

# Infrastructure Submissions

## Section 6



Town of Needham  
Capital Improvement Plan  
January 2009

Building, Infrastructure & Other Facility Request CIP-BIF								
<b>Project Title</b>	<b>Bicycle Facilities</b>				<b>Fiscal Year</b>	<b>2010</b>		
Requestor	Public Works				Project Category	I		
Location	Various							
Funding	General Fund				CPA Eligible?	NO		
<b>Purpose</b>		<b>Timeline</b>		<b>Method to Determine Cost</b>		<b>Project Budget</b>		
Acquisition		Total Project Duration (months)	12	Consultant		A, D, & E		
New Construction (increase in square footage)	X	Engineering and Design Phase		In-House	X	Site Costs		
Reconstruction - Repair		Construction Phase	1 Season	Industry References		Construction	\$52,500	
Health or Safety	X	Next Phase		Other		F, F, & E		
Federal or State Mandate						Technology		
New Technology		<b>Estimated Useful Life</b>				Contingency		
Performance Measure						Other		
<b>Project Manager</b>						Estimated Project Cost	\$52,500	
Project Funding Schedule								
	FY2010	FY 2011	FY 2012	FY 2013	FY 2014			
Engineering & Design								
Construction	\$52,500							
Total	\$52,500							
Operational Considerations							YES	NO
Are there additional costs to bid, design, construct, complete, and use (except future year operating costs) that are NOT included in this request?								X
If another department provides support (personnel or financial), has the department been consulted prior to submission of this request?							N/A	
Will the requested project require an increase in the next fiscal year operating budget for ANY department?							X	
Will additional staff be required if the request is approved?								X
As Permanent Employees?								
Hired Independent Contractors?								
Does the request include or require new or additional technology?								X
Does the request support activities which produce revenue for the Town?								X
If the request is not approved will Town revenues be negatively impacted?								X

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<b>Building, Infrastructure &amp; Other Facility Request CIP-BIF</b>															
Project Title	Bicycle Facilities	Fiscal Year	2010												
Requestor	Public Works	Project Category	I												
<i>All "YES" responses must be explained in the narrative</i>															
Description and Explanation															
<p>During the past few years the DPW has been working with members of the Bicycle Advisory Committee. With the DPW's cooperation, the Committee has produced a report entitled "A Bicycling Plan for the Town of Needham". The plan is intended to identify opportunities to enhance the use of bicycles for transportation, as well as recreation, incorporating it into the intermodal transportation network. The plan promotes the designation of certain roads as the Needham Bikeway Network. The Network initially includes the designations of "bicycle lane" or "share the road" depending on the pavement width. Ultimately it will include bicycle paths. In order to delineate the Network it is necessary to install special signs and add pavement markings. The additional signs and pavement markings will have to be maintained through the Highway Division operating budget.</p> <table style="margin-left: auto; margin-right: auto; border: none;"> <tr> <td></td> <td style="text-align: center;">Markings</td> <td style="text-align: center;">Signs</td> </tr> <tr> <td>Bicycle Lanes</td> <td style="text-align: center;">\$39,500</td> <td style="text-align: center;">\$ 6,500</td> </tr> <tr> <td>Share the Road</td> <td style="text-align: center;">---</td> <td style="text-align: center;">\$ 6,500</td> </tr> <tr> <td></td> <td style="text-align: center; border-top: 1px solid black;">\$39,500</td> <td style="text-align: center; border-top: 1px solid black;">\$13,000</td> </tr> </table>					Markings	Signs	Bicycle Lanes	\$39,500	\$ 6,500	Share the Road	---	\$ 6,500		\$39,500	\$13,000
	Markings	Signs													
Bicycle Lanes	\$39,500	\$ 6,500													
Share the Road	---	\$ 6,500													
	\$39,500	\$13,000													

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Building, Infrastructure & Other Facility Request CIP-BIF								
<b>Project Title</b>	<b>Bridge Repair Design</b>				<b>Fiscal Year</b>	<b>10-14</b>		
Requestor	Public Works				Project Category	I		
Location	Kendrick Street over Charles River							
Funding	General Fund				CPA Eligible?	No		
<b>Purpose</b>		<b>Timeline</b>		<b>Method to Determine Cost</b>		<b>Project Budget</b>		
Acquisition		Total Project Duration (months)	18	Consultant		A, D, & E	\$125,000	
New Construction (increase in square footage)		Engineering and Design Phase	18	In-House	x	Site Costs		
Reconstruction - Repair	x	Construction Phase	TBD	Industry References		Construction	TBD	
Health or Safety	x	Next Phase		Other	x	F, F, & E		
Federal or State Mandate						Technology		
New Technology		<b>Estimated Useful Life</b>				Contingency		
Performance Measure		75 Years				Other		
<b>Project Manager</b>					Estimated Project Cost	TBD		
Project Funding Schedule								
	FY2010	FY 2011	FY 2012	FY 2013	FY 2014			
Engineering & Design	\$125,000	TBD						
Construction		TBD						
Total								
Operational Considerations							YES	NO
Are there additional costs to bid, design, construct, complete, and use (except future year operating costs) that are NOT included in this request?								x
If another department provides support (personnel or financial), has the department been consulted prior to submission of this request?							N/A	
Will the requested project require an increase in the next fiscal year operating budget for ANY department?								x
Will additional staff be required if the request is approved?								x
As Permanent Employees?								
Hired Independent Contractors?								
Does the request include or require new or additional technology?								x
Does the request support activities which produce revenue for the Town?								x
If the request is not approved will Town revenues be negatively impacted?								x
<i>All "YES" responses must be explained in the narrative</i>								

Town of Needham  
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<b>Building, Infrastructure &amp; Other Facility Request CIP-BIF</b>			
<b>Project Title</b>	<b>Bridge Repair Design</b>	<b>Fiscal Year</b>	<b>10-14</b>
Requestor	Public Works	Project Category	I
Description and Explanation			
<p>Surrounded on three sides by the Charles River, the Town jointly maintains a number of bridges with neighboring communities. The Massachusetts Bridge Inspection Program has identified a number of bridges to have some level of deficiency and has recommended repairs. This program is essential to improve the structural and/or surface integrity of all bridges throughout Needham. The South Street/Willow Street Bridge and the Kendrick Street Bridge are both in need of repair. Capital Project costs will include surveying, engineering evaluation, design, and repair or reconstruction. Recent reports from Mass Highway indicated that the conditions of the South Street/Willow Street bridge and the Kendrick Street bridge are worsening and are in immediate need of repair. The State has agreed to pay for the repairs of the Willow Street bridge, which will be designed under the direction of the Town of Dover. Bridges are one of the infrastructure assets whose value and depreciation are now tracked under the GASB 34 program</p> <p>FY10 - Kendrick Street Bridge Evaluation and Design - \$125,000</p> <p>FY11 - Kendrick Street Bridge Construction - \$TBD</p>			

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Building, Infrastructure & Other Facility Request CIP-BIF							
<b>Project Title</b>	<b>Bridges, Intersections, Roads and Sidewalks Capital Program – General Fund</b>			<b>Fiscal Year</b>	<b>10-14</b>		
Requestor	Director of Public Works			Project Category	I		
Location	Various						
Funding	General Fund			CPA Eligible?	No		
<b>Purpose</b>		<b>Timeline</b>		<b>Method to Determine Cost</b>		<b>Project Budget</b>	
Acquisition		Total Project Duration (months)	Varies	Consultant		A, D, & E \$365,000	
New Construction (increase in square footage)		Engineering and Design Phase	Varies	In-House		Site Costs	
Reconstruction - Repair	X	Construction Phase		Industry References		Construction \$5,635,000	
Health or Safety	X	Next Phase		Other		F, F, & E	
Federal or State Mandate	X					Technology	
New Technology		<b>Estimated Useful Life</b>				Contingency	
Performance Measure		Varies				Other	
<b>Project Manager</b>		Highway Superintendent			Estimated Project Cost	\$6,000,000	
<b>Project Funding Schedule</b>							
	FY2010	FY 2011	FY 2012	FY 2013	FY 2014		
Engineering & Design	\$75,000	\$80,000	\$85,000	\$0	\$125,000		
Construction	\$925,000	\$1,020,000	\$1,115,000	\$1,300,000	\$1,275,000		
<b>Total</b>	<b>\$1,000,000</b>	<b>\$1,100,000</b>	<b>\$1,200,000</b>	<b>\$1,300,000</b>	<b>\$1,400,000</b>		
<b>Operational Considerations</b>						YES	NO
Are there additional costs to bid, design, construct, complete, and use (except future year operating costs) that are NOT included in this request?							X
If another department provides support (personnel or financial), has the department been consulted prior to submission of this request?						X	
Will the requested project require an increase in the next fiscal year operating budget for ANY department?							X
Will additional staff be required if the request is approved?							X
As Permanent Employees?							X
Hired Independent Contractors?							X
Does the request include or require new or additional technology?							X
Does the request support activities which produce revenue for the Town?							X
If the request is not approved will Town revenues be negatively impacted?							X
<i>All "YES" responses must be explained in the narrative</i>							
Description and Explanation							
<u>Roadway Reconstruction</u> The roadway system throughout the community has developed over the last century. A great							

