

Infrastructure Submissions

Section 7

**Five Year Department Submissions
Section Index
FY2015 - FY2019**

Title	Department	Group	Page
Alphabetical by Title (sort)			
Cooks Bridge - Repair/Replacement	DPW	Public Works	7-6
Drain System Improvements – Water Quality (EPA)	DPW	Drains	7-8
Fire Flow Improvements - Feasibility Study	DPW	Water	7-42
Mills Fields Improvements	DPW	Parks	7-11
Public Works Infrastructure Program	DPW	Public Works	7-15
Sewer Main Extensions and Zone I and II	DPW	Sewer	7-28
Sewer Pump Station Improvements/Improvements	DPW	Sewer	7-24
Sewer Service Connections	DPW	Sewer	7-26
Sidewalk Needs Assessment	DPW	Public Works	7-13
Trail Improvement Project: Newman Eastman Conservation	Community Development	Community Services	7-1
Trail Improvement Project: Reservoir Trail and Ridge Hill Loop	Community Development	Community Services	7-3
Trail Improvement Project: Rosemary Camp Property Trail	Parks & Recreation	Community Services	7-22
Water Distribution Study	DPW	Water	7-44
Water Main Replacement	DPW	Water	7-40
Water Service Connections	DPW	Water	7-34
Water Supply Development	DPW	Water	7-31
Water System Rehabilitation Program	DPW	Water	7-36
Capital Request Code Key			7-46

Town of Needham
Capital Improvement Plan
January 2015

Department Capital Request CIP-DCR							
Title	Trail Improvement Project: Newman Eastman Conservation	Department	School Department/Conservation/Park & Recreation	Fiscal Year	2016		
Parameters					YES	NO	NA
1.	Is this a multi-year capital replacement/upgrade request?					X	
2.	Is this a request in response to a documented public health or safety condition?					X	
3.	Is this a request in response to a Court, Federal, or State order?					X	
4.	Is this a request for a study or long range plan?					X	
5.	Is this a request to purchase office or school equipment (other than technology)?					X	
6.	Is this a request to purchase specialty equipment?					X	
7.	Is this a request to purchase technology or wireless communication system?					X	
8.	Is this a request to purchase apparatus/equipment that is intended to be permanently installed at the location of its use?					X	
9.	Is this a request to improve or make repair to extend the useful life of a public building?					X	
10.	Is this a request to improve or replace public infrastructure: bridges, culverts, drainage, intersection, roads, sidewalks, sewers or water systems?					X	
11.	Is this a request to repair or otherwise improve public property which is NOT a building or infrastructure?				X		
12.	Will any other department be required to provide resources (other than fulfilling its responsibilities) at any point during the process in order to complete the project?					X	
13.	Are there recommendations or costs identified by other departments that are NOT factored into the request?					X	
14.	Are there additional costs to purchase, install, implement, and/or use (except future year operating costs) that are NOT included in this request?					X	
15.	Are there additional costs to bid, design, construct, complete, and/or use (except future year operating costs) that are NOT included in this request?					X	
16.	If approved, will this request increase the operating expense for any other department?					X	
17.	If approved, will this request require the need for ongoing assistance from vendors at an additional expense to the Town which is not already budgeted?					X	
18.	If approved, will additional permanent staff be required?					X	
19.	If approved, is the current operating budget sufficient to cover the operating costs of the requested project?				X		
20.	If approved, will this request lower the requesting department's operating costs?					X	
21.	Does the request support activities to produce new revenue for the Town?					X	
22.	If the request is not funded will existing Town revenue sources be negatively impacted?					X	
23.	Have other non-capital investment options been explored before submitting this request?				X		
24.	Is specialized training or annual licensing required that the Town will need to pay in order to use the asset (beyond the initial purchase/installation)?					X	
25.	If applicable, will the items being replaced be retained by the Town?						X
26.	Does this request qualify for funding from Community Preservation Act (CPA)?				X		
27.	Are there any appendix forms with this funding request?					X	
Useful Life	II	Primary Reason	1	Operating Budget Impact	C		

Town of Needham
Capital Improvement Plan
January 2015

Department Capital Request CIP-DCR									
Title	Trail Improvement Project: Newman Eastman Conservation			Department	School Department/Conservation/ Park & Recreation			Fiscal Year	2016
Requested Funding Years & Amounts	Column A	Costs Components		Column B		*Other Expenses		Column C	
Year 1	\$800,000	Intangibles							
Year 2		Equipment							
Year 3		Design & Engineering							
Year 4		Construction Expenses		\$800,000					
Year 5		Other Expenses*							
Column A Total	\$800,000	Column B Total		\$800,000		Column C Total			
Equipment Schedule									
		Yes		No		NA		X	
Description and Justification									
<p>Design funds were already approved for this project, in conjunction with the design of the Newman athletic fields. The design of the updated and improved trail system is underway. The cost estimate is based on the current draft design, as prepared by the design consultant.</p> <p>The trail system in the Thomas W. Eastman Conservation Education Study Area is on land behind the Newman School and is utilized as part of the curriculum of the Needham Public Schools and its Science Center. The improvement of this trail is also a first step in the proposed future connection to the trails at the Carol/Brewster property. The ability to access the Carol/Brewster property (and its potential for educational use) from the Newman School would be a great addition to the Science Center's curriculum.</p>									
FY2016-FY2020 Version									

Town of Needham
Capital Improvement Plan
January 2015

Department Capital Request CIP-DCR							
Title	Trail Improvement Project: Reservoir Trail and Ridge Hill Loop	Department	Conservation/Park & Recreation	Fiscal Year	2017		
Parameters					YES	NO	NA
1.	Is this a multi-year capital replacement/upgrade request?					X	
2.	Is this a request in response to a documented public health or safety condition?					X	
3.	Is this a request in response to a Court, Federal, or State order?					X	
4.	Is this a request for a study or long range plan?					X	
5.	Is this a request to purchase office or school equipment (other than technology)?					X	
6.	Is this a request to purchase specialty equipment?					X	
7.	Is this a request to purchase technology or wireless communication system?					X	
8.	Is this a request to purchase apparatus/equipment that is intended to be permanently installed at the location of its use?					X	
9.	Is this a request to improve or make repair to extend the useful life of a public building?					X	
10.	Is this a request to improve or replace public infrastructure: bridges, culverts, drainage, intersection, roads, sidewalks, sewers or water systems?					X	
11.	Is this a request to repair or otherwise improve public property which is NOT a building or infrastructure?				X		
12.	Will any other department be required to provide resources (other than fulfilling its responsibilities) at any point during the process in order to complete the project?					X	
13.	Are there recommendations or costs identified by other departments that are NOT factored into the request?					X	
14.	Are there additional costs to purchase, install, implement, and/or use (except future year operating costs) that are NOT included in this request?					X	
15.	Are there additional costs to bid, design, construct, complete, and/or use (except future year operating costs) that are NOT included in this request?					X	
16.	If approved, will this request increase the operating expense for any other department?					X	
17.	If approved, will this request require the need for ongoing assistance from vendors at an additional expense to the Town which is not already budgeted?					X	
18.	If approved, will additional permanent staff be required?					X	
19.	If approved, is the current operating budget sufficient to cover the operating costs of the requested project?				X		
20.	If approved, will this request lower the requesting department's operating costs?					X	
21.	Does the request support activities to produce new revenue for the Town?					X	
22.	If the request is not funded will existing Town revenue sources be negatively impacted?					X	
23.	Have other non-capital investment options been explored before submitting this request?				X		
24.	Is specialized training or annual licensing required that the Town will need to pay in order to use the asset (beyond the initial purchase/installation)?					X	
25.	If applicable, will the items being replaced be retained by the Town?						X
26.	Does this request qualify for funding from Community Preservation Act (CPA)?				X		
27.	Are there any appendix forms with this funding request?					X	
Useful Life	V	Primary Reason	1	Operating Budget Impact		C	

Town of Needham
Capital Improvement Plan
January 2015

Department Capital Request CIP-DCR										
Title	Trail Improvement Project: Reservoir Trail and Ridge Hill Loop				Department	Conservation/Park & Recreation			Fiscal Year	2017
Requested Funding Years & Amounts	Column A	Costs Components	Column B	*Other Expenses	Column C					
Year 1	\$515,000	Intangibles								
Year 2		Equipment								
Year 3		Design & Engineering								
Year 4		Construction Expenses	\$515,000							
Year 5		Other Expenses*								
Column A Total	\$515,000	Column B Total	\$515,000	Column C Total						
Equipment Schedule										
	Yes		No		NA					
				X						
Description and Justification										
<p>Funding was received in FY2014 for the design of the Reservoir Trail project, through CPA funds and the contract for the design work was awarded in October 2014. As this is written, the design is not complete, so the construction estimate is preliminary, based on input from the design consultant. It will be important to schedule construction in relation to other projects that may be underway at the site in upcoming years.</p> <p>Reservoir Trail Construction</p> <p>This request is for the construction of a handicap accessible perimeter trail (with boardwalks) around the Needham Reservoir. The development of an accessible trail around one of the Town's important amenities – the Needham Reservoir – was a key priority identified in the Town's Trail Master Plan. The proposal dovetails nicely with the construction of the Public Services Administration Building and the associated improvements to the parcel on Dedham Avenue. Furthermore, as Needham does not currently have a handicapped accessible trail, this project would also provide a unique recreational opportunity for those with mobility challenges. In addition to an accessible fishing dock, the conceptual design incorporates the closure of two decommissioned water supply wells. By incorporating the well closures, the project will address two separate goals and, hopefully, realize environmental benefits and cost savings.</p> <p>In 1890, the Town of Needham acquired the property including and surrounding the Needham Reservoir for water supply purposes. Groundwater extraction wells operated on the property until the 1940's and the reservoir was decommissioned as a water supply source in 1995. The property is under the jurisdiction of the Board of Selectmen and the water supply use has not changed since the property was purchased. What has changed is that pedestrian use of the property – primarily by nearby residents and by employees from the abutting Department of Public Works – has increased. While an ad hoc, dirt road (constructed decades ago to provide access to the wells) exists along the northern edge of the reservoir, the road is eroding in places and is impassible during wet conditions in others. The remainder of</p>										

Department Capital Request CIP-DCR					
Title	Trail Improvement Project: Reservoir Trail and Ridge Hill Loop	Department	Conservation/Park & Recreation	Fiscal Year	2017
<p>the reservoir perimeter (beyond the last well) is used less frequently; however, those who do walk the southerly portion of the property have blazed their own, inconsistent routes through and over existing shrubs and herbaceous plants in an effort to keep their feet dry. Additionally, some direct abutters to the property have constructed their own "paths" directly to the water's edge.</p> <p>One reason to construct a formal trail system at this location is to preserve the sensitive wetland system that surrounds the reservoir. In order to protect the functions and values of this area (including but not limited to wildlife habitat, storm damage prevention, and pollution prevention) it is necessary to keep pedestrians – who cannot reasonably be excluded from using this property – to a predefined and appropriate space. Creating a functional, dry and obvious trail around the reservoir will address the haphazard and detrimental routes that are developing and will discourage encroachment into the vegetated portions of the property. Furthermore, replacing the outdated access drive with a solid, non-erodible surface will decrease the potential sediment loads to both the surrounding wetlands and the reservoir. The trail will also provide opportunities for public education about the history of the reservoir and the natural environment within which it exists.</p> <p>Ridge Hill Loop Construction This project would create a large turn-around for the northernmost extension of the Esker Trail and connect two branching trails, while ensuring that visitors to Ridge Hill do not enter onto adjacent private property. Almost all of the work will be done by volunteers, but a small contingency (\$15,000) has been placed in this request in the event that a private or not-for-profit contractor is needed to provide assistance in the completion of this trail segment.</p>					
FY2016-FY2020 Version					

