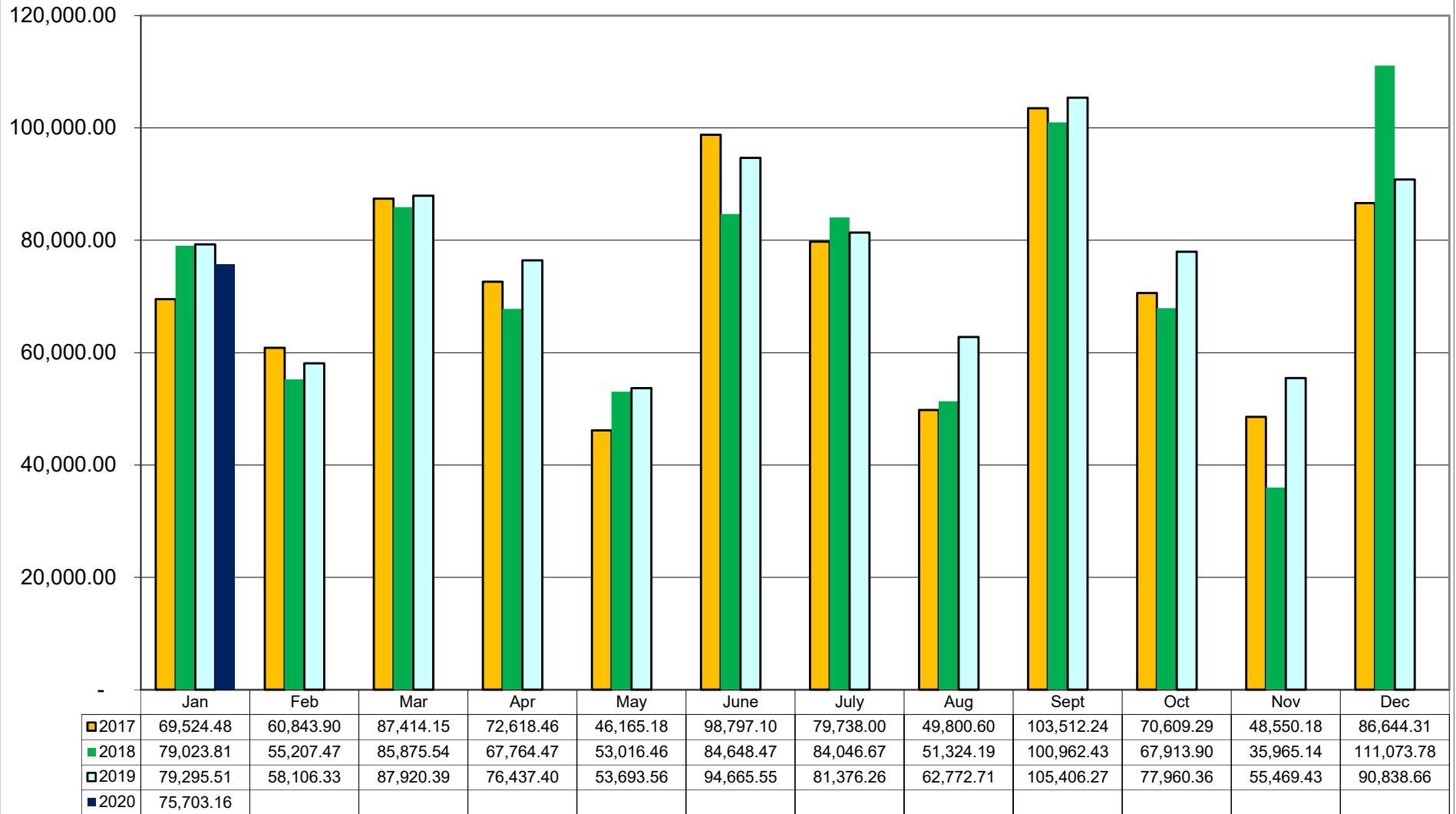
Allocation of ending balance:

Pooled Cash	1,614,327.34
Investments	492,500.00
Payables	<u>(5,130.00)</u>
Total	<u>2,101,697.34</u>

Committed Funds:

Maintenance Fund City Wide	(46,171.29)	
Concrete Sidewalk Fund	(72,352.28)	
Blighted Property Fund	(32,421.57)	
Storm Sirens For Fire Dept	(8,523.48)	
Technology upgrades	(14,844.02)	
GFOA ERP Consulting Agreement	(27,770.00)	
Golf Clubhouse/Subdivision	(40,432.48)	
Superior Well Pagoda	(111,519.99)	
MARRS System	(402,537.05)	
Grant Match (Business Infrastructure)	(100,000.00)	
CDBG Grant Match (Sewer Digester)	(450,000.00)	
Bank Building Roof	(167,209.20)	
Sewer Extensions:	<u>(822,199.54)</u>	
Total Committed Funds		<u>(2,295,980.90)</u>
Available Cash Balance		<u>(194,283.56)</u>

Gross Capital Improvement Sales Tax Receipts



City of Excelsior Springs
Gross Capital Improvement Sales Tax by Month - Cash Basis

	2017	2018	2019	2020
Jan	69,524.48	79,023.81	79,295.51	75,703.16
Feb	60,843.90	55,207.47	58,106.33	
Mar	87,414.15	85,875.54	87,920.39	
Apr	72,618.46	67,764.47	76,437.40	
May	46,165.18	53,016.46	53,693.56	
June	98,797.10	84,648.47	94,665.55	
July	79,738.00	84,046.67	81,376.26	
Aug	49,800.60	51,324.19	62,772.71	
Sept	103,512.24	100,962.43	105,406.27	
Oct	70,609.29	67,913.90	77,960.36	
Nov	48,550.18	35,965.14	55,469.43	
Dec	86,644.31	111,073.78	90,838.66	
Annual Total	874,217.89	876,822.33	923,942.43	75,703.16

Comparison of Revenues thru January:

	2018	2019	2020	Y-T-Y Change
Net sales tax	77,399.91	76,768.29	74,806.45	(1,961.84)
Use tax	4,885.97	5,837.78	4,224.23	(1,613.55)
Interest on bank accounts	959.57	943.80	1,199.63	255.83
Interest on investments	1,928.16	406.61	-	(406.61)
	85,173.61	83,956.48	80,230.31	(3,726.17)
Add TIF Surplus	-	-	-	-
Total	85,173.61	83,956.48	80,230.31	(3,726.17)

