

## EXECUTIVE SUMMARY

### The Recommended Capital Plan

The Town Charter requires that the Town Manager, after consultation with the Board of Selectmen, submit in writing to the Board of Selectmen a careful, detailed estimate of the recommended capital expenditures showing specifically the amount necessary to be provided for each office, department and activity and a statement of the amounts required to meet the debt service requirements or other indebtedness of the Town. This plan includes the proposed FY2019 Capital Budget, which is recommended to the Finance Committee and ultimately to Town Meeting for consideration. The projects presented for FY2020-FY2023 reflect an assessment by municipal departments and the School Committee of future capital needs and are primarily shown for planning purposes. While many of these projects may ultimately be recommended for funding, the plan is a fluid one, and projects may be added and deleted from the list as circumstances change. The proposed financing plan for the recommended FY2019 capital budget is shown in Table 1.

**Table 1**

Fund	Cash	Debt	Other	Total
General Fund	\$9,183,869	\$72,511,000	\$1,855,000	\$83,549,869
Community Preservation Fund	\$2,820,000			\$2,820,000
Solid Waste Enterprise	\$345,360	\$645,000		\$990,360
Sewer Enterprise	\$2,301,111			\$2,301,111
Water Enterprise	\$3,311,048			\$3,311,048
<b>Total (all funds)</b>	<b>\$17,961,388</b>	<b>\$73,156,000</b>	<b>\$1,855,000</b>	<b>\$92,972,388</b>

### FY2019 Highlights

A capital expenditure is defined by the Needham General By-laws as the acquisition, construction, renovation, betterment, or improvement involving land, public buildings and facilities; water and sewer system laterals, mains and appurtenances; and equipment or vehicles; provided that the cost is \$25,000 or more and the improvement will have a useful life of five years or more; or any planning, feasibility, engineering or design study in preparation for such capital expense. The FY2019 Capital Plan includes continued focus on the buildings in the facility financing plan proposed for renovation and/or reconstruction in the near future: replacement of the Hillside School, Rosemary Recreation Complex, Public Safety Building, Fire Station #2, DPW Complex, Needham High School, Emery Grover, and the Memorial Park Complex. The Williams School, the Rosemary Recreation Complex, and the High School classroom addition projects have all been funded and are underway. Construction funding for the Public Safety Buildings, Fire Station #2, and the Memorial Park building is proposed for FY2019. The replacement of the DPW fueling station is complete, and funding for the design and construction of a storage facility on Central Avenue is also proposed for FY2019. Finally, additional feasibility funding for the Emery Grover Building is proposed for FY2019. FY2019 is the first year in which the consolidation of building maintenance functions from Public Facilities to the Department of Public Works is presented in the Capital

Improvement Plan.

## **Capital Planning 101**

### **Capital Improvement Plan**

The Capital Improvement Plan (CIP) is a multi-year tool used to coordinate the financing and timing of major public improvements for the Town of Needham. It contains a list of capital projects proposed for the Town within the next five years and reflects the recommendations of citizens, boards, commissions, and staff from each of the Town departments. The CIP identifies each proposed project and presents a summary description, estimate of cost, method of financing, and a schedule of implementation. Capital planning helps ensure that the community is positioned to:

- preserve and improve its basic infrastructure through construction, rehabilitation and maintenance;
- maximize the useful life of capital investments by scheduling major renovation, rehabilitation, or replacement at the appropriate time in the life-cycle of the facility or equipment;
- identify and examine current and future infrastructure needs and establish priorities among projects so that available resources are used to the community's best advantage; and
- improve financial planning by balancing needs and resources and identifying potential fiscal implications.

### **Operating Budget and Capital Budget**

The Town's capital budget and operating budget are developed separately but are closely linked. The annual operating budget provides for general municipal service delivery, including personnel, supplies and other contractual services, and certain capital equipment. Most appropriations in the annual operating budget are for a single fiscal year. In contrast, the capital budget is a multi-year budget designed to expend monies which add to the physical assets of the Town. Capital projects typically require expenditures which take place beyond a single fiscal year, funding with debt because of significant costs to be shared by current and future beneficiaries, systematic acquisition over an extended period of time in order to implement major operating systems or programs, and scheduled replacement or maintenance of specific elements of physical assets.

Notwithstanding the differences between the two, the operating and capital budgets are closely interwoven inasmuch as operating costs related to capital projects are estimated and incorporated into the operating budget. Many capital projects will have an impact on operating costs once constructed. Town practice is to project the net effect a capital project will have on the operating budget. While maintenance and repair costs may be lower in a new facility, larger and more modern facilities are often more costly to operate. In addition, since many capital projects are financed through municipal debt, repayment of that debt becomes part of the operating budget and is incorporated into the Town's forecasting models. The necessity to incur some degree of debt in order to finance the CIP carries with it the burden to effectively manage that debt within the Town's financial resources.

### **Best Practices**

The following best practices have been used in the development of the FY2019 operating and capital budgets:

1. Current revenues must be sufficient to support current expenditures.
2. The operating and capital budgets must be developed in conformance with the Town's comprehensive financial policies and must not be reliant on one-time revenue or unsustainable practices.
3. The five year Pro Forma budget must be updated on an annual basis to ensure that the underlying assumptions are adjusted based upon changing conditions and data.
4. Debt must not be used to fund on-going operating expenses, and will only be issued for capital improvements greater than \$250,000 with a useful life of five years or more.
5. The use of Free Cash to fund operations will be minimized by limiting such use to no more than 2% of the prior year's appropriated operating budget, or the actual turn back, whichever is lower.
6. Adequate contingency funds must be maintained.
7. Sufficient maintenance and replacement funds will be allocated to ensure that capital facilities and equipment are properly maintained.
8. The operating and capital budgets must be resilient – allowing the Town to maintain existing service levels, withstand typical local and regional economic disruptions, and meet the demands of natural growth, decline, and change.
9. The operating and capital budgets must be sustainable – meeting the needs of the present without compromising the ability of future generations to meet their own needs.

### **Budget Priorities**

The primary goal of the Board of Selectmen in consideration of the FY2019 operating and capital budgets is the maintenance and optimization of existing Town services. In addition, mindful of the availability of revenue for appropriation, the Board has set the following priorities for FY2019:

1. Support for items that contribute to the achievement of Townwide goals and objectives.
2. Support for a five to ten year plan for the renovation, reconstruction and/or preservation of the Town's capital assets in the most prudent, realistic, and efficient manner.
3. Support for initiatives that contribute to financial sustainability, including the maintenance of a debt service plan that balances capital needs with the Town's ability to pay, identification of alternative funding sources for traditional cash capital needs, evaluation of financing alternatives, and alignment of capital and maintenance needs with appropriate funding sources.
4. Support for initiatives aimed at achieving greater coordination and efficiency among Town departments, and providing adequate resources to address identified service delivery and general administrative needs of the Town in a cost effective manner.
5. Commitment to ensure that not all identified recurring funds are committed for on-going expenses in order to reserve capacity for identified priorities in FY2020 and FY2021 (such as full-day kindergarten and public safety staffing).

### **Financial Benefits of Capital Planning**

Needham's capital planning initiatives have contributed to the successful achievement and maintenance of its AAA bond rating from Standard and Poor's. This bond rating places Needham in the top tier of communities in Massachusetts and allows the Town to borrow at a lower interest rate. Investors and bond rating agencies stress the value of a CIP for a municipality seeking to borrow funds. The absence of a rational, long-term

planning instrument would weigh against the bond rating assigned to Needham by rating agencies and the result would be higher interest rates on bond issues and the diversion of tax dollars to pay for the interest on loans. Another financial benefit of the capital planning process is the avoidance of poorly timed projects. Good planning can ensure that capital improvement efforts are coordinated. In addition, significant savings can accrue to taxpayers when major capital financing is coordinated so that bond issues are sold infrequently, and at times during the economic cycle when the Town can take advantage of low interest rates.

### **Development of the CIP**

The process for preparing the FY2019 - FY2023 Capital Improvement Program and its associated FY2019 Capital Budget involves active participation by the Town Manager, Assistant Town Managers, and requesting departments, boards, committees and commissions. The Capital Budget is prepared in the context of a five-year determination of need by departments and the School Committee, in conjunction with the Town's overall financial capacity to affordably accommodate the required debt service payments. Projected debt service payments and budgetary impacts are forecast annually to help ensure affordability and sustainability of the Capital Improvement Program. The Town's Capital Improvement Policies provide guidance for assessing the capital needs of the Town. These policies, included in Section 6, define capital projects as those items requiring the expenditure of at least \$25,000 and having a useful life of more than five years. Recommended capital project requests are prioritized using the following criteria:

- the project is required to comply with State and/or Federal accessibility standards;
- the project is necessary to protect the health and safety of people; and
- the project is necessary to maintain an existing capital facility, or operation of equipment used in providing Town services.