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<b>Building, Infrastructure &amp; Other Facility Request CIP-BIF</b>			
<b>Project Title</b>	<b>Bridges, Intersections, Roads and Sidewalks Capital Program – General Fund</b>	<b>Fiscal Year</b>	<b>10-14</b>
<p>number of miles of roadway, mainly residential roads were developed after World War II. A combination of the aging of the earliest roads, the tremendous expansion of the road system and a failure to provide adequate, ongoing maintenance and repair over the past 25 years has resulted in a significant decline in the overall condition of Needham’s roads. A significant number of roads are in need of reconstruction.</p> <p>This program will provide the necessary funding for the inspection, engineering, and design for the rehabilitation or reconstruction of the roadway network including drainage, traffic control and other incidental roadway improvements. Roadway improvements may include full construction or other standard rehabilitation methods. Many of the main roads may require structural and geometric improvements. Improvements in the business district could include new traffic signals, sidewalk improvements, pedestrian lighting, granite curb, and other features.</p> <p>Beginning in FY1999, following several years of attempting to secure funding for the reconstruction of local roads, an ongoing program for funding was initiated. Due to a poor economy and tight budget, the funding for this program was discontinued after only 3 years.</p> <p>The annual request for Engineering &amp; Design funding is in the \$450,000-\$500,000 range. The annual request for Construction funding is \$3,300,000.</p> <p>Estimated Useful Life 60 to 80 Years. Estimated 5 Year Capital Cost is approximately \$18.0 Million.</p> <p><u>Street Resurfacing</u> This program is essential to improve the structural and surface integrity of the Town's network of accepted streets. The primary strategy in this program is asphalt paving and incidental work directly associated with paving. Incidental work could include corner reconstruction, handicap ramps, leveling, structural overlays, utility adjustments, minor drainage improvements, some drain extension work, street sign replacement, asphalt curbing with grass shoulders and pavement markings.</p> <p>Many streets have insufficient pavement thickness, are poorly shaped, lack curbing and require some drainage improvements. Applying this repair strategy in a timely manner will help defer costly and disruptive street reconstruction significantly on all but the most highly traveled roadways. Paving roadways in a timely manner will extend the useful life of the roadway system in the most cost effective manner.</p> <p>This program would provide funding to pave about 8 lane miles of roadway based on CY-09 contract prices. A lane mile is 5,280’ by 12’ or 7,040 S.Y.</p> <p>Other paving strategies may be funded under this program.</p> <p>The current program requests \$254,000 for Construction funding for Fiscal Year 2010.</p> <p>The request for Construction funding in FY 2011 is \$175,000; in FY 2012 is \$250,000; in FY 2013 is \$271,000; and in FY2014 is \$750,000.</p> <p>Estimated Useful Life 10 to 15 Years. Estimated 5 Year Capital Cost \$1,700,000</p>			

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<b>Building, Infrastructure &amp; Other Facility Request CIP-BIF</b>			
<b>Project Title</b>	<b>Bridges, Intersections, Roads and Sidewalks Capital Program – General Fund</b>	<b>Fiscal Year</b>	<b>10-14</b>
<p><u>Traffic Signal &amp; Intersection Improvements</u> The costs are estimated by Engineering and require conceptual scope of work for project level costs that have not yet been determined.</p> <p>This program will fund Traffic Signal Improvements &amp; intersection improvements for existing intersections and provide funding for new Traffic Signals where none currently exist.</p> <p>FY10 – Design - Dedham Ave. @ Harris Ave, this intersection has been identified as requiring intersection improvements. The engineering and design estimate is \$75,000.</p> <p>FY11 – Construction - Dedham Ave. @ Harris Ave., intersection improvements. \$335,000.</p> <p>Design - High St @ Greendale Ave, This intersection has been identified as requiring traffic signals. This request is for intersection and traffic signal engineering and design. The engineering and design estimate is \$80,000.</p> <p>FY12 – Construction - High St @ Greendale Ave, intersection improvement and new traffic signal installation. \$408,000.</p> <p>Design - Great Plain Ave @ Greendale Ave, this intersection has been identified as requiring intersection improvements and replacement of traffic signals. The engineering and design estimate is \$85,000.</p> <p>FY13 – Construction - Great Plain Av @ Greendale Av, this existing traffic signal may require intersection improvements and updating some of the existing traffic signal components. \$500,000</p> <p>FY14 – Design estimate - \$125,000</p> <p>Estimated Useful Life 25 Years Estimated 5 Year Capital Cost \$1,608,000</p> <p><u>Sidewalk Repair &amp; Resurfacing School Walking Routes</u> This program includes funding to construct 10 to 15 handicap ramps.</p> <p>There are over 160 miles of sidewalk of which 52 miles are designated as school walking routes. The school walking routes are reviewed periodically. Over half of the sidewalks require significant work. Most of the existing sidewalks do not comply with ADA or AAB laws and regulations or Town of Needham specifications.</p> <p>Current conservative estimates identify nearly \$20 million of sidewalk work required, Town wide.</p> <p>Highway staff performs detailed functions such as loam and seed operations to minimize contractor costs.</p> <p>Depending on the workload in the Engineering Division, private surveyors may be required to provide layout services.</p>			

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<b>Building, Infrastructure &amp; Other Facility Request CIP-BIF</b>			
<b>Project Title</b>	<b>Bridges, Intersections, Roads and Sidewalks Capital Program – General Fund</b>	<b>Fiscal Year</b>	<b>10-14</b>
<p>FY10 –, Mt Vernon Ave. from Great Plain Ave. to Birds Hill Ave. north side, Hillcrest Rd. from Birds Hill Rd. to Bond St (one side). Garden St. from Great Plain Ave. to May St. (both sides). Warren St Dedham Ave. to Kingsbury St (one side) - Eng. &amp; Const. \$571,000</p> <p>FY11 - Thornton Rd. from Broad Meadow Rd. to Birds Hill Ave. (east side), Harris Ave. from Great Plain Ave. to Coulton Park.(both sides), Bradford St from Dedham Ave. to Harris Ave. (West side), Glenwood Rd. from Bradford St. to the Pollard School Parking Lot. (north side). High St. (both sides), Greendale Ave. from Nevada Rd to High St. (south Side)- Eng. &amp; Const. \$410,000</p> <p>FY12 - Harris Ave. from Dedham Av to Bradford St.(both sides), School St. from Chestnut St. to Warren St. (North Side), Dedham Ave. opposite Grant St. to Bradford St. (North Side), Warren St. from School St. to Great Plain Ave. (one side) - Eng. &amp; Const. \$357,000</p> <p>FY-13 - Harris Ave. from Bradford St. to Coulton Pk (both sides), Pinewood Rd. (west side) - Eng. &amp; Const. Sylvan Rd. from Linden St to Fairview Rd. (north side), - Eng. &amp; Const. \$429,000</p> <p>FY14 – Grant St. from Dedham Ave. to Junction St. (East side), Oak St. from Chestnut St. to Marked Tree Rd.(north side) – Eng. &amp; Const. \$425,000</p> <p>Estimated Useful Life 20 to 30 Years. Estimated 5 Year Capital Cost \$2,192,000</p> <p><u>Sidewalk Repair &amp; Resurfacing Non-School Walking Routes</u> This program would provide funding for sidewalk repair and resurfacing not covered under the “school walking route” program.</p> <p>FY10-FY14 – Attention will be directed to non-school walking routes. Examples of these roads are: Birds Hill Ave., Coolidge Rd., Glendoon Rd., Great Plain Ave., Hillcrest Rd., Maple St., Mark Lee Rd., Mellen St., Washburn Ave., Wilshire Pk., and Woodledge Rd.</p> <p>There are over 160 miles of sidewalk. Over half of the sidewalks require significant work. Most of the existing sidewalks do not comply with ADA or AAB laws and regulations or Town of Needham specifications. In future years more funds will be dedicated to this part of the program from the school routes.</p> <p>Current conservative estimates identify approximately \$20 million of sidewalk work required, Town wide.</p> <p>Estimated Useful Life 20 to 30 Years Estimated 5 Year Capital Cost \$500,000</p>			