CAPITAL IMPROVEMENTS SALES TAX
Transactions for February 2020

Beginning Balance:

Pooled Cash	1,614,327.34	
Investments	492,500.00	
Payables	<u>(5,130.00)</u>	
Available Beginning Balance		2,101,697.34

Revenues:

	<u>February</u>	
City Sales Tax	68,723.68	
TIF Allocations	(1,523.62)	
City Use Tax	4,313.86	
Interest Income	1,254.87	
Investment Interest	-	
Sale of properties (DEMO)	<u>-</u>	
Total Revenue	72,768.79	72,768.79

Expenditures:

Bank Charges	(91.03)	
Professional Services		Sidewalk replacement program
Labor and materials		Superior Well Pagoda
Labor and materials		Hall of Waters Roof
Materials		Building maintenance
Professional Services		Cemetery Mausoleum
Professional Services		Hall of Waters HVAC Engineering
Professional Services		Clubhouse and Subdivision
Professional Services		Hall of Waters Drainage Study
Professional Services		MARS Radio System Upgrade
Professional Services		Opportunity Zone Marketing
Professional Services		GFOA ERP Project
Labor and materials		Technology upgrade project
Property Purchases/Demos	(4,962.00)	Blighted Property Fund
Transfers		
Transfers - General Fund	(860.42)	Indirect cost allocation
Transfers - Pollution Control		<u>Sewer Extensions</u>
Total Expenditures		<u>(5,913.45)</u>

Ending Balance

2,168,552.68

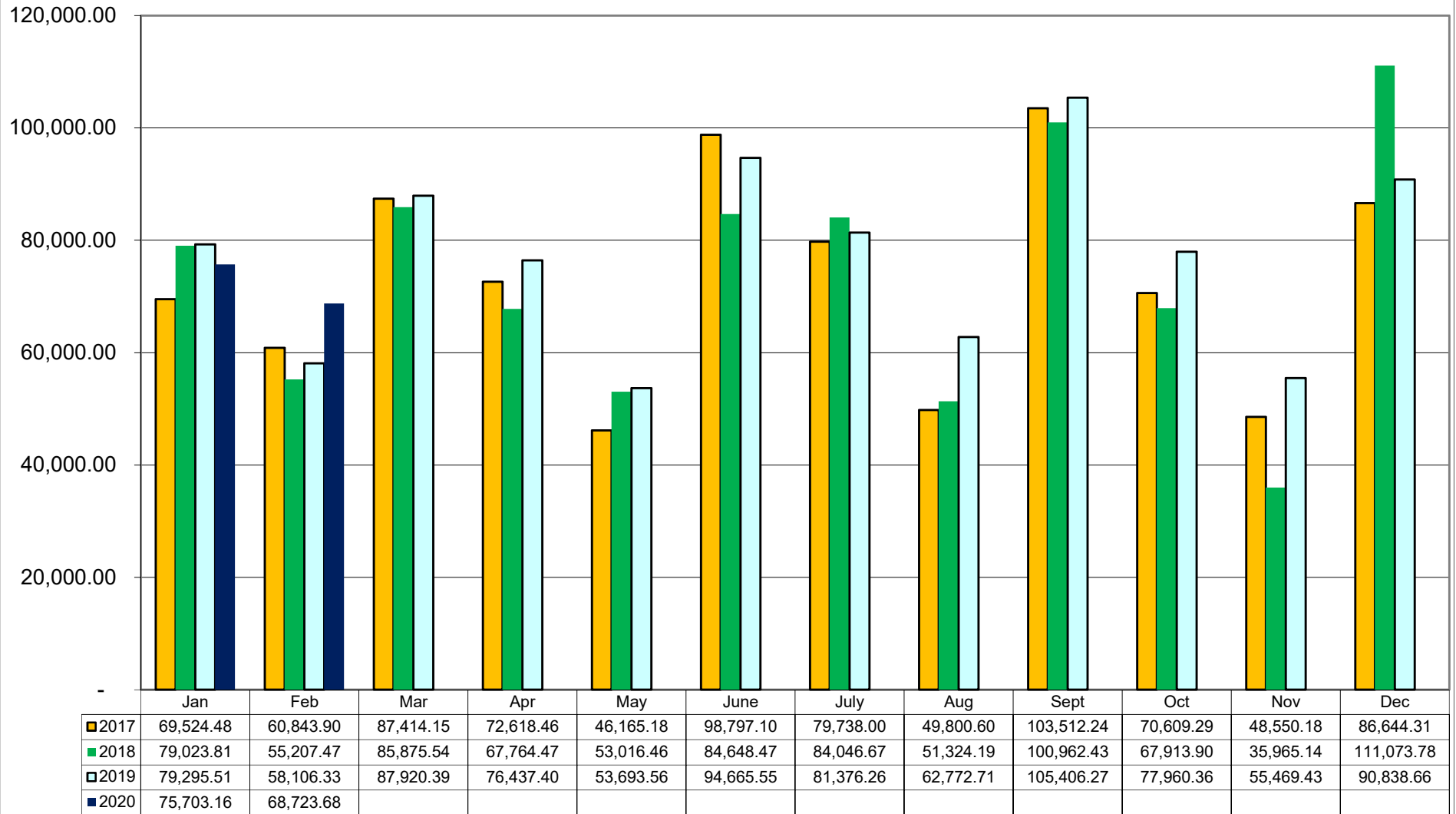
Allocation of ending balance:

Pooled Cash	1,676,052.68
Investments	492,500.00
Payables	<u>-</u>
Total	<u>2,168,552.68</u>

Committed Funds:

Maintenance Fund City Wide	(46,171.29)	
Concrete Sidewalk Fund	(72,352.28)	
Blighted Property Fund	(27,459.57)	
Storm Sirens For Fire Dept	(8,523.48)	
Technology upgrades	(14,844.02)	
GFOA ERP Consulting Agreement	(27,770.00)	
Cemetery GIS	(18,000.00)	
Golf Clubhouse/Subdivision	(40,432.48)	
Superior Well Pagoda	(111,519.99)	
MARRS System	(402,537.05)	
Grant Match (Business Infrastructure)	(100,000.00)	
CDBG Grant Match (Sewer Digester)	(450,000.00)	
Bank Building Roof	(167,209.20)	
Sewer Extensions:	<u>(822,199.54)</u>	
Total Committed Funds		<u>(2,309,018.90)</u>
Available Cash Balance		<u>(140,466.22)</u>