Town of Needham
Capital Improvement Plan
January 2015

Department Capital Request CIP-DCR							
Title	Cooks Bridge – Repair/Replacement	Department	Public Works	Fiscal Year	2016		
Parameters					YES	NO	NA
1.	Is this a multi-year capital replacement/upgrade request?			<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2.	Is this a request in response to a documented public health or safety condition?			<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3.	Is this a request in response to a Court, Federal, or State order?			<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4.	Is this a request for a study or long range plan?			<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
5.	Is this a request to purchase office or school equipment (other than technology)?			<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
6.	Is this a request to purchase specialty equipment?			<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
7.	Is this a request to purchase technology or wireless communication system?			<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
8.	Is this a request to purchase apparatus/equipment that is intended to be permanently installed at the location of its use?			<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
9.	Is this a request to improve or make repair to extend the useful life of a public building?			<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
10.	Is this a request to improve or replace public infrastructure: bridges, culverts, drainage, intersection, roads, sidewalks, sewers or water systems?			<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
11.	Is this a request to repair or otherwise improve public property which is NOT a building or infrastructure?			<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
12.	Will any other department be required to provide resources (other than fulfilling its responsibilities) at any point during the process in order to complete the project?			<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
13.	Are there recommendations or costs identified by other departments that are NOT factored into the request?			<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
14.	Are there additional costs to purchase, install, implement, and/or use (except future year operating costs) that are NOT included in this request?			<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
15.	Are there additional costs to bid, design, construct, complete, and/or use (except future year operating costs) that are NOT included in this request?			<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
16.	If approved, will this request increase the operating expense for any other department?			<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
17.	If approved, will this request require the need for ongoing assistance from vendors at an additional expense to the Town which is not already budgeted?			<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
18.	If approved, will additional permanent staff be required?			<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
19.	If approved, is the current operating budget sufficient to cover the operating costs of the requested project?			<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
20.	If approved, will this request lower the requesting department's operating costs?			<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
21.	Does the request support activities to produce new revenue for the Town?			<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
22.	If the request is not funded will existing Town revenue sources be negatively impacted?			<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
23.	Have other non-capital investment options been explored before submitting this request?			<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
24.	Is specialized training or annual licensing required that the Town will need to pay in order to use the asset (beyond the initial purchase/installation)?			<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
25.	If applicable, will the items being replaced be retained by the Town?			<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
26.	Does this request qualify for funding from Community Preservation Act (CPA)?			<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
27.	Are there any appendix forms with this funding request?			<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Useful Life	[V]	Primary Reason	[1]	Operating Budget Impact		[C]	

Town of Needham
Capital Improvement Plan
January 2015

Department Capital Request CIP-DCR									
Title	Cooks Bridge – Repair/Replacement			Department	Public Works			Fiscal Year	2016
Requested Funding Years & Amounts	Column A	Costs Components	Column B	*Other Expenses		Column C			
Year 1	4,000,000	Intangibles		Enter description					
Year 2		Equipment		Enter description					
Year 3		Design & Engineering		Enter description					
Year 4		Construction Expenses	4,000,000	Enter description					
Year 5		Other Expenses*		Enter description					
Column A Total	4,000,000	Column B Total	4,000,000	Column C Total					
Equipment Schedule									
		Yes	<input type="checkbox"/>	No	<input type="checkbox"/>	NA	<input type="checkbox"/>	X	<input type="checkbox"/>
Description and Justification									
<p>Cooks (Elliot St) Bridge – Central Ave to Newton Upper Falls</p> <p>In the spring of 2013 this bridge was identified by the state as having structural deficiencies. Upon receiving this information, the Town of Needham and the City of Newton engaged a structural engineer to further evaluate the bridge. A report by the structural engineer completed in the late summer of 2013 has indicated that further monitoring is necessary to determine what action needs to be taken with this bridge. The Town of Needham has engaged a consultant to monitor the bridge for a period of six months to determine the extent of the structural deficiencies.</p> <p>It is possible that the Town will need to perform engineering and design services in the Fall/Winter of 2014, with construction to follow, in order to ensure the safety of this bridge. The budgetary figure indicated for design and engineering is based on the cost for rehabilitation which is referred to as the "root canal option" which would require supporting the structure, removing the asphalt and dirt interior of the bridge and the replace it with concrete. This is more cost effective than a total replacement. The budgetary figure comes from the initial study conducted in 2013. The construction funding is the total cost of the project. The Town fully believes that these costs will be shared with the City of Newton.</p> <p>Funding for engineering was approved in the May 2014 Annual Town Meeting. The Town is still awaiting the results of the bridge monitoring to determine the best method of addressing deficiencies with this bridge. The Town anticipates that the cost for design will be split with the City of Newton. It is still anticipated that construction funding will be necessary for FY 2016.</p>									
FY2015-FY2018 Version									

Town of Needham
Capital Improvement Plan
January 2015

Department Capital Request CIP-DCR							
Title	Drain System Improvements – Water Quality (EPA)	Department	Public Works – Drains	Fiscal Year	2016		
Parameters					YES	NO	NA
1.	Is this a multi-year capital replacement/upgrade request?				X		
2.	Is this a request in response to a documented public health or safety condition?					X	
3.	Is this a request in response to a Court, Federal, or State order?				X		
4.	Is this a request for a study or long range plan?				X		
5.	Is this a request to purchase office or school equipment (other than technology)?					X	
6.	Is this a request to purchase specialty equipment?					X	
7.	Is this a request to purchase technology or wireless communication system?					X	
8.	Is this a request to purchase apparatus/equipment that is intended to be permanently installed at the location of its use?					X	
9.	Is this a request to improve or make repair to extend the useful life of a public building?					X	
10.	Is this a request to improve or replace public infrastructure: bridges, culverts, drainage, intersection, roads, sidewalks, sewers or water systems?				X		
11.	Is this a request to repair or otherwise improve public property which is NOT a building or infrastructure?					X	
12.	Will any other department be required to provide resources (other than fulfilling its responsibilities) at any point during the process in order to complete the project?					X	
13.	Are there recommendations or costs identified by other departments that are NOT factored into the request?					X	
14.	Are there additional costs to purchase, install, implement, and/or use (except future year operating costs) that are NOT included in this request?					X	
15.	Are there additional costs to bid, design, construct, complete, and/or use (except future year operating costs) that are NOT included in this request?					X	
16.	If approved, will this request increase the operating expense for any other department?					X	
17.	If approved, will this request require the need for ongoing assistance from vendors at an additional expense to the Town which is not already budgeted?					X	
18.	If approved, will additional permanent staff be required?					X	
19.	If approved, is the current operating budget sufficient to cover the operating costs of the requested project?				X		
20.	If approved, will this request lower the requesting department’s operating costs?					X	
21.	Does the request support activities to produce new revenue for the Town?					X	
22.	If the request is not funded will existing Town revenue sources be negatively impacted?					X	
23.	Have other non-capital investment options been explored before submitting this request?				X		
24.	Is specialized training or annual licensing required that the Town will need to pay in order to use the asset (beyond the initial purchase/installation)?					X	
25.	If applicable, will the items being replaced be retained by the Town?					X	
26.	Does this request qualify for funding from Community Preservation Act (CPA)?					X	
27.	Are there any appendix forms with this funding request?					X	
Useful Life	[V]	Primary Reason	[2]	Operating Budget Impact	[C]		

Town of Needham
Capital Improvement Plan
January 2015

Department Capital Request CIP-DCR						
Title	Drain System Improvements – Water Quality (EPA)	Department	Public Works – Drains	Fiscal Year	2016	
Requested Funding Years & Amounts	Column A	Costs Components	Column B	*Other Expenses	Column C	
Year 1		Intangibles		Enter description		
Year 2	118,000	Equipment		Enter description		
Year 3	2,000,000	Design & Engineering	261,000	Enter description		
Year 4	118,000	Construction Expenses	2,225,000	Enter description		
Year 5	250,000	Other Expenses*		Enter description		
Column A Total	\$2,486,000	Column B Total	\$2,486,000	Column C Total		
Equipment Schedule						
	Yes	No	NA	X		
Description and Justification						
<p>The Town entered into a Memorandum of Understanding (MOU) with the Environmental Protection Agency (EPA) to commence a Town-wide investigation of stormwater discharge, and to the development of a Stormwater Master Plan to address the discharge of pollutants through stormwater into the Charles River Basin and other water bodies. This Master Plan was completed in 2002. Incorporated into this Stormwater Master 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 listed in the Stormwater Master Plan. .</p> <p>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 is overdue and is expected in the current fiscal year.</p> <p>Past projects completed to improve stormwater discharge with a variety of methods are:</p> <ul style="list-style-type: none"> • Town Library • High School • Chestnut Street Reconstruction • High Rock School • Lake Drive <p>Design completed, awaiting construction</p> <ul style="list-style-type: none"> • DPW Building (470 Dedham Ave) Drainage improvements <p>The Watershed Management plan was approved for design in the May 2014 Town Meeting. Design work was initiated in the Summer of 2014. The Sportsman Pond water quality issues, low dissolved oxygen, which had previously been submitted on this form will be addressed by the Sportsman’s Club.</p> <p>FY16 – No Request</p>						

Town of Needham
 Capital Improvement Plan
 January 2015

Department Capital Request CIP-DCR					
Title	Drain System Improvements – Water Quality (EPA)	Department	Public Works – Drains	Fiscal Year	2016
<p>FY17 – Rosemary Lake Sediment Removal – Engineering & Design \$118,000 The DPW is investigating whether the Rosemary project is eligible for Community Preservation funding.</p> <p>FY18 – Rosemary Lake Sediment Removal – Construction \$1,000,000 to \$2,000,000</p> <p>FY19 - The Town Reservoir Sediment Removal – Engineering & Design \$118,000 The DPW is investigating whether the Reservoir project is eligible for Community Preservation funding.</p> <p>FY20 – Action Items from Watershed Management Plan funded in FY 15 – Items TBD, Design & Construction \$250,000</p> <p><u>Future Projects</u> The Town Reservoir Sediment Removal – Construction \$1,000,000 DPW Facility SWMP, Construction \$79,000</p>					
FY2015-FY2018 Version					

Town of Needham
Capital Improvement Plan
January 2015

Department Capital Request CIP-DCR					
Title	Mills Field Improvements	Department	Public Works/Park and Recreation		
Parameters			YES	NO	NA
1.	Is this a stand-alone capital request?			X	
2.	Is this a multi-year capital replacement/upgrade request?			X	
3.	Is this a request in response to a documented public health or safety condition?			X	
4.	Is this a request in response to a Court, Federal, or State order?			X	
5.	Is this a request for a study or long range plan?			X	
6.	Is this a request to purchase office or school equipment (other than technology)?			X	
7.	Is this a request to purchase specialty equipment?			X	
8.	Is this a request to purchase technology or wireless communication system?			X	
9.	Is this a request to purchase vehicles or other rolling stock?			X	
10.	Is this a request to purchase apparatus/equipment that is intended to be permanently installed at the location of its use?			X	
11.	Is this a request to improve or make repair to extend the useful life of a public building?			X	
12.	Is this a request to improve or replace public infrastructure: bridges, culverts, drainage, intersection, roads, sidewalks, sewers or water systems?		X		
13.	Is this a request to repair or otherwise improve public property which is NOT a building or infrastructure?		X		
14.	Will any other department be required to provide resources (other than fulfilling its responsibilities) at any point during the process in order to complete the project?			X	
15.	Are there recommendations or costs identified by other departments that are NOT factored into the request?			X	
16.	Are there additional costs to purchase, install, implement, and/or use (except future year operating costs) that are NOT included in this request?			X	
17.	Are there additional costs to bid, design, construct, complete, and/or use (except future year operating costs) that are NOT included in this request?			X	
18.	Will the requested project increase the annual operating costs for ANY department?			X	
19.	Will the requested project require an increase in the operating budget of any department the year it is approved for funding?			X	
20.	If the requested project is funded, will there be a need for ongoing assistance from outside contractors at an added expense to the Town which is NOT already budgeted?			X	
21.	Will additional permanent staff be required if the request is approved?			X	
22.	If the project is approved is the current operating budget insufficient to cover the operating costs of the requested project?			X	
23.	If the requested project is funded, will it reduce the requesting department's operating costs?			X	
24.	Does the request support activities to produce new revenue for the Town?			X	
25.	If the request is not approved will existing Town revenue sources be negatively impacted?			X	
26.	Have other non-capital investment options been explored before submitting this request?			X	
27.	Is specialized training or annual licensing required that the Town will need to pay in order to use the asset (beyond the initial purchase/installation)?			X	
28.	If applicable, will the items being replaced be retained by the Town?			X	
29.	Does this request qualify for funding from Community Preservation Act (CPA)?		X		
30.	Are there any appendix forms with this funding request?			X	

