Analysis of Outstanding Debt

City of Springfield, Massachusetts

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THE CITY OF SPRINGFIELD, MASSACHUSETTS

Dear Mayor Sarno and Members of the City Council:

I am pleased to provide you with the enclosed analysis of the City of Springfield's existing debt. This report is intended to be a user-friendly examination of current and future debt issued on behalf of the residents of our community. The Office of Management and Budget (OMB) specifically uses this analysis to make informed decisions regarding the City's debt and financial position; taking into account the affordability of issuing new debt on top of the existing annual debt service payment obligations.

In this report, affordability is measured by determining the annual amount of debt service and other debt-like payment obligations as a percentage of general fund revenues. Debt service as a percent of general fund revenues is a commonly accepted standard for measuring debt capacity. It provides a true indication of the relative cost of the City's debt by taking into account the City's actual debt service payments, and the amount of revenue available to pay those obligations.

In recent years, the City has taken a proactive approach to debt strategy by reviewing outstanding debt for restructuring opportunities; consistently assessing capital needs and offsetting project costs with outside funding whenever possible. The following debt affordability analysis will show that, consequent to these efforts, the City of Springfield is now in a position to strategically invest in its infrastructure and capital needs.

Along with a strong debt strategy, the ability to tackle the City's capital needs by offsetting project costs with grant awards, and funding provided by state and federal agencies. In February 2017, the City issued $44.3 million of debt for multiple completed and on-going projects. These projects include the School Dense Wireless Project, the building of John J. Shea Bright Nights Technical Training Facility (Skill & Technical Training Center), the renovation of the Clifford A. Phaneuf Environmental Center (ECOS) in Forest Park, the Union Station parking garage, a new South End Community Center (SECC), and the purchase of vehicles for the Police Department and Department of Public Works. Additionally, the City bonded for the Springfield Public School Culinary and Nutrition Center, the renovation of 50 East Street, the building of the Raymond Jordan Senior Center in Blunt Park, and multiple school projects.

Many of these projects received funding by outside agencies including Massachusetts School Building Authority (MSBA), Federal Emergency Management Agency (FEMA), Massachusetts Emergency Management Agency (MEMA), and U.S. Department of Housing and Urban Development (HUD). In total, the City anticipates receiving outside funding for up to 58% of the total estimated costs of the projects listed above. By leveraging funding through these agencies and other outside entities, the City is able to invest in numerous capital projects.

The City capitalized on the opportunity to pay off old debt at a lower interest rate in March 2017. This refinancing of 2007 bonds will save the City over $3.8 million over the next six years by exchanging the original interest rate of 4.263% for a lower rate of 2.0063%. In addition to previous years' efforts to restructure debt, this sale increased our capacity for future debt issuances and prevented dramatic increases in future debt payments. One of the established benchmarks reviewed by the municipal bond industry is debt retirement, which is the percent of debt to be paid off within ten years. The industry standard is between 65% and 100%; currently, Springfield's debt retirement number is 80.5%. A declining debt schedule and rapid repayment of principal indicates that the City is committed to repaying its debt quickly and efficiently.

Annually, the City publishes a Capital Improvement Plan (CIP), which provides a detailed view of the capital needs within the City of Springfield. This comprehensive capital plan includes roads, sidewalks, parks, land, buildings, equipment, fleet and other capital asset needs which will serve as a singular basis for capital funding decisions in future years. The Fiscal Year 2018-2022 Capital Improvement Plan (CIP) indicates there is over $850.1 million in capital needs in the City. The Fiscal Year 2019-2023 Capital Improvement Plan process is currently underway.

As often as possible, the City takes advantage of the MSBA's Accelerated Repair Program initiative. This innovative competitive grant program represents a unique opportunity for the City. The main goals of the Accelerated Repair Program are to improve learning environments for children and teachers, reduce energy usage and generate cost savings for the City. To date, the City has been invited to take part in this program to repair and/or replace roofs, windows, and doors in eighteen schools. Work is currently underway on the Alfred G. Zanetti Montessori Magnet School, M. Marcus Kiley Middle School, Kensington International School, Mary M. Lynch Elementary School, Thomas M. Balliet Elementary School, and Balliet Middle School. The City is currently discussing an additional ten schools for the replacement of roofs, windows, and doors to be decided upon in February 2018. The collaboration between the City and MSBA results in high reimbursement levels, a major reason for the high percentage of school related debt.

The City has continued to pursue assistance from FEMA, MEMA, Federal Highway Administration (FHwA), HUD, and MSBA for the costs related to disaster recovery and resiliency efforts. Springfield has issued Bond Anticipation Notes (BANs) to address the Department of Revenue (DOR) requirement to extinguish the deficits; and we continue to seek reimbursement from these agencies. In the interim, the City continues to monitor its cash flow and process payments in a timely manner.

During our last debt issuance in 2017, Standard & Poor's (S&P) affirmed the City's AA- credit rating with a stable outlook which continues to be the highest rating in the City's recorded history; steadily improving from its A- rating five years ago. This recent credit rating review focuses on the City's strong institutional core by highlighting Springfield's "strong management, with "strong" financial policies and practices, adequate budgetary performance, and strong budgetary flexibility." Additionally, the City received a reaffirmed credit rating of A2 with a stable outlook by Moody's in January 2017. Looking back almost ten years ago, the City had a Baa3 credit rating, junk bond status. These rating improvements are a testament to how well the City has made it through the economic downturn and made appropriate decisions to keep the budget balanced. Moody's credited Springfield's stabilized financial position to its status as the regional economic center of western Massachusetts, having satisfactory reserves, as well as demonstrating conservative fiscal management and an adherence to formal financial policies.

I hope this analysis is helpful to you and welcome the opportunity to provide any additional information that would be useful to you, and the residents of our community.

Very truly yours,

Timothy J. Plante
Chief Administrative and Financial Officer

Springfield Debt Overview

Mandated by Chapter 468 of Acts and Resolves of 2008, the City of Springfield's Office of Management & Budget is required to provide a yearly review of the City's current outstanding debt. This analysis is designed to have two desired effects:

1. To show financial officials and citizens the current state of debt management.

2. To indicate whether or not the City of Springfield can afford more debt in either the current fiscal year, or future years, as debt service payments decline.

Currently, the City of Springfield has a total of $257.4 million in outstanding total debt, which can be broken down to $200.5 million in principal and $56.8 million in interest. The total debt consists of issuances dating back to fiscal year 2009 up to the most recent debt issuance in March 2017. This study will show that Springfield is currently within its debt capacity as mandated by the City's financial ordinances, Chapter 4.44.070, which states "General Fund debt service as a percentage of general fund revenues, net of debt exclusions – should not exceed eight percent (8%)".

Debt Service as a % of General Fund Revenue		
2017 Total Debt Service	$	33,519,048
2017 General Fund Revenue	$	615,805,978
Debt Capacity		**5.4%**

Source: First Southwest, Springfield 2017 CAFR

Analysis of City Debt

The City's aggregate debt service totals $257.4 million over eight years. Project balances that make up this debt range from the small - $10,100 for the Blunt Park Renovation, to the large - $9.9 million for citywide ESCO (Energy Service Contracts, Phase II of III) projects for facility enhancements and improvements that maximize energy efficiency.

There are many different ways to examine the City's debt. This document first examines the policy issues associated with our debt, for what purpose was it issued, in what structure or manner was it issued, and then examines what this debt tells us about the finances of our community. The latter analysis relies on benchmarks established by the three large companies that evaluate and rate municipal debt: Moody's Investors Service, Standard & Poor's, and Fitch Ratings. These benchmarks tell us what our ability is to repay our debt, highlights areas of further investigation and public discourse, and will be used by rating agencies to rate our bonds. When Springfield wants to issue bonds, its bond rating reflects the amount of interest it has to pay an investor. The higher the bond rating, the lower the risk of default and the amount of risk the investor is taking. The lower the risk, the lower the interest rate the City will have to pay on its loans.

Annual Debt Service

The City is legally obligated to pay the principal and interest associated with a bond issuance before all expenses, including salary obligations. This annual payment is known as the ***debt service payment***. Because of this mandated expense, the City must be cognizant of debt service payments when issuing new debt and in deciding whether or not the City has the ability to increase those payments.

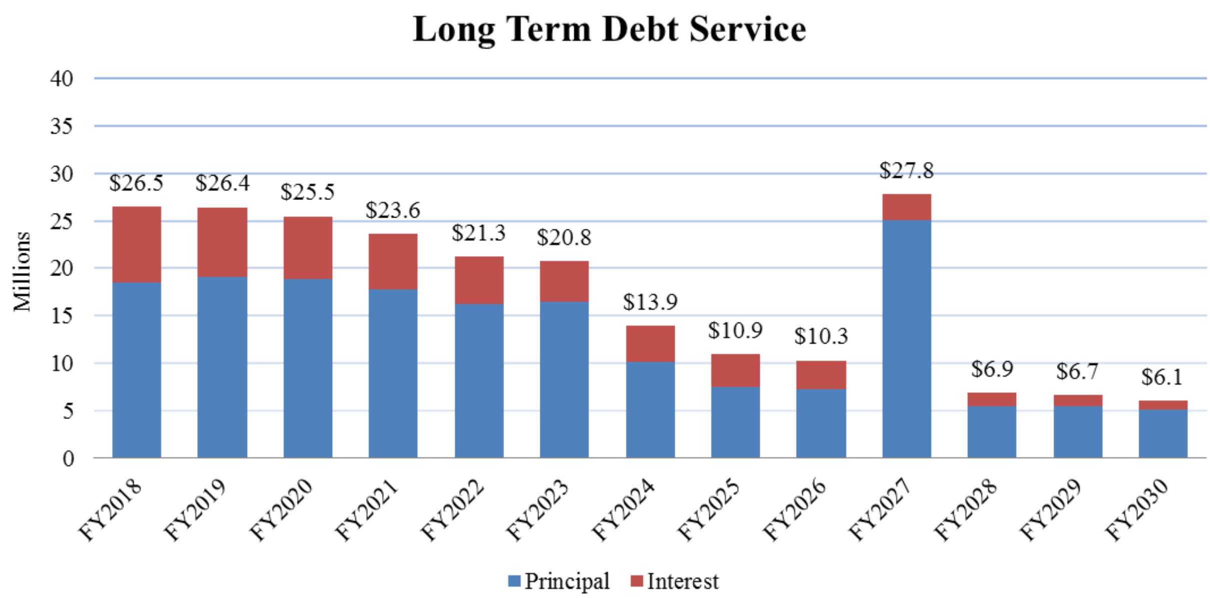

Figure 1: Debt service repayment schedule, First Southwest

The City's debt service repayment schedule, as of June 30, 2017, is outlined in the chart above (Figure 1). In fiscal year 2010, the City took advantage of the Qualified School Construction Bond (QSCB) Act. This borrowing requires a "bullet" payment at the end of a seventeen year borrowing term. This "bullet" payment is reflected in the large $27.8 million expenditure payment due in 2027. In order to prepare for this, the City has been, and will continue to invest the required payments ($776,910 annually) for the bond into a "sinking fund" each year. At the end of the term, the City will use the sinking fund to pay the principal and interest payments that are due. Aside from this, the City works to maintain a relatively smooth debt schedule as to not front or back load debt costs.