Gross Capital Improvement Sales Tax Receipts



City of Excelsior Springs
Gross Capital Improvement Sales Tax by Month - Cash Basis

	2017	2018	2019	2020
Jan	69,524.48	79,023.81	79,295.51	75,703.16
Feb	60,843.90	55,207.47	58,106.33	68,723.68
Mar	87,414.15	85,875.54	87,920.39	
Apr	72,618.46	67,764.47	76,437.40	
May	46,165.18	53,016.46	53,693.56	
June	98,797.10	84,648.47	94,665.55	
July	79,738.00	84,046.67	81,376.26	
Aug	49,800.60	51,324.19	62,772.71	
Sept	103,512.24	100,962.43	105,406.27	
Oct	70,609.29	67,913.90	77,960.36	
Nov	48,550.18	35,965.14	55,469.43	
Dec	86,644.31	111,073.78	90,838.66	
Annual Total	874,217.89	876,822.33	923,942.43	144,426.84

Comparison of Revenues thru February:

	2018	2019	2020	Y-T-Y Change
Net sales tax	132,119.36	134,857.04	142,006.51	7,149.47
Use tax	11,903.42	11,320.55	8,538.09	(2,782.46)
Interest on bank accounts	1,894.57	1,894.70	2,454.50	559.80
Interest on investments	3,696.86	406.61	-	(406.61)
	149,614.21	148,478.90	152,999.10	4,520.20
Add TIF Surplus	-	-	-	-
Total	149,614.21	148,478.90	152,999.10	4,520.20

CAPITAL IMPROVEMENTS SALES TAX
Transactions for March 2020

Beginning Balance:

Pooled Cash	1,675,787.86	
Investments	492,500.00	
Payables	-	
Available Beginning Balance		2,168,287.86

Revenues:

	<u>March</u>	
City Sales Tax	83,193.50	
TIF Allocations	(515.98)	
City Use Tax	7,871.50	
Interest Income	1,112.04	
Investment Interest	1,053.42	
Sale of properties (DEMO)	-	
Total Revenue	92,714.48	92,714.48

Expenditures:

Bank Charges	(89.53)	
Professional Services		Sidewalk replacement program
Labor and materials		Superior Well Pagoda
Labor and materials	(385.00)	Bank Building Roof/Remodel
Materials	(15,415.16)	Building maintenance
Professional Services		Cemetery Mausoleum
Professional Services		Hall of Waters HVAC Engineering
Professional Services		Clubhouse and Subdivision
Professional Services		Hall of Waters Drainage Study
Professional Services	(3,881.07)	MARS Radio System Upgrade
Professional Services		Opportunity Zone Marketing
Professional Services		GFOA ERP Project
Labor and materials		Technology upgrade project
Property Purchases/Demos	(7,132.00)	Blighted Property Fund
Transfers		
Transfers - General Fund	(860.42)	Indirect cost allocation
Transfers - Pollution Control		Sewer Extensions
Total Expenditures		(27,763.18)

Ending Balance

2,233,239.16

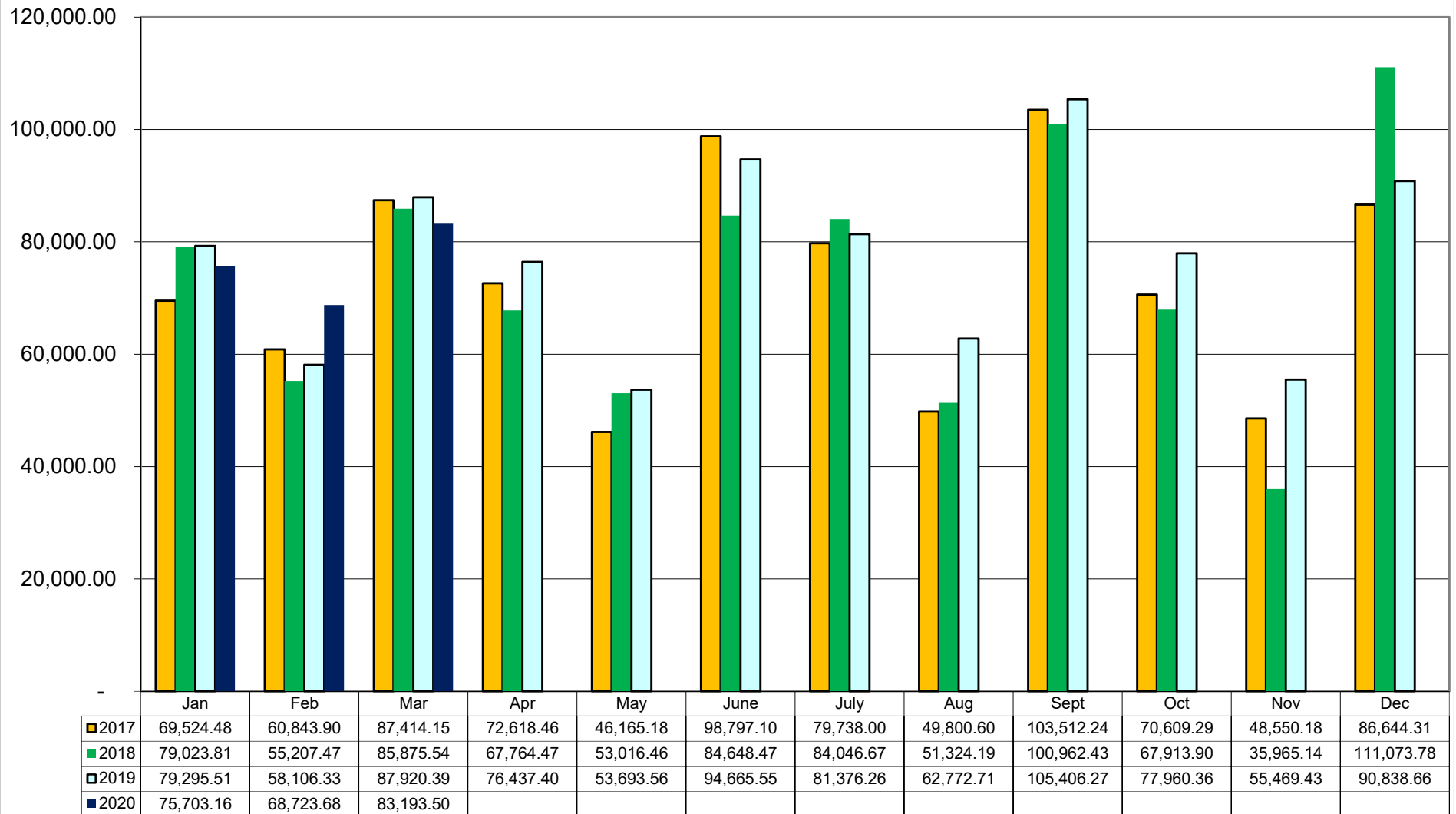
Allocation of ending balance:

Pooled Cash	1,763,354.32
Investments	492,500.00
Payables	(22,615.16)
Total	<u>2,233,239.16</u>

Committed Funds:

Maintenance Fund City Wide	(30,756.13)	
Concrete Sidewalk Fund	(72,352.28)	
Blighted Property Fund	(20,327.57)	
Storm Sirens For Fire Dept	(8,523.48)	
Technology upgrades	(14,844.02)	
GFOA ERP Consulting Agreement	(27,770.00)	
Cemetery GIS	(36,000.00)	
Golf Clubhouse/Subdivision	(40,432.48)	
Superior Well Pagoda	(111,519.99)	
MARRS System	(398,655.98)	
Grant Match (Business Infrastructure)	(100,000.00)	
CDBG Grant Match (Sewer Digester)	(450,000.00)	
Bank Building Roof	(166,824.20)	
Sewer Extensions:	(822,199.54)	
Total Committed Funds		(2,300,205.67)
Available Cash Balance		<u>(66,966.51)</u>

Gross Capital Improvement Sales Tax Receipts



City of Excelsior Springs
Gross Capital Improvement Sales Tax by Month - Cash Basis

	2017	2018	2019	2020
Jan	69,524.48	79,023.81	79,295.51	75,703.16
Feb	60,843.90	55,207.47	58,106.33	68,723.68
Mar	87,414.15	85,875.54	87,920.39	83,193.50
Apr	72,618.46	67,764.47	76,437.40	
May	46,165.18	53,016.46	53,693.56	
June	98,797.10	84,648.47	94,665.55	
July	79,738.00	84,046.67	81,376.26	
Aug	49,800.60	51,324.19	62,772.71	
Sept	103,512.24	100,962.43	105,406.27	
Oct	70,609.29	67,913.90	77,960.36	
Nov	48,550.18	35,965.14	55,469.43	
Dec	86,644.31	111,073.78	90,838.66	
Annual Total	874,217.89	876,822.33	923,942.43	227,620.34

Comparison of Revenues thru March:

	2018	2019	2020	Y-T-Y Change
Net sales tax	215,031.75	222,423.73	224,684.03	2,260.30
Use tax	18,589.98	19,702.86	16,409.59	(3,293.27)
Interest on bank accounts	2,895.55	3,119.36	3,566.54	447.18
Interest on investments	3,941.31	2,625.01	1,053.42	(1,571.59)
	240,458.59	247,870.96	245,713.58	(2,157.38)
Add TIF Surplus	-	-	-	-
Total	240,458.59	247,870.96	245,713.58	(2,157.38)

TRANSPORTATION TRUST SALES TAX

Transactions for January 2020

Beginning Balance		\$1,086,537.28
Total Cash		\$1,086,537.28
Revenues:	Year to Date	
City Sales Tax	\$73,618.89	
City Use Tax	\$4,224.23	
Tif Allocation Golf	-\$53.17	
TIF Paradise Playhouse	-\$3.27	
TIF Vintage II	-\$210.53	
TIF Allocation Elms	-\$629.74	
Interest Income	\$669.89	
Investment Interest		
Total Revenue		\$77,616.30
Disbursements:		
Bank Charges	-\$54.09	
Bus/dccals	-\$1,100.00	
Misc Concrete repairs	-\$524.88	
Infrastructure repairs	-\$1,351.32	
Snow Removal	-\$8,811.00	
Transportation	-\$8,083.34	
Operating Transfers - Finance Dept. (11/	-\$250.00	
Operating Transfers - Gen Fund	\$0.00	
Operating Transfers - Const Services		
Operating Transfers - Comm Developme	\$0.00	
Total Expense		-\$20,174.63
Ending Balance		\$1,143,978.95
Committed Funds:		
2020 Overlay Program	-\$600,000.00	
Snow Removal	-\$22,502.00	
Misc Concrete Repairs	-\$102,838.24	
Bus Purchase	-\$1,712.00	
Van Purchase	-\$15,000.00	
Transportation Budget	-\$83,833.32	
Infrastructure	-\$89,921.18	-\$915,806.74
Total Spendable Cash Balance		\$228,172.21

TRANSPORTATION TRUST SALES TAX
Transactions Feb 2020

Beginning Balance			\$1,143,978.95
Total Cash			\$1,143,978.95
Revenues:		Year to Date	
City Sales Tax	\$64,732.74		
City Use Tax	\$4,313.86		
TIF Allocation Golf	-\$27.08		
TIF Allocation Vintage			
TIF Vintage II	-\$237.74		
TIF Allocation Elms	-\$1,523.62		
Interest Income	\$719.76		
Investment Interest			
Total Revenue			\$67,977.92
Disbursements:			
Legal Fees/Engineering			
Snow Removal			
Bank Charges	-\$50.83		
Misc Concrete repairs			
Infrastructure repairs			
Transportation	-\$8,083.34		
Operating Transfers - Finance Dept. (-\$250.00		
Operating Transfers - Gen Fund			
Operating Transfers - Const Services			
Operating Transfers - Comm Development			
Total Expense			-\$8,384.17
Ending Balance			\$1,203,572.70
Committed Funds:			
2020 Overlay Program	-\$600,000.00		
Snow Removal	-\$22,502.00		
Misc Concrete Repairs	-\$102,838.24		
Bus Purchase	-\$1,712.00		
Van Purchase	-\$15,000.00		
Transportation Budget	-\$75,749.98		
Infrastructure	-\$89,921.18		
			-\$907,723.40
Total Spendable Cash Balance			\$295,849.30