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Building, Infrastructure & Other Facility Request CIP-BIF								
<b>Project Title</b>	<b>Brook and Culvert Repair and Maintenance</b>				<b>Fiscal Year</b>	<b>11-14</b>		
Requestor	Town Engineer				Project Category	I		
Location	Various							
Funding	General Fund				CPA Eligible?	No		
<b>Purpose</b>		<b>Timeline</b>		<b>Method to Determine Cost</b>		<b>Project Budget</b>		
Acquisition		Total Project Duration (months)		Consultant		A, D, & E		
New Construction (increase in square footage)		Engineering and Design Phase		In-House	X	Site Costs		
Reconstruction - Repair	X	Construction Phase		Industry References		Construction	\$400,000	
Health or Safety		Next Phase		Other		F, F, & E		
Federal or State Mandate	X					Technology		
New Technology		<b>Estimated Useful Life</b>				Contingency		
Performance Measure		25 Years				Other		
<b>Project Manager</b>					Estimated Project Cost	\$400,000		
Project Funding Schedule								
	FY2010	FY 2011	FY 2012	FY 2013	FY 2014			
Engineering & Design								
Construction	\$0	\$100,000	\$100,000	\$100,000	\$100,000			
<b>Total</b>	<b>\$0</b>	<b>\$100,000</b>	<b>\$100,000</b>	<b>\$100,000</b>	<b>\$100,000</b>			
Operational Considerations							YES	NO
Are there additional costs to bid, design, construct, complete, and use (except future year operating costs) that are NOT included in this request?							x	
If another department provides support (personnel or financial), has the department been consulted prior to submission of this request?							x	
Will the requested project require an increase in the next fiscal year operating budget for ANY department?								x
Will additional staff be required if the request is approved?								x
As Permanent Employees?								x
Hired Independent Contractors?								x
Does the request include or require new or additional technology?								x
Does the request support activities which produce revenue for the Town?								x
If the request is not approved will Town revenues be negatively impacted?								x
<i>All "YES" responses must be explained in the narrative</i>								

Town of Needham  
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<b>Building, Infrastructure &amp; Other Facility Request CIP-BIF</b>			
<b>Project Title</b>	<b>Brook and Culvert Repair and Maintenance</b>	<b>Fiscal Year</b>	<b>11-14</b>
Description and Explanation			
<p>The severe storms of October 1996, June 1998 and 2006 have resulted in numerous complaints and subsequent investigations of the Town's brooks, streams and culverts. The conditions observed were significant. The DPW has developed a repair and maintenance program which is a combination of contracted work and use of town forces. It is the intention of the DPW to expend Capital Funds to address the issue of flooded and poor draining brooks, streams, waterways and culverts throughout the Town that have been severely neglected for many years. Lack of routine maintenance has caused the failure of retaining walls, loss of soils behind the walls, and brooks have become silted allowing the overgrowth of vegetation that has impacts on the level of the water flows. This neglect 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. FY06 funding for this program included cleaning of Hurd Brook and culverts, from Central Avenue to the Wellesley line and a portion of Alder Brook. In FY07, no funding was appropriated. FY08 funding will complete Alder Brook. FY09 funding was reduced to \$60,000. No request is being made for FY10.</p> <p><u>Future Projects include, but are not limited to, the following locations:</u></p> <ul style="list-style-type: none"> <li>Winding River Rd.</li> <li>Locust Lane</li> <li>Fuller Brook</li> <li>Oxbow Road</li> <li>Webster &amp; Howland Streets</li> <li>Brookside Road &amp; Forest Street</li> <li>Chestnut Street &amp; Carriage Lane</li> <li>Emerson Place</li> <li>Pennsylvania Avenue</li> </ul>			

Town of Needham  
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Building, Infrastructure & Other Facility Request CIP-BIF								
<b>Project Title</b>	Catch Basin cleaning and Management Baseline				<b>Fiscal Year</b>	10-14		
Requestor	Town Engineer				Project Category	I		
Location	Town wide							
Funding	General Fund				CPA Eligible?	NO		
<b>Purpose</b>		<b>Timeline</b>		<b>Method to Determine Cost</b>		<b>Project Budget</b>		
Acquisition		Total Project Duration (months)	12	Consultant		A, D, & E	\$50,000	
New Construction (increase in square footage)		Engineering and Design Phase		In-House	X	Site Costs		
Reconstruction - Repair		Construction Phase		Industry References		Construction	\$250,000	
Health or Safety	X	Next Phase		Other		F, F, & E		
Federal or State Mandate	X					Technology		
New Technology		<b>Estimated Useful Life</b>				Contingency		
Performance Measure	X	20-Years				Other		
<b>Project Manager</b>		Town Engineer			Estimated Project Cost	\$300,000		
<b>Project Funding Schedule</b>								
	FY2010	FY 2011	FY 2012	FY 2013	FY 2014			
Engineering & Design	\$50,000							
Construction	\$250,000							
Total	\$300,000							
<b>Operational Considerations</b>							YES	NO
Are there additional costs to bid, design, construct, complete, and use (except future year operating costs) that are NOT included in this request?								X
If another department provides support (personnel or financial), has the department been consulted prior to submission of this request?							X	
Will the requested project require an increase in the next fiscal year operating budget for ANY department?								X
Will additional staff be required if the request is approved?								X
As Permanent Employees?								
Hired Independent Contractors?								
Does the request include or require new or additional technology?								X
Does the request support activities which produce revenue for the Town?								X
If the request is not approved will Town revenues be negatively impacted?								X
<i>All "YES" responses must be explained in the narrative</i>								

Town of Needham  
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<b>Building, Infrastructure &amp; Other Facility Request CIP-BIF</b>			
Project Title	Catch Basin cleaning and Management Baseline	Fiscal Year	10-14
Description and Explanation			
<p><u>History</u></p> <p>The DPW has an EPA Stormwater Discharge Permit (NPDES-Phase II) under the Federal Clean Water Act. The permit requires comprehensive multi-year programs to demonstrate to the EPA that the Town is meeting the intent of the regulations. In effort to preserve, protect, and improve Needham's water resources from polluted Stormwater, the EPA has set six (6) minimum control measures the town must establish for Stormwater management.</p> <p>The proposed project meets one of the 6 minimum measures as "Pollution Prevention and good house keeping".</p> <p><u>Project Description</u></p> <p>The town has approximately 3750 Catch basins that will be pumped empty by a contracted vac truck company and the contents of the catch basins will be disposed of by the town. Catch basins will be inspected and various structural information will be recorded as well as information on type and quantity of material found in the sump of each catch basin. A database will be developed and downloaded onto the town's GIS.</p> <p><u>Results</u></p> <ul style="list-style-type: none"> <li>· The proposed program will meet one of the six identified minimum control measures for Stormwater monitoring. The EPA considers this pollution prevention/good housekeeping controls.</li> <li>· Will assist on investigations and developing plans for making corrections to current drainage problems and other problems with areas of stagnant water that require vector (mosquito) control.</li> <li>· Information gathered will assist the DPW in predictive catch basin cleaning needs. The DPW will be able to more accurately schedule catch basin cleanings based on need rather than cleaning each individual catch basin on an arbitrary rotation.</li> </ul> <p><u>Cost Breakdown</u></p> <p>The project will last for one year in which all town owned catch basins will be pumped empty and information will be entered into a database and a predictive cleaning can be developed.  Pump town owned catch basins - \$250,000  Database development/Engineering support - \$50,000</p>			