Town of Needham
Capital Improvement Plan
January 2015

Department Capital Request CIP-DCR									
Title	Mills Field Improvements				Department	Public Works/Park and Recreation			
Useful Life	IV	Primary Reason		1	Operating Budget Impact			C	
Requested Funding Years & Amounts	Column A		Costs Components	Column B		*Other Expenses		Column C	
FY2013			Intangibles						
FY2014			Equipment						
FY2015			Design & Engineering						
FY2016	510,000		Construction Expenses	510,000					
FY2017			Other Expenses*						
Total	\$510,000		Total	\$510,000		Total	\$		
Attached Schedules									
	CF		CX		LS		SI		SS
Description and Justification									
<p>Mills Field has been the location of several park improvements in the past four years including renovated tennis courts, new playground equipment, the addition of a high barrier fence between baseball diamond and tennis courts, replacement of a backstop and outfield fencing, and fencing around the playground area has been replaced.</p> <p>The purpose of this project is to provide safety and aesthetic improvements to the park. These improvements include: (a) create new parking areas at circular drive (24 spaces), along Hampton Avenue (10-12 spaces), and along Ellis St with permeable surfacing (27 spaces); (b) add asphalt overlay to basketball court, stripe, and replace poles and backboards; (c) replace bathroom at Mills Field with modular bathrooms; (d) replace picnic tables and grills; (e) add Xeriscape gardening in appropriate locations; and (f) strip and sod the ball field.</p> <p>Park and Recreation has worked with DPW to develop this scope of work.</p> <p>Additional costs and items were added in the Division's FY 2015-2020 submission. These items include: (a) \$14,000 for a water quality tank, \$6,000 for infiltration, \$30,000 for landscaping, \$30,000 for the addition of Ellis St parking to the project, and \$20,000 for complementary planning board requirements; (b) now includes improved surfacing, which increases the cost by \$15,000 (c) has been added to this project and this has increased the cost by \$46,500.</p> <p>The addition of permeable pavers or non-trackable permeable surfacing will increase the cost of this project between \$90,000 and \$132,000. The budget has been increased to include the most expensive option.</p> <p>This project was originally proposed for funding in FY 2014, but due to other financial and operating considerations has been pushed back one year and all costs have been inflated by 3.5% to account for a one year delay in construction.</p> <p><u>Proposed Schedule</u> Design & Engineering Winter of 2013/2014 May ATM 2015 – Seek Construction Funding Summer of 2015 – Construction</p>									

Town of Needham
Capital Improvement Plan
January 2015

Department Capital Request CIP-DCR							
Title	Sidewalk Needs Assessment	Department	Public Works	Fiscal Year	2016		
Parameters					YES	NO	NA
1.	Is this a multi-year capital replacement/upgrade request?				X		
2.	Is this a request in response to a documented public health or safety condition?					X	
3.	Is this a request in response to a Court, Federal, or State order?					X	
4.	Is this a request for a study or long range plan?				X		
5.	Is this a request to purchase office or school equipment (other than technology)?					X	
6.	Is this a request to purchase specialty equipment?					X	
7.	Is this a request to purchase technology or wireless communication system?					X	
8.	Is this a request to purchase apparatus/equipment that is intended to be permanently installed at the location of its use?					X	
9.	Is this a request to improve or make repair to extend the useful life of a public building?					X	
10.	Is this a request to improve or replace public infrastructure: bridges, culverts, drainage, intersection, roads, sidewalks, sewers or water systems?				X		
11.	Is this a request to repair or otherwise improve public property which is NOT a building or infrastructure?					X	
12.	Will any other department be required to provide resources (other than fulfilling its responsibilities) at any point during the process in order to complete the project?					X	
13.	Are there recommendations or costs identified by other departments that are NOT factored into the request?					X	
14.	Are there additional costs to purchase, install, implement, and/or use (except future year operating costs) that are NOT included in this request?					X	
15.	Are there additional costs to bid, design, construct, complete, and/or use (except future year operating costs) that are NOT included in this request?					X	
16.	If approved, will this request increase the operating expense for any other department?					X	
17.	If approved, will this request require the need for ongoing assistance from vendors at an additional expense to the Town which is not already budgeted?					X	
18.	If approved, will additional permanent staff be required?					X	
19.	If approved, is the current operating budget sufficient to cover the operating costs of the requested project?					X	
20.	If approved, will this request lower the requesting department's operating costs?					X	
21.	Does the request support activities to produce new revenue for the Town?					X	
22.	If the request is not funded will existing Town revenue sources be negatively impacted?					X	
23.	Have other non-capital investment options been explored before submitting this request?					X	
24.	Is specialized training or annual licensing required that the Town will need to pay in order to use the asset (beyond the initial purchase/installation)?					X	
25.	If applicable, will the items being replaced be retained by the Town?						X
26.	Does this request qualify for funding from Community Preservation Act (CPA)?						X
27.	Are there any appendix forms with this funding request?						X
Useful Life	III	Primary Reason	7	Operating Budget Impact	C		

Town of Needham
Capital Improvement Plan
January 2015

Department Capital Request CIP-DCR							
Title	Sidewalk Needs Assessment		Department	Public Works		Fiscal Year	2016
Requested Funding Years & Amounts	Column A	Costs Components	Column B	*Other Expenses	Column C		
Year 1	100,000	Intangibles		Enter description			
Year 2		Equipment		Enter description			
Year 3		Design & Engineering	100,000	Enter description			
Year 4		Construction Expenses		Enter description			
Year 5		Other Expenses*		Enter description			
Column A Total	\$100,000	Column B Total	\$100,000	Column C Total			
Equipment Schedule							
	Yes		No		NA	X	
Description and Justification							
<p>The Traffic Management Advisory Committee (TMAC) has received a number of requests to consider improving pedestrian safety conditions and school walking routes in remote areas of Town. Additionally, the Department of Public Works intends to perform a sidewalk analysis to determine locations where additional sidewalks may be required, and other areas that may be over served by an excess of sidewalks that require maintenance. The Department's goal is to maintain the same or reduce the linear footage of sidewalk throughout the Town.</p> <p>In 2016, this submission is proposing an analysis of the sidewalks within the Town to determine the best course of action in terms of adding or removing sidewalks.</p> <p>Sidewalks that have been identified for consideration for improvements include but are not limited to:</p> <ul style="list-style-type: none"> • Forest St • Nehoiden St • Marked Tree Road • Warren St • High Rock St • Dedham Ave • Central Ave <p>Once the study has been completed a submission for sidewalk construction and estimates will be made.</p>							
FY2015-FY2018 Version							

Town of Needham
Capital Improvement Plan
January 2015

Department Capital Request CIP-DCR							
Title	Public Works Infrastructure Program	Department	Public Works	Fiscal Year	2016		
Parameters					YES	NO	NA
1. Is this a multi-year capital replacement/upgrade request?					X		
2. Is this a request in response to a documented public health or safety condition?						X	
3. Is this a request in response to a Court, Federal, or State order?						X	
4. Is this a request for a study or long range plan?						X	
5. Is this a request to purchase office or school equipment (other than technology)?						X	
6. Is this a request to purchase specialty equipment?						X	
7. Is this a request to purchase technology or wireless communication system?						X	
8. Is this a request to purchase apparatus/equipment that is intended to be permanently installed at the location of its use?						X	
9. Is this a request to improve or make repair to extend the useful life of a public building?						X	
10. Is this a request to improve or replace public infrastructure: bridges, culverts, drainage, intersection, roads, sidewalks, sewers or water systems?					X		
11. Is this a request to repair or otherwise improve public property which is NOT a building or infrastructure?					X		
12. Will any other department be required to provide resources (other than fulfilling its responsibilities) at any point during the process in order to complete the project?						X	
13. Are there recommendations or costs identified by other departments that are NOT factored into the request?						X	
14. Are there additional costs to purchase, install, implement, and/or use (except future year operating costs) that are NOT included in this request?						X	
15. Are there additional costs to bid, design, construct, complete, and/or use (except future year operating costs) that are NOT included in this request?						X	
16. If approved, will this request increase the operating expense for any other department?						X	
17. If approved, will this request require the need for ongoing assistance from vendors at an additional expense to the Town which is not already budgeted?						X	
18. If approved, will additional permanent staff be required?						X	
19. If approved, is the current operating budget sufficient to cover the operating costs of the requested project?					X		
20. If approved, will this request lower the requesting department's operating costs?						X	
21. Does the request support activities to produce new revenue for the Town?						X	
22. If the request is not funded will existing Town revenue sources be negatively impacted?						X	
23. Have other non-capital investment options been explored before submitting this request?						X	
24. Is specialized training or annual licensing required that the Town will need to pay in order to use the asset (beyond the initial purchase/installation)?						X	
25. If applicable, will the items being replaced be retained by the Town?						X	
26. Does this request qualify for funding from Community Preservation Act (CPA)?						X	
27. Are there any appendix forms with this funding request?						X	
Useful Life	III	Primary Reason	5	Operating Budget Impact	C		

Town of Needham
Capital Improvement Plan
January 2015

Department Capital Request CIP-DCR						
Title	Public Works Infrastructure Program		Department	Public Works		Fiscal Year
Requested Funding Years & Amounts		Column A	Costs Components	Column B	*Other Expenses	Column C
Year 1	1,453,500	Intangibles			Borrowing Costs - 2%	145,000
Year 2	1,505,000	Equipment				
Year 3	1,550,000	Design & Engineering		569,000		
Year 4	1,650,000	Construction Expenses		7,144,500		
Year 5	1,700,000	Other Expenses*		145,000		
Column A Total		\$7,858,500	Column B Total	\$7,858,500	Column C Total	\$145,000
Equipment Schedule						
		Yes	No	NA		
Description and Justification						
<p>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.</p> <p>Due to the additional need for drainage work related to the Labor Day storm in 2013 the Traffic Signal & Intersection Improvement requests have been delayed two years. The FY 16 existing Storm Drain Capacity Improvement request has been delayed one year, and the Street Resurfacing and Sidewalk Program has been reduced throughout all five years of the request.</p> <p>Street Resurfacing: This program is essential to improve the structural and surface integrity of the Town's 123 linear miles of accepted streets. 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.</p> <p>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.</p> <p>In the summer of 2014 a grant was offered for crack filling and pot hole repair as a result the winter storms in 2014. Winter Rapid Road Recovery Program granted the Town approximately \$137 thousand dollars, some of which was appropriated towards street resurfacing work normally funded through this article.</p>						