As illustrated above in Figure 1, the City has entered into a declining debt service payment schedule. Each year, prior bond issuances "fall off" our debt schedule, decreasing the City's annual long term debt service obligation. This means the City has bonding capacity for new capital improvement projects. In FY15, the City took advantage of the declining debt schedule and bonded approximately $50.5 million for new projects, including demolition, streets and sidewalk repairs, school improvements and city facility purchasing and improvements. The next sale occurred in February 2017, when the City issued $44.3 million in debt for numerous capital improvement projects. The same year, March 2017, the City sold bonds for Union Station. The newest sales impact our debt schedule starting in Fiscal Year 2019. By strategically selling debt this way, the City will continue to have a declining debt schedule and keep payments between fiscal years consistent. The City's goal is to maintain a similar level of payments to ensure large debt service payments are not unfairly placed on the City's budget in the future.

Additionally, the City's ability to refinance some of its outstanding bonds for interest cost savings gives the City a larger debt capacity each year. This larger debt capacity enables more debt to be issued for capital improvement projects that are imperative for the City. Similar to the refinancing of a mortgage, savings are achieved by lowering interest costs. Our lower interest cost savings is the result of being able to call in high interest rate debt and substitute it with lower interest rate debt. This refunding gives the City a larger debt capacity each year enabling more debt to be issued. Between FY15 and FY16, the City completed two debt refunds, saving over $2.5 million in interest payments over the fifteen years of debt service for the City and $1.2 million as a reduction in QSCB payments from MSBA. The City also refinanced bonds issued in 2007 at the same time it financed the Union Station Project in March 2017. By exchanging the original interest rate of 4.263% for a lower rate of 2.0063%, the City anticipates saving over $3.8 million over the next six years.

Purpose of Issuance

Of the City's $200.5 million (principal only) debt, $84.2 million (42.0%), was issued to finance school projects and $116.3 million (58.0%), was issued for all other municipal purposes. The category of "all other municipal purposes" includes roads, sidewalks, police, fire, recreation, general government, technology, as well as senior and other social services.

Project/Type	Total	Percent of Total
City Facility	78,143,600	39.0%
Demolition	9,933,167	5.0%
Equipment	2,287,025	1.1%
Other	5,877,450	2.9%
Park/Land	9,326,400	4.7%
Streets/Sidewalks	10,585,050	5.3%
Technology	176,950	0.1%
City Total	**116,329,642**	**58.0%**
School Total	**84,199,358**	**42.0%**
Grand Total	***200,529,000***	***100%***

In years past, the majority of the City's debt has been dedicated to school facilities because of varying degrees of need ranging from repairs, to major renovations, and new school construction. Additionally, many construction projects for school buildings are eligible for partial reimbursement from the Massachusetts School Building Authority (MSBA). School Construction aid received from the School Building Authority Board, the predecessor to the MSBA, allowed the City to issue debt for school building projects at a lower cost to the City's general fund.

This year, with the refinancing of bonds from 2007 in March, and the $44.3 million sale of new debt in February, the ratio of School projects to City projects switched. City projects that aided in this change include the renovation of the Paul J. Fenton 50 East Street, the building of the

Raymond Jordan Senior Center in Blunt Park, the construction of a new South End Community Center (SECC), the building of the John J. Shea Bright Nights Technical Training Facility (Skill & Technical Training Center), the renovation of the Clifford A. Phaneuf Environmental Center (ECOS) in Forest Park, the Union Station parking garage, and the purchase of vehicles for the Police Department and DPW.

Other Funding Sources

The City has been strategic in leveraging funds from Federal and State agencies. The City worked collaboratively with the Federal Emergency Management Agency (FEMA), the U.S. Department of Housing and Urban Development (HUD), the Massachusetts Emergency Management Agency (MEMA), and the Massachusetts School Building Authority (MSBA) to maximize revenues for schools, facilities, and infrastructure improvements.

In February 2017, the City issued $44.3 million of debt for its share of cost of City projects. By leveraging funds from FEMA, MEMA, and MSBA, the City anticipates receiving up to 58% of the total estimated costs for the bonded projects. FEMA has committed over $19.0 million as part of FEMA's improved projects program, aimed at restoring facilities damaged in the 2011 tornado. The chart below shows the total project costs and the breakdown between FEMA funding and City contribution with the exception of ECOS. The Mass Mutual Foundation granted the Springfield Public School $150,000 toward the cost of building ECOS; this is reflected in the chart below.

Project	Outside Funding	City Contribution	Total Estimated Project Cost
50 East Street Renovation	2,890,464	9,053,120	11,943,584
Raymond Jordan Senior Center	7,608,496	4,391,504	12,000,000
South End Community Center (SECC)	6,000,000	4,292,500	10,292,500
Clifford A. Phaneuf Environmental Center (ECOS)	2,682,303	1,487,689	4,169,991
TOTAL	**19,181,263**	**19,224,813**	**38,406,075**

In addition to FEMA funding, the City anticipates an 80% MSBA reimbursement for eligible costs for six Springfield public schools that were invited into the MSBA Accelerated Repair Program in 2017: the Alfred G. Zanetti Montessori Magnet School, M. Marcus Kiley Middle School, and Balliet Middle School for the replacement of windows and doors and accessibility upgrades, and the Mary Lynch Elementary School and Kensington Avenue International School, and Thomas M. Balliet Elementary School for roof replacement and accessibility upgrades. The total estimated project cost for these schools is $20.1 million; all of which are currently in the design construction phase.

School Project	MSBA Estimated Funding	City Contribution	Total Estimated Project Cost
Alfred G. Zanetti Montessori Magnet School	2,525,137	631,284	3,156,421
M. Marcus Kiley Middle School	7,598,889	1,899,722	9,498,611
Kensington International School	1,191,130	297,783	1,488,913
Mary M. Lynch Elementary School	1,693,704	423,426	2,117,130
Thomas M. Balliet Elementary School	1,671,440	417,860	2,089,300
Balliet Middle School	1,365,804	341,451	1,707,255
TOTAL	**16,046,104**	**4,011,526**	**20,057,630**

The City will continue this strategic use of federal, state, private and City funding as we make decisions about future debt issuances.

Composition of Debt

Debt can be issued for numerous purposes. Cities and towns deliver many services, from education and public safety, to transportation, recreation and social services. Each service has a different capital characteristic. Education, for example, requires the construction and maintenance of buildings in which to educate children. Education debt should therefore be heavily skewed toward building and facility debt. It is rare for the City to issue debt for non-facility or grounds related projects for the School Department. As shown below in Figure 2, the City's outstanding debt is mainly comprised of building and facility debt: City facility (67.2%), demolitions (8.5%), and Streets/Sidewalks (9.1%).

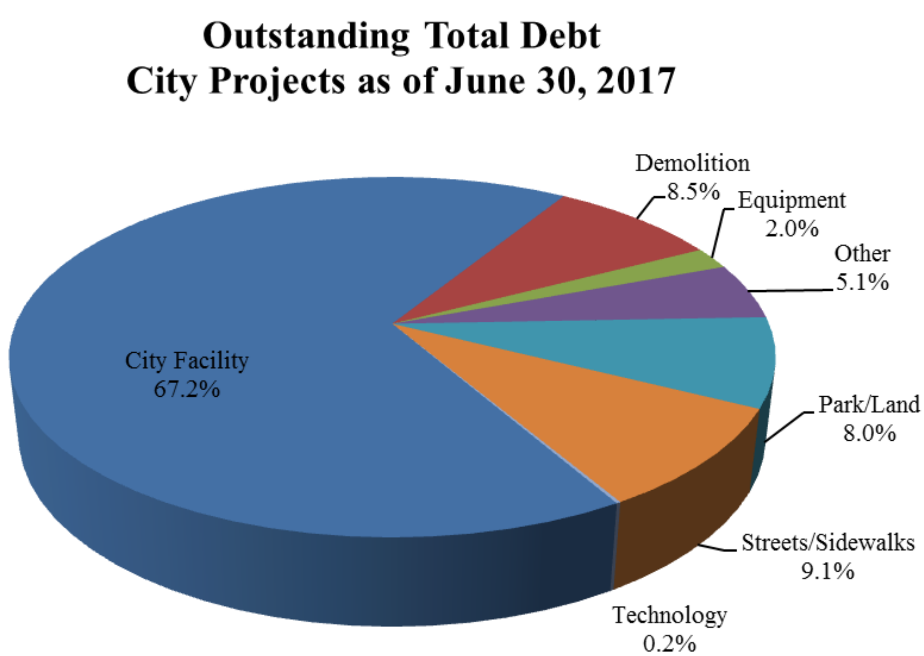

Figure 2: Breakdown of outstanding City debt, First Southwest

General government services, however, should have a much more diverse mix of facility and non-facility debt. For example, parks and recreational debt should include some building debt, but also substantial non-facility debt, including the renovation of fields, pools, and other projects. Public Safety debt would normally include a mix of facility and non-facility debt, with non-facility debt being comprised mainly of vehicle, apparatus, and equipment purchases. These non-facility debt categories account for 24.4% of the total City debt as shown in Figure 2 above.

Examining non-facility debt, the City has begun to make substantial investments in equipment, parks, land purchases, the demolition of blight and condemned buildings, technology, and road and sidewalk infrastructure. The City's Capital Improvement Plan (CIP) indicates there will be considerable funding needed in the future in these areas. These projects should also weigh heavily in the economic development plan for the City as dictated by the City's executive leadership.

The City has shown its ability to fund non-facility investment projects with the use of debt. As mentioned above, a declining debt schedule has allowed for increased bonding capacity for new capital improvement projects.

The City issued $44.3 million in debt for new capital projects in February 2017. This issuance funds complete projects and projects the City intends to complete within Fiscal Year 2018, including: the completed Skill and Technical Training Facility, ECOS, Dense Wireless Projects, and the purchase of Police and DPW vehicles. The City is also issuing debt for ongoing projects, such as: the School Culinary and Nutrition Center, 50 East Street renovations, South End Community Center, Senior Center, and multiple school projects.

In FY15, the City issued $50.5 million in debt for capital projects. These projected included improvements to the Boston Road corridor, which is expected to generate a return on investment by attracting national chain stores to the neighborhood. In addition, funding has been used for the purpose of aiding the Springfield Redevelopment Authority in the implementation of the Union Station Redevelopment project. This type of clean up and improvement work is a driving force in economic development.