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Building, Infrastructure & Other Facility Request CIP-BIF								
<b>Project Title</b>	<b>Needham Center/ Chestnut Street Streetscape &amp; Pedestrian Facility Improvements</b>				<b>Fiscal Year</b>	<b>10-14</b>		
Requestor	Public Works				Project Category	I		
Location	Needham Center/Chestnut Street							
Funding	General Fund				CPA Eligible?			
<b>Purpose</b>		<b>Timeline</b>		<b>Method to Determine Cost</b>		<b>Project Budget</b>		
Acquisition		Total Project Duration (months)	18	Consultant		A, D, & E		
New Construction (increase in square footage)		Engineering and Design Phase	18	In-House	x	Site Costs		
Reconstruction - Repair	x	Construction Phase	2012	Industry References		Construction		
Health or Safety		Next Phase	2011	Other	x	F, F, & E		
Federal or State Mandate						Technology		
New Technology		<b>Estimated Useful Life</b>				Contingency		
Performance Measure		20 Years				Other		
<b>Project Manager</b>		Town Engineer			Estimated Project Cost	TBD		
Project Funding Schedule								
	FY2010	FY 2011	FY 2012	FY 2013	FY 2014			
Engineering & Design	\$78,500	\$100,000	TBD					
Construction	\$52,500		TBD	TBD	TBD			
<b>Total</b>	<b>\$130,000</b>	<b>\$100,000</b>	<b>TBD</b>	<b>TBD</b>	<b>TBD</b>			
Operational Considerations							YES	NO
Are there additional costs to bid, design, construct, complete, and use (except future year operating costs) that are NOT included in this request?								x
If another department provides support (personnel or financial), has the department been consulted prior to submission of this request?							x	
Will the requested project require an increase in the next fiscal year operating budget for ANY department?							x	
Will additional staff be required if the request is approved?								x
As Permanent Employees?								x
Hired Independent Contractors?								x
Does the request include or require new or additional technology?								x
Does the request support activities which produce revenue for the Town?								x
If the request is not approved will Town revenues be negatively impacted?								x
<i>All "YES" responses must be explained in the narrative</i>								

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<b>Building, Infrastructure &amp; Other Facility Request CIP-BIF</b>			
<b>Project Title</b>	<b>Needham Center/ Chestnut Street Streetscape &amp; Pedestrian Facility Improvements</b>	<b>Fiscal Year</b>	<b>10-14</b>
Description and Explanation			
<p>In 1995 the Needham Design Guidelines Partnership consisting of members of the Planning Board, the Design Review Board and the Needham Business Association secured funding from public and private sources to produce a report entitled "Town of Needham Design Guidelines for the Business Districts". Utilizing a consultant, this group held several meetings including workshops where both public and private participants could provide input to develop this guideline. This guideline is offered to private developers to encourage them to incorporate these treatment recommendations as their properties undergo improvements. Several of these recommendations have been incorporated into the recent reconstruction of the Great Plain Ave near Pickering St. and the Highland Ave/Chapel St./May St. intersection, the reconstruction of Chapel St., the Chestnut St. Parking Lots and proposed Chestnut Street reconstruction project from Marsh road to the MBTA bridge. This has allowed property owners to enhance their rear entrances or improve their entrance areas such as on Chapel St, as prescribed in the guidelines. There is a separate section devoted to public improvements. These improvements include recommendations for improved streetscape character involving the use of pedestrian-scale light fixtures, landscaping, including additional trees and plantings, and other public amenities such as benches, trash receptacles and bicycle racks. More significantly, it recommends more public accessibility. These are accomplished with wider sidewalks, additional crosswalks and safer crossing at intersections. This work is proposed to be undertaken in 3 stages. First the development of conceptual plans in order to determine the desired outcome followed by engineering / design, then the construction. Funding for the construction could be sought from the State under a special program, however, funds for these are not in large amounts and competition is heavy.</p> <p>The Downtown Study Committee has not yet finalized a recommendation for the theme of visual improvements for the Downtown area.</p> <p>The proposed funding for 2010 is intended to fund the first phase of preliminary design and construction under this Capital Item.</p> <p>The proposed funding for 2011 is intended to fund the first phase of preliminary traffic signal design under this Capital Item.</p>			

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Building, Infrastructure & Other Facility Request CIP-BIF								
<b>Project Title</b>	<b>Retaking Monumentation of Street Layouts</b>				<b>Fiscal Year</b>	<b>10-14</b>		
Requestor	Public Works				Project Category	I		
Location	Various							
Funding	General Fund				CPA Eligible?			
<b>Purpose</b>		<b>Timeline</b>		<b>Method to Determine Cost</b>		<b>Project Budget</b>		
Acquisition		Total Project Duration (months)	12	Consultant		A, D, & E	\$62,000	
New Construction (increase in square footage)		Engineering and Design Phase		In-House	X	Site Costs		
Reconstruction - Repair	X	Construction Phase		Industry References		Construction		
Health or Safety		Next Phase	2011	Other		F, F, & E		
Federal or State Mandate						Technology		
New Technology		<b>Estimated Useful Life</b>				Contingency		
Performance Measure		100-Years				Other		
<b>Project Manager</b>		Town Engineer			Estimated Project Cost	\$62,500		
Project Funding Schedule								
	FY2010	FY 2011	FY 2012	FY 2013	FY 2014			
Engineering & Design	\$62,500	TBD	TBD	TBD	TBD			
Construction								
<b>Total</b>	<b>\$62,500</b>							
Operational Considerations							YES	NO
Are there additional costs to bid, design, construct, complete, and use (except future year operating costs) that are NOT included in this request?								X
If another department provides support (personnel or financial), has the department been consulted prior to submission of this request?								
Will the requested project require an increase in the next fiscal year operating budget for ANY department?								X
Will additional staff be required if the request is approved?								X
As Permanent Employees?								
Hired Independent Contractors?								
Does the request include or require new or additional technology?								X
Does the request support activities which produce revenue for the Town?								X
If the request is not approved will Town revenues be negatively impacted?								X
<i>All "YES" responses must be explained in the narrative</i>								

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<b>Building, Infrastructure &amp; Other Facility Request CIP-BIF</b>			
<b>Project Title</b>	<b>Retaking Monumentation of Street Layouts</b>	<b>Fiscal Year</b>	<b>10-14</b>
Description and Explanation			
<p>The program would fund the survey and drafting efforts required to determine and record the layout of various streets throughout the Town. A retaking plan and installation of stone bounds are included in the project.</p> <p>FY10 - Broad Meadow Road -\$62,500            FY11 - Hunnewell Street - TBD            FY12 - Webster Street - TBD            FY13 - TBD            FY14 - TBD</p>			

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Building, Infrastructure & Other Facility Request CIP-BIF								
Project Title	Storm Drain Discharge Improvements – Water Quality (EPA)				Fiscal Year	11-14		
Requestor	Public Works				Project Category	I		
Location	Various							
Funding	General Fund				CPA Eligible?	No		
Purpose		Timeline		Method to Determine Cost		Project Budget		
Acquisition		Total Project Duration (months)	12	Consultant		A, D, & E	\$105,000	
New Construction (increase in square footage)		Engineering and Design Phase	12	In-House	X	Site Costs		
Reconstruction - Repair	X	Construction Phase	12	Industry References		Construction	\$70,000	
Health or Safety		Next Phase	2010	Other		F, F, & E		
Federal or State Mandate	X					Technology		
New Technology		Estimated Useful Life				Contingency		
Performance Measure		80 Years				Other		
Project Manager		Town Engineer			Estimated Project Cost	\$175,000		
Project Funding Schedule								
	FY2010	FY 2011	FY 2012	FY 2013	FY 2014			
Engineering & Design	\$0	\$40,000		\$65,000				
Construction			\$70,000					
Total	\$0	\$40,000	\$70,000	\$65,000				
Operational Considerations							YES	NO
Are there additional costs to bid, design, construct, complete, and use (except future year operating costs) that are NOT included in this request?								X
If another department provides support (personnel or financial), has the department been consulted prior to submission of this request?							X	
Will the requested project require an increase in the next fiscal year operating budget for ANY department?								X
Will additional staff be required if the request is approved?								X
As Permanent Employees?								X
Hired Independent Contractors?								X
Does the request include or require new or additional technology?								X
Does the request support activities which produce revenue for the Town?								X
If the request is not approved will Town revenues be negatively impacted?								X
<i>All "YES" responses must be explained in the narrative</i>								