Town of Needham
 Capital Improvement Plan
 January 2015

Department Capital Request CIP-DCR					
Title	Public Works Infrastructure Program	Department	Public Works	Fiscal Year	2016
FY16 - \$450,000 FY17 - \$400,000 FY18 - \$580,000 FY19 - \$563,000 FY20 - \$806,000					
The average useful life for asphalt paving is 15 years; the proposed 5 year capital request is \$2,799,000.					
Traffic Signal & Intersection Improvements: The costs are estimated by Engineering and require conceptual scope of work for project level costs that have not yet been determined. This program will fund Traffic Signal Improvements & Intersection Improvements and new traffic signal installations where none currently exist.					
FY16 – No Funding requested FY17 – No Funding requested FY18 - Highland Avenue @ West Street, Engineering & Design - \$128,000 FY19 – Highland Avenue @ West Street, Construction - \$505,000 FY20 – Great Plain Avenue @ Greendale Avenue, this intersection has been identified as requiring intersection improvements and potentially the replacement of traffic signals, Engineering & Design - \$110,000					
The average useful life is 25 years; the proposed 5 year capital request is \$743,000					
Out Years FY21 – Great Plain Avenue @ Greendale Avenue, Construction - \$643,000 FY22 – Central Ave @ Great Plain Ave, Engineering & Design - \$160,000					
Future intersections under consideration: Dedham Ave/South Central/Webster Central/West 4 th Ave/Kendrick Central/Great Plain					

Town of Needham
Capital Improvement Plan
January 2015

Department Capital Request CIP-DCR					
Title	Public Works Infrastructure Program	Department	Public Works	Fiscal Year	2016
<p>Sidewalk Program: This Program requires funding for the Town to address the failing 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 cost for sidewalk rehabilitation and reconstruction can vary significantly. Current estimates have identified over \$20,000,000 in backlogged sidewalks in need of repair.</p> <p>Calendar year 2015 contract pricing to reconstruct one mile of asphalt sidewalk with incidental costs is estimated to be \$237,000 per mile (\$45.00/lf). Contract pricing to install a mile of granite curb with minor drainage improvements and incidental costs is estimated to be \$260,040 per mile (\$49.25/lf). These costs do not include engineering, design, tree removal and replacement, major drainage improvements or major public or private property adjustments.</p> <p>FY16 - \$225,000 FY17 - \$404,000 FY18 - \$484,000 FY19 - \$300,000 FY20 - \$450,000</p> <p>The average useful life for asphalt sidewalk is over 30 years; the proposed 5 year capital request is \$1,863,000.</p> <p>Storm Drain Capacity Improvements: This program provides funding to improve roadway drainage capacity. The March 2002 Stormwater Master Plan identified a number of areas throughout Needham where improvements are required to resolve flooding problems and illicit discharge. Locations for improvements have been prioritized within the plan. This funding request also includes but is not limited to the installation of additional storm drains and the replacement and extension of drains on Manning Street, Hoover Road, Concord Road and Burnside Road with larger capacity drains. Since the issuance of the 2002 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.</p> <p>FY16 – Greendale Ave. (Reserved for projects related to Labor Day 2013 Flooding) – Eng. \$120,000; Const. \$350,000 FY17 - Taylor Street / Central Avenue – Engineering \$32,500 TBD (Reserved for projects related to Labor Day 2013 Flooding) – Eng. \$100,000; Const. \$337,500 FY18 – Taylor Street / Central Avenue – Construction \$180,000 FY19 – TBD (Reserved for projects related to Labor Day 2013 Flooding) – Const. \$200,000 FY20 – TBD (Reserved for projects related to Labor Day 2013 Flooding) – Const. \$200,000</p>					

Department Capital Request CIP-DCR					
Title	Public Works Infrastructure Program	Department	Public Works	Fiscal Year	2016
<p>The average useful life is 60 years; the proposed 5 year capital request is \$1,520,000.</p> <p>Future Areas to be considered, but not yet prioritized:</p> <ul style="list-style-type: none"> Carey Road (area 2) – Engineering \$42,800 Carey Road (area 2) – Construction \$156,800 Foxhill Rd., Canterbury Lane, South St., and X-Country (Area 10) – Eng. 41,800 Lower Hunnewell Drainage improvements Eng. & Construction 305,000 Foxhill Rd., Canterbury Lane, South St., and X-Country (Area 10) – Construction Concord St., Greendale Ave., Woodbine Cir. System (Area 4) – Eng. 100,000 Oak St. (Area 8), Mackintosh Ave. (Areas 3 & 7), Oxbow Rd. (Area 9), West St. (Area 11) Fairfield St., Elmwood Rd. (Area 5) <p>Storm Drain System Repairs:</p> <p>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.</p> <p>The first project is the replacement of 10 feet of pipe underneath a culvert on Edgewater Drive. This pipe is particularly problematic. It is over 100 years of age, and is plugged-up and degraded beyond remediation. This pipe is presently supporting two sewage pipes, one that is in service, and one that is abandoned in place. The drainage pipe and one of the active sewage pipes are all uncovered due to erosion and the drainage pipe is providing the structural foundation for the sewage pipes. Should the drainage pipe be compromised, it would make the sewage pipes it supports also subject to failure. This replacement includes extensive wetland consulting and permitting which is a major factor in the cost of this project. Additionally, this drainage pipe needs to be constructed under the existing sewage pipes adding to the difficulty of this replacement. This repair will resolve drainage issues in the area that has resulted in flooding of the abutters of the brook, and will ensure the structural stability of the adjacent sewage pipes.</p> <p>The second project is to replace a badly damaged 100 foot section of 18” reinforced concrete drain pipe within a Town easement adjacent to 470 South Street. This replacement includes extensive wetland consulting and permitting which is a major factor in the cost of this project.</p> <p>In the May 2014 Town Meeting funded the design and wetland consulting for the Edgewater Area Culvert. The design work was initiated in the Fall of 2014. Additionally, this project will provide funding over four years for the Drains division to address small projects related to the Labor Day 2013 storm drainage remediation.</p>					

Town of Needham
Capital Improvement Plan
January 2015

Department Capital Request CIP-DCR					
Title	Public Works Infrastructure Program	Department	Public Works	Fiscal Year	2016
<p>FY 16 – Edgewater Area Culvert – Const. \$90,000 470 South St – Design & Wetland Consulting - \$78,500 TBD (Reserved for projects related to Labor Day 2013 Flooding) - \$35,000 FY 17 – 470 South St – Const. \$80,000 TBD (Reserved for projects related to Labor Day 2013 Flooding) - \$25,000 FY 18 - TBD (Reserved for projects related to Labor Day 2013 Flooding) - \$50,000 FY 19 - TBD (Reserved for projects related to Labor Day 2013 Flooding) - \$50,000</p> <p>The proposed 5 year capital request is \$408,500.</p> <p>Brooks and Culverts – Repair and Maintenance: The severe storms of October 1996, June 1998, June 2006, July 2008 and March 2010 have resulted in numerous complaints and subsequent investigations of the Town's brooks, streams and culverts. The conditions observed were significant. It is the intention of the DPW to expend Capital Funds 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 in March 2010 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 current conditions are beyond the means of DPW equipment and personnel. It will require a detailed investigation, a plan of recommended improvements, a design drawing and specifications, environmental permitting and bidding of construction to be overseen by the Town's Engineering Division. This will return the waterways to a condition that the DPW will be able to maintain.</p> <p>The Environmental Protection Agency (EPA) is currently finalizing stronger requirements for stormwater and permitting under the NPDES permit. The Town will need to continue to demonstrate its efforts regarding cleaning and improvements to water quality of brook and culverts to avoid fines from the EPA.</p> <p>FY16 - Continued wall repair along Rosemary Brook – Construction \$80,000. FY17 – Wall repairs at various locations to be determined – Construction \$100,000. FY18 – Culvert at Meadowbrook Rd – Construction \$100,000 FY19 – No Funding Requested FY20 – Continued wall repair along Rosemary Brook – Construction \$100,000</p> <p>The proposed 5 year capital request is \$380,000</p> <p>Future Projects include, but are not limited to, the following locations: Winding River</p>					

Town of Needham
 Capital Improvement Plan
 January 2015

Department Capital Request CIP-DCR					
Title	Public Works Infrastructure Program	Department	Public Works	Fiscal Year	2016
Locust Lane Fuller Brook Oxbow Road Webster & Howland Streets Brookside Road & Forest Street Chestnut Street & Carriage Lane Emerson Place Pennsylvania Avenue Elder Road Meredith Circle Prior projects funded include: Cleaning of Hurd Brook and culverts, from Central Avenue to the Wellesley line and a portion of Alder Brook. FY09 - Brook cleaning from Chestnut Street to Maple Street was completed FY11 - MBTA culvert replacement FY12 - Rosemary Brook at Mallard Road, Perry Gorge FY13 - Portion of Rosemary Brook					
FY2016-FY2020 Version					

Town of Needham
Capital Improvement Plan
January 2015

Department Capital Request CIP-DCR							
Title	Trail Improvement Project: Rosemary Camp Property Trail	Department	Park and Recreation/Conservation	Fiscal Year	2018		
Parameters					YES	NO	NA
1.	Is this a multi-year capital replacement/upgrade request?			<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2.	Is this a request in response to a documented public health or safety condition?			<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3.	Is this a request in response to a Court, Federal, or State order?			<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4.	Is this a request for a study or long range plan?			<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
5.	Is this a request to purchase office or school equipment (other than technology)?			<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
6.	Is this a request to purchase specialty equipment?			<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
7.	Is this a request to purchase technology or wireless communication system?			<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
8.	Is this a request to purchase apparatus/equipment that is intended to be permanently installed at the location of its use?			<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
9.	Is this a request to improve or make repair to extend the useful life of a public building?			<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
10.	Is this a request to improve or replace public infrastructure: bridges, culverts, drainage, intersection, roads, sidewalks, sewers or water systems?			<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
11.	Is this a request to repair or otherwise improve public property which is NOT a building or infrastructure?			<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
12.	Will any other department be required to provide resources (other than fulfilling its responsibilities) at any point during the process in order to complete the project?			<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
13.	Are there recommendations or costs identified by other departments that are NOT factored into the request?			<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
14.	Are there additional costs to purchase, install, implement, and/or use (except future year operating costs) that are NOT included in this request?			<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
15.	Are there additional costs to bid, design, construct, complete, and/or use (except future year operating costs) that are NOT included in this request?			<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
16.	If approved, will this request increase the operating expense for any other department?			<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
17.	If approved, will this request require the need for ongoing assistance from vendors at an additional expense to the Town which is not already budgeted?			<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
18.	If approved, will additional permanent staff be required?			<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
19.	If approved, is the current operating budget sufficient to cover the operating costs of the requested project?			<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
20.	If approved, will this request lower the requesting department's operating costs?			<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
21.	Does the request support activities to produce new revenue for the Town?			<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
22.	If the request is not funded will existing Town revenue sources be negatively impacted?			<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
23.	Have other non-capital investment options been explored before submitting this request?			<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
24.	Is specialized training or annual licensing required that the Town will need to pay in order to use the asset (beyond the initial purchase/installation)?			<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
25.	If applicable, will the items being replaced be retained by the Town?			<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
26.	Does this request qualify for funding from Community Preservation Act (CPA)?			<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
27.	Are there any appendix forms with this funding request?			<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Useful Life	III	Primary Reason	1	Operating Budget Impact		C	