The FY15 bonds also fund the second phase of the City's ESCO project, which includes improvements to increase energy efficiency within city and school facilities. This project includes upgrading boilers and heating systems in twenty municipal buildings; including thirteen schools, three libraries and four public safety buildings. Returns on investment on this project are best viewed environmentally. Annually, energy efficiencies due to the City's ESCO project improvements will yield the equivalent of 3.9 acres of forest preserved from deforestation, or 102.7 cars off the road for a year. And finally, the FY15 bonds also include additional school improvement projects, which will provide our students with a comfortable, technologically advanced environment in which to learn.

In FY 2009, the City had instituted another source of funding for capital expenditures, which is known as "pay-as-you-go" capital. The City appropriates 1.5% of local source operating revenues to finance capital improvements via cash, in lieu of issuing debt, as required by the City's financial ordinances and policies (Ch. 4.44.050.). This source allows the City to reduce its overall borrowing costs by funding smaller routine projects through the operating budget and avoid interest payments associated with bonds. Over the last eight years, $22.4 million has been appropriated for capital projects. With this source, the City has been able to fund emergency infrastructure repair, vehicle replacement schedules for Public Safety and Public Works departments, IT upgrades for software, security and servers, as well as park and building renovations.

Net Debt Service

As mentioned in the Purpose of Issuance section, the City of Springfield has a total outstanding debt portfolio (principal only) of $200.5 million as of June 30, 2017. When interest is included, the total cost of this debt is $257.4 million. However, this is not the actual amount that the City pays in debt service. The City receives reimbursement for certain debt funded projects which, when netted from the $257.4 million, leaves a balance of $237.6 million of liability (principal and interest). Figure 3 below shows net debt service through 2030. The 2027 debt service payment spike represents the sinking fund payment of the QSCB as explained previously.

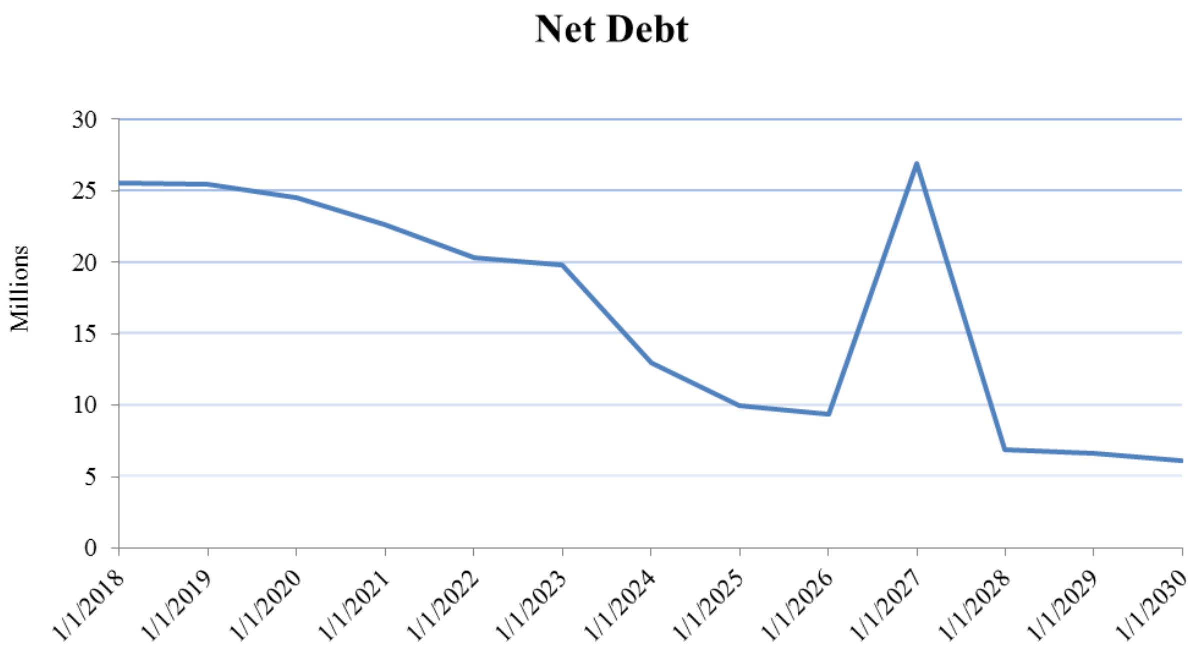

Figure 3: Net Debt Service payments; First Southwest

In previous years, the City had been approved to receive school construction assistance on various school construction projects under a program managed by the Massachusetts School Building Authority (MSBA). Under the terms of this program, the City was required to incur general obligation debt financing for the full costs of the particular school construction project. The MSBA then provided annual grant distributions to the City and such reimbursements were meant to offset the annual debt service costs as the City repaid the bonds. These reimbursements were scheduled to be netted down from the City’s debt service payment until 2022.

However, in FY17, the City entered into a debt refinancing transaction in order to take advantage of favorable interest rates. The City issued $23,965,000 of general obligation refunding bonds on March 7, 2017. The proceeds of the refunding bonds, along with a refunding premium of $2.6 million and $22.6 million of lump-sum payments from the Massachusetts School Building Authority (MSBA), were used to complete a current refunding of $48,495,000 of existing debt from 2007. The transaction resulted in an economic gain of $3,858,526 and a reduction of $3,806,718 in future debt service payments. The lump-sum payment from the MSBA replaced contract assistance payments that were scheduled through FY2022 on three older school projects.

Industry Benchmarks

The municipal bond industry has established benchmarks that it uses to examine cities and towns across the nation. These benchmarks are intended to provide insight into a community's ability and willingness to repay the debt it issues and can be valuable tools for communities to evaluate their financial management. This analysis is intended to provide insight into our finances and our ability to support debt and public investment.

What is included in this report and what is not?
This ratio analysis looks at all debt that places a burden on our general government revenue stream, including enterprise fund debt. The City issued debt on behalf of its single Enterprise fund in February 2017, for two pick-up trucks, two semi-automated and one fully-automated 31 cubic-yard trucks for trash removal services. Payments, scheduled to begin in 2020, will stay well within the City's financial ordinances, Chapter 4.44.070, which state "Enterprise fund debt service as a percentage of enterprise operating revenue – should not exceed fifteen percent (15%)." Selling debt in support of the solid waste program enables the City to strategically replace out aging fleet, and purchase more vehicles in the future.

This report assumes normal operations for the City of Springfield. A "worst case scenario" analysis could be conducted that would assume the Commonwealth stops making school building assistance payments. (This measure is appropriate as the City establishes its reserve funds, as these funds are established to address such emergencies.) The City's debt study, however, should examine debt under normal operating conditions. The following measurements have been performed for this analysis:

Measure	Industry Standard	FY2017	FY2018
General Fund Balance as a % of Total Revenues	15% or greater	13.1%	13.6%
Debt Service as a % of General Fund Revenue	0% - 8%	5.9%	5.4%
Debt Service as a % of General Fund Expenditures	0% - 8%	5.3%	4.5%
Percent of Debt Retired in Ten Years	65% - 100%	82.0%	80.5%
Debt as a Percentage of EQV	0% - 5%	2.9%	2.7%
Total Outstanding Debt Per Capita	$0 - $1,000	$1,314.00	$1,300.41
Total Debt as a Percentage of Total Personal Income	0% - 7%	7.1%	7.2%
Undesignated Fund Balance as a % of Revenues	10% or greater	9.4%	10.0%
Overall Net Debt as a % of Full Value	1.5% - 5%	2.9%	3.2%
Taxpayer Concentration % of Property Value Held by Top Ten Taxpayers	0% - 15%	10.3%	9.9%

Figure 5: Municipal Bond Industry Benchmarks

Debt Service as a Percentage of General Fund Expenditures
The metric used for this benchmark measures the City's ability to finance debt within its current year budget, similar to the measurement of household income dedicated to mortgage payments.

This is the most immediate measure of determining a City's ability to pay; however, it only examines the ability to pay for debt within a community's existing budget. Cities and towns that have excess levy capacity – communities that do not tax to the maximum of their Proposition 2 ½ limitation – would have greater ability to pay for debt than this measure suggests because they have additional taxing capacity which they have not accessed.

The City's measure of debt service as a percentage of General Fund expenditures is strong, with 4.5% of the Fiscal Year 2018 budget dedicated to debt service. This measure has been trending down over the last three fiscal years due to a decrease in total debt service and an increase in the City's general fund revenue. The City is required to annually fund a capital reserve at least one and one half percent of property taxes from the prior fiscal year (Chapter 4.44.060). Many cities and towns with similar traits to Springfield, have higher ratios of debt service to general fund expenditures. Springfield should continue to maintain this ratio at a similar level to ensure large debt service payments are not unfairly placed on the City's budget in the future.

The City's relatively low ratio of debt service to general fund expenditures provides more budgetary flexibility to address financial problems that may arise. Debt payments are not discretionary. Courts have ruled these payments must be made even before salary payments for employees. Communities with high levels of debt service relative to operating expenditures have a larger portion of their budget dedicated to payments that must be made regardless of the community's financial situation. The City restructured its debt service payments in order to have declining payments in future years. This not only makes the debt service more affordable but also allows the City to layer more debt in future fiscal years. Therefore, having a lower ratio means less money is dedicated to debt service, which means more flexibility exists within the operating budget.

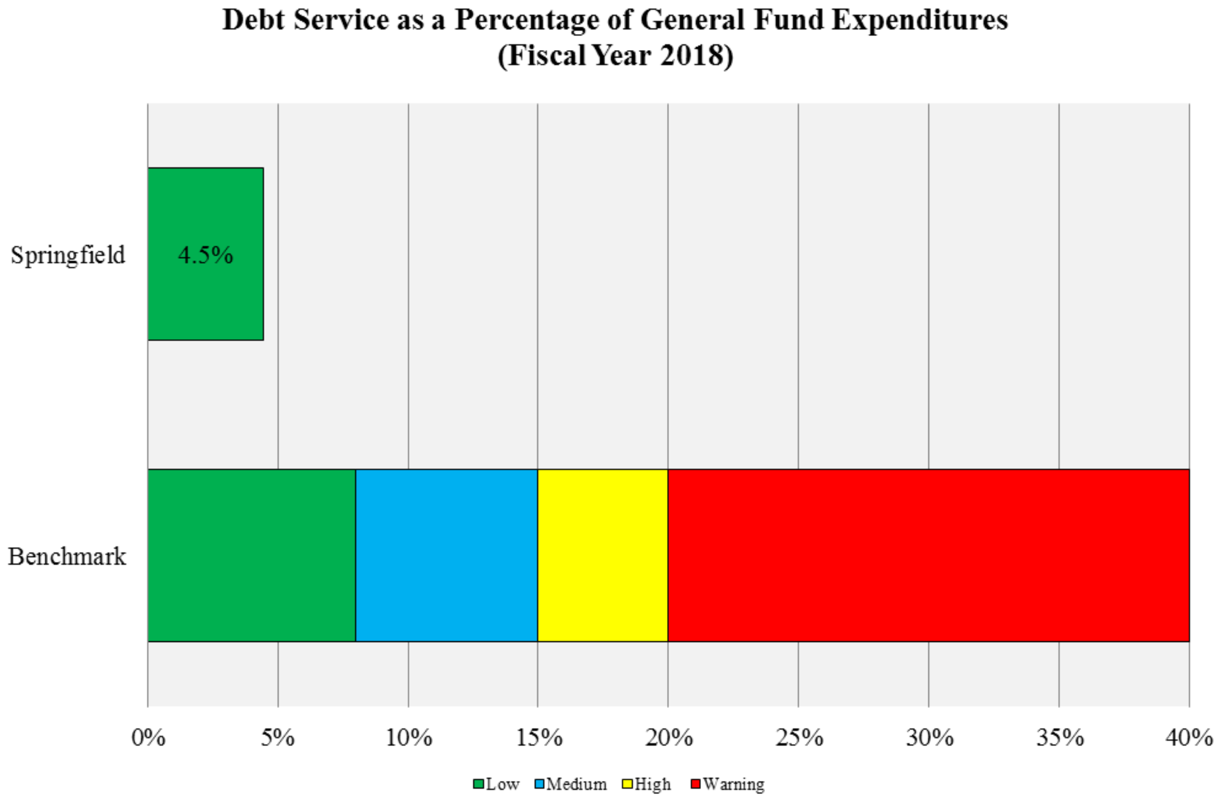

Figure 6: Ratio of 2018 Budgeted Debt Service Payments over Total General Fund Budget