TRANSPORTATION TRUST SALES TAX

Transactions for March 2020

Beginning Balance		\$1,203,572.70
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Total Cash**\$1,203,572.70****Revenues:**

Year to Date

City Sales Tax \$80,553.09

City Use Tax \$7,871.50

TIF Allocation Paradise Playhouse -\$10.14

TIF Allocation Vintage

TIF Vintage II -\$505.84

TIF Golf

Interest Income \$642.28

Investment Interest \$112.39

Total Revenue**\$88,663.28****Disbursements:**

TT2020 -\$8,951.60

Transportation -\$8,083.34

Bank Charges -\$50.00

Misc Concrete repairs -\$1,288.51

Infrastructure repairs -\$1,068.89

Van Purchase -\$11,676.40

Operating Transfers - Finance Dept. (-\$250.00)

Operating Transfers - Gen Fund

Operating Transfers - Const Services

Operating Transfers - Comm Development

Total Expense**-\$31,368.74****Ending Balance****\$1,260,867.24****Committed Funds:**

2020 Overlay Program -\$591,048.40

Snow Removal -\$22,502.00

Misc Concrete Repairs -\$101,549.73

Bus Purchase -\$1,712.00

Van Purchase -\$3,323.60

Transportation Budget -\$67,666.64

Infrastructure -\$88,852.29

-\$876,654.66**Total Spendable Cash Balance****\$384,212.58**

Date: April 8, 2020

To: The Excelsior Springs Capital Improvements Authority

From: Paul V. Tribble, Fire Chief

SUBJECT: Topic for discussion of a funding source for the replacement of ambulances
(In 2020, "Med #2")

ESFD Ambulance Replacement:

One might ask about industry standards for replacing an ambulance. Every department across the United States have asked the same question. There are not any published "industry standards" for an ambulance because every ambulance service is different. Key issues in the "Life of an Ambulance":

- Vehicle Manufacturer (Ford, Chevy, Dodge, International, Freightliner, etc.)
- Box Manufacturer-the patient & equipment area (Wheeled Coach, Horton, AEV, etc.)
- Department protocols/policy (allowing the unit to idle while on scene)
- Response & transport distances (how many sq./miles; hospitals in KC)
- Idle time/engine hours (relates to amount of time, not moving)
- Terrain-every service is different (hills, flats, mountains, etc.)
- Weather conditions (Extreme heat or cold, mild temps) - can change from year to year, location to location.
- In use time- dependent upon how busy, your department is (KC vs. ESFD).

In an on-line article by EMS WORLD, How to Develop a Fleet Replacement Strategy, the author identifies that the "useful life of a vehicle is normally between 150,000 and 250,000 miles at an age of between 4-7 years. Cost in terms of total maintenance versus initial purchase cost is also very important (the purchase cost of the vehicle is a known number; the total investment in its life must be understood. For any fleet, be it a commercial carrier or EMS and fire departments, vehicles must be available for service and mechanically viable in order to remain operationally efficient."

Back in the early 1990's, prior administration determined a fleet replacement schedule for the ambulances of Excelsior Springs Fire Department (ESFD). Each ambulance would serve in a three-tiered system. When an ambulance is purchased and placed into service, it serves two years as a "first out" unit (meaning it is primarily the first unit that responds on EMS calls). In years, three and four it serves in a "second out" capacity (meaning that it is the second ambulance out the door for EMS calls). In years five and six it serves in a "reserve" capacity (meaning it is only put into service should one of the other two ambulance need to be taken out of service for maintenance or other issues). This replacement schedule requires that every two years ESFD purchase an ambulance.

When ambulances are not purchased every two years, it causes the whole replacement system to become out of order. An ambulance is required to spend more time as a reserve, which causes the mileage and "wear & tear" on the first two ambulances to increase...which increases maintenance cost throughout the whole system.

INDUSTRY STANDARDS



- Useful life of an Ambulance
 - 150,000-250,000 miles
 - Between 4-7 Years
 - Key factors in Life of an Ambulance
 - Vehicle manufacturer
 - "Box" manufacturer
 - Department policy/protocols
 - Response/transport distances
 - Idle time
 - Terrain
 - Weather conditions
 - In use time...
 - Life Of an ESFD Ambulance
 - Years 1-2 (First Out Unit)
 - Years 3-4 (Second Out Unit)
 - Sometimes 2nd out runs as much as 1st out.
 - Years 5-6 (Reserve Unit)
- Factor...only works when units are purchased every two years.

In 2020, the ambulance up for replacement, commonly referred to as "Med #2" this ambulance is;

- 2013 Chevrolet Express 4500 chassis
- Built by Wheel Coach
- Placed into service (PIS) February 2, 2013.
- 6.6 Liter Turbo Duramax engine
- Engine hours 7,613
- Mileage 180,124



EMS Unit: MED #2
2013 Chevrolet Express 4500
Built by Wheel Coach
PIS: February 2, 2013
ENGINE: 6.6 Liter Turbo Duramax
Engine Hours 7,613
Mileage 180,124

Maintenance issues:

Med #2 Maintenance in 2018: Totaled \$2,905.16



MAINTENANCE & REPAIR 2018

Maintenance & Repairs for 2018						
DATE	Description	MILEAGE	PARTS	LABOR	OTHER	ESTIMATE TOTAL
3/19/2018	Oil Change	146,803			\$73.00	\$73.00
3/19/2018	Replace Battery	146,803	\$221.30			\$221.30
5/17/2018	Tire Replacement	151,232			\$122.50	\$122.50
5/23/2018	Brake Repair	151,812			\$559.00	\$559.00
5/30/2018	Climate Control, A/C	152,250	\$31.00			\$31.00
6/6/2018	Oil Change	152,829			\$73.00	\$73.00
6/29/2018	Emissions Repair	154,851	\$353.62	\$437.85	\$52.54	\$844.01
7/10/2018	Climate Control, A/C	156,180	\$30.00			\$30.00
7/10/2018	Electrical Repair	156,180	\$0.00	\$0.00	\$0.00	\$0.00
9/6/2018	Oil Change	159,288			\$73.00	\$73.00
11/19/2018	Misc. Engine Repair	164,249	\$30.11	214.76	\$59.13	\$304.00
11/19/2018	Exhaust Repair	164,249	\$5.90	\$139.00	\$0.00	\$144.90
11/19/2018	Coolant repair	164,249	\$2.45	\$139.00		\$141.45
11/29/2018	Brake Repair	165,154	\$168.00	\$120.00		\$288.00
Total for 2018						\$2,905.16