Town of Needham
Capital Improvement Plan
January 2015

Department Capital Request CIP-DCR									
Title	Trail Improvement Project: Rosemary Camp Property Trail				Department	Park and Recreation/Conservation		Fiscal Year	2018
Requested Funding Years & Amounts	Column A		Costs Components	Column B		*Other Expenses		Column C	
Year 1	8,800		Intangibles						
Year 2	66,000		Equipment						
Year 3	93,800		Design & Engineering	74,800					
Year 4			Construction Expenses	93,800					
Year 5			Other Expenses*						
Column A Total	168,600		Column B Total	168,600		Column C Total			
Equipment Schedule									
			Yes		No		NA		
Description and Justification									
<p>The Trails Master Plan has outlined several projects, and this is one of the major improvement projects that is being moved forward for funding. The original estimate was developed in 2008 and updated by the consultant in September 2012. A 5% increase has been added in subsequent years.</p> <p>The trail system that begins in the parking lot at Rosemary Pool and extends through the camp property and over to Nehoiden Street is used on a daily basis by residents in the area. The beginning section is the most urgent need for restoration, but there are other areas of concern, particularly along the steep stretch adjacent to the lake. Some projects would be completed by volunteers, so that only the large construction projects will need to be performed by a contractor. Under the revised legislation, this project is now eligible for CPA funding. A pre-feasibility study was added to insure that the original trail and any other options have been fully vetted. Permitting costs are included in the design phase.</p> <p>Park and Recreation has a separate project for the Rosemary Pool complex being requested, so this project would be coordinated with any future renovations at Rosemary Lake and Pool. As the trail head is within the pool parking lot, some improvements would need to be completed under the Pool project. The Pool Complex was partially funded with federal Land and Water Conservation funds, and access to the property for residents is an important component to the rules related to funding.</p>									
FY2016-FY2020 Version									

Town of Needham
Capital Improvement Plan
January 2015

Department Capital Request CIP-DCR							
Title	Sewer Pump Station Improvements/Replacement	Department	Public Works – Sewer	Fiscal Year	2016		
Parameters					YES	NO	NA
1.	Is this a multi-year capital replacement/upgrade request?				X		
2.	Is this a request in response to a documented public health or safety condition?					X	
3.	Is this a request in response to a Court, Federal, or State order?					X	
4.	Is this a request for a study or long range plan?					X	
5.	Is this a request to purchase office or school equipment (other than technology)?					X	
6.	Is this a request to purchase specialty equipment?					X	
7.	Is this a request to purchase technology or wireless communication system?					X	
8.	Is this a request to purchase apparatus/equipment that is intended to be permanently installed at the location of its use?					X	
9.	Is this a request to improve or make repair to extend the useful life of a public building?					X	
10.	Is this a request to improve or replace public infrastructure: bridges, culverts, drainage, intersection, roads, sidewalks, sewers or water systems?				X		
11.	Is this a request to repair or otherwise improve public property which is NOT a building or infrastructure?					X	
12.	Will any other department be required to provide resources (other than fulfilling its responsibilities) at any point during the process in order to complete the project?					X	
13.	Are there recommendations or costs identified by other departments that are NOT factored into the request?					X	
14.	Are there additional costs to purchase, install, implement, and/or use (except future year operating costs) that are NOT included in this request?					X	
15.	Are there additional costs to bid, design, construct, complete, and/or use (except future year operating costs) that are NOT included in this request?					X	
16.	If approved, will this request increase the operating expense for any other department?					X	
17.	If approved, will this request require the need for ongoing assistance from vendors at an additional expense to the Town which is not already budgeted?					X	
18.	If approved, will additional permanent staff be required?					X	
19.	If approved, is the current operating budget sufficient to cover the operating costs of the requested project?				X		
20.	If approved, will this request lower the requesting department's operating costs?					X	
21.	Does the request support activities to produce new revenue for the Town?					X	
22.	If the request is not funded will existing Town revenue sources be negatively impacted?					X	
23.	Have other non-capital investment options been explored before submitting this request?					X	
24.	Is specialized training or annual licensing required that the Town will need to pay in order to use the asset (beyond the initial purchase/installation)?					X	
25.	If applicable, will the items being replaced be retained by the Town?					X	
26.	Does this request qualify for funding from Community Preservation Act (CPA)?					X	
27.	Are there any appendix forms with this funding request?					X	
Useful Life	15	Primary Reason	4	Operating Budget Impact	C		

Town of Needham
Capital Improvement Plan
January 2015

Department Capital Request CIP-DCR																		
Title	Sewer Pump Station Improvements/Replacement	Department	Public Works – Sewer	Fiscal Year	2016													
Requested Funding Years & Amounts	Column A	Costs Components	Column B	*Other Expenses	Column C													
Year 1	550,000	Intangibles		Enter description														
Year 2	0	Equipment		Enter description														
Year 3	590,000	Design & Engineering	265,500	Enter description														
Year 4		Construction Expenses	1,504,500	Enter description														
Year 5	630,000	Other Expenses*		Enter description														
Column A Total	\$1,770,000	Column B Total	\$1,770,000	Column C Total														
Equipment Schedule																		
	Yes	No	NA	X														
Description and Justification																		
<p>As part of the Wastewater System Master Plan, several of the wastewater pumping stations were evaluated to assess their physical condition and capacity, and to evaluate current and future flow projections. The Master Plan recommended that at least 7 of the 9 stations be upgraded.</p> <p>Canister pump stations at Lake Drive, Cooks Bridge (Milo Circle), Alden Rd and Reservoir "A" are each either at or beyond their design life. Constant maintenance and emergency shutoffs occur more frequently and require greater amounts of personnel time and emergency funds to keep running.</p> <p>Alden Road Pump Station was originally constructed in the mid- 1950's as a pneumatic ejection station, and converted in the 1970's to a built in place wet well/dry well type station with vertical flooded suction sewage pumps. There are no alarms with the exception of a local red light alarm for high wet well level. The pump's outdated electrical control panels are located below grade level adjacent to the pumps, which if flooded, poses a severe threat to personnel as well as equipment. The station has heat, but no dehumidifier or ventilation. Problems have also occurred with roots and rags clogging pumps.</p> <table style="width: 100%; border: none;"> <tr> <td style="width: 60%;">FY 16 Reservoir St. "A" – Engineering, Design & Construction</td> <td style="width: 40%; text-align: right;">\$550,000</td> </tr> <tr> <td>FY 18 Alden Rd – Engineering, Design, & Construction</td> <td style="text-align: right;">\$590,000</td> </tr> <tr> <td>FY 20 Lake Drive – Engineering, Design & Construction</td> <td style="text-align: right;">\$630,000</td> </tr> <tr> <td colspan="2"><u>Out Years:</u></td> </tr> <tr> <td>FY 21 Cooks Bridge - Engineering & Design</td> <td style="text-align: right;">\$345,000</td> </tr> <tr> <td>FY 22 Cooks Bridge - Construction</td> <td style="text-align: right;">\$3,370,500</td> </tr> </table>							FY 16 Reservoir St. "A" – Engineering, Design & Construction	\$550,000	FY 18 Alden Rd – Engineering, Design, & Construction	\$590,000	FY 20 Lake Drive – Engineering, Design & Construction	\$630,000	<u>Out Years:</u>		FY 21 Cooks Bridge - Engineering & Design	\$345,000	FY 22 Cooks Bridge - Construction	\$3,370,500
FY 16 Reservoir St. "A" – Engineering, Design & Construction	\$550,000																	
FY 18 Alden Rd – Engineering, Design, & Construction	\$590,000																	
FY 20 Lake Drive – Engineering, Design & Construction	\$630,000																	
<u>Out Years:</u>																		
FY 21 Cooks Bridge - Engineering & Design	\$345,000																	
FY 22 Cooks Bridge - Construction	\$3,370,500																	
FY2015-FY2018 Version																		

Town of Needham
Capital Improvement Plan
January 2015

Department Capital Request CIP-DCR							
Title	Sewer Service Connections	Department	Public Works – Sewer	Fiscal Year	2016		
Parameters					YES	NO	NA
1.	Is this a multi-year capital replacement/upgrade request?			<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2.	Is this a request in response to a documented public health or safety condition?			<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3.	Is this a request in response to a Court, Federal, or State order?			<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4.	Is this a request for a study or long range plan?			<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
5.	Is this a request to purchase office or school equipment (other than technology)?			<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
6.	Is this a request to purchase specialty equipment?			<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
7.	Is this a request to purchase technology or wireless communication system?			<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
8.	Is this a request to purchase apparatus/equipment that is intended to be permanently installed at the location of its use?			<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
9.	Is this a request to improve or make repair to extend the useful life of a public building?			<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
10.	Is this a request to improve or replace public infrastructure: bridges, culverts, drainage, intersection, roads, sidewalks, sewers or water systems?			<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
11.	Is this a request to repair or otherwise improve public property which is NOT a building or infrastructure?			<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
12.	Will any other department be required to provide resources (other than fulfilling its responsibilities) at any point during the process in order to complete the project?			<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
13.	Are there recommendations or costs identified by other departments that are NOT factored into the request?			<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
14.	Are there additional costs to purchase, install, implement, and/or use (except future year operating costs) that are NOT included in this request?			<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
15.	Are there additional costs to bid, design, construct, complete, and/or use (except future year operating costs) that are NOT included in this request?			<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
16.	If approved, will this request increase the operating expense for any other department?			<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
17.	If approved, will this request require the need for ongoing assistance from vendors at an additional expense to the Town which is not already budgeted?			<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
18.	If approved, will additional permanent staff be required?			<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
19.	If approved, is the current operating budget sufficient to cover the operating costs of the requested project?			<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
20.	If approved, will this request lower the requesting department's operating costs?			<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
21.	Does the request support activities to produce new revenue for the Town?			<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
22.	If the request is not funded will existing Town revenue sources be negatively impacted?			<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
23.	Have other non-capital investment options been explored before submitting this request?			<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
24.	Is specialized training or annual licensing required that the Town will need to pay in order to use the asset (beyond the initial purchase/installation)?			<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
25.	If applicable, will the items being replaced be retained by the Town?			<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
26.	Does this request qualify for funding from Community Preservation Act (CPA)?			<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
27.	Are there any appendix forms with this funding request?			<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Useful Life	[V]	Primary Reason	[4]	Operating Budget Impact		[C]	

Town of Needham
Capital Improvement Plan
January 2015

Department Capital Request CIP-DCR						
Title	Sewer Service Connections		Department	Public Works – Sewer		Fiscal Year
Requested Funding Years & Amounts		Column A	Costs Components	Column B	*Other Expenses	Column C
Year 1	50,000	Intangibles		Enter description		
Year 2	50,000	Equipment		Enter description		
Year 3	50,000	Design & Engineering		Enter description		
Year 4	50,000	Construction Expenses	250,000	Enter description		
Year 5	50,000	Other Expenses*		Enter description		
Column A Total		\$250,000	Column B Total	\$250,000	Column C Total	
Equipment Schedule						
		Yes	No	NA	X	
Description and Justification						
<p>There are 108 homes with access to sewer that are not connected to the Sewer System because they have chosen not to. The purpose of this request is to provide the lateral sewer line from the sewer main to the property line so that the homeowner can connect should they choose to or should their septic system fail. The lateral sewer line is to be added prior (at least one year) to a road reconstruction/paving project. The cost for these service installations are typically not included in road construction estimates. In the case of Chapter 90 Projects, these are not considered as a reimbursement eligible expense. These expenses are included in local road reconstruction estimates. There is a corresponding request for water service connections.</p> <p>Past projects</p> <ul style="list-style-type: none"> • 2013 – installed 14 new sewer laterals (408.5' of pipe) • 2014 – no appropriation was requested • 2015 - \$50,000 appropriated, will fund connections of 5-6 homes 						
FY2015-FY2018 Version						