In addition to the criteria listed above, the Town has a long practice of funding the systematic replacement of obsolete or worn-out equipment, and those items requested for the improvement of operating efficiency and the equitable provision of services.

The development of the CIP occurs over the following approximate timeframe:

*Late Summer* — Following Town Meeting, departments are provided with their previously submitted five year requests for review, update and the addition of the next fifth year. While requests for each year should remain the same as in the initial request, there are occasionally changed circumstances which necessitate alterations to the requests. This information is returned to the Town Manager and staff for review. Also in the summer, the Assistant Town Manager/Finance Director develops and presents a pro forma budget for the ensuing five year period. The pro forma budget is the basis for the determination of the amount of revenue available to support the CIP.

*Autumn* — The Town Manager and staff meet with each department to gain a better understanding of each request.

*Late Autumn/Early Winter* — The Assistant Town Manager/Finance updates the preliminary debt schedules and financial forecasts in order to provide context to the Capital Budget as well as the five-year Capital Improvement Plan, and the Town Manager presents the Board of Selectmen with a proposed five-year plan.

*January* – The Town Manager transmits the Capital Improvement Plan, along with any recommendations made by the Board of Selectmen, to the Finance Committee by the first Tuesday after the first Monday in January.

*January/February/March* — The Finance Committee reviews each project in the capital budget and makes recommendations on items included in the Town Meeting Warrant.

*May* — The capital budget is presented to Town Meeting for approval.

### **Financing of Capital Projects**

The number of capital projects to be funded must be considered in the context of the total operating budget, capital budget needs, and revenue growth. Capital improvement projects are funded through current receipts, reserves, and/or other funds such as grants.

*Current Receipts* – Current receipts include property tax revenue, local receipts (such as fees and charges), and state aid. This plan includes no projects to be funded from current receipts.

*Free Cash* – Free Cash is a function of actual revenue collections in excess of estimates and expenditures less than appropriations. Because Free Cash should not be relied upon as a recurring revenue source, the Town's practice is not to rely upon it as an operating revenue source. In this plan, we have continued the effort to minimize the Town's reliance on free cash to support on-going operations by limiting such use to no more than 2% of the prior year's appropriated operating budget, or the actual turn back, whichever is lower. The recommended plan includes \$9,183,869 to be funded from Free Cash.

*Capital Improvement Fund* – In 2004, the Town created a General Fund Cash Capital Equipment and Facility Improvement Fund (CIF). The purpose of the CIF is to allow the Town to reserve funds to use for general fund cash capital. The CIF may be used in future years to fund the acquisition of new equipment, the replacement of existing equipment, and building and facility improvements which cost less than \$250,000, for which the Town may borrow for a period of five years or more. Projects must be included in the CIP in order to be eligible for funding through the CIF. This plan includes no projects to be funded from the Capital Improvement Fund.

*Capital Facility Stabilization Fund* – In 2007, the Town created a Capital Facility Stabilization Fund to allow the Town to reserve funds for design, maintenance, renovation or reconstruction relating to the structural integrity, building envelope or MEP (mechanical, electrical, plumbing) systems of then existing capital facilities. For this purpose, capital facility refers to any building or structure which is located on Town property and is under the jurisdiction of the Town Manager, including any Town-owned building, structure, room, or space within a building, facility, park or plaza, open space, driveway, landscaped area, or other physical improvements under the administrative control of the Town. This plan includes no projects to be funded from the Capital Facility Stabilization Fund.

*Athletic Facility Improvement Fund* – In 2012, the Town created an Athletic Facility Improvement Fund to reserve funds for the design, maintenance, renovation, reconstruction, or construction of athletic facilities. For the purpose of the fund, athletic facilities include any Town-owned building, structure, pool, synthetic turf and natural grass turf playing field or ball diamond, and associated grounds and parking areas

whose primary purpose is for organized athletic events for Needham children, adults, and school teams. This plan includes \$1,855,000 to be funded from the Athletic Facility Improvement Fund for FY2019.

*Debt Service Stabilization Fund* – The November 2, 2015 Special Town Meeting approved the establishment of a Debt Service Stabilization Fund to set aside funds to be available as necessary to pay certain debt obligations. This fund is intended to be part of the Town's overall planning strategy for addressing capital facility needs. The fund would provide added flexibility to maintain the Town's capital investment strategy by smoothing out the impact of debt payments in years when the debt level is higher than is typically recommended. The fund would also be beneficial at times when interest rates are higher than expected. The plan for the fund is designed to ensure that the monies are not depleted in a single year, and that the amount available for appropriation is known before the budget year begins. All appropriations to and from the fund require Town Meeting action. This plan includes no projects to be financed through use of the Debt Service Stabilization Fund.

*Retained Earnings* – Three of the Town's operations – water, sewer, and solid waste – are accounted for as enterprise funds. The revenues and expenditures of these operations are not commingled with those generated by general fund operations. Generally, each enterprise will generate surplus funds on an annual basis. The Board of Selectmen's retained earnings policies are included in Section 6. The policies contain reserve targets to ensure liquidity and stability of operations. Surplus funds above the target are considered available for appropriation. This plan includes \$5,957,519 in funding from the enterprise fund retained earnings accounts for fiscal year 2019 (RTS - \$345,360, Sewer - \$2,301,111, and Water - \$3,311,048).

*Debt* – The Board of Selectmen's debt management policies (Section 6) provide guidance in translating capital expenditures into annual debt service. Section 2 of this plan contains a graphic presentation of the Town's current debt service and a calculation of the Town's debt burden (annual debt service as a percent of total Town revenues). The figures used in calculating the debt burden are derived from the Town's long-term debt service schedule that is also included in Section 2. This plan includes a recommendation for \$73,156,000 in projects to be funded through General Fund debt (of which \$65,405,000 is in excluded debt) and \$645,000 to be funded through Enterprise Fund debt (RTS) for fiscal year 2019.

*Community Preservation Fund* – The Community Preservation Act (CPA) allows cities and towns to raise monies through a surcharge on the tax levy. These funds may then be used to acquire, create and preserve open space, acquire and preserve historic resources, create, preserve and support community housing, and acquire, create and preserve land for recreational use. The CPA also provides for matching funds from the Commonwealth. The CPA requires that each fiscal year Needham must spend, or set aside for later spending, at least 10% of the annual revenues in the Community Preservation Fund for each of three CPA target areas: open space (but not including land for recreational use), historic resources, and community housing. The remaining 70% may be appropriated at the Town's discretion as long as it is used for the three target areas or recreation. The statute also permits the Town to appropriate up to 5% of the annual revenue estimate for the administrative expenses of the Community Preservation Committee (CPC). Projects submitted for inclusion in the CIP that qualify for CPA funding are forwarded to the CPC for its consideration. This plan includes a recommendation for \$2,820,000 in projects contingent upon Community Preservation Funding cash for FY2019.

*Other Available Funds* – An Available Fund is actual monies which have become available and may be used to fund expenditures. Monies may become available after a project is completed and the cost was less than appropriated, monies that were previously set aside for future expenditure (e.g., stabilization fund), or monies that are received by the Town but must be specifically identified as a funding source in the Town Meeting motion. An available fund may be restricted to certain purposes (e.g. surplus bond proceeds, special stabilization funds, sale of surplus real estate, grants), or may be non-restricted and hence can be appropriated for any legal purpose. Some Available Funds carry over from year to year and others expire at the end of the fiscal year and close out to fund balance. This plan includes no projects to be funded from Other Available Funds in fiscal year 2019, other than the previously mentioned use of the Athletic Facility Improvement Fund.

### **The CIP Is a Flexible Planning Tool**

While much of the Town's budget and financial planning efforts are by necessity focused on one or at most two year intervals, capital planning helps to focus attention on the Town's long-term objectives and financial capacity, and the balance between operating and capital needs. The Town is often faced with the option of reducing its capital plan in order to balance the operating budget. Having a formal and accepted plan helps to maintain a consistent level of spending for capital needs, barring extraordinary circumstances. Individual projects are evaluated against long-term objectives and in relationship to each other. By strategically programming capital projects, the Town can maintain a tolerable level of debt service, and prevent unexpected changes in debt service payments.