Maintenance in 2019: Totaled (or projected) \$12,352.52



MAINTENANCE & REPAIR 2019

Maintenance & Repair for 2019						
DATE	Description	MILEAGE	PARTS	LABOR	OTHER	ESTIMATE TOTAL
1/24/2019	Preventative Maintenance	166,643			\$74.95	\$74.95
2/13/2019	Transmission Service	167,532			\$316.67	\$316.67
2/28/2019	Transmission Service-crank case	167,589	\$632.20	\$1,199.57	\$143.95	\$1,975.72
	Recommended replacing Transmission				\$6,000.00	\$6,000.00
4/24/2019	Climate Control	168,014			\$2,539.42	\$2,539.42
7/17/2019	Oil Change	172,858			\$47.95	\$47.95
10/7/2019	Fuel Filter Change	176,707	\$35.39	\$29.56		\$64.95
10/7/2019	Emissions Repair	176,707	\$322.25	\$548.10	\$97.40	\$967.75
10/7/2019	Brake Repair	176,707	\$141.08	\$224.03		\$365.11
Total for 2019						\$12,352.52

Maintenance in 2020: Totaled (or projected) \$13,233.10



MAINTENANCE & REPAIR 2020

		Maintenance & Repair for 2020				
2/19/2020	Tow Bill				\$180.00	\$180.00
2/20/2020	Misc. Engine Repair	179.964	\$67.87	\$396.20	\$47.54	\$511.61
3/3/2020	Tow Bill				\$180.00	\$180.00
3/3/2020	Fuel System Repair	180,124			\$12,181.49	\$12,181.49
3/6/2020	Tow Bill				\$180.00	\$180.00
		Total for 2020				\$13,233.10

On March 6, 2020, Med #2 had to be towed to Westfall GMC Truck, where it was diagnosed to need the “Entire Fuel System” replaced at a cost of \$12,181.49. After a meeting with City Manager Molly McGovern, it was determined that the vehicle was not worth repairing.

In an article published on-line by **Fleet Financials**, How to Calculate Optimal Replacement Cycles. The author, Bibona, wrote about several methods to identify an economical way to determine when to replace a vehicle. The methods identified were; “Economic Lifecycle Analysis, Focusing on Age and/or Mileage, Exceeding a Threshold Cost, Exceeding the Value of the Vehicle, and Cost of Repair vs. Residual Value. The bottom line is each has its own advantages and disadvantages to consider”.

All of the methods require a knowledge of the maintenance and repairs of the apparatus in question. I utilized his “Cost of Repair vs. Residual Value” method to determine where we stood with Med #2. We already know the “Age and/or Mileage” is within some of the basic industry standards.

Maintenance/Repair vs. Residual Values for Med #2:

Comparing Maintenance and Repair (M&R) Expenses to Residual Values						
Year	Maintenance and Repair	Residual Value	Percent M & R is of Residual Value		Mileage	Miles in the Year
2013	\$544.39	\$142,492.00	0.38%	Placed into service February 2013:	1,397	29,879
2014	\$1,373.29	\$90,244.93	1.52%	Beginning of 2014:	31,276	29,089
2015	\$2,438.43	\$57,155.13	4.27%	Beginning of 2015:	60,365	34,635
2016	\$2,743.10	\$36,198.25	7.58%	Beginning of 2016:	95,000	29,835
2017	\$3,635.02	\$22,925.56	15.86%	Beginning of 2017:	124,835	21,968
2018	\$2,905.16	\$14,519.52	20.01%	Beginning of 2018:	146,803	19,840
2019	\$12,352.52	\$9,195.70	134.33%	Beginning of 2019:	166,643	13,481
2020	\$13,233.10	\$5,823.94	227.22%	End of Life:	180,124	0

We see here that Med #2 was purchased in 2013 for \$142,492 in the past 7 years its value has dropped to an estimate of around \$5,824. During that same period the maintenance and repair (M&R) has increased to about \$13,233. At year six (2018) the percentage of M&R vs. the Residual Value is slightly above 20%. Author Sal Bibona identifies, “*Any vehicle or equipment unit with a maintenance cost that is 30 percent or more of the vehicle’s residual value should be assessed for replacement*”.

Safety:

Ambulances are built to a defined standard; these are referred to as KKK-A-1822F specifications. On July 1, 2015, changes were made to the standard. The changes were:

- Ambulance Patient Compartment Seating Integrity and Occupant Restraints.
- Ambulance Litter Integrity, Retention, and Patient Restraint.

In addition, the National Fire Protection Association 1917 standard for ambulances was released in 2015. These were “General requirements for ambulance design and performance”:

- Minimum requirements in design, performance and testing of new automotive ambulances.
- Chassis, patient compartment, low voltage electrical systems and warning devices.

Med #2 does not meet these new standards in safety that all ambulances are built.

As ambulances are replaced, the added additional safety features built into their design that improves ride for our patients and staff. It is always an important reason to replace an ambulance.



SAFETY

- Ambulances are built to KKK-A-1822F standards.
- On July 1, 2015, changes to the standard were implemented.
 - Ambulance Patient Compartment Seating Integrity and Occupant Restraints.
 - Ambulance Litter Integrity, Retention and Patient Restraint.
- National Fire Protection Association (NFPA) 1917..released in 2015
 - General requirements for ambulance design and Performance:
 - Minimum requirements in; design, performance, and testing of new automotive ambulances.
 - Chassis, patient compartment, low voltage electrical systems and warning devices.

This is one of the newest safety features...our newest ambulance's safety and loading system.



Need for a Reserve Unit (Third ambulance):

Over the past three years, our units have averaged over 297+ hours a year being out of service (Lost Unit Hours) for maintenance & repair. It is very important for ESFD to have a “reserve” unit. We currently have our newest ambulance that needs M&R, which taken out of service would leave us with one ambulance. We cannot rely on our mutual aid partners, as they are busy covering their own areas.