Debt Service as a % of General Fund Expenditures		
2018 Total Debt Service	$	27,984,872
2018 Budgeted General Fund Expenditures	$	628,819,204
Debt Capacity		**4.5%**

Source: First Southwest, Springfield FY2018 Adopted Budget

Figure 7: Calculation of Debt Service as a percent of Budgeted General Fund Budget

Debt Retirement: Percent Retired within Ten Years

The speed with which a community retires its debt indicates a number of important factors. Included in these are:

- Willingness to repay debt: rapid repayment of principal indicates that a community is committed to repaying its debt. This "willingness to pay" is measured in a number of ways and is particularly important to those who lend money to others, as it provides them some proof of the borrower's intention to repay the money it borrowed.
- Ability to repay debt: rapid repayment of principal indicates that a city or town has the financial resources necessary to repay debt quickly. This demonstrates a level of financial stability; communities that are experiencing financial difficulty are unlikely to repay their debt in an accelerated manner.

- Prevention of future problems: rapid debt retirement ensures that a community is not "back loading" its debt, as the City once did, locking itself into debt repayments that are affordable now but that will grow as time passes. Back loading is a sign of poor financial management – either overspending is intentional or managers are unable to make the difficult immediate term decisions to balance the budget using a more appropriate debt financing structure.

The percentage of debt retired within ten years is particularly important in determining the timing of debt repayment – the "back loading" issue described above. Back loading occurs when the cost of debt is pushed off into the future, reducing current year payments while increasing future ones. Back loading increases the cost of debt in the long term and can be a destabilizing financial factor when debt service requirements increase in future years. This means the City would need to reduce expenditures or programs, or increase taxes or other revenues to make the debt service payment. Prior to 2005, the City back loaded debt issuances causing major spikes in its debt service payments in future years. This was accompanied through "front loading" debt and making a number of other modifications to the City's debt structure.

Failure to invest in maintenance and capital investment, otherwise known as deferred maintenance, can be considered a form of debt back loading because capital needs must be addressed at some point; delay in maintenance or investment only delays the financing of these improvements, increases the likelihood that capital will fail *en masse*, forcing unaffordable costs onto future taxpayers. Delaying capital investment also tends to make projects more expensive because costs tend to increase over time.

The City currently has an aggressive debt retirement schedule. On average, 80.5% of the principal borrowed by the City is repaid within ten years as the remainder will be retired within nineteen years, as shown in Figures 8 and 9 below. This places the City well within the "excellent" ranking established by bond rating agencies (65% and above). Because of this schedule, the City will be able to borrow additional money to continue investing in its facilities, infrastructure, and other capital projects.

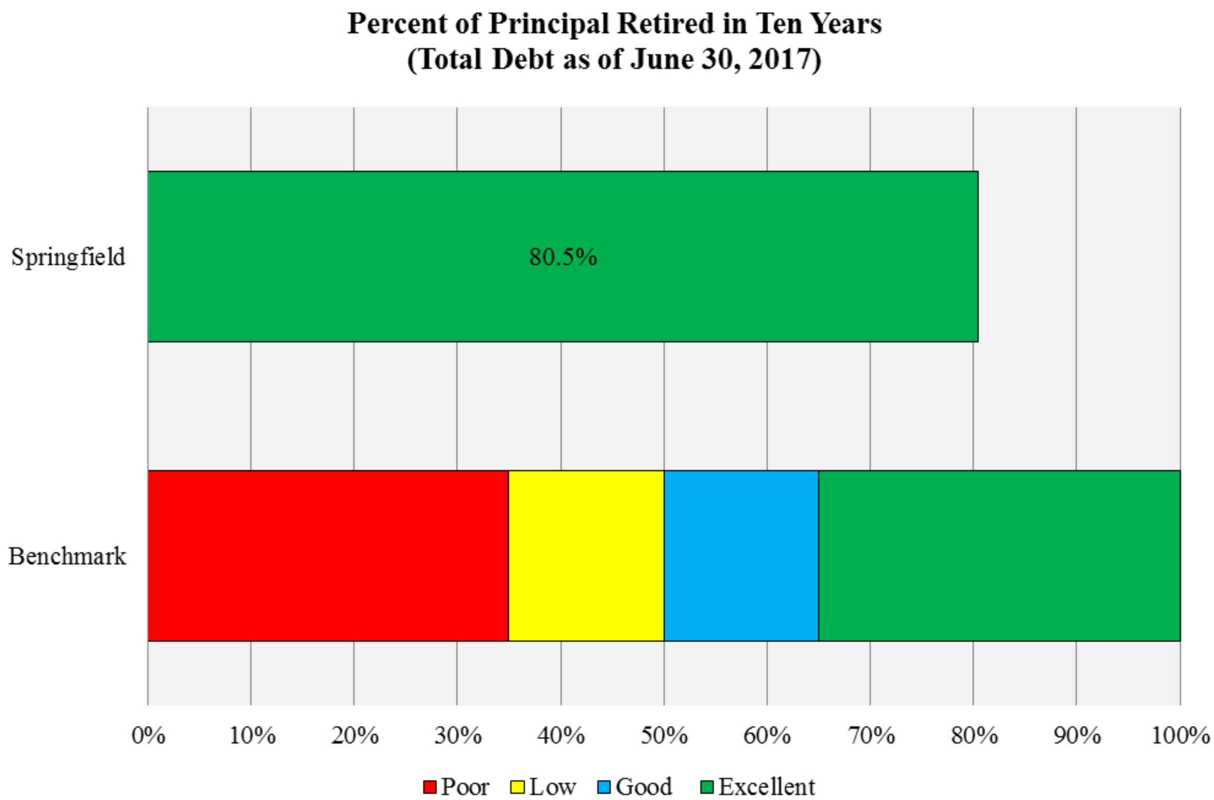

Figure 8: Percent of Debt retired in 10 years.

Percent of Debt Retired in Ten Years		
Total Debt Retired in 10 Years	$	207,107,861
Total Outstanding Debt Service	$	257,357,028
Percent of Debt Retired in Ten Years		**80.5%**

Source: First Southwest

Figure 9: Calculation of Total Debt (Principal + Interest) retired in 10 years.

Furthermore, the City's overall debt retirement ranking indicates a strong willingness to repay debt. Examining this ratio in conjunction with the City's overall debt schedule indicates that the City has not back loaded debt; the City's overall debt structure is prudent and well within the industry benchmarks.

Debt as a Percentage of Full Property Value (EQV)

Debt as a percentage of full property value (known in government finance circles as "equalized value," or EQV) measures the ability of a community's property tax base to support borrowing. The majority of revenue in most communities comes from property taxation; therefore this ratio examines a community's debt relative to its main revenue source. However, in Springfield, 61% of revenue comes from state aid while 39% comes from local revenue. In essence, this ratio looks at one of Springfield's major sources of revenue to determine if outstanding debt would place too large a burden on it.

This measure is helpful but not deeply informative because it looks at total outstanding debt, not debt service. Examining debt as a ratio of full property value does not say much about the affordability of that debt. A small amount of debt issued at a high rate of interest can be more expensive than a larger amount of debt issued at a lower interest rate. Further, in Massachusetts communities are limited in their ability to access their property tax base by Proposition 2 ½. This measure is a helpful benchmark to compare communities to one another but is not an absolute measure of debt affordability because of these issues.

Mass. Gen. Laws (M.G.L) Ch. 44§10 dictates the City's debt limit be no more than 5% of the equalized value. The City's ratio of debt to property value is currently 2.7% which is considered "medium" by rating agencies (Figure 10). As indicated above, this medium measure does not directly relate to the City's ability to pay for this debt. This ratio does not take into account debt structure (how much money is due at what point in time for each issuance), or timing of payments. Furthermore, it fails to consider the City's ability to access property values due to Proposition 2 ½.