Town of Needham
Capital Improvement Plan
January 2015

Department Capital Request CIP-DCR							
Title	Sewer Main Extensions in Zone I and II	Department	Public Works-Sewer	Fiscal Year	2017		
Parameters					YES	NO	NA
1.	Is this a multi-year capital replacement/upgrade request?					X	
2.	Is this a request in response to a documented public health or safety condition?				X		
3.	Is this a request in response to a Court, Federal, or State order?					X	
4.	Is this a request for a study or long range plan?					X	
5.	Is this a request to purchase office or school equipment (other than technology)?					X	
6.	Is this a request to purchase specialty equipment?					X	
7.	Is this a request to purchase technology or wireless communication system?					X	
8.	Is this a request to purchase apparatus/equipment that is intended to be permanently installed at the location of its use?					X	
9.	Is this a request to improve or make repair to extend the useful life of a public building?					X	
10.	Is this a request to improve or replace public infrastructure: bridges, culverts, drainage, intersection, roads, sidewalks, sewers or water systems?				X		
11.	Is this a request to repair or otherwise improve public property which is NOT a building or infrastructure?					X	
12.	Will any other department be required to provide resources (other than fulfilling its responsibilities) at any point during the process in order to complete the project?					X	
13.	Are there recommendations or costs identified by other departments that are NOT factored into the request?					X	
14.	Are there additional costs to purchase, install, implement, and/or use (except future year operating costs) that are NOT included in this request?				X		
15.	Are there additional costs to bid, design, construct, complete, and/or use (except future year operating costs) that are NOT included in this request?					X	
16.	If approved, will this request increase the operating expense for any other department?					X	
17.	If approved, will this request require the need for ongoing assistance from vendors at an additional expense to the Town which is not already budgeted?				X		
18.	If approved, will additional permanent staff be required?					X	
19.	If approved, is the current operating budget sufficient to cover the operating costs of the requested project?					X	
20.	If approved, will this request lower the requesting department's operating costs?					X	
21.	Does the request support activities to produce new revenue for the Town?					X	
22.	If the request is not funded will existing Town revenue sources be negatively impacted?					X	
23.	Have other non-capital investment options been explored before submitting this request?					X	
24.	Is specialized training or annual licensing required that the Town will need to pay in order to use the asset (beyond the initial purchase/installation)?					X	
25.	If applicable, will the items being replaced be retained by the Town?					X	
26.	Does this request qualify for funding from Community Preservation Act (CPA)?					X	
27.	Are there any appendix forms with this funding request?					X	
Useful Life	[V]	Primary Reason	[1]	Operating Budget Impact	[C]		

Town of Needham
Capital Improvement Plan
January 2015

Department Capital Request CIP-DCR						
Title	Sewer Main Extensions in Zone I and II		Department	Public Works-Sewer		Fiscal Year
Requested Funding Years & Amounts	Column A	Costs Components	Column B	*Other Expenses	Column C	
Year 1	73,860	Intangibles		Enter description		
Year 2	492,400	Equipment		Enter description		
Year 3		Design & Engineering	73,860	Enter description		
Year 4		Construction Expenses	492,400	Enter description		
Year 5		Other Expenses*		Enter description		
Column A Total	\$566,260	Column B Total	\$566,260	Column C Total		
Equipment Schedule						
	Yes	No	NA	X		
Description and Justification						
<p>There are eight homes in Needham that need to be prioritized for sewer service connection because they are within Massachusetts Department of Environmental Protection's (MassDEP) Zone II areas. These homes are being looked at as part of a future sewer main extension/ service connections project.</p> <p>The Zone I and Zone II aquifer protection area for the Charles River Well No. 1 encompasses an area that includes private septic systems. Zone I, as defined by MassDEP includes land within the protective four hundred (400) foot radius around an existing or potential public water supply well or well field. 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. It is bounded by the groundwater divides which result from pumping the well and by the contact of the aquifer with less permeable materials such as till or bedrock. (Note: these private systems predate the Zone I and II requirements by MassDEP and Needham Zoning Bylaws, Section 3.4.6 (b)).</p> <p>All three of Needham's wells are located in an area that is vulnerable to contamination from nearby septic systems, and extending the sewer main to allow access to homes within Zones I & II will greatly reduce this risk.</p> <p>The sewer main ends at 827 Charles River St, the sewer main extension would run from 828 Charles River St to Winding River Road and extend 712 feet up Winding River Rd. The new sewer main will pick up 5 homes that are on septic, 4 of which are on Winding River Rd. These improvements would be subject to a betterment fee. This may also include the installation of an additional prefabricated sewer pump station for these locations.</p> <p>Monies requested are based on 712 linear feet of 8" gravity sewer pipe installation at a cost of \$200 per linear foot, which includes the installation of five sewer manholes; the cost estimate for this station based on other similar projects is \$350,000; and design and engineering costs of 15% of total project. It is feasible that another option for this project exists in which gravity sewer may be run</p>						

Town of Needham
 Capital Improvement Plan
 January 2015

Department Capital Request CIP-DCR					
Title	Sewer Main Extensions in Zone I and II	Department	Public Works-Sewer	Fiscal Year	2017
through easements, which may result in an overall decrease in the cost of this project.					
FY17	Engineering & Design		\$73,860		
FY18	Construction		\$492,400		
Additional operating budget funds will be required after this project is constructed in order to operate the new main which include electrical and maintenance costs of the pumps, mechanicals seals, valves, wet cleanings, and other maintenance costs. These costs are not anticipated to exceed \$1,000 in 2014 dollars.					
FY2015-FY2018 Version					

Town of Needham
Capital Improvement Plan
January 2015

Department Capital Request CIP-DCR							
Title	Water Supply Development	Department	Public Works - Water	Fiscal Year	2016		
Parameters					YES	NO	NA
1.	Is this a multi-year capital replacement/upgrade request?					X	
2.	Is this a request in response to a documented public health or safety condition?					X	
3.	Is this a request in response to a Court, Federal, or State order?					X	
4.	Is this a request for a study or long range plan?					X	
5.	Is this a request to purchase office or school equipment (other than technology)?					X	
6.	Is this a request to purchase specialty equipment?					X	
7.	Is this a request to purchase technology or wireless communication system?					X	
8.	Is this a request to purchase apparatus/equipment that is intended to be permanently installed at the location of its use?					X	
9.	Is this a request to improve or make repair to extend the useful life of a public building?					X	
10.	Is this a request to improve or replace public infrastructure: bridges, culverts, drainage, intersection, roads, sidewalks, sewers or water systems?				X		
11.	Is this a request to repair or otherwise improve public property which is NOT a building or infrastructure?					X	
12.	Will any other department be required to provide resources (other than fulfilling its responsibilities) at any point during the process in order to complete the project?					X	
13.	Are there recommendations or costs identified by other departments that are NOT factored into the request?					X	
14.	Are there additional costs to purchase, install, implement, and/or use (except future year operating costs) that are NOT included in this request?					X	
15.	Are there additional costs to bid, design, construct, complete, and/or use (except future year operating costs) that are NOT included in this request?					X	
16.	If approved, will this request increase the operating expense for any other department?					X	
17.	If approved, will this request require the need for ongoing assistance from vendors at an additional expense to the Town which is not already budgeted?					X	
18.	If approved, will additional permanent staff be required?					X	
19.	If approved, is the current operating budget sufficient to cover the operating costs of the requested project?				X		
20.	If approved, will this request lower the requesting department's operating costs?					X	
21.	Does the request support activities to produce new revenue for the Town?					X	
22.	If the request is not funded will existing Town revenue sources be negatively impacted?					X	
23.	Have other non-capital investment options been explored before submitting this request?					X	
24.	Is specialized training or annual licensing required that the Town will need to pay in order to use the asset (beyond the initial purchase/installation)?					X	
25.	If applicable, will the items being replaced be retained by the Town?					X	
26.	Does this request qualify for funding from Community Preservation Act (CPA)?					X	
27.	Are there any appendix forms with this funding request?					X	
Useful Life	V	Primary Reason	4	Operating Budget Impact	B		

Town of Needham
Capital Improvement Plan
January 2015

Department Capital Request CIP-DCR						
Title	Water Supply Development		Department	Public Works - Water		Fiscal Year
						2016
Requested Funding Years & Amounts	Column A	Costs Components	Column B		*Other Expenses	Column C
Year 1	700,000	Intangibles				
Year 2		Equipment				
Year 3		Design & Engineering				
Year 4		Construction Expenses		700,000		
Year 5		Other Expenses*				
Column A Total	700,000	Column B Total	700,000		Column C Total	
Equipment Schedule						
	Yes		No		NA	X
Description and Justification						
<p><u>Replacement of Well #3</u></p> <p>In April 2013 the Town redeveloped Well # 3 and was able to restore the yield of the well to approximately one third of its original capacity. The original capacity of the well was 50 gallons per foot, and the redevelopment was able to bring the well up to 18 gallons per foot. Prior to the redevelopment the yield of the well was 5 gallons per foot, and this had been redeveloped in 2009. Since this last redevelopment in April 2013, the well is already showing signs of losing further capacity, and is pumping 7 gallons per foot as of September 2014.</p> <p>The Water & Sewer Division is recommending that this funding request, initially been submitted for the development of a fourth well, be redirected to the replacement of Well #3. The permitting process with the Massachusetts Department of Environmental Protection (MassDEP) for this replacement would be considerably shorter, approximately 1 year, rather than the 7-10 year process for establishing a new well. The funding for FY 15 is for the design and engineering of a replacement well, which is starting in the Fall of 2014, and the funding for FY 16 would be for the construction of that well.</p> <p><u>Proposed Well #4 – Future Project</u></p> <p>This project would be to install a fourth well at the Charles River Well Field that will provide for reliability and redundancy while other wells are taken offline for routine maintenance or repair. The Well Field is presently at full capacity when all three wells are operational. This fourth well would allow the Town to continue to operate to its full capacity. Previously, when the system was at peak demand and a well was taken offline, the Town had to rely on MWRA water source to meet its daily demands. This redundant well will allow the Town to be more</p>						

Town of Needham
 Capital Improvement Plan
 January 2015

Department Capital Request CIP-DCR					
Title	Water Supply Development	Department	Public Works - Water	Fiscal Year	2016
independent even during routine maintenance periods. A feasibility study was completed in FY 2011 that supports the development of an additional well in the Town's existing well field.					
FY2016-FY2020 Version					

Town of Needham
Capital Improvement Plan
January 2015

Department Capital Request CIP-DCR							
Title	Water Service Connections	Department	Public Works – Water	Fiscal Year	2016		
Parameters					YES	NO	NA
1.	Is this a multi-year capital replacement/upgrade request?				X		
2.	Is this a request in response to a documented public health or safety condition?				X		
3.	Is this a request in response to a Court, Federal, or State order?					X	
4.	Is this a request for a study or long range plan?					X	
5.	Is this a request to purchase office or school equipment (other than technology)?					X	
6.	Is this a request to purchase specialty equipment?					X	
7.	Is this a request to purchase technology or wireless communication system?					X	
8.	Is this a request to purchase apparatus/equipment that is intended to be permanently installed at the location of its use?					X	
9.	Is this a request to improve or make repair to extend the useful life of a public building?					X	
10.	Is this a request to improve or replace public infrastructure: bridges, culverts, drainage, intersection, roads, sidewalks, sewers or water systems?				X		
11.	Is this a request to repair or otherwise improve public property which is NOT a building or infrastructure?					X	
12.	Will any other department be required to provide resources (other than fulfilling its responsibilities) at any point during the process in order to complete the project?					X	
13.	Are there recommendations or costs identified by other departments that are NOT factored into the request?					X	
14.	Are there additional costs to purchase, install, implement, and/or use (except future year operating costs) that are NOT included in this request?					X	
15.	Are there additional costs to bid, design, construct, complete, and/or use (except future year operating costs) that are NOT included in this request?					X	
16.	If approved, will this request increase the operating expense for any other department?					X	
17.	If approved, will this request require the need for ongoing assistance from vendors at an additional expense to the Town which is not already budgeted?					X	
18.	If approved, will additional permanent staff be required?					X	
19.	If approved, is the current operating budget sufficient to cover the operating costs of the requested project?				X		
20.	If approved, will this request lower the requesting department's operating costs?					X	
21.	Does the request support activities to produce new revenue for the Town?					X	
22.	If the request is not funded will existing Town revenue sources be negatively impacted?					X	
23.	Have other non-capital investment options been explored before submitting this request?					X	
24.	Is specialized training or annual licensing required that the Town will need to pay in order to use the asset (beyond the initial purchase/installation)?					X	
25.	If applicable, will the items being replaced be retained by the Town?					X	
26.	Does this request qualify for funding from Community Preservation Act (CPA)?					X	
27.	Are there any appendix forms with this funding request?					X	
Useful Life	V	Primary Reason	3	Operating Budget Impact	C		