## **Investment in Real Property, Facilities and Infrastructure**

Asset preservation – committing necessary resources to preserve, repair, or adaptively re-use current assets – is a high priority for the Town in order to keep the its physical plant and infrastructure in reliable operating condition. While significant investment in many capital facilities is still required or overdue, the Town of Needham has made an extraordinary investment in public infrastructure during the past decade. The Town's success in this area is a direct result of continued and sustained focus on asset evaluation, needs assessment, careful planning, and prioritization. The need for this level of investment in facilities and infrastructure is generally attributable to three factors – the age of the community and its infrastructure and assets, the built environment and amount of lane miles of roadway, and the growth in school age population after the Second World War that resulted in a building boom from 1951 to 1960. After the advent of Proposition 2½ in 1982, the community found it difficult to make necessary investment in its array of school facilities. This resulted in a need for complete replacement or rehabilitation of the entire system beginning in the mid-1990s and continuing today. Finally, based on adoption of and changes to the Community Preservation Act, the Town has made a truly remarkable investment in athletic facility, parks, and recreational amenities including Walker Gordon Field, Greene's Field and Playground, Newman Fields, Eastman Trail, the Rail Trail, the all-abilities trail around the Needham Reservoir, and the reconstruction of the Rosemary Pool and Recreation Complex. Table 2 shows the Town's investment in facilities and infrastructure over the past five years.

**Table 2**

Description	2014	2015	2016	2017	2018	Total	Average
Municipal Facilities	\$2,771,500	\$105,779	\$90,000	\$649,000	\$6,126,000	\$9,742,279	\$1,948,456
Townwide Facilities and Community Services	\$951,828	\$750,219	\$3,513,323	\$756,154	\$17,202,000	\$23,173,524	\$4,634,705
Public Works Infrastructure Program	\$600,000	\$1,760,000	\$3,453,500	\$1,700,000	\$2,011,000	\$9,524,500	\$1,904,900
School Facilities	\$4,292,276	\$200,000	\$9,368,000	\$58,791,714	\$15,168,000	\$87,819,990	\$17,563,998
Drains, Sewer, and Water Infrastructure	\$7,670,900	\$1,283,050	\$2,320,500	\$375,860	\$2,900,000	\$14,550,310	\$2,910,062
<b>Total Appropriations</b>	<b>\$16,286,504</b>	<b>\$4,099,048</b>	<b>\$18,745,323</b>	<b>\$62,272,728</b>	<b>\$43,407,000</b>	<b>\$144,810,603</b>	<b>\$28,962,121</b>

## Investment in Equipment, Technology and Fleet

The position of the Town with respect to its equipment and technology capital investment is also positive. Major categories of this capital spending include Public Safety, Public Works, and Public Facilities fleet and equipment, School and Town-wide technology, and School copiers and equipment. Table 3 shows the Town's investment in these categories of capital spending for the five year period FY2014 through FY2018.

**Table 3**

Description	2014	2015	2016	2017	2018	Total	Average
All Other Functions	\$146,250		\$30,645			\$176,895	\$35,379
Public Facilities & Works	\$480,100	\$29,797	\$144,000	\$120,000	\$162,000	\$935,897	\$187,179
Public Safety	\$27,500				\$167,872	\$195,372	\$39,074
Public School	\$176,145	\$112,000	\$108,145	\$45,000	\$45,000	\$486,290	\$97,258
<b>Equipment</b>	<b>\$829,995</b>	<b>\$141,797</b>	<b>\$282,790</b>	<b>\$165,000</b>	<b>\$374,872</b>	<b>\$1,794,454</b>	<b>\$358,891</b>
All Other Functions	\$30,000	\$130,000	\$30,000		\$145,000	\$335,000	\$67,000
Public Facilities & Works		\$33,000	\$129,500			\$162,500	\$32,500
Public Safety		\$408,615				\$408,615	\$81,723
Public School	\$633,800	\$679,325	\$403,000	\$347,080	\$510,290	\$2,573,495	\$514,699
<b>Technology</b>	<b>\$663,800</b>	<b>\$1,250,940</b>	<b>\$562,500</b>	<b>\$347,080</b>	<b>\$655,290</b>	<b>\$3,479,610</b>	<b>\$695,922</b>
All Other Functions				\$87,353		\$87,353	\$17,471
Public Facilities & Works	\$1,011,000	\$343,572	\$1,146,902	\$730,618	\$640,433	\$3,872,525	\$774,505
Public Safety	\$94,242	\$248,267		\$137,877	\$224,677	\$705,063	\$141,013
Public School					\$99,611	\$99,611	\$19,922
<b>Fleet</b>	<b>\$1,105,242</b>	<b>\$591,839</b>	<b>\$1,146,902</b>	<b>\$955,848</b>	<b>\$964,721</b>	<b>\$4,764,552</b>	<b>\$952,910</b>
<b>Total Appropriations</b>	<b>\$2,599,037</b>	<b>\$1,984,576</b>	<b>\$1,992,192</b>	<b>\$1,467,928</b>	<b>\$1,994,883</b>	<b>\$10,038,616</b>	<b>\$2,007,723</b>



## **Project Summaries – Recommended Projects for Fiscal Year 2019**

### **GENERAL GOVERNMENT**

#### **TOWN OFFICE FURNITURE REPLACEMENT**

The renovated Town Hall opened in October, 2011, and the Public Services Administration Building opened in February, 2010. Furniture in heavy use is in need of replacement. Furniture scheduled to be replaced in FY2019 includes the Selectmen's Chambers conference table and chairs, and furniture in poor and fair condition at the Public Services Administration Building. *(Submitted by: Office of the Town Manager)*

The Town Manager's recommendation for Town Offices Replacement Furniture is \$25,000 to be funded by Free Cash.

#### **TOWN MULTI-FUNCTION PRINTER DEVICES**

This funding will allow for the replacement of multi-function printers throughout the four primary Town locations (Town Hall, Public Services Administration Building, Public Safety, and Center at the Heights) that are obsolete or as part of a planned schedule replacement. In all there are nine of these devices between the buildings with only three of the devices not purchased during a capital project. Though several of these devices are currently over six years old, with one over eight, only one has reached 50% of the anticipated life cycles for each model according to the manufacturer estimated cycles per year. Based on the current usage, the expected life of these devices is between ten and twelve years. However the manufacturer of these devices does not guarantee the availability of parts or consumables past seven years. The cycle for replacement of these multi-function printers is therefore seven years. *(Submitted by: Information Technology Department)*

The Town Manager's recommendation for Town Multi-Function Printer Devices is \$35,600 to be funded by Free Cash in the Tier 2 category.

#### **NON-PUBLIC SAFETY DATA CENTER SERVERS AND STORAGE UNITS**

This funding is for the replacement of hardware within the three Town of Needham data centers. Phase 1 of the project, which is taking place in the current fiscal year (FY2018), includes the replacement of four servers, two storage units, and four switches. Phase 2 of the project will be the replacement of six servers, two storage units, and four switches. Data Center 1 is housed at the Town Hall, Data Center 2 is housed at the Public Services Administration Building, and Data Center 3 is housed at the Center at the Heights. Data Center 1 is the primary data center where the Town Departments access files and programs, the Internet, and network and Internet security takes place. The six servers at Town Hall are physical servers; however three of them maintain and support upwards of 50 virtual servers with corresponding data maintained on the storage units. The other three are for specific software functions. The servers, storage unit, and switches at the Public Services Administration Building act as fail safe in case of the Town Hall's network and infrastructure going offline. The server and storage at the Center at the Heights is where backup data is housed and from there certain segments of the data are migrated off site. All replacements would be

comparable to the current devices being used. Maintaining this hardware at a level that will support the needs of the Town Departments is critical to the Town's business continuity strategy. As equipment gets older it becomes more difficult to maintain the same level of quality and performance as when initially installed, and this directly affects the day-to-day operations of the Town. Unless circumstances require otherwise, FY2019 funding will be for Data Center 1 and Data Center 2 hardware replacement. *(Submitted by: Information Technology Department)*

The Town Manager's recommendation for Non-Public Safety Data Center Servers and Storage Units is \$180,000 to be funded by Free Cash.

## **PUBLIC SAFETY**

### **PERSONAL PROTECTIVE EQUIPMENT - BUNKER GEAR**

This funding is part of an annual program begun in FY2018 to replace Personal Protective Equipment ("PPE" or "bunker gear") for 20% of all firefighting personnel on an annual basis. This is to ensure the life span of the equipment does not exceed the ten year guideline. Ensembles issued prior to the recent purchase of a second set of PPE are approaching this time frame. Bunker gear includes boots, firefighting pants and coat. Firefighting personnel regularly work in toxic environments caused by spills, chemical releases and the products of combustion. Numerous studies have found the number of carcinogens and other toxins associated with the fire ground to be extremely high. Further, the toxicity of these carcinogens appears to be much greater and more concentrated today, due to the widespread use of synthetic and petroleum based building materials and furnishings found in modern construction. These unhealthy contaminants, chemicals, toxins and carcinogens adhere to firefighters' bunker gear, thus creating a lingering exposure concern for not only the firefighters, but to members of the public they serve, as they respond to calls for service. Current safety practices dictate that firefighters be issued two sets of PPE, so that once contaminated the equipment can be washed in extractors and dried in dryers designed specifically for that purpose. Maintaining a second set of PPE allows for contaminated equipment to be washed and dried properly, while allowing personnel to remain available to respond to calls. *(Submitted by: Fire Department)*

The Town Manager's recommendation for Personal Protective Equipment is \$43,424 to be funded by Free Cash.