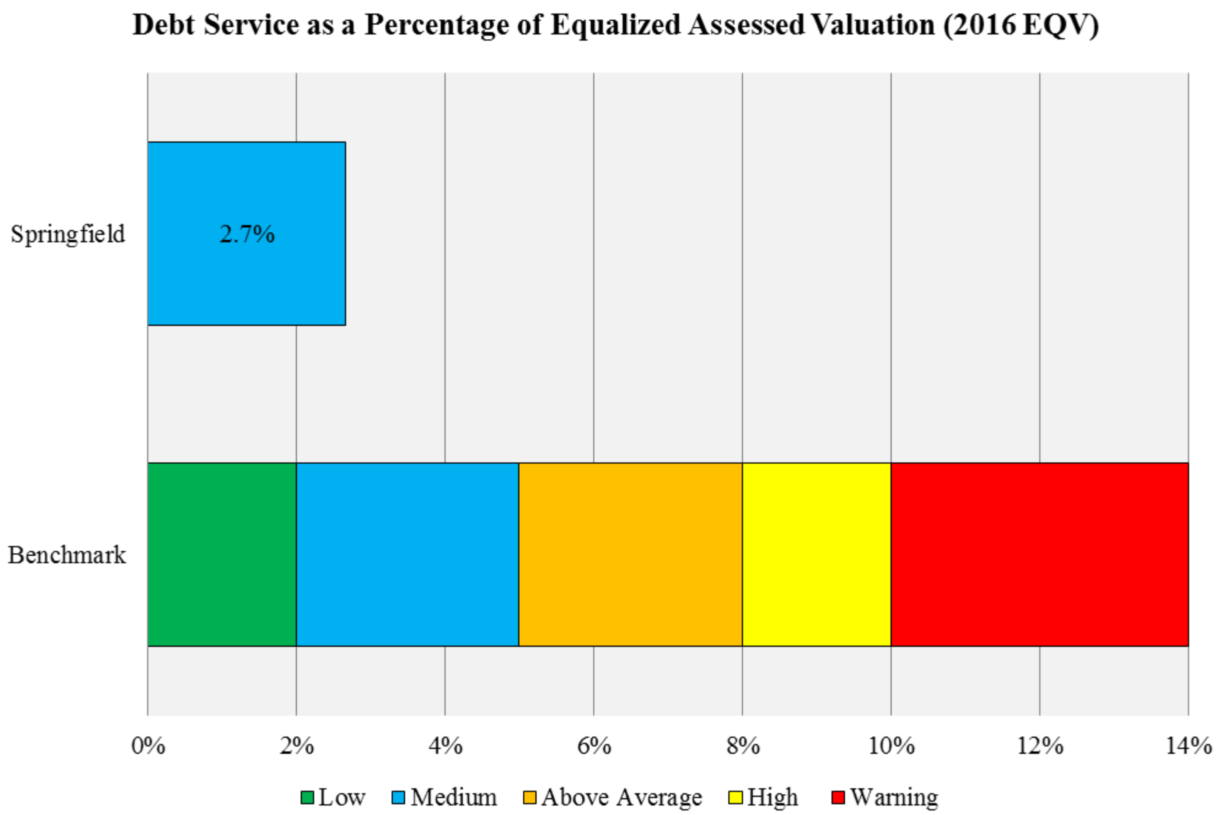

Figure 10: Ratio of Debt to Estimated Property Value

Debt as a Percentage of EQV	
Total Outstanding Debt (Principal)	$ 200,529,000
2016 EQV (Equalized Valuation)	$ 7,518,915,400
Debt as a Percentage of EQV	**2.7%**

Source: First Southwest, DLS Municipal Databank

Figure 11: Calculation of Outstanding Principal as a percent of EQV.

Debt per Capita

Debt per capita examines the amount of debt the City has issued per person in the community. This is not intended to be a literal measure because debt is not issued to benefit individuals, but rather the community as a whole. This measure provides a sense of the cost of the capital investments in a community and, at its most extreme, how much money would be required from each resident to repay the community's debt if for some reason immediate repayment was required.

Debt per capita can be a useful measure when examining similar communities – by and large, comparable communities should issue similar amounts of debt for various capital purposes. Even similar sized communities have significant differences about them, so this measure should not be examined in absolute terms, but rather in the context of the unique requirements and challenges facing each community. It should also be viewed in light of Proposition 2 ½ which limits a community's ability to access its property tax base; Proposition 2 ½ can force communities to issue debt for smaller projects that communities in other states would pay for in cash.

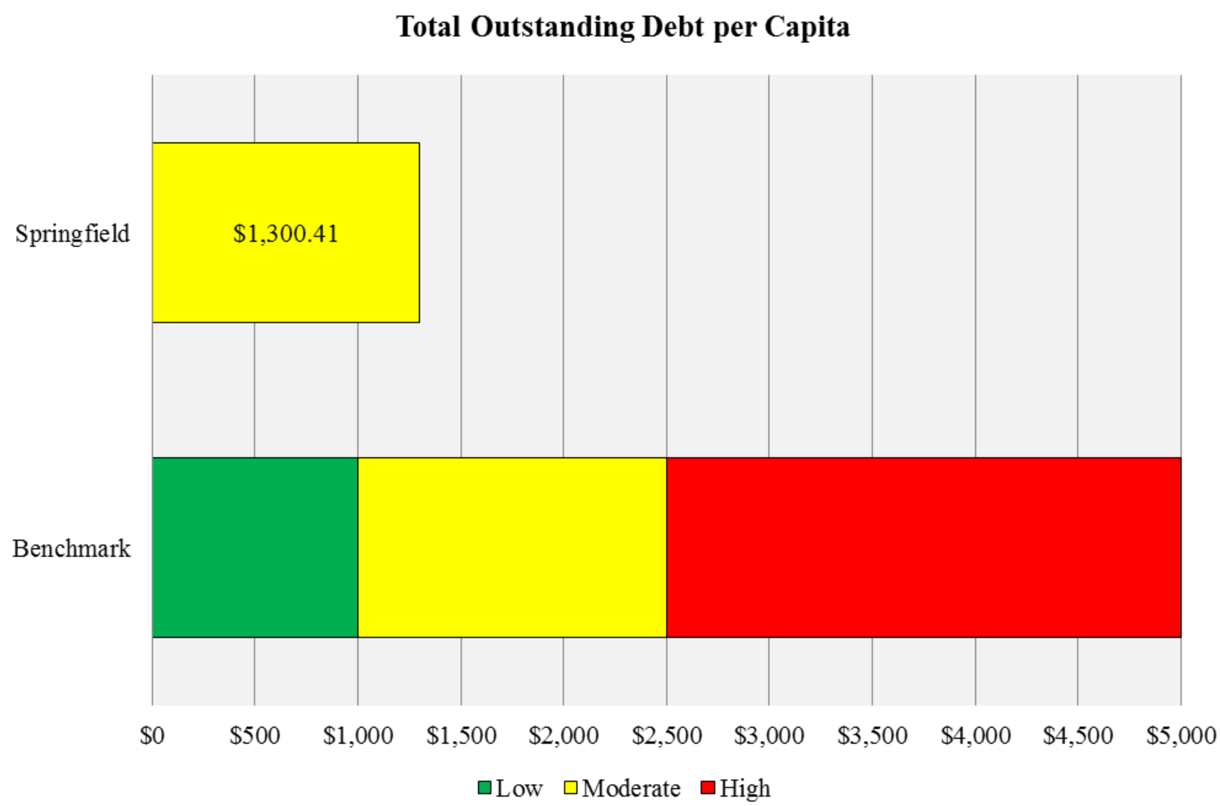

Figure 12: Estimated Debt per person.

Total Outstanding Debt Per Capita		
Total Outstanding Debt (Principal)	$	200,529,000
2017 Population Estimate		154,204
Total Outstanding Debt Per Capita	**$**	**1,300**

Source: First Southwest, MA Division of Local Services

Figure 13: Calculation of outstanding debt per person

The City's level of debt per capita is considered moderate by rating agencies. This measurement is not completely unexpected as the City has a large number of aging facilities (particularly schools) and infrastructure. The City is currently performing large school reconstruction projects, as well as, the replacement of schools and other facilities. Because of the major capital needs and the issuance of debt every few years, this measurement will continue to fluctuate as it is dependent on the total outstanding principal. To address this, the City of Springfield has restructured its debt repayment schedule in the past and continues to be strategic in how issuing debt affects the City's outstanding debt and payment schedule.

Debt as a Percentage of Total Personal Income

Like the ratio of debt to property value, the ratio of debt to personal income is a measure of affordability of the debt issued by a community. While property values provide the base that supports property taxation, it is personal income that allows people to buy goods and services, make investments, and pay their taxes. Debt as a percentage of total personal income tells us how affordable debt is based on the income characteristics of a city or town.

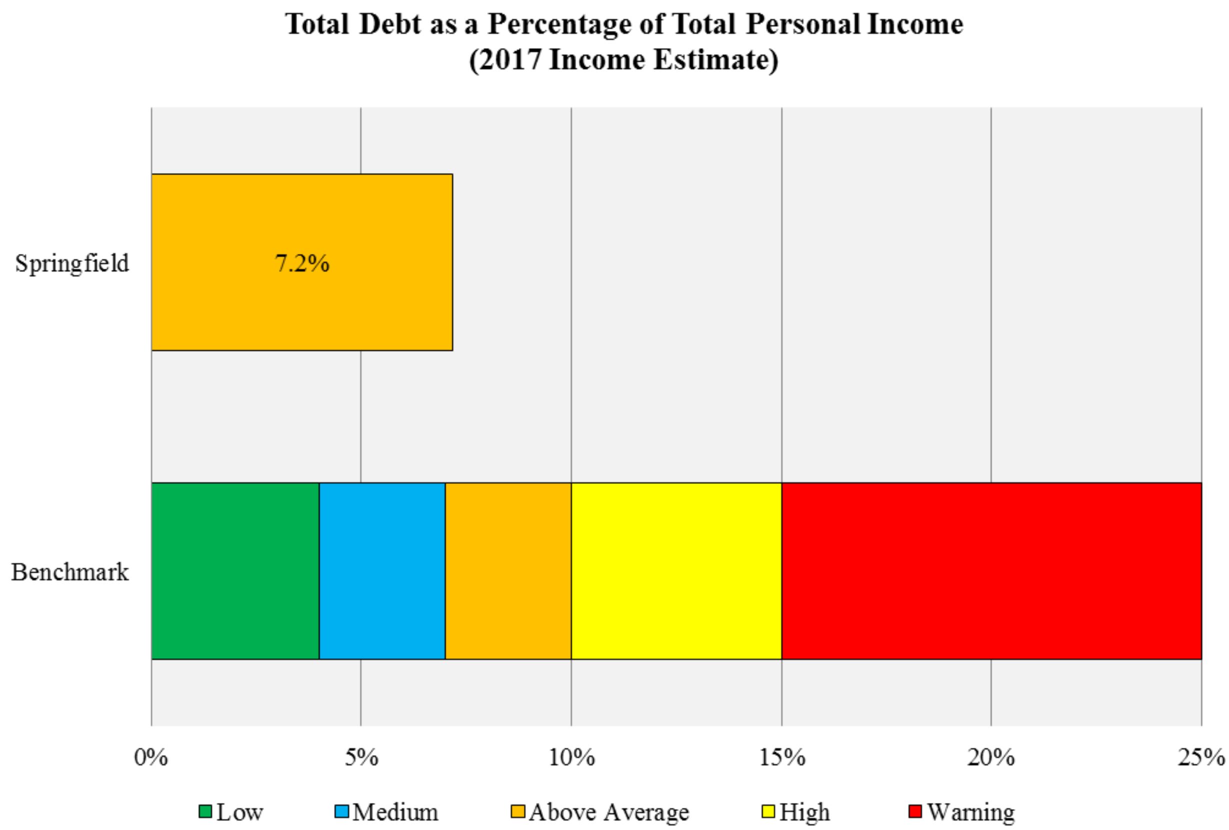

Figure 14: Ratio of debt to personal income.

Total Outstanding Debt Per Capita as a Pecentage of Total Personal Income Per Capita		
Total Outstanding Debt Per Capita	$	1,300.41
2017 Per Capita Income	$	18,133
Total Outstanding Debt Per Capita as a Percentage of Total Personal Income Per Capita		**7.2%**

Source: US Census Bureau, MA Division of Local Services

Figure 15: Calculation of debt to personal income.