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<b>Building, Infrastructure &amp; Other Facility Request CIP-BIF</b>			
Project Title	Storm Drain Discharge Improvements – Water Quality (EPA)	Fiscal Year	11-14
Description and Explanation			
<p>In 1995 the DPW was under order from the EPA to embark on a stormwater discharge investigation for all illicit discharges to the Charles River. Illicit Discharges identified in this investigation were pursued and improvements undertaken to eliminate them in 1996 and 1997. This investigation led to the Town entering into a Memorandum of Understanding (MOU) with the EPA to commence a Town-wide investigation and to the development of a Stormwater Master Plan. This Master Plan was completed in 2002. Incorporated into this Stormwater Master Plan are improvements to the Storm Drainage System to upgrade the quality of the water discharged to the Charles River in Needham. Further investigation and sampling continues year to year. When the EPA Stormwater Discharge Permit took effect, there were a number of projects identified to better manage stormwater quality. The first projects that have been identified include:</p> <p>FY10 – No Request            FY11 - DPW Facility SWMP , Engineering / Design / Permitting \$40,000            FY12 - DPW Facility SWMP, Construction \$70,000            FY13 – Water Shed Management Plan \$65,000            FY14 - TBD</p>			

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Building, Infrastructure & Other Facility Request CIP-BIF								
<b>Project Title</b>	<b>Storm Water Master Plan Drainage Improvements (Capacity)</b>				<b>Fiscal Year</b>	<b>10-14</b>		
Requestor	Public Works				Project Category	I		
Location	Various							
Funding	General Fund				CPA Eligible?	No		
Purpose		Timeline		Method to Determine Cost		Project Budget		
Acquisition		Total Project Duration (months)	12	Consultant	x	A, D, & E	\$345,000	
New Construction (increase in square footage)		Engineering and Design Phase	12	In-House	x	Site Costs		
Reconstruction - Repair	x	Construction Phase	2010	Industry References		Construction	\$545,000	
Health or Safety		Next Phase	2010	Other		F, F, & E		
Federal or State Mandate						Technology		
New Technology		Estimated Useful Life				Contingency		
Performance Measure		80 Years				Other		
Project Manager		Town Engineer			Estimated Project Cost	\$890,000		
Project Funding Schedule								
	FY2010	FY 2011	FY 2012	FY 2013	FY 2014			
Engineering & Design	\$240,000	\$0	\$65,000	\$40,000	\$0			
Construction		\$235,000	\$0	\$310,000	\$0			
Total	\$240,000	\$235,000	\$65,000	\$350,000	\$0			
Operational Considerations							YES	NO
Are there additional costs to bid, design, construct, complete, and use (except future year operating costs) that are NOT included in this request?								x
If another department provides support (personnel or financial), has the department been consulted prior to submission of this request?							x	
Will the requested project require an increase in the next fiscal year operating budget for ANY department?								x
Will additional staff be required if the request is approved?								x
As Permanent Employees?								x
Hired Independent Contractors?								x
Does the request include or require new or additional technology?								x
Does the request support activities which produce revenue for the Town?								x
If the request is not approved will Town revenues be negatively impacted?								x
<i>All "YES" responses must be explained in the narrative</i>								

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<b>Building, Infrastructure &amp; Other Facility Request CIP-BIF</b>			
Project Title	Storm Water Master Plan Drainage Improvements (Capacity)	Fiscal Year	10-14
Description and Explanation			
<p>The March 2002 Storm Water Master Plan, identified a number of areas throughout the Town where improvements are required to resolve flooding problems and illicit discharges. Locations for improvements have been prioritized within the Plan. Drainage improvements to Bradford Street and Carey Road were determined to be most critical. The funding request also includes installation of additional storm drains between Lantern Lane and Gayland Road and to replace, increase capacity and extend storm drains on Manning St, Hoover Rd and Concord Rd &amp; Burnside Rd. Since the issuance of this report numerous multi-unit developments have been built or planned in the Town of Needham. These developments incorporate new roads with drainage structures and roof or sump connections which are then connected to the existing town owned system. These new connections have increased the load on the current system and causes flooding in some areas.</p>			
<p>FY10 - Bradford Street System (Area 1) - Eng. \$40,000 Lantern Lane &amp; Gayland Road (Area 6a &amp; 6b) - Eng &amp; Construction \$200,000</p>			
<p>FY11 - Bradford Street System (Area 1)- Construction \$235,000</p>			
<p>FY12 - Taylor Street/Central Ave (Undesignated) - Eng. \$30,000, Carey Road (Area 2) - Eng. \$35,000</p>			
<p>FY13 - Foxhill Rd., Canterbury Lane, South St., and X-Country (Area 10) - Eng. \$40,000 Carey Road (Area 2) - Construction \$150,000 Taylor Street/Central Ave (Undesignated) - Construction \$160,000</p>			
<p>FY14 - TBD</p>			
<p>Future Areas to be considered, but not yet prioritized:</p>			
<p>\$TBD Foxhill Rd., Canterbury Lane, South St., and X-Country (Area 10) - Construction</p>			
<p>Concord Street, Greendale Ave., Woodbine Cir. System (Area 4) - Eng. \$100,000</p>			
<p>Oak St. (Area 8), Mackintosh Ave. (Areas 3 &amp; 7), Oxbow Rd. (Area 9), West St (Area</p>			
<p>11) Fairfield Street, Elmwood Road (Area 5)</p>			

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Building, Infrastructure & Other Facility Request CIP-BIF								
<b>Project Title</b>	<b>Traffic and Street Lighting Energy Challenge Program</b>				<b>Fiscal Year</b>	<b>10-14</b>		
Requestor	Public Works				Project Category	03		
Location	Town Wide							
Funding	General Fund				CPA Eligible?	No		
<b>Purpose</b>		<b>Timeline</b>		<b>Method to Determine Cost</b>		<b>Project Budget</b>		
Acquisition		Total Project Duration (months)	12	Consultant		A, D, & E		
New Construction (increase in square footage)		Engineering and Design Phase		In-House	<b>x</b>	Site Costs		
Reconstruction - Repair	<b>x</b>	Construction Phase	12 months	Industry References		Construction		
Health or Safety		Next Phase	2010	Other		F, F, & E		
Federal or State Mandate						Technology		
New Technology	<b>x</b>	<b>Estimated Useful Life</b>				Contingency		
Performance Measure		10 Years				Other		
<b>Project Manager</b>		Town Engineer			Estimated Project Cost	\$10,000/Year		
Project Funding Schedule								
	FY2010	FY 2011	FY 2012	FY 2013	FY 2014			
Engineering & Design								
Construction	<b>\$10,000</b>	<b>\$10,000</b>	<b>\$10,000</b>	<b>\$10,000</b>				
Total	<b>\$10,000</b>	<b>\$10,000</b>	<b>\$10,000</b>	<b>\$10,000</b>				
Operational Considerations							YES	NO
Are there additional costs to bid, design, construct, complete, and use (except future year operating costs) that are <b>NOT</b> included in this request?								<b>x</b>
If another department provides support (personnel or financial), has the department been consulted prior to submission of this request?							<b>x</b>	
Will the requested project require an increase in the next fiscal year operating budget for ANY department?								<b>x</b>
Will additional staff be required if the request is approved?								<b>x</b>
As Permanent Employees?								
Hired Independent Contractors?								
Does the request include or require new or additional technology?							<b>x</b>	
Does the request support activities which produce revenue for the Town?								<b>x</b>
If the request is not approved will Town revenues be negatively impacted?								<b>x</b>
<i>All "YES" responses must be explained in the narrative</i>								