### **POLICE USE-OF-FORCE TRAINING SIMULATOR**

This funding will support the acquisition of an interactive Use-Of-Force training simulator, which will provide a platform for realistic, stress-induced training. The system provides scenarios that enhance marksmanship skills and improve decision-making for the appropriate selection of force to be used. The simulator provides trainees with the ability to practice posture, verbalization, soft hand skills, impact weapons, chemical spray and lethal force. The system also provides a means for officers to practice de-escalation skills. Each trainee's scenario and reaction can be analyzed and then reviewed for training purposes. The system is portable and can be easily customized to meet the needs of the Department. The benefit of having an effective, realistic training program is to enhance public safety as well as reduce liability risks. *(Submitted by: Police Department)*

The Town Manager's recommendation for Police Use-Of-Force Training Simulator is \$47,000 to be funded by Free Cash.

## **PUBLIC SAFETY COMPLEX/STATION #2**

The Public Safety Building, located at the intersection of Chestnut Street and School Street, opened in 1931, and was renovated in 1988-1989. Fire Station #2, located at the intersection of Highland Avenue and Webster Street, opened in 1949 and was also renovated in 1988-1989. The amount of space that was originally allocated within both buildings for the Police and Fire Departments is no longer sufficient to accommodate changes in operations, changing personnel needs, technology upgrades, and security improvements, and neither station is fully accessible for individuals with limited mobility.

In 1950, 19 years after the station opened, the Police Department had 25 sworn officers and responded to 1,774 calls. By 2015, the number of sworn officers was 49 and call volume had increased to 31,610. The proposed program meets many deficiencies identified in the Police Department, including the lack of adequate locker facilities for female officers, evidence and property storage, interview rooms and interview recording technology, public meeting space, records storage, dispatch areas, patrol and administrative office space, and report writing space. The prisoner holding cells are outdated and inadequate, and the current prisoner booking area is unsafe due to its size and configuration. The building lacks the ability to handle technology improvements due to available space needed, while the roof continues to leak into the records/server room on the second floor. The current climate control only works sporadically throughout the building creating numerous temperature variations. In 1950, the Fire Department had 27 firefighters. Call volume data is not available for 1950, but the Department responded to 600 calls in 1960. By 2015, the number of sworn firefighters was 64 and the Department responded to 3,915 calls. The proposed program meets many deficiencies identified in the Fire Department, including apparatus bays that are too small for modern fire trucks, insufficient area for performing equipment maintenance and repair, lack of facilities for storing and cleaning turnout gear, minimal existing office space, inadequate facilities for firefighter support such as bunkrooms, toilets and showers, and insufficient storage space for files and equipment.

The November 2, 2015 and February 10, 2016 Special Town Meetings and the 2017 Annual Town Meeting approved a total of \$390,000 in funding for feasibility studies and schematic design. The October 2, 2017 Special Town Meeting approved an appropriation of \$3,750,000 for full design of the project, which will be presented to the fall, 2018 Special Town Meeting for construction appropriation, and to the voters at the November 6, 2018 State election for debt exclusion funding. *(Submitted by: Police and Fire Departments)*

The Town Manager's recommendation for Public Safety Complex/Station #2 is \$65,405,000 to be financed by Excluded Debt.

## **PUBLIC SAFETY MOBILE DEVICES**

This funding will replace laptops and tablets that are used in the Needham Police and Fire Department Vehicles. The hardware is used to access multiple applications during daily operations. The hardware communicates with the Public Safety CAD software as well as State and Federal databases. The devices themselves are hardened military specification hardware manufactured for above normal use in more intensive environments than normal off the shelf hardware. *(Submitted by: Information Technology Department)*

The Town Manager's recommendation for Public Safety Mobile Devices is \$35,000 to be funded by Free Cash.

## **PUBLIC SCHOOLS**

### **BUILDING MANAGEMENT SYSTEM UPGRADE**

The Town maintains a Building Management System (BMS) to manage the heating and cooling in all major facilities in Town. All of the buildings constructed since 2009, with the exception of the Newman School, are on the same system. These systems consist of internal sensors in the HVAC components and a backend software product that allows Building Maintenance staff to review and diagnose HVAC issues remotely as well as on-site. This system is critical to the maintenance of healthy air temperatures in the building. This funding will standardize all of the BMS so that only one system is in use. (A part of the Newman School will need to remain on a separate system because of the devices installed at the time of renovation.) This conversion will allow for greater standardization and will change the manner in which HVAC data is communicated. Currently, there are computer interfaces talking to devices within the building and then communicating this information to an outside computer for management. This new software would create a virtualized environment where the software would only be on the back end and no longer on the devices. This will eliminate unnecessary redundancy and help to improve tracking. This will also allow all of the Town's buildings to integrate with the Town's afterhours permitting system, which will reduce the amount of time it takes staff to input irregular schedules and ensure appropriate temperature for afterhours events. Unless circumstances require otherwise, in FY2019 the Town will upgrade the Front End Software and complete the conversion of the Pollard, Broadmeadow, Library, Mitchell, and Eliot Schools. *(Submitted by: Department of Public Works/Building Maintenance)*

The Town Manager's recommendation for Building Management System Upgrade is \$102,000 to be funded by Free Cash in the Tier 2 category.

### **EMERY GROVER FEASIBILITY STUDY REFRESH**

Numerous Facilities Master Plans have indicated that the Emery Grover School Administration Building is in need of additional office and storage space, as well as extensive repair and modernization. The needed scope of renovation includes reorganizing office and meeting spaces, making the building fully ADA accessible, removing remaining asbestos and lead paint, and replacing deteriorating systems, including: windows, HVAC, electrical and plumbing. These renovations would allow for a more efficient use of space, as well as full utilization of all four floors and full handicapped accessibility. A feasibility study was conducted in August 2013 by DesignLAB Architects, which identified several options: renovation of the existing building, the purchase/renovation of commercial property, and new construction on an alternate Town-owned parcel. This request is to conduct a "refresh" of the original study, to focus exclusively on a project to renovate/reconstruct the Emery Grover Building at the Highland Avenue location, rather than the alternate options of purchasing/renovating commercial property or new construction on another Town-owned parcel. The study will include an updated project budget and schedule, address temporary relocation requirements, and identify any building code changes that will be needed to accommodate the projected use. In addition, the study will include the assessment of

swing space options including timelines and project budget for the swing space.  
(Submitted by: Needham Public Schools)

The Town Manager's recommendation for Emery Grover Feasibility Study Refresh is \$70,000 contingent on Community Preservation Funding.

### **MITCHELL SCHOOL LOCKER REPLACEMENT**

The current lockers at the Mitchell School are in need of repair. They are not appropriately sized for the school age population at the Mitchell and are broken. This request is to replace the existing lockers with lockers that are better suited for elementary school children. The Mitchell School is not scheduled to be renovated for at least ten years and this would help to improve the appearance as well as the functionality of the school. There are three different types of lockers at the Mitchell. One set require two students to share each locker. One set is too narrow to store backpacks. This results in the locker doors remaining open, which is dangerous in the hallways. The last set just needs refurbishment. The replacement lockers would be stacked on top of each other in order to accommodate wider lockers. These lockers would be easier for elementary aged students to store their backpacks and other items, and will be easier to open and close. This project will allow each student to have his or her own locker.  
(Submitted by: Department of Public Works/Building Maintenance)

The Town Manager's recommendation for Mitchell School Locker Replacement is \$70,000 to be funded by Free Cash in the Tier 2 category.