Springfield's ratio of debt to personal income is considered just slightly "above average" by credit rating agency standards. This means that the City's debt can be considered a large share of a resident's income. Unlike the prior measure, however, this does not examine the cost of the debt, but focuses on the amount of debt issued. In other words, this measure does not take into account the net debt service or timing of debt payments.

This year, when net debt is factored, the percentage of Total Personal Income is increased to 8.5% because the City's total outstanding debt (principal) is much less than the total net debt. In prior years, the City received reimbursements from the MSBA which effectively made the total outstanding principal and the net debt very close. In March 2017 refunding, the City refunded $48.5 million of school debt originally issued in 2007. As part of this refunding, the City received $22.6 million of lump-sum payments from the Massachusetts School Building Authority (MSBA) rather than spreading the payments out. This one-time payment means that the City no longer receives the MSBA reimbursements, causing an increase in the net debt and the percent of debt per person.

The ratio of debt to personal income appears to be less favorable than that of debt to total property value, which indicates a disparity between home values and income. This variance is caused by higher commercial and industrial property values that are included in the debt to total property value but not in the debt to personal income ratio. The City would not be able to provide the level of services and investment in infrastructure without business property tax revenue. This disparity highlights the need for economic development to be a top priority of the City.

Overall Net Debt as a percentage of Full Value

Overall Net Debt as a percentage of full value, or sometimes referred to as the "Debt Burden" of the community, measures the value of a city's debt compared to the value of a city's assessed real property. In a municipal bond issue, a ratio measuring the value of the municipality's net debt compared to the specified value of the real property being purchased as assessed for tax purposes.

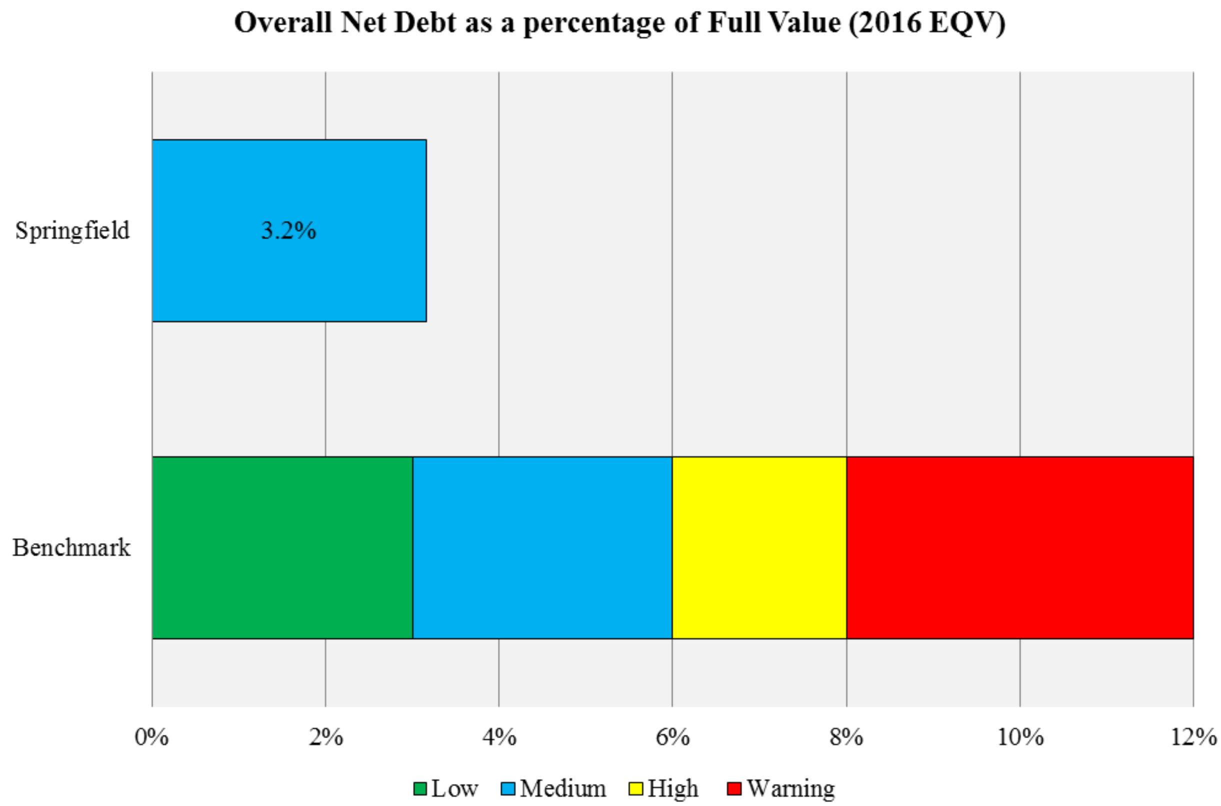

Figure 16: Ratio of Net Debt to EQV.

Overall Net Debt as a percentage of EQV	
Total Outstanding Net Debt	$ 237,597,714
2016 EQV (Equalized Valuation)	$ 7,518,915,400
Overall Net Debt as a percentage of EQV	**3.2%**

Source: First Southwest, MA Division of Local Services

Figure 17: Calculation of net debt to EQV.

This is one of the factors which determine the quality of a municipal bond issue. The lower the City's debt is relative to the assessed value of its property, the less risky its bonds are deemed to be. Ultimately, the more leveraged a tax base is, the more difficult it is to afford additional debt. Debt burdens that range from 3-4% tend to be viewed as average. The City's level of debt burden is 3.2% which is considered average by most rating agencies. Last year, this ratio considered low at 2.9% because the City had a lower outstanding net debt ($204.9M). With the sale of bonds in February and March of 2017, the City's net debt was increased thereby increasing the overall net debt as a percentage of EQV.

Conclusion

Since Fiscal Year 2005, continuing through present day, the City of Springfield has strengthened its financial position by not only instituting clear and strict financial policies, but also passing responsible budgets and a comprehensive five-year capital investment plan; all within the fiscal constraints illustrated in this debt affordability analysis. The City has paid particular attention to the debt policies that allow the City to borrow for specific projects and pay off the debt in a timely manner.

During our last debt issuance in 2017, Standard and Poor's (S&P) affirmed the City of Springfield's AA- program rating, with a stable outlook, a high investment grade. This demonstrates that Standard & Poor's strongly believes in the City's financial management and ability to make difficult decisions to balance the budget. S&P credited the City for having strong budgetary flexibility, with an available fund balance in fiscal 2016 of 9.7% of operating expenditures, very strong management with "strong" financial policies and practices, and an experienced and capable management team. The S&P rating continues to be the highest rating in the City's recorded history, and one that the City has maintained for the last four years. Credit ratings has an integral role in the municipal bond market and are one factor that affects the City's cost of funds on debt offerings.

The debt service illustrates the City's ability to finance debt within its current budget as a percentage of general fund expenditures. This is the most immediate measure outlining the ability to pay; however, it only examines the ability to pay for debt within a community's existing budget. With only 4.5% of the Fiscal Year 2018 budget dedicated to debt service, the City's measure of debt service as a percentage of General Fund expenditures is strong. This measure has been trending down over the last four fiscal years (6.5% in FY15, 5.8% in FY16, and 5.3% in FY17) due to a decrease in total debt service and an increase in the City's general fund revenue. The improvement in the debt service ratio is attributable to the decrease of outstanding debt and an increase in the City's budgeted general fund.

According to the measures presented in this analysis, the City is in a solid debt position but can improve its standing even further. One way to bring the City more in line with its debt policies is to foster an environment that promotes jobs and increase citizens' wealth. These policies help decrease the percentage of debt per total income and decrease debt per capita. This will bring Springfield more in line with other communities in the Commonwealth and have the desired affect of increasing the City's financial standing.

With help from the Federal Emergency Management Agency (FEMA), Massachusetts Emergency Management Agency (MEMA) and the MSBA most of the costs will be reimbursed. What remains will have to be paid for by Springfield and added to its capital liability. There are four projects that the City issued debt for that will leverage over $18.9 million in FEMA and MEMA funding. Furthermore, ten schools are currently being partially reimbursed for window, door, and roof projects. The City is currently discussing an additional ten schools for the replacement of roofs, windows, and doors to be decided upon in February 2018.

Additionally, in November 2014, the Massachusetts Gaming Commission officially awarded MGM with a resort-casino license, signaling the green light for the $950.0 million MGM Springfield Casino project. The host community agreement outlines the financial impact that MGM Springfield will have on the City, totaling over $25 million in annual payments once the resort casino opens. In the meantime, the City can expect annual revenue increases averaging $5.0 million, which began in fiscal year 2016.

In February 2017, the City issued $44.3 million of debt for multiple completed and on-going projects. In order to address high priority capital needs, Springfield issued short and long term debt, along with a combination of MSBA, FEMA, Pay-Go, unexpended bond proceeds, and grant funding to finance over $105.8 million of capital improvement projects.

Furthermore, the City will issue Bond Anticipation Notes (BANs) in the spring of 2018 to address the Department of Revenue's (DOR) requirement to extinguish the deficits. We continue to seek reimbursement from the MSBA, FEMA, MEMA, and various grants until projects are complete. In the interim, the City continues to monitor its cash flows and process payments in a timely manner. Additionally, the City is preparing to issue long term debt in FY19 for projects are that are currently in progress. These projects include the building of the East Forest Park Library, the Culinary and Nutrition Center (Phase II), the renovation of Riverfront Park, various MSBA school improvement projects, and the feasibility study for the replacement of Brightwood Elementary School.

The City is steadily and strategically moving in the right direction. Our high credit rating allows us to pay back loans at a lower interest rate which in turn, allows the City to issue more debt for citywide projects. The theory is that the more capital projects the City can afford to do, the more economic development will ensue. When we invest into and grow our economy, the spin off effects are new business, a rise in property values, and improved infrastructure – resulting in better maintenance of streets, parks, libraries, and public buildings that are available to City residents. A healthy economy positively impacts school graduation rates, job creation which lowers poverty levels from unemployment, and crime. All of these effects increase citizens' moral and make Springfield a more attractive city for current and future residents.

Appendix A
Debt Analysis Definitions

Consistent with the City's financial policies as well as standard business practices, the City of Springfield has only issued debt to finance capital investment. Appendix B of this report is a summary of all projects financed by debt that are currently outstanding. Each of these projects is a capital project, and the expenditures are considered capital investments.

The City of Springfield defines **capital** as buildings, facilities, land, infrastructure or major equipment with an estimated useful life of at least ten years and costs at least $25,000. Similarly, any improvements to capital which would extend the useful life of capital being improved by at least five years may be considered capital if it costs at least $25,000.

A **capital investment** is the expenditure of funds to improve existing City infrastructure, extend its useful life, buildings, or acquire new capital assets. This is considered an investment because the funds expended are used to reduce costs and/or improve services over a multi-year timeframe.

Debt Service is the cost of repaying debt that has been issued. This includes principal and interest payments. Move definitions to appendix at end.