Town of Needham
Capital Improvement Plan
January 2015

Department Capital Request CIP-DCR																						
Title	Water Service Connections	Department	Public Works – Water	Fiscal Year	2016																	
Requested Funding Years & Amounts	Column A	Costs Components	Column B	*Other Expenses	Column C																	
Year 1	200,000	Intangibles		Enter description																		
Year 2	200,000	Equipment		Enter description																		
Year 3	200,000	Design & Engineering		Enter description																		
Year 4	200,000	Construction Expenses	1,000,000	Enter description																		
Year 5	200,000	Other Expenses*		Enter description																		
Column A Total	1,000,000	Column B Total	1,000,000	Column C Total																		
Equipment Schedule																						
	Yes	No	NA	X																		
Description and Justification																						
<p>The primary purpose of this program is to remove old iron pipe water services that may contain lead from the water distribution system. Old water services are to be replaced prior (at least one year) to a road reconstruction/paving project. If this project is not funded it leaves an element of the subsurface infrastructure susceptible to failure before the useful life of the reconstructed roadway has been realized. Prior appropriations are currently under contract with water service connection replacements estimated to be one and a half years ahead of the road resurfacing program. The FY2016 funding will provide approximately one year’s value of water service replacements, which will fall in line with the road resurfacing program schedule. System wide, there are approximately 2,500 services that still need to be replaced in the system.</p>																						
<table border="1" style="width: 100%; border-collapse: collapse; margin-left: auto; margin-right: auto;"> <thead> <tr> <th style="width: 20%;">Year</th> <th style="width: 80%;">Number of Services Replaced</th> </tr> </thead> <tbody> <tr><td>CY 2007</td><td style="text-align: center;">126</td></tr> <tr><td>CY 2008</td><td style="text-align: center;">170</td></tr> <tr><td>CY 2009</td><td style="text-align: center;">174</td></tr> <tr><td>CY 2010</td><td style="text-align: center;">17</td></tr> <tr><td>CY 2011</td><td style="text-align: center;">145</td></tr> <tr><td>CY 2012</td><td style="text-align: center;">102</td></tr> <tr><td>CY 2013</td><td style="text-align: center;">200</td></tr> </tbody> </table>							Year	Number of Services Replaced	CY 2007	126	CY 2008	170	CY 2009	174	CY 2010	17	CY 2011	145	CY 2012	102	CY 2013	200
Year	Number of Services Replaced																					
CY 2007	126																					
CY 2008	170																					
CY 2009	174																					
CY 2010	17																					
CY 2011	145																					
CY 2012	102																					
CY 2013	200																					
FY2015-FY2018 Version																						

Town of Needham
Capital Improvement Plan
January 2015

Department Capital Request CIP-DCR							
Title	Water System Rehabilitation Program	Department	Public Works – Water	Fiscal Year	2016		
Parameters					YES	NO	NA
1.	Is this a multi-year capital replacement/upgrade request?				X		
2.	Is this a request in response to a documented public health or safety condition?					X	
3.	Is this a request in response to a Court, Federal, or State order?					X	
4.	Is this a request for a study or long range plan?					X	
5.	Is this a request to purchase office or school equipment (other than technology)?					X	
6.	Is this a request to purchase specialty equipment?					X	
7.	Is this a request to purchase technology or wireless communication system?					X	
8.	Is this a request to purchase apparatus/equipment that is intended to be permanently installed at the location of its use?					X	
9.	Is this a request to improve or make repair to extend the useful life of a public building?					X	
10.	Is this a request to improve or replace public infrastructure: bridges, culverts, drainage, intersection, roads, sidewalks, sewers or water systems?				X		
11.	Is this a request to repair or otherwise improve public property which is NOT a building or infrastructure?					X	
12.	Will any other department be required to provide resources (other than fulfilling its responsibilities) at any point during the process in order to complete the project?					X	
13.	Are there recommendations or costs identified by other departments that are NOT factored into the request?					X	
14.	Are there additional costs to purchase, install, implement, and/or use (except future year operating costs) that are NOT included in this request?					X	
15.	Are there additional costs to bid, design, construct, complete, and/or use (except future year operating costs) that are NOT included in this request?					X	
16.	If approved, will this request increase the operating expense for any other department?					X	
17.	If approved, will this request require the need for ongoing assistance from vendors at an additional expense to the Town which is not already budgeted?					X	
18.	If approved, will additional permanent staff be required?					X	
19.	If approved, is the current operating budget sufficient to cover the operating costs of the requested project?				X		
20.	If approved, will this request lower the requesting department's operating costs?					X	
21.	Does the request support activities to produce new revenue for the Town?					X	
22.	If the request is not funded will existing Town revenue sources be negatively impacted?					X	
23.	Have other non-capital investment options been explored before submitting this request?					X	
24.	Is specialized training or annual licensing required that the Town will need to pay in order to use the asset (beyond the initial purchase/installation)?					X	
25.	If applicable, will the items being replaced be retained by the Town?					X	
26.	Does this request qualify for funding from Community Preservation Act (CPA)?					X	
27.	Are there any appendix forms with this funding request?					X	
Useful Life	[V]	Primary Reason	[3, 5]	Operating Budget Impact	[C]		

Town of Needham
Capital Improvement Plan
January 2015

Department Capital Request CIP-DCR					
Title	Water System Rehabilitation Program	Department	Public Works – Water	Fiscal Year	2016
<u>FY19</u>					
	Thorpe Rd./Webster St. to End New 8" (330lf) – Eng. & Design			\$36,500	
	Mills Rd./ Sachem Rd. to Davenport Ave. New 8" (500lf) – Eng. & Design				
	Mayo Ave. Harris Ave to Great Plain Ave New 8" (1060lf) – Eng. & Design				
<u>FY20</u>					
	Thorpe Rd./ Mills Rd./ Mayo Ave. – Construction			\$375,000	
	Mills Rd./ Sachem Rd. to Davenport Ave. New 8" (500lf) – Construction				
	Mayo Ave. Harris Ave to Great Plain Ave New 8" (1060lf) – Construction				
<u>Previously Funded Projects – Completed</u>					
2007	Charles River St 14" Water Main Cleaning & Relining			\$348,509	
2008	Construction Engineering Services Dunster Water Tank			\$46,000	
2008	Construction/Inspection/Engineering Services Phase I 14" Water Main Cleaning & Relining Charles River St			\$77,600	
2009	Chapel St & May St Engineering Design			\$93,500	
2009	16" Water Main/Remove & Replace on Charles River St (Grove to Marked Tree)			\$807,661	
2009	Pickering St. 8" Water Main Replacement/Engineering & Design			\$69,300	
2009	16" Water Main Construction Engineer Services DWRF #3157			\$150,940	
2009	Chapel/May Water Main Replacement			\$690,860	
2010	Pickering St & Garden Street St Water Main Construction			\$521,338	
2012	Highland Ave Water Main Replacement Webster to Sachum Rd Design			\$29,300	
2012	Highland Ave Water Main Replacement, Webster to Muzi Ford, Const.			\$519,628	
2012	Lincoln St Water Main Replacement Design			\$23,125	
2012	16" Water Main Replacement Design (Chestnut & Oak)			\$29,300	
2013	Grant St./Junction St. to Dedham Ave. – New 8' (2500 lf) – Eng. & Design			\$33,000	
2014	Grant St. – New 8' (2500 lf) - Construction			\$376,693	
2014	Lincoln St. – Construction			\$410,113	
2014	16" Water Main @ School St, Chestnut St, & Oak St – Construction			\$685,188 (contract)	
2014	Pleasant St./Howland St. to Dedham Ave. – New 8" (1160 lf) – Eng. & Design			\$36,900 (contract)	
2014	Norfolk St./Warren St. to Webster St. – New 8" (1300 lf) – Eng. & Design			\$39,600 (contract)	
2014	School St.			\$15,000 (contract)	
<u>Future Projects after FY20:</u>					
<u>FY21</u>					
	Kingsbury St. / Oakland Ave. to Webster St. 8" (1,500lf) – Eng. & Design			\$43,000	
	Oakland Ave. / May St. to Highland Ave. 8" (1,1,00lf)- Eng. & Design				

Town of Needham
 Capital Improvement Plan
 January 2015

Department Capital Request CIP-DCR					
Title	Water System Rehabilitation Program	Department	Public Works – Water	Fiscal Year	2016
<u>FY22</u> Kingsbury St. / Oakland Ave. to Webster St. 8" (1,500lf) – Construction \$443,500 Oakland Ave. / May St. to Highland Ave. 8" (1,1,00lf) - Construction Fenton Rd. / West St. to Pershing Rd. - Eng. & Design Greenough St. / Pine Grove St. to Avery St. – Eng. & Design Pine Grove St. Hillside Ave to existing 8" - Eng. & Design High St./Webster St to Greendale Ave 1,400' of 8" – Eng. & Design Tower Ave./Greendale Ave to Lexington Ave. 800' of 12" – Eng. & Design					
FY2015-FY2018 Version					

Town of Needham
Capital Improvement Plan
January 2015

Department Capital Request CIP-DCR							
Title	Water Main Replacement	Department	Public Works - Water	Fiscal Year	2018		
Parameters					YES	NO	NA
1.	Is this a multi-year capital replacement/upgrade request?			<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2.	Is this a request in response to a documented public health or safety condition?			<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3.	Is this a request in response to a Court, Federal, or State order?			<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4.	Is this a request for a study or long range plan?			<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
5.	Is this a request to purchase office or school equipment (other than technology)?			<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
6.	Is this a request to purchase specialty equipment?			<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
7.	Is this a request to purchase technology or wireless communication system?			<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
8.	Is this a request to purchase apparatus/equipment that is intended to be permanently installed at the location of its use?			<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
9.	Is this a request to improve or make repair to extend the useful life of a public building?			<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
10.	Is this a request to improve or replace public infrastructure: bridges, culverts, drainage, intersection, roads, sidewalks, sewers or water systems?			<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
11.	Is this a request to repair or otherwise improve public property which is NOT a building or infrastructure?			<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
12.	Will any other department be required to provide resources (other than fulfilling its responsibilities) at any point during the process in order to complete the project?			<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
13.	Are there recommendations or costs identified by other departments that are NOT factored into the request?			<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
14.	Are there additional costs to purchase, install, implement, and/or use (except future year operating costs) that are NOT included in this request?			<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
15.	Are there additional costs to bid, design, construct, complete, and/or use (except future year operating costs) that are NOT included in this request?			<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
16.	If approved, will this request increase the operating expense for any other department?			<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
17.	If approved, will this request require the need for ongoing assistance from vendors at an additional expense to the Town which is not already budgeted?			<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
18.	If approved, will additional permanent staff be required?			<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
19.	If approved, is the current operating budget sufficient to cover the operating costs of the requested project?			<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
20.	If approved, will this request lower the requesting department's operating costs?			<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
21.	Does the request support activities to produce new revenue for the Town?			<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
22.	If the request is not funded will existing Town revenue sources be negatively impacted?			<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
23.	Have other non-capital investment options been explored before submitting this request?			<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
24.	Is specialized training or annual licensing required that the Town will need to pay in order to use the asset (beyond the initial purchase/installation)?			<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
25.	If applicable, will the items being replaced be retained by the Town?			<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
26.	Does this request qualify for funding from Community Preservation Act (CPA)?			<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
27.	Are there any appendix forms with this funding request?			<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Useful Life	M	Primary Reason	3,5	Operating Budget Impact		C	