### **POLLARD BLUE AND GREEN GYM UPDATES**

The Pollard gyms were identified in the feasibility study conducted in 2011 as in need of upgrade, and have been identified by the Director of Athletics as in need of improvement. These improvements consist of replacing the present rubber flooring with another material that is more appropriate for basketball use, upgrading lighting, and installing mats along the side of the gym for safety. Lighting upgrades were completed under the Energy Efficient Upgrades request in FY2016. In FY2019, this funding will allow the Town to replace the flooring in the Blue and Green Gyms. The present rubber flooring is not ideal for basketball use and this building is used frequently by both school and community basketball groups due to its size. The rubber flooring will be replaced by a new type of flooring that would have the same bounce as wood flooring required for basketball usage, but does not have the ADA/MAAB accessible issues that wood flooring presents. Additionally, work will be done to improve the functionality and safety of both gyms. In the Blue Gym, the siding will be removed and replaced. The Blue Gym will also be painted to brighten the area. Backboards and winch mechanisms on the basketball hoops will be replaced and winch mechanisms will be installed on hoops that do not currently have them. Padding will also be installed behind all backboards. In the Green Gym, two sections of pull out seating, approximately 15'x15' each, will be installed in order to accommodate classes.

This is a multi-year project with further improvements planned for future years.  
(Submitted by: Department of Public Works/Building Maintenance)

The Town Manager's recommendation for Pollard Blue and Green Gym Upgrades is \$540,000 to be funded by Free Cash.

## **POLLARD PHASED IMPROVEMENTS FEASIBILITY STUDY**

This is a project to study the feasibility of phasing identified improvements at the Pollard School over multiple years, for the purpose of best addressing the needs of that facility in the most timely and economically feasible manner possible. Additionally, the study will evaluate the current condition of the Pollard modular classrooms and develop recommendations (as needed) for extending their useful life until such time as they can be replaced with permanent construction. *(Submitted by: Needham Public Schools)*

The Town Manager's recommendation for Pollard Phased Improvements Feasibility Study is \$65,000 to be funded by Free Cash.

## **SCHOOL COPIER REPLACEMENT**

In May of 2003, Town Meeting authorized \$60,000 in first year funding to establish a replacement cycle for school photocopiers. School photocopiers are located in all the schools and the administration building, and are used both by administrative and teaching staff. Teachers use the machines to reproduce classroom materials, including homework sheets, exams, teaching packets, etc. Currently the School Department owns 47 copy machines. The FY2019 request replaces six copy machines. Copier replacement is planned on a cycle analysis, which projects when a copier should be replaced based on actual usage and the manufacturer's total estimated capacity. Copiers which are heavily used are replaced more frequently than copiers that are lightly used. A seven-year maximum is assumed for most machines, even if they have not yet reached maximum copy allowances, given the additional operating expense associated with servicing and maintaining older equipment, as well as the difficulty in obtaining replacement parts. This analysis assumes that copiers are re-deployed around the District as needed, to match copier use with equipment capacity. *(Submitted by: Needham Public Schools)*

The Town Manager's recommendation for School Copier Replacement is \$84,190 to be funded by Free Cash.

## **SCHOOL FURNITURE**

This request continues the replacement cycle for school furniture in poor and fair condition at the Schools. Furniture at the Pollard Middle School is 25-30+ years old and in a state of disrepair after decades of heavy use. In FY2005 Town Meeting approved funding of \$20,500 to begin the replacement of furniture in poor condition. By FY2015, all furniture in 'poor' condition was replaced in the schools. In FY2019 \$30,500 is proposed for the resurfacing of cabinets in three Pollard science classrooms and installation of new counters in four Pollard science classrooms, and \$30,000 is proposed for the purchase of classroom furniture for Needham High School. *(Submitted by: Needham Public Schools)*

The Town Manager's recommendation for School Furniture is \$60,500 to be funded by Free Cash.

## **SCHOOL PHONE SYSTEM REPLACEMENT**

The telephone system currently in use by the School Department consists of eight separate phone systems of varying ages from five to over 15 year old (estimated.) The systems employ manufacturer discontinued equipment, are unstable and are in constant need of repair. The phone systems in three buildings - Hillside, Mitchell and Emery Grover - have occasionally failed, leaving the buildings with no phone access. All

systems require frequent repairs, which can only be performed by a contract technician via a technical service maintenance appointment. The existing system, in addition to being old and unstable, runs on antiquated PBX technology that uses traditional Verizon POTS (copper) lines for external calls and Centrex to connect internally within a network of Town departments. This type of system supports a limited number of concurrent external connections per building and a limited number of concurrent Centrex connections per building; when concurrent lines are maximized within a building, users receive a busy signal until a line becomes available. Accessibility of the current voicemail system also is a concern particularly for teachers who transition to different classrooms and locations throughout the day; their voicemail is only available from their "home" location. This request would replace the antiquated PBX system with a new phone system that would combine all of the buildings into a unified IP-based phone system. The new system would utilize the Town's fiber network and pooled SIP trunks to reduce overall cost while maintaining a secure, robust and reliable phone system. It would allow for tiered user licenses that are customized to roles and responsibilities. The School Department will assume responsibility for managing the new technology-based system from the Public Works/Building Maintenance Division. *(Submitted by: Needham Public Schools)*

The Town Manager's recommendation for School Phone System Replacement is \$319,000 to be funded by Free Cash.

## **SCHOOL TECHNOLOGY REPLACEMENT**

This request is for funding to replace School Department technology, including computers, printers, IWBs, servers, laptop carts, and specialized instructional labs. The request reflects the decision in FY2017 to move Digital Learning Devices (DLDs) and staff laptops to the operating budget, as well the new classroom technology standard. In FY2017, funding for devices with a lifespan of fewer than five years was shifted to the operating budget. These devices included Digital Learning Devices (DLDs) such as iPads and Chromebooks, and laptops. The FY2019 submitted request is for \$303,600 and consists of computer hardware (computer labs, desktops, TV studio, interactive white boards, and video displays) in the amount of \$190,600 and infrastructure (servers, network hardware, and wireless infrastructure and access points) in the amount of \$113,000. *(Submitted by: Needham Public Schools)*

The Town Manager's recommendation for School Technology Replacement is \$303,600 to be funded by Free Cash.

## **PUBLIC WORKS**

### **TRAFFIC IMPROVEMENTS**

This funding would support projects that are recommended by the DPW and the Traffic Management Advisory Committee (TMAC). These recommendations include items such as permanent speed monitoring devices, traffic calming measures, and school zone enhancements. The proposed funding will support one or two construction-related requests per year, such as 500 feet of roadway granite curb installation, two school zone installations, two average traffic calming installations, several radar sign installations or sign and/or pavement markings. Unless circumstances require otherwise, FY2019 funding is proposed for the installation of granite curbing on Paul Revere Road and Brookline Street. *(Submitted by: Department of Public Works)*

The Town Manager's recommendation for Traffic Improvements is \$50,000 to be funded by Free Cash.

### **DPW BOILER REPLACEMENT/470 DEDHAM AVENUE**

This funding will support design of the replacement of the DPW/470 Dedham Avenue boiler with two high efficiency condensing boilers. The increase to two boilers is based on both the need for redundancy in the heating season and the desire to improve energy efficiency. The boiler at the DPW was installed in 1961 and is past its useful life. This piece of equipment has required a number of repairs in order to maintain it in working order. A new boiler will improve the energy efficiency of heating the DPW. Installing two units will ensure that if one unit needs repair during the heating season, the building will have sufficient heat to prevent the pipes from freezing. The new boiler will be designed for natural gas and will increase the energy efficiency of the heating systems at the DPW. This project may be eligible for energy efficiency rebates to offset the cost of buying a more efficient model. The project includes the upgrade of heat piping throughout the building with the assumption that the building will need to remain in use for the foreseeable future. *(Submitted by: Public Works/Building Maintenance)*

The Town Manager's recommendation for DPW Boiler Replacement 470 Dedham Avenue is \$34,000 to be funded by Free Cash in the Tier 2 Category.

### **DPW CENTRAL AVENUE STORAGE FACILITY**

The recently completed DPW relocation feasibility study determined that all of the vehicle storage required to fulfill DPW operations programming needs cannot fit on the existing site (470/484 Dedham Avenue). The existing site has been approved by the Board of Selectmen as the preferred site for the ultimate reconstruction of the facility. Weston & Sampson evaluated many options and locations, recommending that a storage facility be constructed in a remote location. After reviewing recommendations with the PPBC and Board of Selectmen, Weston & Sampson has recommended that the facility be located at the RTS. The storage facility will address the needs of a modernized DPW facility and organization, including providing shelter for Town equipment which will increase its service life. The feasibility process included the development of a comprehensive vehicle and equipment list, including towed, ride-on, and small portable equipment along with classified storage type (i.e. garaged vs. covered), and presented equipment storage scenarios. This request will fund the design and construction of the facility to expedite the project, as the facility may be used to support off-site storage needs for the Fire Station #2 reconstruction project as well. *(Submitted by: Department of Public Works)*

The Town Manager's recommendation for DPW Central Avenue Storage Facility is \$7,900,000 to be funded by Free Cash in the amount of \$1,382,000, General Fund Debt Financing in the amount of \$3,788,000, and Water & Sewer Enterprise Fund Retained Earnings in the amount of \$2,730,000.