Municipal debt: usually bonds and notes – is a tool for financing investments in the infrastructure and capital equipment that permits government to provide services to the public. In its most basic form, debt occurs when a city or town borrows from lenders. The money that is borrowed is usually repaid over a number of years, and the lender usually charges interest to the borrower as compensation for allowing someone else to use their money. To begin to understand municipal borrowing, a few key terms are important:

Bond: A long-term financing tool that allows a community to borrow money to finance certain investments. Municipal bonds in Massachusetts are generally issued with a fixed interest rate and carry a term of between 10 and 30 years.

Note: A financing tool generally used for short-term needs, such as "bridge financing" during construction. In Massachusetts, notes are generally issued as one-year debt which can be "rolled" for a maximum of five years.

Term: The length of time a bond or note is outstanding. In other words, if a community borrows money for 20 years to finance the construction of City Hall, the "term" of the debt is 20 years. In five years, the "remaining term" would be 15 years.

With rare exception – exceptions which are authorized by the Commonwealth on a case-by-case basis through special legislation – municipal debt can only be incurred for investment in the capital needs of a community. State finance law permits communities to issue debt for the following purposes:

Public Works

- Construction and reconstruction of roads, bridges, sidewalks, walls and dikes, and for the acquisition of land
- Construction and reconstruction of municipal buildings, including schools
- Traffic signals, public lighting, fire alarm and police communication equipment

Municipal Equipment

- Departmental equipment, including fire equipment and heavy equipment such as graders, street sweepers, trash trucks, and semi-automated recycling trucks.
- Costs for design, development and purchase of computer software and equipment

Energy

- Energy conservation, to pay for energy audits or to implement alternative energy technologies

Environmental

- Asbestos abatement in municipal buildings
- Preservation and restoration of lakes and ponds

Recreational

- Construction of parks and playgrounds
- Construction of skating rinks, outdoor swimming pools, golf courses, tennis courts and other outdoor recreational facilities

Debt should be issued to finance capital improvements that will maintain or improve the rate of return on taxpayer dollars. Stated another way, debt should be issued to finance capital projects that prevent things from getting worse, make things better or improve operations, services or efficiency.

There are a number of reasons to issue debt to finance capital investment. As the City recovered from the June 2011 tornado and October 2011 snow storm, certain projects, such as the construction and reconstruction of the heavily damaged Elias Brookings Elementary and Mary Dryden Elementary Schools, could only be afforded by spreading their cost over many years. The MSBA Grant Program requires the City to appropriate the full cost of the project, before any reimbursements from MSBA can be requested, which required the issuance of debt.

The issuance of debt to finance projects with a long life is also considered "fair." This equity concern is grounded in the argument that today's taxpayers should not pay the entire cost of projects that will benefit future residents; rather, the people who benefit from the project should pay for its costs. As benefits from the investment will accrue over time, the costs should be paid over time as well. This requires the issuance of debt.

As an example, the City has bonded for the construction of a new Brookings Elementary School that could provide educational services for 50 years. It would not be "fair" to finance the project through direct cash appropriation because today's taxpayers would pay for its entire cost. Those who moved into Springfield in two years could receive 48 years of benefit without paying any of the cost, and those who moved out of Springfield in five years would have paid 50 years of cost but received only five years of benefit.

Similarly, it would not be "fair" or cost effective to bond for the project and structure the debt in such a way that the City would not pay the starting costs associated with the construction until 20 years from now. In other words, as the City issues debt, it begins paying back the principal and interest as to not back load the debt service schedule for future years to fund. The City's financial policies require the City to structure its debt in such a way that the City pays for the construction based on the depreciation of that building.

Debt management is the application of financial knowledge to ensure that our debt is structured in the manner that saves as much money as possible for our residents and protects our taxpayers from the risks associated with debt. Proper debt management can help the City take advantage of opportunities that suddenly arise and can help us predict and resolve problems before they occur. Specifically, proper debt management allows the City to plan additional debt issuances. The benefit of this is to allow the City to determine those projects that would be viewed as top priorities.

Debt management also helps a community ensure the cost of its debt is fair and equitable. Part of this fairness is issuing debt whose term does not exceed the useful life of the asset it finances. This reduces overall costs by placing a limit on the term of the debt and ensures that taxpayers will not be required to pay for assets that no longer exist, and therefore are no longer providing a public benefit.

Proper debt management should incorporate communication with the public to ensure the people we serve are fully informed of the ways in which their government is financed. This analysis continues the City's efforts to improve communication about public finances.

Appendix B
Current Outstanding Debt Issuances

City of Springfield, Massachusetts

Long-Term Debt Outstanding as of June 30, 2017

General Fund Tax-Supported

	Excludes QSCB		QSCB			
Date	Principal	Interest	QSCB Interest	Required Sinking Fund Deposits	Federal Subsidy (1)	Net Existing Debt Service
06/30/2018	18,445,000.00	7,016,128.22	1,071,840.00	776,910.95	(966,442.40)	26,343,436.77
06/30/2019	19,110,000.00	6,252,318.94	1,071,840.00	776,910.95	(966,442.40)	26,244,627.49
06/30/2020	18,845,000.00	5,547,881.44	1,071,840.00	776,910.95	(966,442.40)	25,275,189.99
06/30/2021	17,800,000.00	4,754,193.94	1,071,840.00	776,910.95	(966,442.40)	23,436,502.49
06/30/2022	16,230,000.00	3,976,981.44	1,071,840.00	776,910.95	(966,442.40)	21,089,289.99
06/30/2023	16,440,000.00	3,283,956.44	1,071,840.00	776,910.95	(966,442.40)	20,606,264.99
06/30/2024	10,140,000.00	2,694,456.44	1,071,840.00	776,910.95	(966,442.40)	13,716,764.99
06/30/2025	7,530,000.00	2,312,306.44	1,071,840.00	776,910.95	(966,442.40)	10,724,614.99
06/30/2026	7,250,000.00	1,983,331.44	1,071,840.00	776,910.95	(966,442.40)	10,115,639.99
06/30/2027	7,245,000.00	1,668,906.44	1,071,840.00	776,910.95	(966,442.40)	9,796,214.99
06/30/2028	5,490,000.00	1,390,131.44	-	-	-	6,880,131.44
06/30/2029	5,480,000.00	1,186,456.44	-	-	-	6,666,456.44
06/30/2030	5,095,000.00	1,002,756.44	-	-	-	6,097,756.44
06/30/2031	4,905,000.00	852,756.44	-	-	-	5,757,756.44
06/30/2032	4,600,000.00	705,756.44	-	-	-	5,305,756.44
06/30/2033	4,595,000.00	560,756.40	-	-	-	5,155,756.40
06/30/2034	4,445,000.00	416,556.40	-	-	-	4,861,556.40
06/30/2035	4,430,000.00	272,075.06	-	-	-	4,702,075.06
06/30/2036	2,345,000.00	156,934.38	-	-	-	2,501,934.38
06/30/2037	2,245,000.00	74,987.50	-	-	-	2,319,987.50
Total	$ 182,665,000.00	$ 46,109,628.12	$ 10,718,400.00	$ 7,769,109.50	$ (9,664,424.00)	$ 237,597,713.62

(1) Does not reflect an assumption regarding reduced subsidies as a result of sequestration.
prepared by FirstSouthwest, a Division of Hilltop Securities Inc.

Par Amounts Of Selected Issues June 30, 2017	Amount
April 15 2009 Series A SQ -White Street Fire Station (ISQ)..	920,000
April 15 2009 Series A SQ -Technology (ISQ)...	40,000
April 15 2009 Series A SQ -Chapman Valve Eco. Dev. (ISQ)...	170,000
April 15 2009 Series A SQ -Old First Church (ISQ)...	200,000
April 15 2009 Series A SQ -Forest Park Maintenance (ISQ)...	130,000
April 15 2009 Series A SQ -Administrative Expenses (ISQ)..	70,000

April 15 2009 Series A SQ -Van Horn Dam Study (ISQ)	20,000
June 24 2010 QSCB (Taxable)	17,864,000
December 20 2012 SQ Refunding -Adv Ref July 7 2005 Remodel Public Buildings (ISQ)	497,000
December 20 2012 SQ Refunding -Adv Ref July 7 2005 Dep.Equip.Fac.Mgmt & Park(ISQ)	118,000
December 20 2012 SQ Refunding -Adv Ref July 7 2005 Public Building Reno (ISQ)	1,886,000
December 20 2012 SQ Refunding -Adv Ref July 7 2005 Roof Repairs - School (ISQ)	389,000
December 20 2012 SQ Refunding -Adv Ref July 7 2005 Boston Road/Parker St (ISQ)	94,000
December 20 2012 SQ Refunding -Adv Ref July 7 2005 Public Build.ADA Require (ISQ)	945,000
December 20 2012 SQ Refunding -Adv Ref July 7 2005 Repairs to Public Build (ISQ)	916,000
December 20 2012 SQ Refunding -Adv Ref July 7 2005 Repairs to School Build (ISQ)	444,000
December 20 2012 SQ Refunding -Adv Ref July 7 2005 Emergency School Repair (ISQ)	945,000
December 20 2012 SQ Refunding -Adv Ref July 7 2005 Library & Museum Remodel (ISQ	12,000
December 20 2012 SQ Refunding -Adv Ref July 7 2005 Repairs to Muni Garage (ISQ)	3,419,000
December 20 2012 SQ Refunding -Adv Ref July 7 2005 Final Phase Tapley St (ISQ)	994,000
December 20 2012 SQ Refunding -Adv Ref July 7 2005 School Build Repairs (ISQ)	1,363,000
December 20 2012 SQ Refunding -Adv Ref July 7 2005 Public Building Repairs (ISQ)	232,000
December 20 2012 SQ Refunding -Adv Ref July 7 2005 Rebecca Johnson School (ISQ)	463,000
December 20 2012 SQ Refunding -Adv Ref July 7 2005 Demo of Former Tech HS (ISQ)	1,010,000
December 20 2012 SQ Refunding -Adv Ref July 7 2005 Facility Construction (ISQ)	99,000
December 20 2012 SQ Refunding -Adv Ref July 7 2005 Landfill Closure (OSQ)	2,106,000
December 20 2012 SQ Refunding -Adv Ref July 7 2005 Departmental Equip (ISQ)	131,000
December 20 2012 SQ Refunding -Adv Ref July 7 2005 Urban Renewal 1 (OSQ)	298,000
December 20 2012 SQ Refunding -Adv Ref July 7 2005 Park Improve 1 (ISQ)	866,000
December 20 2012 SQ Refunding -Adv Ref July 7 2005 Park Improve 2 (ISQ)	1,806,000
December 20 2012 SQ Refunding -Adv Ref July 7 2005 Cyr Arena (ISQ)	272,000
December 20 2012 SQ Refunding -Adv Ref July 7 2005 Fire/Safety Complex (ISQ)	851,000
December 20 2012 SQ Refunding -Adv Ref July 7 2005 Library & Museum (ISQ)	1,277,000
December 20 2012 SQ Refunding -Adv Ref July 7 2005 Urban Renewal 2 (OSQ)	1,281,000
December 20 2012 SQ Refunding -Adv Ref July 7 2005 Park Improve 3 (ISQ)	396,000
February 12 2015 Series A SQ -Forest Park Middle School Renovation (OSQ)	3,140,090
February 12 2015 Series A SQ -Landfill Closure (OSQ)	1,000,000
February 12 2015 Series A SQ -Elias Brookings Elementary School Replace. (OSQ)	1,617,570
February 12 2015 Series A SQ -Mary Dryden Veterans Memorial School Remodel (OSQ)	2,176,784
February 12 2015 Series A SQ -Union Station (OSQ)	2,200,000
February 12 2015 Series A SQ -Central HS Science Lab Remodeling (OSQ)	6,112,627
February 12 2015 Series A SQ -Boston Rd. Corridor Improvements I (ISQ)	4,500,000
February 12 2015 Series A SQ -Boston Rd. Corridor Improvements II (ISQ)	1,500,000
February 12 2015 Series A SQ -School Roof Replacement - HS of Science/Tech (OSQ)	610,350
February 12 2015 Series A SQ -Ells School Roof Replacement (OSQ)	200,000
February 12 2015 Series A SQ -South End Middle School Roof Replacement (OSQ)	153,381
February 12 2015 Series A SQ -Springfield Public Day HS Roof Replacement (OSQ)	179,157
February 12 2015 Series A SQ -Pine Point Library Design & Construction I (ISQ)	750,000
February 12 2015 Series A SQ -Pine Point Library Design & Construction II (ISQ)	650,000
February 12 2015 Series A SQ -Chestnut Middle School Roof (OSQ)	452,644