ESFD's EMS covers twelve square miles, inside the city limits of Excelsior Springs. We are under contract with Eastern Clay County Ambulance District to provide EMS to 100 sq. miles in rural Clay County (Mosby, Prathersville, Missouri City, and rural).


AREA OF RESPONSIBILITY (RESPONSE AREA)


Inside the City of Excelsior Springs

- EMS
 - 12 Square miles

Outside the City Limits (Rural Clay County)

- EMS
 - Eastern Clay County Ambulance District thru annual contract (Mosby, Prathersville, Missouri City, and rural)
 - 100 sq. miles





Calls for Service:

From January 1, 2019 thru December 31, 2019, ESFD responded to over 2,500 calls for service. Of those 2,586 calls, 2,285 of them were for Emergency Medical Services. We average 6.26 calls per day with the two units that we have.

RESPONSES JANUARY 1, 2019 – DECEMBER 31, 2019

• EMS

- Assist Invalid = 1
- Cover Assignment = 29
- Rescue & EMS Incident = 2,254
- EMS Call, Party transported by non-fire = 1

Total EMS Related Calls = 2,285

• Fire

- Fire = 53 (\$598,850 in loss)
- Overpressure Rupture, Explosion, Overheat = 1
- Motor Vehicle Accidents/Rescues = 93
- Hazardous Conditions = 54
- Service Calls = 41
- Good Intent Calls = 10
- False Alarm & False Call = 49

Total Fire Related Calls = 301

(Does not include 737 EMS assists)



1253 times we were "blackened" out...



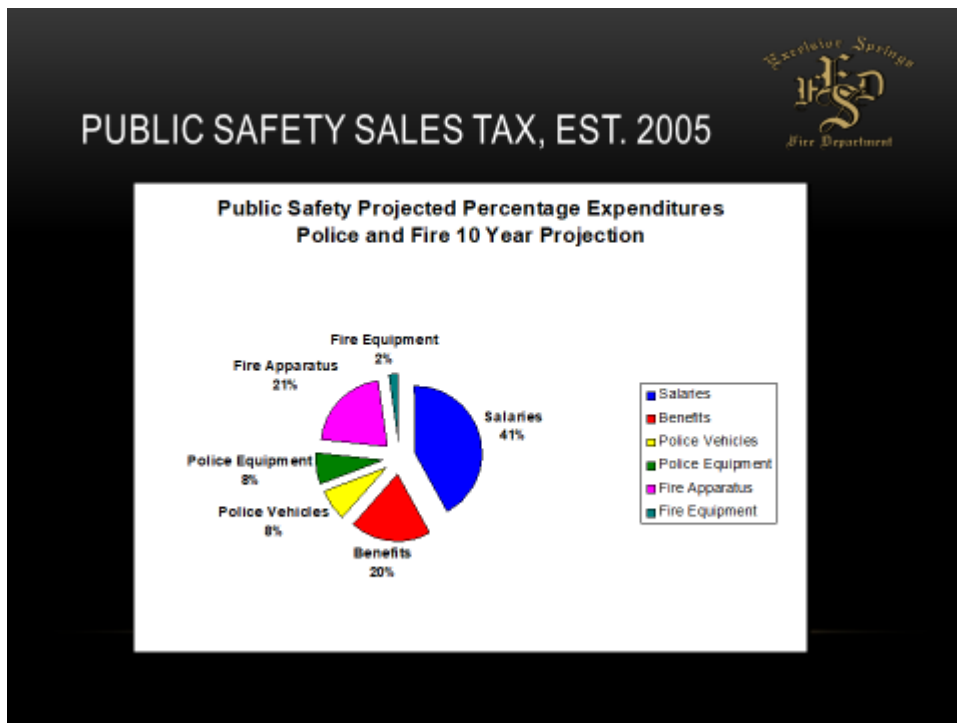
Funding:

Some might ask, “Where does the funding come from to replace ambulances”? In the history of ESFD, there has never been a reliable funding source for the replacement of ambulances. Some years, it has come from the “General Fund”; some years, it has come from “Public Safety Sales Tax”; some years, it came from outside contract sources (when we provided contract services to rural Lawson & Ray County). There has never been a funding source established on a regular basis, it has always come down to “we need to replace an ambulance, where can we get the money from this year”

Public Safety Sales Tax (PSST)

The question has come up “Why not Public Safety Sales Tax” fund. In 2005, the Public Safety Sales tax was established for the following:

- Salaries= 4%
- Benefits= 20%
- Fire equipment= 2%
- Fire Apparatus= 21%
- Police Equipment= 8%
- Police Vehicles= 8%



- **Career Enhancement/Personnel Retention (41%)**

[Fire Department percentage is 20.5]

To enhance our ability in the Recruitment and Retention of professional and highly qualified law enforcement and fire personnel.

- During the previous twelve years, 43 police officers have severed their affiliation with the police department. 70% of those police officers took positions with other law enforcement agencies. This department released 14% of those police officers, as they failed to meet or adhere to the department's high standards.
- During the previous twelve years 6 communications officers have severed their affiliation with the police department. 33% of those communications officers took position with other law enforcement agencies.
- During the past seven years 14 firefighters have severed their affiliation with the fire department. The average tenure of firefighters leaving employment has been in excess of 5 years. 62% of those firefighters took positions with other fire departments.

- **Benefits (20%)**

[Fire Department's percentage is 10]

- FICA/Medicare/LAGERS
- Health/Life/Dental/Vision Insurance
- Long term Disability
- Worker's Compensation

- **Replace Fire Apparatus (21%) \$1,100,000**

Replace Fire Pumps, Ladder Trucks, Support Vehicles, and Staff Vehicles according to an effective replacement schedule.

Replace Fire Equipment (2%) \$120,000

Purchase or replace fire suppression equipment, rescue equipment, hazardous materials response equipment, personal protective equipment, communications equipment, and replace electronic equipment.

There was never any mention of purchasing ambulances out of Public Safety Sales Tax, which there has been at least two ambulances purchased out of PSST...every time an ambulance is purchased out of PSST, it depletes the fund and pushes back the replacement of fire apparatus (which is just as important to replace).