### **HILLCREST RADIO REPEATER BUILDING REPLACEMENT**

This funding will support the replacement of the failing building at the base of the Birds Hill Water Tower on Hillcrest Road. The building houses radio equipment and related support components used by the following departments: Fire, Police, DPW, School Transportation, and Emergency Management. The new building will house some existing equipment, some new equipment, and a back-up generator. The current building, which



was built with cement blocks, is deteriorating and has several water leaks in both the walls and the roof. There has also been damage to the building and its contents from animals. Additionally, the steel entrance door exhibits rust and rot. The current building size is 8'X10' and the proposed replacement building would be 8'X12', placing the back-up power generator in a separate room, as well as allowing modest room for future expansion. The building plays a critical role in the Town's public safety communication network. *(Submitted by: Department of Public Works)*

The Town Manager's recommendation for Hillcrest Radio Repeater Building Replacement is \$136,000 to be funded by Free Cash.

## **PUBLIC WORKS INFRASTRUCTURE PROGRAM**

The Public Works Infrastructure Program allows the Department of Public Works to make improvements and repairs to Town infrastructure, including but not limited to roads, bridges, sidewalks, intersections, drains, brooks, and culverts. Each program is detailed below.

### Street Resurfacing

This Program is essential to maintaining the structural and surface integrity of the Town's approximately 279 lane miles of accepted streets. The Town targets 17 lane miles per year to achieve a desired life cycle of 15 to 20 years. The primary strategy of this program is asphalt paving and incidental work. Incidental work may include asphalt berm curb, new grass shoulders, corner reconstruction including handicapped ramps, minor drainage improvements, street sign replacement, traffic markings, and signs. Applying this repair strategy in a timely manner will extend the useful life of the roadway for up to 15 years. Installing a monolithic asphalt berm curb better defines the edge of road, improves drainage and protects the shoulder from erosion. The Town targets roads with a Pavement Condition Index (PCI) of below 70 for resurfacing or specialized treatment. The Town targets a PCI of 60 or below for repair/renovation. The Town's goal is to maintain its roadway network at an average PCI rating of 75. Target funding for street resurfacing in FY2019 is \$820,000.

### Traffic Signal & Intersection Improvements

This Program will fund traffic signal improvements, intersection improvements, and new traffic signal installations where none currently exist. In FY2019, DPW will evaluate intersection prioritization for future projects.

### Sidewalk Program

This Program funds improvements to the network of sidewalks throughout the community. There are over 160 miles of accepted sidewalks in Needham. Over half of the Town's sidewalks do not comply with current standards and require significant improvements, including the installation of handicapped ramps. Sidewalk improvements must comply with Federal and State laws and construction standards. The target funding for FY2019 is \$500,000.

### Storm Drain Capacity Improvements

This Program provides funding to improve roadway drainage capacity. The Town's Stormwater Master Plan identified a number of areas throughout Needham where improvements are required to resolve flooding problems and illicit discharge. Since the issuance of the Stormwater Master Plan numerous multi-unit developments have been built or planned in the Town of Needham. These developments include new roads with drainage structures and roof or sump connections that are then connected to existing

Town systems. These new connections have increased the load on the Town's drainage system and caused flooding in some areas. Due to extensive drainage repairs that were required on Greendale Avenue, funds for FY2018 were diverted to that project. Unless circumstances dictate otherwise, FY2019 funding of \$103,500 is planned for engineering and design for Ardmore Road and Hunnewell Street.

#### Storm Drain System Repairs

This Program provides funding to repair failing storm drainage infrastructure within Town easements that have been discovered through investigation work. These projects will include the replacement of existing culverts that have deteriorated over time and are restricting flow. This work will eliminate flooding and capacity issues in the immediate vicinity. This project will provide funding over five years for the Drains Division to address small projects related to the Labor Day 2013 storm drainage remediation. Unless circumstances dictate otherwise, FY2019 funding in the amount of \$100,000 is targeted for engineering and design for 470 South Street.

#### Brooks and Culverts – Repair and Maintenance

It is the intention of the DPW to address the issue of poorly draining brooks, streams, waterways, and culverts throughout the Town that have been severely damaged by heavy rains/storms in the past. Flooding has caused the failure of retaining walls, resulting in extensive erosion and silt deposits in brooks and streams. The silt has provided a medium for vegetation and affected the flow of water, and the situation has resulted in the loss of useable abutting property and flooded basements. The Environmental Protection Agency (EPA) is currently finalizing stronger requirements for stormwater and permitting under the NPDES permit. Unless circumstances require otherwise, FY2019 funding is planned for construction in Meredith Circle.

#### Roadway Reconstruction

Town evaluates the sight distance, drainage, handicap ramps, sidewalks, subsurface utilities, public utility poles and overhead utilities of all roads. The physical condition of roads to be considered for full reconstruction includes shape, foundation and traffic volume. This is a multi-year process requiring surveying, designing, utility evaluation and construction. Some of the roads that may be targeted for full reconstruction in the future include: Marked Tree Road, Nehoiden Street, Kingsbury Street, sections of Central Avenue, and Webster Street from Dedham Avenue to South Street. No funding is allocated to the Roadway Reconstruction category in FY2019.

#### Bridge Repairs

Surrounded on three sides by the Charles River, the Town jointly maintains a number of bridges with neighboring communities. The Massachusetts Bridge Inspection Program has identified a number of bridges that have some level of deficiency and has recommended repairs. This Program is essential to improve the structural and/or surface integrity of all bridges throughout Needham. No funding is proposed for this category in FY2019.

#### Guardrail

Many of the Town's guardrails are noncompliant and the DPW is preparing a plan internally to systematically upgrade existing guardrails to make them both compliant and aesthetically pleasing. No funding is proposed for this category in FY2019. *(Submitted by: Department of Public Works)*

The Town Manager's recommendation for Public Works Infrastructure Program is \$1,773,500 - \$1,523,000 to be funded by Free Cash and \$250,000 to be financed by General Fund Debt.

### **STREETLIGHT CONVERSION TO LED**

This funding will allow the Town to convert its network of streetlights to Light Emitting Diodes (LED). The Department conducted a Streetlight Pilot Program in the spring of 2017, testing existing streetlights against LED streetlights. The existing lights are High Pressure Sodium (HPS) lights, which were considered the most energy efficient lighting types for their purpose in the early 2000s. Currently, LEDs are considered the more energy efficient lighting type. Of the three LED streetlight models piloted, two received higher average ratings than the existing HPS streetlights by the Town residents who completed the online survey. The Metropolitan Area Planning Council (MAPC) conducted an estimate for the conversion of all of the Town's existing Cobra head streetlights, determining that there are 2,521 existing streetlights that need to be converted. The Town's energy savings would be approximately 393,296 kWh annually. LED lights will be warrantied for ten years, and the only costs for maintenance to the Town will be labor to address any issues, pole transfers, new lights, and the cost of knockdowns. Other Massachusetts towns and cities with comparable streetlight inventories that have participated in the MAPC LED conversion program have secured maintenance contracts valued at an average of \$0.53 per streetlight per year, while Needham currently pays \$14.24 per streetlight per year for its existing streetlight maintenance contract. Though not all Town-owned streetlights are eligible for LED conversion under the MAPC program, total maintenance savings for those that are eligible for conversion could exceed \$30,000 per year. *(Submitted by: Department of Public Works)*

The Town Manager's recommendation for Streetlight Conversion to LED is \$685,000 to be funded by Free Cash in the Tier 2 Category.

### **WATER QUALITY IMPROVEMENTS/ROSEMARY LAKE SEDIMENT REMOVAL**

The Town entered into a Memorandum of Understanding (MOU) with the Environmental Protection Agency (EPA) to commence a Town-wide investigation of stormwater discharge to address the discharge of pollutants through stormwater into the Charles River Basin and other water bodies. Incorporated into this plan are improvements to the Stormwater Drainage System to upgrade the quality of the water discharged into the Charles River in Needham. This request is to support action items identified in the MOU. When the 2003 EPA National Pollutant Discharge Elimination System (NPDES) Stormwater Discharge Permit took effect, it incorporated several requirements identified in the MOU. There were a number of projects proposed to manage stormwater quality effectively. The second permit to be issued by the EPA will take effect July 1, 2018, pending on-going litigation. This request for funding increased from the previous year because during the design process, it was determined that the depth of the sediment that needs to be removed is greater than what was originally estimated. This has increased the cubic yardage of sediment product that needs to be disposed. Funding for the construction portion of the Rosemary Lake Sediment Removal was delayed a year from FY2018 to FY2019. Analysis of Wildwood Drive pond was added to FY19 to address concerns over the condition of the pond and its capacity to handle Town stormwater. *(Submitted by: Department of Public Works)*

The Town Manager's recommendation for Water Quality Improvements (Rosemary Lake Sediment Removal) is \$2,400,000 contingent on Community Preservation Funding, and \$25,000 to be funded by Free Cash in the Tier 2 category.