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<b>Building, Infrastructure &amp; Other Facility Request CIP-BIF</b>			
<b>Project Title</b>	<b>Traffic and Street Lighting Energy Challenge Program</b>	<b>Fiscal Year</b>	<b>10-14</b>
<b>Description and Explanation</b>			
<p>The Community Energy Challenge is an opportunity for municipalities across New England to identify simple and cost-effective measures that increase energy efficiency and renewable energy use while reducing air pollution and saving money.</p> <p>The DPW Engineering Division and Highway Division have been exploring new technologies relative to traffic signal lamps. This request proposes to retrofit all of the existing red yellow and green lamps which use 116 watt incandescent bulbs (average life 1 year) with a 6 watt/12 watt Light Emitting Diode (LED) unit (guaranteed 5 year life with up to 10 years life for those currently in service around the country). These LED displays provide efficient, durable, and reliable service. They also offer the added benefit of improved brightness for safety and easy maintenance by only having to be replaced every 5-10 years vs. once per year. The Massachusetts Highway Department began retrofitting their signals several years ago and the Town of Framingham and City of Newton have also undertaken retrofits.</p> <p>The Town is also investigating a streetlight conversion program, which replaces Mercury Vapor lights with more energy efficient and mercury free High-Pressure Sodium (HPS) lights. The program will include a study for the investigation to reduce the overall number of streetlights within the Town, saving energy and replacement costs as part of the Town's Sustainable Needham Initiative. The cost savings realized from the conversion of mercury vapor to high pressure sodium is approximately 40 percent.</p> <p>Many of the local minor streets including cul-de-sac's and dead-end roads can be considered for street light reductions. Several other locations where new pedestrian scale lights have been installed are candidates for having the standard street lights still in existence removed.</p>			

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<b>Future Project Request CIP-F</b>			
<b>Project Title</b>	<b>Sewer Service Connection Installation/Replacement</b>	<b>Fiscal Year</b>	<b>11-12</b>
Requestor	Public Works - Sewer Division		
Location	Various	Estimated Project Cost	\$100,000
Funding Source	SWR	CPA Eligible?	
Project Manager	Water and Sewer		
Project Summary			
<p>With the initiation of the Road Construction Programs, a component of the overall project that had been overlooked for funding was the installation or replacement of the sewer service building connections. There are still homes that have chosen not to connect to the Sewer System. Should their septic system fail, they could be ordered to connect due to health reasons regardless of any moratoriums on excavations in new construction that may be in place. 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. However, they are reimbursable through a betterment type process typically over a ten (10) year period. These expenses will be included in future local road reconstruction estimates. Homeowners where sewer mains exist will be encouraged to connect prior to the project start. However, for those homeowners who do not connect, a partial connection within the right-of-way will be installed. There is a corresponding request for water service connections.</p>			

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<b>Building, Infrastructure &amp; Other Facility Request CIP-BIF</b>								
<b>Project Title</b>	<b>Sewer System Rehabilitation - Infiltration Removal Program Sewer System Rehabilitation - Inflow Removal Program</b>				<b>Fiscal Year</b>	<b>2011</b>		
<b>Requestor</b>	Public Works Water & Sewer Superintendent				<b>Project Category</b>	03		
<b>Location</b>	Various							
<b>Funding</b>	Sewer Enterprise Fund / WPAT – SRF (2%Loan ) / MWRA(Loan/grant)				<b>CPA Eligible?</b>	NO		
<b>Purpose</b>		<b>Timeline</b>		<b>Method to Determine Cost</b>		<b>Project Budget</b>		
Acquisition		Total Project Duration (months)	24 Months	Consultant		A, D, & E		
New Construction (increase in square footage)		Engineering and Design Phase	12 Months	In-House		Site Costs		
Reconstruction - Repair	X	Construction Phase	12 Months	Industry References		Construction		
Health or Safety		Next Phase		Other		F, F, & E		
Federal or State Mandate	X					Technology		
New Technology		<b>Estimated Useful Life</b>				Contingency		
Performance Measure		25 years				Other		
<b>Project Manager</b>		Town Engineer				Estimated Project Cost		
<b>Project Funding Schedule</b>								
		FY2010	FY 2011	FY 2012		FY 2013	FY 2014	
Engineering & Design		0	155,000					
Construction		0	0					
Total		0	155,000					
<b>Operational Considerations</b>							YES	NO
Are there additional costs to bid, design, construct, complete, and use (except future year operating costs) that are NOT included in this request?								X
If another department provides support (personnel or financial), has the department been consulted prior to submission of this request?								X
Will the requested project require an increase in the next fiscal year operating budget for ANY department?								X
Will additional staff be required if the request is approved?								X
As Permanent Employees?								X
Hired Independent Contractors?								X
Does the request include or require new or additional technology?								X
Does the request support activities which produce revenue for the Town?								X

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<b>Building, Infrastructure &amp; Other Facility Request CIP-BIF</b>													
Project Title	Sewer System Rehabilitation - Infiltration Removal Program Sewer System Rehabilitation - Inflow Removal Program	Fiscal Year	2011										
If the request is not approved will Town revenues be negatively impacted?		X											
<i>All "YES" responses must be explained in the narrative</i>													
Description and Explanation													
<p>The Town of Needham, along with numerous other communities, is under Administrative Orders from the DEP to identify and remove Infiltration and Inflow (I/I) in existing sewer systems. Infiltration is defined as groundwater or storm water runoff that enters the system thru deteriorated pipe or manhole structures that by definition need to be repaired. As a result of this order, I/I studies have been undertaken to determine the locations and volumes of I/I entering the sanitary sewer system. The I/I analysis (1985 &amp; 1989) and the Sewer System Evaluation Survey (SSES) (1991) have identified, by flow measurement, the areas of the collection system which are contributing high volumes of I/I to the system. On the basis of volumes of flow and knowledge of local sewer system overflows (SSO) or basement flooding, an order of priority has been established to determine the scheduling of the engineering, design, and remediation work. The highest priorities relate to locations of known surcharging with sewage overflow or release or basement flooding. The remediation proceeds in stages starting with the preliminary engineering, followed by the rehabilitation design and concluding with the rehabilitation construction.</p> <p>Much of this work could address inflow include extending or expanding the storm drain system to accept groundwater from household sump pumps. Needham's most significant problem is believed to be from these private sources. The program will initiate with an education and information campaign to inform and prepare the homeowners as to the nature of the problem. The cost impacts to the community, the legal implications, the likely solutions, and the responsibilities of the homeowner and the potential enforcement actions by the Town, the MWRA, the DEP, and the EPA will need to be communicated. The preliminary engineering will likely take the form of smoke testing and flooded dye testing to determine any direct or indirect interconnections between the sewer and the storm drain system. It will also include a door-to-door investigation of households to determine where violations are occurring. Typical violations include, but are not limited to, sump pumps or open clean-outs where non-sanitary flow is discharging directly to the sewer system as well as foundation drains, yard drains, roof leaders and other cross connections.</p> <p><u>INFILTRATION</u> The work to date has focused on infiltration removal. This program will continue as an infiltration removal effort. A separate program is being presented for Inflow removal</p> <p><u>Previously Funded Areas</u></p> <table style="width: 100%; border: none;"> <tr> <td style="padding-left: 20px;">FY08 - Engineering, Design &amp; Construction (Various Locations)</td> <td style="text-align: right; padding-right: 20px;">\$1,740,300</td> </tr> <tr> <td style="padding-left: 40px;">Infiltration Construction - Area 2, 24 &amp; 21(L)</td> <td></td> </tr> <tr> <td style="padding-left: 40px;">Area 22(Prelim. Design - Infiltration)</td> <td style="text-align: right;">\$ 66,500</td> </tr> <tr> <td></td> <td style="text-align: right; border-top: 1px solid black;">\$1,806,800</td> </tr> </table> <p><u>Proposed Funded Areas</u></p> <table style="width: 100%; border: none;"> <tr> <td style="padding-left: 20px;">FY10 (No Work Proposed)</td> <td style="text-align: right; padding-right: 20px;">0</td> </tr> </table>				FY08 - Engineering, Design & Construction (Various Locations)	\$1,740,300	Infiltration Construction - Area 2, 24 & 21(L)		Area 22(Prelim. Design - Infiltration)	\$ 66,500		\$1,806,800	FY10 (No Work Proposed)	0
FY08 - Engineering, Design & Construction (Various Locations)	\$1,740,300												
Infiltration Construction - Area 2, 24 & 21(L)													
Area 22(Prelim. Design - Infiltration)	\$ 66,500												
	\$1,806,800												
FY10 (No Work Proposed)	0												