February 12 2015 Series A SQ -Chestnut Middle School Demolition (OSQ)................................	2,298,967
February 12 2015 Series A SQ -Chestnut Middle School Medallions (OSQ)................................	200,220
February 12 2015 Series A SQ -School Remodeling - Green Communities (OSQ)........................	75,000
February 12 2015 Series A SQ -Putnam School (OSQ)..	5,874,850
February 12 2015 Series A SQ -ESCO Phase II (ISQ)..	9,996,160
February 12 2015 Series A SQ -Parker St. Road Improvements (ISQ).......................................	1,000,000
February 12 2015 Series A SQ -City Hall HVAC Improvements (ISQ)......................................	1,658,000
February 12 2015 Series A SQ -Land Acquisition/Remediation - Catherine St. (ISQ)..................	2,864,200
February 12 2015 Series B SQ (Taxable)..	960,000
February 12 2015 Series C SQ -Adv Ref 2-7-07 Putnam School Renovation (ISQ).....................	509,950
February 12 2015 Series C SQ -Adv Ref 2-7-07 Our Lady Hope School Reno (ISQ)..................	1,550,000
February 12 2015 Series C SQ -Adv Ref 2-7-07 Various School & Water (ISQ).........................	240,050
February 12 2015 Series C SQ -Adv Ref 2-7-07 Demolition 1 (ISQ)..	1,191,850
February 12 2015 Series C SQ -Adv Ref 2-7-07 Demolition 2 (ISQ)..	1,005,000
February 12 2015 Series C SQ -Adv Ref 2-7-07 Demolition 3 (ISQ)..	1,235,000
February 12 2015 Series C SQ -Adv Ref 2-7-07 Financial Software (ISQ).................................	57,895
February 12 2015 Series C SQ -Adv Ref 2-7-07 Fire Station Land Acquisition (ISQ)..................	229,305
February 12 2015 Series C SQ -Adv Ref 2-7-07 Fire Upgrades (ISQ)..	270,000
February 12 2015 Series C SQ -Adv Ref 2-7-07 Library Upgrades (ISQ)....................................	280,000
February 12 2015 Series C SQ -Adv Ref 2-7-07 Police Dept Renovation (ISQ)...........................	2,719,450
February 12 2015 Series C SQ -Adv Ref 2-7-07 Police - Fire Design (ISQ)...............................	748,950
February 12 2015 Series C SQ -Adv Ref 2-7-07 Hope-Baptist Land Acq. (ISQ).........................	149,625
February 12 2015 Series C SQ -Adv Ref 2-7-07 Greenleaf Park Building (ISQ)..........................	38,850
February 12 2015 Series C SQ -Adv Ref 2-7-07 Blunt Park Renovation (ISQ)...........................	10,100
February 12 2015 Series C SQ -Adv Ref 2-7-07 Treetop Park Renovation (ISQ).........................	125,000
February 12 2015 Series C SQ -Adv Ref 2-7-07 Marshall Roy Park Renovation (ISQ)................	115,000
February 12 2015 Series C SQ -Adv Ref 2-7-07 Land Acquisition (ISQ)....................................	149,650
February 12 2015 Series C SQ -Adv Ref 2-7-07 Project Management (ISQ)..............................	96,850
February 12 2015 Series C SQ -Adv Ref 2-7-07 ESCO (ISQ)...	7,462,475
October 1 2015 SQ -Ref July 2005 Adv Ref 98 Land Acq & Apprais (ISQ)...............................	270,000
October 1 2015 SQ -Ref July 2005 Adv Ref 98 School Construction (OSQ)...............................	7,830,000
October 1 2015 SQ -Ref July 2005 Adv Ref 99 School 1 (OSQ)..	6,790,000
October 1 2015 SQ -Ref July 2005 Adv Ref 99 Chestnut School Land (ISQ...............................	320,000
October 1 2015 SQ -Ref July 2005 Adv Ref 99 Urban Renewal (OSQ).....................................	1,845,000
October 1 2015 SQ -Ref July 2005 Adv Ref 99 Demolition (OSQ)...	555,000
October 1 2015 SQ -Ref July 2005 Adv Ref 99 Public Building 1 (ISQ).....................................	310,000
October 1 2015 SQ -Ref July 2005 Adv Ref 99 Public Building 2 (ISQ).....................................	345,000
February 23 2017 -Emergency Borrowing (Tornado/ Snowstorm) (OSQ)..................................	4,079,300
February 23 2017 -School Dense Wireless (Hardware) (ISQ)..	851,500
February 23 2017 -School Dense Wireless (Software) (ISQ)...	1,173,900
February 23 2017 -Kennedy School - Windows & Doors (ISQ)...	1,364,500
February 23 2017 -Kensington School - Windows & Doors (ISQ)...	463,100

February 23 2017 -Daniel Brunton Elementary School (ISQ)	504,200
February 23 2017 -Mary M. Walsh School - Windows & Doors (ISQ)	500,700
February 23 2017 -Public Day High School - Windows & Doors (ISQ)	319,000
February 23 2017 -STEM Middle School - Roof Rpelacement (ISQ)	397,000
February 23 2017 -Food Service Building (ISQ)	6,645,500
February 23 2017 -50 East Street Planning (ISQ)	615,700
February 23 2017 -50 East Street Renovation (ISQ)	7,978,400
February 23 2017 -Senior Center Planning (ISQ)	758,900
February 23 2017 -Senior Center Construction (ISQ)	3,407,750
February 23 2017 -South End Community Center Planning 1 (ISQ)	593,500
February 23 2017 -South End Community Center Planning 2 (ISQ)	92,000
February 23 2017 -South End Community Center Construction (ISQ)	3,364,000
February 23 2017 -Skill & Technical Training Facility (ISQ)	1,638,000
February 23 2017 -ECOS (ISQ)	1,411,700
February 23 2017 -Police Vehicles 2017 (ISQ)	1,016,000
February 23 2017 -DPW Vehicles 2015 (ISQ)	817,300
February 23 2017 -Landfill (Bondis Island) (OSQ)	1,736,600
February 23 2017 -Demolition 1 (ISQ)	467,300
February 23 2017 -Demolition 2 (ISQ)	493,300
February 23 2017 -Demolition 3 (ISQ)	921,000
February 23 2017 -Roads/Sidewalks 1 (ISQ)	2,436,500
February 23 2017 -Roads/Sidewalks 2 (ISQ)	258,350
March 15 2017 -Cur Ref Feb 7 07 Adv Ref 01 Chestnut School (ISQ)	4,767,100
March 15 2017 -Cur Ref Feb 7 07 Adv Ref 01 Commerce School (ISQ)	1,442,250
March 15 2017 -Cur Ref Feb 7 07 Adv Ref 01 Aerial Mapping (ISQ)	149,150
March 15 2017 -Cur Ref Feb 7 07 Adv Ref 01 Park Improvements(ISQ)	162,950
March 15 2017 -Cur Ref Feb 7 07 Adv Ref 01 GIS (ISQ)	79,055
March 15 2017 -Cur Ref Feb 7 07 Adv Ref 01 Park Restoration (ISQ)	263,100
March 15 2017 -Cur Ref Feb 7 07 Adv Ref 01 Street Construct (ISQ)	418,575
March 15 2017 -Cur Ref Feb 7 07 Adv Ref 01 Department Equip (ISQ)	204,725
March 15 2017 -Cur Ref Feb 7 07 Adv Ref 01 Street Construct2(ISQ)	210,475
March 15 2017 -Cur Ref Feb 7 07 Adv Ref 01 Sidewalk Const (ISQ)	167,150
March 15 2017 -Cur Ref Feb 7 07 Adv Ref 01 Harris School Des(ISQ)	188,900
March 15 2017 -Cur Ref Feb 7 07 Adv Ref 01 VanSickleSchConst(ISQ)	1,208,900
March 15 2017 -Cur Ref Feb 7 07 Adv Ref 01 Bowland LC Des (ISQ)	110,000
March 15 2017 -Cur Ref Feb 7 07 Adv Ref 01 Bowland LC Land (ISQ)	102,575
March 15 2017 -Cur Ref Feb 7 07 Adv Ref 01 Harris Sch Const (ISQ)	1,310,125
March 15 2017 -Cur Ref Feb 7 07 Adv Ref 01 Library (ISQ)	1,186,100
March 15 2017 -Cur Ref Feb 7 07 Adv Ref 01 Bowland LC Const (ISQ)	1,018,000
March 15 2017 -Cur Ref Feb 7 07 Adv Ref 01 Fire&SafetyComplex(ISQ	1,474,795
March 15 2017 -Cur Ref Feb 7 07 Adv Ref 01 Demolition (ISQ)	755,750
March 15 2017 -Cur Ref Feb 7 07 Adv Ref 03 Harris School (ISQ)	988,100
March 15 2017 -Cur Ref Feb 7 07 Adv Ref 03 Bowland LC (ISQ)	1,571,725
March 15 2017 -Cur Ref Feb 7 07 Adv Ref 03 Van Sickle School(ISQ)	6,185,500
March 15 2017 -Union Station	3,115,000
TOTAL PRINCIPLE	**200,529,000**