## **ENERGY EFFICIENCY UPGRADE IMPROVEMENTS**

An energy efficiency study was conducted for ten municipal buildings in 2011. The results of this study illustrate that if the Town makes an initial investment in selected and recommended energy upgrades, the cost of these upgrades will pay for themselves within ten years. Unless circumstances require otherwise, FY2019 funding will be allocated to installing a bi-lighting system in the hallways at the Pollard Middle School (\$7,000), retro-commissioning the HVAC system at the Eliot School (\$57,000), and installing a bi-lighting system in the hallways at the High Rock School (\$7,000). *(Submitted by: Public Works Building Maintenance)*

The Town Manager's recommendation for Energy Efficiency Upgrade Improvements is \$71,000 to be funded by Free Cash.

## **COMMUNITY SERVICES**

### **ATHLETIC FACILITY AND RECREATION IMPROVEMENTS /DESIGN FOR TURF REPLACEMENT**

The Department of Public Works and Park and Recreation have developed a maintenance plan for all fields, which includes new construction, total reconstruction, partial renovation, irrigation, drainage improvements, and equipment replacement or repair (bleachers, fences/backstops, player benches, and miscellaneous equipment) for multi-use fields and ball diamonds. This request is for the design of the removal of the existing turf carpet, re-grading, and installation of new artificial field turf at DeFazio and Memorial Park. *(Submitted by: Department of Public Works)*

The Town Manager's recommendation for Athletic Facility and Public Recreation Improvements/Design for Turf Replacement is \$55,000 to be funded through the Athletic Facility Improvement Fund.

### **LIBRARY FURNITURE REPLACEMENT**

The renovated library has been open to the public for more than eleven years, and, due to heavy use, the furniture is beginning to show wear and tear. Both public and staff computer chairs are slowly breaking and the covering on the arms is splitting. Some of the mesh on the Community Room stackable chairs is unraveling, the backs are separating from the frames, and food has been caught in the mesh and proven difficult to remove. The forty-two cloth public arm chairs are also showing wear from heavy use, particularly on the arms. The thirty-eight leather public arm chairs are also beginning to show wear. *(Submitted by: Needham Public Library)*

The Town Manager's recommendation for Library Furniture Replacement is \$43,970 to be funded by Free Cash.

## **MEMORIAL PARK BUILDINGS AND GROUNDS IMPROVEMENTS**

Winter Street Architects performed a feasibility study on the Memorial Park Building in 2016, and after design funds were approved at the May 2017 Annual Town Meeting, Winter Street continued to move forward with design documents, under the charge of the PPBC. The design is for a new two-story building which will be fully handicap accessible, and constructed in accordance with the building code. The building will enhance programs held at the park, and promote synergy among the other nearby Town facilities. The building will be a service point for High School athletics and other community activities, while keeping the focus on the site and its history. The first floor will have spaces for Needham High School home teams to meet, and a separate room for visiting teams. These rooms have been designed in a flexible manner so that they can be used for other community activities. The facility will include a concession room, restrooms for park users, and a small number of restrooms for team use. Storage will be available for the DPW Parks and Forestry Division, as well as for groups using the fields at Memorial Park. The second floor will have meeting space for the Trustees and other community groups, as well as a room for larger meetings. *(Submitted by: Memorial Park Trustees)*

The Town Manager's recommendation for Memorial Park Buildings and Grounds Improvements is \$5,900,00, \$1,032,000 to be funded from Free Cash, \$1,800,000 to be transferred from the Athletic Facility Improvement Fund, and \$3,068,000 in General Fund debt financing.

## **PUBLIC PLAYGROUNDS**

The Town of Needham has 18 public playground locations: Broadmeadow (2), Eliot (2), Hillside (2), Mitchell (1), Newman (3), Claxton, Cricket, DeFazio, Greene's, Mills, Perry, Riverside, and Walker-Gordon. This funding will allow the upgrade of public playgrounds depending on need and condition. Projects under consideration for FY2019 funding include the Mitchell, Broadmeadow and Eliot Schools, Perry Park, and ADA improvements at Greene's Field. *(Submitted by: Park and Recreation Department)*

The Town Manager's recommendation for Public Playgrounds is \$300,000 contingent on Community Preservation funding.

## **ROSEMARY LAKE CAMP AND TRAIL**

The three remaining buildings at the Rosemary Camp property are subject to vandalism and must be removed for safety reasons. The two smaller buildings were formerly latrines, and need to be decommissioned as part of demolition. The shelter building is not insulated and the electrical source was disconnected almost twenty years ago when a fourth building was lost in a fire. A future project will include trail amenities and the installation of an open air picnic shelter and picnic tables installed on a concrete base to minimize vandalism. This area would be available for use by trail walkers as well as any programs offered by Park and Recreation or other Needham organizations. *(Submitted by: Park and Recreation Department)*

The Town Manager's recommendation for Rosemary Lake Camp and Trail is \$50,000 subject to Community Preservation funding.

## GENERAL FUND FLEET REPLACEMENT PROGRAM

The Town's fleet replacement program was established in FY2015. The program includes a budget and schedule for the Town's rolling stock fleet of appropriately 220 vehicles, trailers, and large specialized attachments and the School Department fleet of 14 vans and buses. General purpose vehicles include pickup trucks, a variety of sedans, SUV's, vans, and police vehicles (87). They comprise approximately 39 percent of the entire fleet. General purpose vehicles are utilized in every department and are relatively interchangeable. The replacement of these vehicles can proceed on a regular schedule and should be part of the of the Town's recurring costs. The Town relies on a number of trailers for the purpose of moving tools and equipment, hauling trash and debris, and transporting special equipment. The Town has 47 trailers which represents approximately 23 percent of the fleet. Specialized, high value vehicles and snow and ice equipment comprise the other 38 percent of the fleet. These vehicles and equipment are just as integral to Town operations as the general purpose vehicles, but serve the unique purposes of specific departments or divisions. Included in this group are the high value vehicles such as ambulances, large dump trucks, fire engines, street sweepers, and others for which appropriations need to be planned. *(Submitted by: Multiple Departments)*

### GENERAL FUND CORE FLEET REPLACEMENT

UNIT	DIVISION	YEAR	REPLACEMENT	AMOUNT
1	Administration	2011	Passenger Vehicle	\$33,616
44	Engineering	2011	Passenger Vehicle	\$33,616
46	Engineering	2011	Passenger Vehicle	\$33,616
4	Fleet	2006	Work Truck Class 3	\$82,671
65	Parks & Forestry	2015	Ford F350 Work Truck Class 3	\$66,037
301	Parks & Forestry	2009	Work Van	\$34,069
702	Building Maintenance	2001	Work Truck Class 2	\$45,765
Van 4	Schools	2011	Transport Van	\$48,776
Van 5	Schools	2011	Transport Van	\$48,776
Total				\$426,942

### GENERAL FUND FLEET REPLACEMENT – SPECIALIZED EQUIPMENT

UNIT	DIVISION	YEAR	REPLACEMENT	AMOUNT
55	Highway	2011	Ford F550	\$142,495
107 (Tier 2)	Highway	2008	Sidewalk Plow	\$190,811
181 (Tier 2)	Highway	2012	Street Sweeper	\$264,101
38 (Tier 2)	Parks & Forestry	2007	Work Truck Class 6	\$202,169
183 (Tier 2)	Parks & Forestry	2007	Trailer	\$25,722
E02	Fire	1999	Fire Engine	\$840,163
Total				\$1,665,461

**REPLACEMENT SNOW AND ICE EQUIPMENT**

UNIT	DIVISION	YEAR	REPLACEMENT	AMOUNT
76	Highway	2006	Skid Steer Loader	\$122,182

The Town Manager's recommendation for General Fund Core Fleet Replacement is \$426,942 to be funded by Free Cash.

The Town Manager's recommendation for General Fund Specialized Equipment is \$1,272,481 to be funded by Free Cash in the Tier 1 category and \$392,980 to be funded by Free Cash in the Tier 2 category.

The Town Manager's recommendation for General Fund Snow & Ice Replacement is \$122,182 to be funded by Free Cash.