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Building, Infrastructure & Other Facility Request CIP-BIF			
Project Title	Sewer System Rehabilitation - Infiltration Removal Program Sewer System Rehabilitation - Inflow Removal Program	Fiscal Year	2011
FY11- Area 16 Preliminary Engineering		\$80,000	
Area 22 - Design -		\$75,000	
Area - Not Identified - Construction		\$ 0	
FY12 - Area 16 - Design -			TBD
Area 22 - Construction -			\$ TBD
 <u>Preliminary Engineering</u>			
 <u>INFLOW</u>			
Inflow is defined as clean, non-septic water, which is introduced to the system. This water is generally produced by residential sump pumps that drain basements. The inflow removal program is being presented separately from the infiltration removal program.			
 <u>Previously Funded Areas</u>			
FY08 - Area 19-1 - Inflow Engineering & Design			
 <u>Proposed Funded Areas</u>			
FY10 - FY11 <i>(No Work Proposed)</i>			
FY12- Areas 1, 3 & 4 - Engineering & Design Area 19-1 - Construction			
FY13 - Areas 2, 24 & 21(L) - Engineering & Design Areas 1, 3, & 4 - Construction			
FY14 - Areas 2, 24 & 21(L) - Construction Area 16 - Engineering & Design			
 Beginning in FY 1996, the MWRA assessment included a component that reflects the volume of wastewater discharged. The total I/I has been measured to be as much as 60% of Needham's total wastewater flow. Normal daily wastewater volume is approximately 3.0 m.g.d. with peak I/I; the volume can exceed a rate of 15.0 m.g.d. These spikes are attributable to the inflow component and can total as much as 300 m.g.d. annually in a typical rainfall year. The remaining 75% is flow that occurs throughout the year as infiltration and can approach 1 billion gallons per year. This is approximately 25% of the total I/I in the system.			

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Building, Infrastructure & Other Facility Request CIP-BIF							
<b>Project Title</b>	Wastewater Pump Station Improvements			<b>Fiscal Year</b>	10-14		
Requestor	Public Works - Sewer Division			Project Category			
Location	Various						
Funding	SEF			CPA Eligible?	No		
<b>Purpose</b>		<b>Timeline</b>		<b>Method to Determine Cost</b>		<b>Project Budget</b>	
Acquisition	Total Project Duration (months)	24 Months	Consultant		A, D, & E	\$550,000	
New Construction (increase in square footage)	Engineering and Design Phase	12 Months	In-House	X	Site Costs		
Reconstruction - Repair	Construction Phase		Industry References		Construction	\$0	
Health or Safety	Next Phase		Other		F, F, & E		
Federal or State Mandate					Technology		
New Technology	<b>Estimated Useful Life</b>				Contingency		
Performance Measure	50 Years				Other		
<b>Project Manager</b>					Estimated Project Cost	\$550,000	
<b>Project Funding Schedule</b>							
	FY2010	FY 2011	FY 2012	FY 2013	FY 2014		
Engineering & Design	\$550,000	\$250,000	\$0	\$50,000	\$104,000		
Construction	\$0	\$4,000,000	\$2,300,000	\$250,000	\$260,000		
<b>Total</b>	<b>\$550,000</b>	<b>\$4,250,000</b>	<b>\$2,300,000</b>	<b>\$300,000</b>	<b>\$364,000</b>		
<b>Operational Considerations</b>						YES	NO
Are there additional costs to bid, design, construct, complete, and use (except future year operating costs) that are NOT included in this request?							X
If another department provides support (personnel or financial), has the department been consulted prior to submission of this request?							X
Will the requested project require an increase in the next fiscal year operating budget for ANY department?							X
Will additional staff be required if the request is approved?							X
As Permanent Employees?							
Hired Independent Contractors?							
Does the request include or require new or additional technology?							X
Does the request support activities which produce revenue for the Town?							X
If the request is not approved will Town revenues be negatively impacted?						X	
<i>All "YES" responses must be explained in the narrative</i>							

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<b>Building, Infrastructure &amp; Other Facility Request CIP-BIF</b>			
Project Title	Wastewater Pump Station Improvements	Fiscal Year	10-14
Description and Explanation			
<p>As part of the Wastewater System Master Plan, several of the wastewater pumping stations were evaluated to determine their current physical condition, capacity vs. current &amp; future flow projections and compliance with current codes or standards of operation. The Master Plan recommends that at least 7 of the 10 stations require work. These include major improvements and replacement of the Reservoir St. "B" Station (this is the 2nd oldest station in the system). Its standby generator has failed and pumps need constant maintenance.</p> <p>Canister pump stations at Lake Drive, Cooks Bridge (Milo Circle), Warren Street and Reservoir "A" are at or beyond their design lives. Constant maintenance and emergency shutoffs occur more frequently and require greater amounts of personnel time and emergency funds to keep running. The remaining canister station at Richardson Drive is scheduled to be eliminated when gravity sewer construction is complete but will need maintenance until then. The design of the elimination of the Richardson Drive Station is completed.</p> <p>The great amount of activity in the Needham Business Center will have a tremendous impact on the Kendrick St. &amp; Reservoir St. "B" Stations. The Kendrick St. Station had been renovated to accommodate some of the initial redevelopment currently underway in the area tributary to this station. This renovation was undertaken and funded by the proponents for the redevelopment of 140 Kendrick St. New enhancements must now be contemplated in anticipation of the addition of 350 residential units at 300 Second Avenue (Charles River Landing) proposed for completion in the next few years.</p>			
FY10	Reservoir St. "B" - Engineering & Design		\$550,000
FY11	Reservoir St. "B" - Construction		\$1,000,000
	Cooks Bridge - Engineering & Design		\$250,000
FY12	Cooks Bridge - Construction		\$2,300,000
FY13	Reservoir St. "A" - Engineering & Design		\$50,000
	Reservoir St. "A" - Construction		\$250,000
FY14	Lake Drive - Engineering & Design		\$52,000
	Lake Drive - Construction		\$260,000
	Alden Rd - Engineering & Design		\$52,000

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Building, Infrastructure & Other Facility Request CIP-BIF								
<b>Project Title</b>	<b>Fire Hydrant Replacement Program</b>				<b>Fiscal Year</b>	<b>10-14</b>		
Requestor	Public Works Water & Sewer Superintendent				Project Category	03		
Location	Various							
Funding	Water Enterprise Fund				CPA Eligible?	NO		
<b>Purpose</b>		<b>Timeline</b>		<b>Method to Determine Cost</b>		<b>Project Budget</b>		
Acquisition		Total Project Duration (months)	12	Consultant		A, D, & E		
New Construction (increase in square footage)		Engineering and Design Phase		In-House	X	Site Costs		
Reconstruction - Repair	X	Construction Phase	12	Industry References		Construction	\$200,000	
Health or Safety	X	Next Phase		Other		F, F, & E		
Federal or State Mandate	X					Technology		
New Technology		<b>Estimated Useful Life</b>				Contingency		
Performance Measure						Other		
<b>Project Manager</b>					Estimated Project Cost	\$200,000		
Project Funding Schedule								
	FY2010	FY 2011	FY 2012	FY 2013	FY 2014			
Engineering & Design	\$100,000	\$100,000						
Construction								
<b>Total</b>	<b>\$100,000</b>	<b>\$100,000</b>						
Operational Considerations							YES	NO
Are there additional costs to bid, design, construct, complete, and use (except future year operating costs) that are NOT included in this request?								X
If another department provides support (personnel or financial), has the department been consulted prior to submission of this request?								X
Will the requested project require an increase in the next fiscal year operating budget for ANY department?								X
Will additional staff be required if the request is approved?								X
As Permanent Employees?								X
Hired Independent Contractors?								X
Does the request include or require new or additional technology?								X
Does the request support activities which produce revenue for the Town?								X
If the request is not approved will Town revenues be negatively impacted?								X
<i>All "YES" responses must be explained in the narrative</i>								

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<b>Building, Infrastructure &amp; Other Facility Request CIP-BIF</b>			
<b>Project Title</b>	<b>Fire Hydrant Replacement Program</b>	<b>Fiscal Year</b>	<b>10-14</b>
Description and Explanation			
<p>The goal of the program is to remove and replace older and out-dated fire hydrants with new and more reliable fire hydrants within the community by developing an ongoing revolving cycle of replacing approx. 50 fire hydrants per year (by contractor). There are approximately 150 unreliable fire hydrants remaining out of 300 initial hydrants that are out-dated and ungated poured lead-joints. During the annual fall hydrant inspection (dry testing), older fire hydrants have been determined to be potential freezing hazards due to their lack of ability to either properly drain or efficiently shut down.</p> <p>With prior years funding (200,000) it was intended to have hydrant replacements privately contracted. With reprioritization and coordination the first &amp; second year's project was successfully completed with Town forces. By utilizing Town forces, this provided the ability to install an estimated 60% more hydrants replaced than originally anticipated. Barring unforeseen circumstances, it is anticipated that this program will be completed by the end of FY11.</p>			