Town of Needham
Capital Improvement Plan
January 2015

Department Capital Request CIP-DCR										
Title	Water Main Replacement				Department	Public Works - Water			Fiscal Year	2018
Requested Funding Years & Amounts	Column A	Costs Components		Column B	*Other Expenses		Column C			
Year 1	400,000	Intangibles								
Year 2		Equipment								
Year 3	4,000,000	Design & Engineering		400,000						
Year 4		Construction Expenses		4,000,000						
Year 5		Other Expenses*								
Column A Total	\$4,400,000	Column B Total		\$4,400,000	Column C Total					
Equipment Schedule										
	Yes		No		NA		X			
Description and Justification										
<p>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 extending from Charles River Street, to Pine Street, to Central Avenue, to Marked Tree Road and a section between Oak Street and Chestnut Street, to School Street.</p> <p>In 2008, 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.</p> <p>This project includes replacing the pipe and reconstructing the road.</p> <p>FY 2018 Funding is proposed for the design of the remaining 11,500 linear feet of water main to be replaced from the intersection of Pine Street, Oak St, and Maple St. Engineering and Design: \$400,000</p> <p>FY 2020 Funding is proposed for the construction of the remaining water main. Construction: \$4,000,000</p> <p>State Revolving Fund Funding may be available for this project and the Public Works Department will submit an application. </p>										
FY2016-FY2020 Version										

Town of Needham
Capital Improvement Plan
January 2015

Department Capital Request CIP-DCR							
Title	Fire Flow Improvements – Feasibility Study	Department	Public Works – Water	Fiscal Year	2017		
Parameters					YES	NO	NA
1.	Is this a multi-year capital replacement/upgrade request?				X		
2.	Is this a request in response to a documented public health or safety condition?					X	
3.	Is this a request in response to a Court, Federal, or State order?					X	
4.	Is this a request for a study or long range plan?					X	
5.	Is this a request to purchase office or school equipment (other than technology)?					X	
6.	Is this a request to purchase specialty equipment?					X	
7.	Is this a request to purchase technology or wireless communication system?					X	
8.	Is this a request to purchase apparatus/equipment that is intended to be permanently installed at the location of its use?					X	
9.	Is this a request to improve or make repair to extend the useful life of a public building?					X	
10.	Is this a request to improve or replace public infrastructure: bridges, culverts, drainage, intersection, roads, sidewalks, sewers or water systems?				X		
11.	Is this a request to repair or otherwise improve public property which is NOT a building or infrastructure?					X	
12.	Will any other department be required to provide resources (other than fulfilling its responsibilities) at any point during the process in order to complete the project?					X	
13.	Are there recommendations or costs identified by other departments that are NOT factored into the request?					X	
14.	Are there additional costs to purchase, install, implement, and/or use (except future year operating costs) that are NOT included in this request?					X	
15.	Are there additional costs to bid, design, construct, complete, and/or use (except future year operating costs) that are NOT included in this request?					X	
16.	If approved, will this request increase the operating expense for any other department?					X	
17.	If approved, will this request require the need for ongoing assistance from vendors at an additional expense to the Town which is not already budgeted?					X	
18.	If approved, will additional permanent staff be required?					X	
19.	If approved, is the current operating budget sufficient to cover the operating costs of the requested project?				X		
20.	If approved, will this request lower the requesting department’s operating costs?					X	
21.	Does the request support activities to produce new revenue for the Town?					X	
22.	If the request is not funded will existing Town revenue sources be negatively impacted?					X	
23.	Have other non-capital investment options been explored before submitting this request?					X	
24.	Is specialized training or annual licensing required that the Town will need to pay in order to use the asset (beyond the initial purchase/installation)?					X	
25.	If applicable, will the items being replaced be retained by the Town?					X	
26.	Does this request qualify for funding from Community Preservation Act (CPA)?					X	
27.	Are there any appendix forms with this funding request?					X	
Useful Life	[V]	Primary Reason	[4]	Operating Budget Impact	[C]		

Town of Needham
Capital Improvement Plan
January 2015

Department Capital Request CIP-DCR							
Title	Fire Flow Improvements – Feasibility Study		Department	Public Works – Water		Fiscal Year	2017
Requested Funding Years & Amounts	Column A	Costs Components	Column B	*Other Expenses	Column C		
Year 1	107,500	Intangibles		Enter description			
Year 2		Equipment		Enter description			
Year 3		Design & Engineering	107,500	Enter description			
Year 4	0	Construction Expenses		Enter description			
Year 5	0	Other Expenses*		Enter description			
Column A Total	\$107,500	Column B Total	\$107,500	Column C Total			
Equipment Schedule							
	Yes	No	NA	X			
Description and Justification							
<p>The Water System Master Plan has identified fire flow adequacy as an improvement for high priority action.</p> <p>A fire flow adequacy analysis was conducted under maximum daily demand that determined the system is unable to meet the minimum 20 pounds per square inch of pressure (psi) in the higher elevations of Town: Tower Hill and Birds Hill Areas. This will address water pressure concerns in high elevation areas during high demand that have been raised by residents in these areas.</p> <p>In order to meet the minimum 20 psi, the DPW is requesting funding for a feasibility study and engineering cost analysis to analyze and propose a cost-effective solution to the low pressure areas. The goal is to create a high pressure zone in those two areas, potentially supplied by water booster stations. The FY17 estimate provided based upon a 1999 water system report and may be altered pending the completion of a feasibility study.</p> <p>FY17- Bird's Hill Tank high service area & Dunster Road Tank high service area / feasibility study - \$ 107,500</p>							
FY2015-FY2018 Version							

Town of Needham
Capital Improvement Plan
January 2015

Department Capital Request CIP-DCR							
Title	Water Distribution Study	Department	Public Works - Water	Fiscal Year	2020		
Parameters					YES	NO	NA
1. Is this a multi-year capital replacement/upgrade request?						X	
2. Is this a request in response to a documented public health or safety condition?						X	
3. Is this a request in response to a Court, Federal, or State order?						X	
4. Is this a request for a study or long range plan?						X	
5. Is this a request to purchase office or school equipment (other than technology)?						X	
6. Is this a request to purchase specialty equipment?						X	
7. Is this a request to purchase technology or wireless communication system?						X	
8. Is this a request to purchase apparatus/equipment that is intended to be permanently installed at the location of its use?						X	
9. Is this a request to improve or make repair to extend the useful life of a public building?						X	
10. Is this a request to improve or replace public infrastructure: bridges, culverts, drainage, intersection, roads, sidewalks, sewers or water systems?					X		
11. Is this a request to repair or otherwise improve public property which is NOT a building or infrastructure?						X	
12. Will any other department be required to provide resources (other than fulfilling its responsibilities) at any point during the process in order to complete the project?						X	
13. Are there recommendations or costs identified by other departments that are NOT factored into the request?						X	
14. Are there additional costs to purchase, install, implement, and/or use (except future year operating costs) that are NOT included in this request?						X	
15. Are there additional costs to bid, design, construct, complete, and/or use (except future year operating costs) that are NOT included in this request?						X	
16. If approved, will this request increase the operating expense for any other department?						X	
17. If approved, will this request require the need for ongoing assistance from vendors at an additional expense to the Town which is not already budgeted?						X	
18. If approved, will additional permanent staff be required?						X	
19. If approved, is the current operating budget sufficient to cover the operating costs of the requested project?					X		
20. If approved, will this request lower the requesting department's operating costs?						X	
21. Does the request support activities to produce new revenue for the Town?						X	
22. If the request is not funded will existing Town revenue sources be negatively impacted?						X	
23. Have other non-capital investment options been explored before submitting this request?						X	
24. Is specialized training or annual licensing required that the Town will need to pay in order to use the asset (beyond the initial purchase/installation)?						X	
25. If applicable, will the items being replaced be retained by the Town?						X	
26. Does this request qualify for funding from Community Preservation Act (CPA)?						X	
27. Are there any appendix forms with this funding request?						X	
Useful Life	M	Primary Reason	3,5	Operating Budget Impact	C		

Town of Needham
Capital Improvement Plan
January 2015

Department Capital Request CIP-DCR										
Title	Water Distribution Study				Department	Public Works - Water			Fiscal Year	2020
Requested Funding Years & Amounts	Column A	Costs Components	Column B	*Other Expenses	Column C					
Year 1	200,000	Intangibles								
Year 2		Equipment								
Year 3		Design &Engineering	200,000							
Year 4		Construction Expenses								
Year 5		Other Expenses*								
Column A Total	\$200,000	Column B Total	\$200,000	Column C Total						
Equipment Schedule										
	Yes		No		NA	X				
Description and Justification										
<p>This study will provide for an analysis of the Town's water infrastructure. This is partially driven by recommendations that were made in the current master plan that was conducted in 1998, which is coming to its completion of recommendations. Since the last time that the Town studied its water infrastructure, Needham Crossing, formally the 128 Business Park, has significantly changed with more dense development and different industries and uses.</p> <p>This request is for developing a new 20 year master plan that will include the following:</p> <ul style="list-style-type: none"> Conduct a thorough asset inventory of the system and conduct a hydraulic analysis. Prioritize the rehabilitation and replacement of the asset information related to condition, performance, replacement values, failure modes, probability of failure, and criticality. Develop a new 20 forecast for projected growth. Developing an annual estimate of needed reserves and an annual budget. Implement the asset management plan. Review and revise the current asset management plan. <p>The purpose of this water distribution study is to evaluate the existing water distribution system and determine the following:</p> <ul style="list-style-type: none"> Identify any deficiencies that exist and determine what repairs should be made to ensure that the system can provide the required flow and pressure. Using growth projections from the Town's planning and zoning maps, estimate where and when future growth will occur. Using these growth projections, analyze the water system and determine the capacity of the water source, storage, and distribution system. Once the capacity is determined, decisions can be made as to when aspects of the water system should be further developed, upsized, or replaced. 										
FY2016-FY2020 Version										

Capital Request Code Key

Project Category:

- B** = Building
- F** = Facility (seasonal buildings and active sites, e.g., beach, fields or park)
- I** = Infrastructure, e.g., road, bridge, and sidewalks, drainage systems, sewer laterals or systems, water supply distribution systems
- L** = Land purchase or improvements (trails)

Useful Life:

- I** = more than five (5) years but less than eight (8) years
- II** = between eight (8) and twelve (12) years
- III** = between twelve (12) and eighteen (18) years
- IV** = between eighteen (18) and twenty-five (25) years
- V** = more than twenty-five (25) years.

Primary Reason:

- 1** = public/employee health or safety
- 2** = legal requirement
- 3** = obsolete/non-functioning
- 4** = operational efficiency
- 5** = scheduled replacement
- 6** = supports performance measure
- 7** = new function or service
- 8** = other

Operating Budget Impact:

- A.** The project will generate revenue to offset costs in full.
- B.** The project will reduce operating cost.
- C.** The project is estimated to result in less than \$5,000 in increased operating expenditures.
- D.** The project is estimated to result in less than \$25,000 in increased operating expenditures.
- E.** The project is estimated to result in less than \$50,000 in increased operating expenditures.
- F.** The project is estimated to result in more than \$50,001 in increased operating expenditures.