## **RECYCLING AND TRANSFER STATION (RTS) ENTERPRISE FUND**

**SMART TECHNOLOGY TRASH CANS**

The Town has been investigating long term strategies for reducing public litter. Over the past year, the DPW has met with vendors to review a Town-wide deployment of waste management receptacles. These receptacles have two compartments, one for recycling and one for trash, with solar powered compactors, and technology that provides an alert when the receptacles are full. The Town is pursuing a pilot program to deploy these receptacles at two recreational facilities around Town. This deployment will include 12 trash and recycling receptacles. Eleven receptacles will be solar powered compactors and one will be a solar powered non-compactable receptacle. The solar powered compactors will be deployed in areas of high trash volume and the non-compactable receptacle will be deployed in an area that is not prone to substantial trash generation. The receptacles will be purchased by the Town and their impact on reducing overflowing trash and minimizing odors will be monitored. There is a potential in the future to either purchase or lease additional receptacles. The 12 trash and recycling receptacles being purchased under this pilot program may also be incorporated into a lease program in the future. *(Submitted by: Department of Public Works)*

The Town Manager's recommendation for Smart Technology Trash Cans is \$100,000 to be funded by RTS Enterprise Fund Retained Earnings.

**RECYCLING AND TRANSFER STATION PROPERTY IMPROVEMENTS**

This funding will enable the Town to make improvements to the Recycling & Transfer Station (RTS) facility to increase efficiency, comply with regulatory requirements, and improve the facility function. The Town's design consultant conducted two evaluations in 2016 on the roof and structure of the 1998 building. Emergency structural repairs were made to address immediate safety concerns in the building, including cleaning and painting of the steel framing, and repairs to the fire protection system. The remaining structural repairs that must be addressed include miscellaneous repairs to the pre-engineered metal framing, additional repairs to the fire protection system, additional

cleaning and painting of the steel framing, roof repair, installation of a fall protection/warning system at tipping pit, replacement of the steel approach at tipping pit, and repair of the slab-on-grade. This funding will support the design, engineering and construction of these items. *(Submitted by Department of Public Works)*

The Town Manager's recommendation for RTS Property Improvements is \$645,000 to be financed by RTS Enterprise Fund debt.

### **FLEET REPLACEMENT – SPECIALIZED EQUIPMENT**

Unit	Division	Year	Replacement	Amount
143	RTS	2010	Large Tractor Loader	\$245,360

The Town Manager's recommendation for RTS Specialized Equipment is \$245,360 to be funded by RTS Enterprise Fund Retained Earnings.

## **SEWER ENTERPRISE FUND**

### **SEWER MAIN EXTENSION ZONES I AND II**

The Massachusetts Department of Environmental Protection designates certain sensitive areas for aquifer protection. The Zone I and Zone II aquifer protection areas for the Charles River Wellfield include homes with private septic systems. Zone I includes land within a 400 foot radius of existing or potential public water supply wells, and Zone II includes the area of an aquifer that, given the most severe pumping and recharge conditions that can be realistically anticipated, would potentially be affected by nearby septic systems. All three of Needham's wells are located in an area that is vulnerable to contamination from nearby septic systems. Extending the sewer main will enable access to homes within Zones I & II and reduce the risk of contamination.

This funding will support the installation of a new sewage pumping station and extension of the sewer main in Winding River Road. With this new service, the Town will provide sewer service for one critical home on a private septic system. This service will extend 712 feet up Winding River Road, allowing additional homes to connect to the sewer system through a betterment program. *(Submitted by: Department of Public Works)*

The Town Manager's recommendation for Sewer Main Extension Zone I and II is \$690,000 to be funded by Sewer Enterprise Fund Retained Earnings.

### **SEWER MAIN REPLACEMENTS**

The Greendale Avenue/Route 128 sewer interceptor is in need of rehabilitation/replacement. The existing sewer line is deteriorating and in need of rehabilitation/replacement. This funding will replace or reline 12,000 feet (2.25 miles) of 18 inch reinforced concrete gravity sewer main running through Town property in the Right of Way from Greendale Avenue near Cheney Street towards Route 128, and along the Route 128 Right of Way to Great Plain Avenue. This interceptor sewer collects and conveys waste water from numerous sewer lines. FY2019 funding will be allocated to a feasibility study for this project.

The Town Manager's recommendation for Sewer Main Replacements is \$330,000 to be funded by Sewer Enterprise Fund Retained Earnings.



## SEWER SYSTEM INFILTRATION & INFLOW (I/I) REMOVAL

The Town recently completed a study identifying priority areas for inflow and infiltration removal for the next ten years. The Town of Needham, along with numerous other communities, is under Administrative Orders from the Department of Environmental Protection (DEP) to identify and remove Infiltration and Inflow (I/I) in existing sewer systems. Infiltration is defined as groundwater or storm water runoff that enters the system through deteriorated pipe or manhole structures that need to be repaired. Inflow is defined as clean, non-septic water, which is introduced to the system. This water is generally produced by residential sump pumps that drain basements. Unless circumstances require otherwise, this funding will support the design of the removal of the remaining locations of identified infiltration in the system.

The Town Manager's recommendation for Sewer System Infiltration and Inflow Removal is \$205,000 to be funded by Sewer Enterprise Fund Retained Earnings.

## CORE FLEET REPLACEMENT

Unit	Division	Year	Replacement	Amount
28	Sewer	2001	Light Work Truck Class 3	\$64,247
94	Sewer	2014	Light Work Truck Class 2b	\$67,864
Total				\$132,111

*(Submitted by: Department of Public Works)*

The Town Manager's recommendation for Sewer Core Fleet Replacement is \$132,111 to be funded by Sewer Enterprise Fund Retained Earnings.

## WATER ENTERPRISE FUND

### BIRDS HILL WATER TANK

The water tank located at Birds Hill ensures that the Town is able to maintain proper operating system pressure of the water distribution system. The tank is filled through one central pipe at the bottom of the tank — and this is also how the tank is drained. The movement of water is therefore predominately at the bottom of the tank. This tank is 100 feet in diameter at the foundation and is 45 feet in elevation. This funding will allow the Town to install a mixing valve that will circulate water throughout the tank. The improved circulation will assist in maintaining chlorine levels inside the tank, improving water quality. *(Submitted by: Department of Public Works)*

The Town Manager's recommendation for Birds Hill Water Tank is \$340,000 to be funded by Water Enterprise Fund Retained Earnings.

## WATER DISTRIBUTION SYSTEM IMPROVEMENTS

### Water System Rehabilitation

Through the Water System Rehabilitation Program, the Town's water infrastructure is continually evaluated to assess functionality and performance, and to identify areas in need of repair. Water infrastructure requires ongoing attention and periodic replacement, and portions of the Town's water infrastructure are 75+ years old and approaching the end of their useful life. A diligent rehabilitation program encompassing maintenance, repair, and replacement ensures a continual supply of water to the public.

The Department of Public Works prioritizes replacement of water pipes based upon pipe condition, water break history, and adequacy of water flow to fire hydrants. Unless circumstances require otherwise, the FY2019 funding will support the replacement of 8 inch water mains on Bennington Street from High Street to Concord Street (unlined) and on Country Way (unlined).

#### Water Main Replacement

This request is to replace a total of 11,500 linear feet of 14" water main. The existing water line dates from 1936-1939 and is cast iron with bitumastic or coal tar liner. The water quality in areas serviced by this line is a concern, as the lining of these pipes breaks down over time causing discoloration in the water. In 2008, the Town began addressing areas served by this type of piping, which at the time was approximately 19,000 linear feet. The 14" water main was relined from the Charles River Water Treatment Facility to Grove Street. In 2010, the second phase of this project replaced the 14" water main with a new 16" water main extending from Grove Street to Central Avenue. In FY2016, the Town replaced the water main in Oak Street from Maple Street to Chestnut Street and in Chestnut Street from Oak Street to School Street. Unless circumstances require otherwise, FY2019 funding will be allocated to the construction of the remaining 11,500 linear feet of water main to be replaced from the intersection of Pine Street to Marked Tree Road to Oak Street, and Maple Street. The 14 inch water main will be replaced by a 16 inch water main. *(Submitted by: Department of Public Works)*

The Town Manager's recommendation for Water Distribution System Improvements is \$830,000 to be funded by Water Enterprise Fund Retained Earnings.
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#### **WATER SPECIALTY EQUIPMENT**

Unit	Division	Year	Replacement	Amount
14	Water	2009	Heavy Duty Truck Class 7	\$239,404
22	Water	2009	Medium Work Truck Class 4	\$115,644
Total				\$355,048

*(Submitted by: Department of Public Works)*

The Town Manager's recommendation for Water Specialty Equipment is \$355,048 to be funded by Water Enterprise Fund Retained Earnings.
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