General Fund

Some have asked, "Why not out of General Fund". The General Fund barely survives on its own. Even though, over the years, a few ambulances have been purchased out of General Fund, it is usually only when there is a balance at the end of the budget. This is not a reliable source.

The only remaining consistent funding source is Capital Improvements.

Replacement options:

- Repair 2013 Chevrolet 4500 (Med #2): We can spend the \$12,181.49 to repair the entire fuel system on the current Med #2. We anticipate as they begin to make the repairs that they will find that there are more problems and this price could go up. In addition in our previous discussion, we saw that the M&R vs. Residual Value that the repair of this unit is not practical.
- Purchase a chassis and pay a company to remount our current box. As this is a cheaper alternative, it is not always practical as we do not know the underlying condition of the box and could lead to additional cost once the box is removed from the current chassis. This option would save us approximately \$30,000 (the price of the box) under a new one. This method to replace ambulances is not supported by current ESFD staff. Past administration has attempted this and it led to key issues with the mounting of the box onto a chassis that it was not built for:
 - Anchor points had to be modified.
 - Electrical access to and from the chassis & box.
 - Leaking of water into the cab and box where the two are joined.
 - Intolerable ride for the patient.
 - Warranty on the chassis, but not on the box (led to continued maintenance cost for box repairs).
 - Does always address safety issues within the box (modifications to the box can be made at an added cost, i.e. adding the cot retention and lifting system).



REPLACEMENT OPTIONS:

- Repair the 2013 Chevrolet 4500 (Med #2)...\$12,181+
- Purchase a chassis and have Med #2's box remounted on new chassis...save about \$30,000 under new. Issues:
 - Anchor points modified.
 - Electrical access to and from chassis.
 - Potential leaking of rain water into cab.
 - Intolerable ride for patient.
 - Warranty on chassis, not on box.
 - Safety issues not addressed.



- Purchase a rebuilt ambulance, this is most likely where a company has purchased a used box and put it on a new chassis. There is most likely a warranty on the chassis, but the box has a limited warranty. Could lead to same issues as us option above and most likely will not meet our specifications...ESFD staff does not support this method of replacing ambulances. You just do not know what you are getting....this cost is approximately \$140,000-199,000 (would not include cot/retention/lifting system).
- Purchase a unit that is already built to our specifications (or close to it) and is sitting on a lot. This unit would only need to have cot/retention and lifting system, painted to our design, refrigerator, snow chains, inverter, and logos added. These are usually perhaps last year's model chassis at a lower price than one being built on a production line to our specifications. Current ESFD staff would support this method. This would come with warranties...an approximate cost would be \$150,000-300,000. The biggest advantage would be that it would only take about 30-60 days for delivery.



REPLACEMENT OPTIONS, CONT'D...

- Purchase a rebuilt ambulance (new chassis, someone else's old box)...\$140,000-199,000.
 - Same issues as remounting Med #2's box.
- Purchase an ambulance already sitting on a lot that meets our specs...\$150,000-300,000
 - Saves time, only need to have:
 - Paint & Logos
 - Snow Chains
 - Inverter
 - Cot/retention & loading system
 - Refrigerator (some of our medications require refrigeration).
 - Warranties on chassis and box.
 - Safety issues addressed.

- Purchase a new unit that meets our specifications, which would be all new. This is usually the higher price of the three options. We are looking into ways to minimize some of the cost. An approximate cost of \$150,000-300,000.



REPLACEMENT CONT'D...

- Purchase new...have built to our spec's...\$150,000 – 300,000
 - Building unit on assembly line will take 90-180 days
 - Warranties
 - Safety requirements addressed.



Things we are considering:

- Diesel engines (the cost of these have increased as the diesel engines require more maintenance with the environmental safety features to scrub its emissions with the addition of the “Diesel Particulate Filter system (DPF), Diesel Oxidation Catalyst (DOC), and Selective Catalytic Reduction system (SCR). The diesel engines provide more power and durability over the previous gasoline engines. Diesel vs. gas...approximately an increase of \$8,000 for diesel.
- Four-wheel drive unit. The last ambulance that we purchased is a four-wheel drive. Having units with type of chassis is definitely helpful in our terrain and weather conditions. However, at an additional cost of approximately \$500-2,500 for a four-wheel drive is under consideration.
- Truck vs. van chassis...a truck chassis is easier to perform maintenance & repairs. The van front-end sometimes requires the grill and radiator be removed for some maintenance. The truck chassis has an increase of approximately \$30,000-60,000 (depending if Heavy-Duty chassis).



The solicited competitive bid process through Mid-America Regional Council's Regional Purchasing Cooperative allows us affordable pricing on new ambulances.

Conclusion:

The Fire department staff is recommending the replacement of an ambulance (Med #2):

- Its mileage and years of service is within "industry standards".
- Maintenance and Repair is costing more than its residual value.
- Any residual value continues to decline.
- Safety features have improved.

Why do we need a "reserve" unit?

- Vehicle availability (Lost Unit Hours) will continue to increase, as the other two units get older and require M&R.
- The 112 square miles of coverage area.
- We have a responsibility to our citizens and our clients to be available for the 2,500+ times they call.
- We cannot rely on our mutual aid partners; they are busy covering their own areas.

We are asking Capital Improvements to be the consistent funding source.

- Public Safety Sales Tax was promoted to the citizens to be a funding source for personnel, fire equipment, and fire apparatus. Ambulance was not in the vote of the public.
- General Fund can barely support the M&R, and cannot support the replacement.
- No other funding source is available.

Each year that an ambulance is not replaced:

- Liability increases.
- Maintenance costs increase.
- Mileages on the remaining two ambulances gets higher (reducing their re-sale value) and closer together (increasing the maintenance cost).

Replacement Options:

- Repair Med #2.
- Rebuild Med #2 with new chassis.
- Purchase rebuilt Ambulance.
- Purchase new ambulance sitting on a lot.
- Purchase new ambulance built to our specs.

Ambulances are like shopping for your own car, except there is so many other variables, options, and issues to consider. If you approve our request to be the funding source for our ambulances, we will be back to request the purchase to be approved.

In advance, please accept the gratitude of the entire fire department staff for your continued support.

Sources:

Fellows, D. (2016, March 28). How to Develop a Fleet Replacement Strategy. Retrieved from: <https://emsworld.com/article12187528/how-to-develop-a-fleet-replacement-strategy>

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