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<b>Future Project Request CIP-F</b>			
<b>Project Title</b>	<b>Irrigation Supply Facility / Design</b>	<b>Fiscal Year</b>	<b>2011</b>
Requestor	Public Works - Water		
Location	Dedham Ave. Reservoir	Estimated Project Cost	\$80,000
Funding Source	WTR	CPA Eligible?	
Project Manager	Town Engineer		
<b>Project Summary</b>			
<p>The Water System Master Plan identified all of the sources of water which supply the Town. In the report it was acknowledged that the use of the original supply serving the Town prior to the development of the Charles River St. Well Field had been discontinued. This supply known as the Needham Reservoir/Dedham Ave. Pump Station had been discontinued as an active supply in the 1950's. It has since been formally decommissioned but it has not been completely deactivated. It consists of 2-8' + diameter shallow wells (30'+) deep, which were originally connected through piping under the reservoir to the pump house. The reservoir was constructed as an earth dam impoundment to serve as a recharge for the wells. Its capacity was 400,000 - 500,000 gallons per day. The report recommended that this supply be explored as an alternate for irrigation purposes for the DeFazio Complex, the Pollard School Fields and the Needham Golf Club. Using this source for these seasonal demands could lessen the impact upon the Charles River Well Field or the MWRA water system. The work would involve installing pumping equipment and controls at or near the wells, piping to connect to the irrigation systems and disconnection from the potable water supply. The first phase for this project is for design work. This project is currently proposed for FY11.</p>			

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Building, Infrastructure & Other Facility Request CIP-BIF								
<b>Project Title</b>	<b>Water Service Connections</b>				<b>Fiscal Year</b>	<b>10-14</b>		
Requestor	Public Works Water & Sewer Superintendent				Project Category	03		
Location	Various							
Funding	Water Enterprise Fund				CPA Eligible?	NO		
<b>Purpose</b>		<b>Timeline</b>		<b>Method to Determine Cost</b>		<b>Project Budget</b>		
Acquisition		Total Project Duration (months)	12 months	Consultant		A, D, & E		
New Construction (increase in square footage)		Engineering and Design Phase		In-House	X	Site Costs		
Reconstruction - Repair	X	Construction Phase	12 months	Industry References		Construction		
Health or Safety	X	Next Phase	2010	Other		F, F, & E		
Federal or State Mandate						Technology		
New Technology		<b>Estimated Useful Life</b>				Contingency		
Performance Measure		60 years				Other		
<b>Project Manager</b>		Water & Sewer Superintendent			Estimated Project Cost	\$200,000/yr.		
Project Funding Schedule								
	FY2010	FY 2011	FY 2012	FY 2013	FY 2014			
Engineering & Design								
Construction	\$200,000	\$200,000	\$200,000	\$200,000	\$200,000			
<b>Total</b>	<b>\$200,000</b>	<b>\$200,000</b>	<b>\$200,000</b>	<b>\$200,000</b>	<b>\$200,000</b>			
Operational Considerations							YES	NO
Are there additional costs to bid, design, construct, complete, and use (except future year operating costs) that are NOT included in this request?								X
If another department provides support (personnel or financial), has the department been consulted prior to submission of this request?								X
Will the requested project require an increase in the next fiscal year operating budget for ANY department?								X
Will additional staff be required if the request is approved?								X
As Permanent Employees?								X
Hired Independent Contractors?								X
Does the request include or require new or additional technology?								X
Does the request support activities which produce revenue for the Town?								X
If the request is not approved will Town revenues be negatively impacted?								X
<i>All "YES" responses must be explained in the narrative</i>								

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<b>Building, Infrastructure &amp; Other Facility Request CIP-BIF</b>			
<b>Project Title</b>	<b>Water Service Connections</b>	<b>Fiscal Year</b>	<b>10-14</b>
Description and Explanation			
<p>The primary purpose of this program is to remove lead from the system. With the initiation of the Road Construction Programs, a component of the project that had been overlooked for funding was the replacement of the water service building connections. This leaves an element of the subsurface infrastructure susceptible to failure before the desired life of the reconstructed roadway has been realized. In the case of Chapter 90 projects, such as Webster St., these are not considered as a reimbursement eligible expenses. Should the DPW be successful in continuing the local road reconstruction program, these expenses could be determined and funded on a project by project basis. Water main projects include service replacements as a project expense.</p>			

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Building, Infrastructure & Other Facility Request CIP-BIF								
<b>Project Title</b>	<b>Water System – Fire Flow Improvements</b>				<b>Fiscal Year</b>	<b>10-14</b>		
Requestor	Richard Merson / Robert Lewis				Project Category	I		
Location	Various							
Funding	W.E.F.				CPA Eligible?	No		
<b>Purpose</b>		<b>Timeline</b>		<b>Method to Determine Cost</b>		<b>Project Budget</b>		
Acquisition		Total Project Duration (months)	48 months	Consultant	X	A, D, & E	\$750,000	
New Construction (increase in square footage)		Engineering and Design Phase	24 months	In-House		Site Costs		
Reconstruction - Repair	X	Construction Phase	24 months	Industry References		Construction	\$6,620,000	
Health or Safety	X	Next Phase		Other		F, F, & E		
Federal or State Mandate						Technology		
New Technology		<b>Estimated Useful Life</b>				Contingency		
Performance Measure		50 years				Other		
<b>Project Manager</b>		Water & Sewer Superintendent			Estimated Project Cost	\$7,370,000		
Project Funding Schedule								
	FY2010	FY 2011	FY 2012	FY 2013	FY 2014			
Engineering & Design	\$300,000	\$0	\$0	\$250,000	\$200,000			
Construction	\$0	\$4,620,000	\$0	\$1,200,000	\$800,000			
<b>Total</b>	<b>\$300,000</b>	<b>\$4,620,000</b>	<b>\$0</b>	<b>\$1,450,000</b>	<b>\$1,000,000</b>			
Operational Considerations							YES	NO
Are there additional costs to bid, design, construct, complete, and use (except future year operating costs) that are NOT included in this request?								X
If another department provides support (personnel or financial), has the department been consulted prior to submission of this request?							X	
Will the requested project require an increase in the next fiscal year operating budget for ANY department?								X
Will additional staff be required if the request is approved?								X
As Permanent Employees?								X
Hired Independent Contractors?								X
Does the request include or require new or additional technology?								X
Does the request support activities which produce revenue for the Town?							X	
If the request is not approved will Town revenues be negatively impacted?							X	
<i>All "YES" responses must be explained in the narrative</i>								

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<b>Building, Infrastructure &amp; Other Facility Request CIP-BIF</b>			
<b>Project Title</b>	<b>Water System – Fire Flow Improvements</b>	<b>Fiscal Year</b>	<b>10-14</b>
Description and Explanation			
<p>The Water System Master Plan has identified a category of improvements for high priority action:</p> <p>FY10 – St. Mary's Street Pump Station improvements/Engineering &amp; Design - \$300,000</p> <p>FY11 - St. Mary's Street Pump Station improvements/construction - \$4,620,000</p> <p>FY12 – No Proposed Work</p> <p>FY13 - Bird's Hill Tank high service area/engineering, design &amp; construction - \$1,450,000</p> <p>FY14 - Dunster Road Tank high service area/engineering, design &amp; construction - \$1,000,000</p>			

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Building, Infrastructure & Other Facility Request CIP-BIF								
<b>Project Title</b>	<b>Water Supply Development Feasibility Study</b>				<b>Fiscal Year</b>	<b>10-14</b>		
Requestor	Robert Lewis				Project Category			
Location	Charles River Well Field							
Funding	WEF				CPA Eligible?	No		
<b>Purpose</b>		<b>Timeline</b>		<b>Method to Determine Cost</b>		<b>Project Budget</b>		
Acquisition		Total Project Duration (months)	24 Mths	Consultant		A, D, & E	\$75,000	
New Construction (increase in square footage)		Engineering and Design Phase	24 Mths	In-House	X	Site Costs		
Reconstruction - Repair		Construction Phase		Industry References		Construction		
Health or Safety	X	Next Phase		Other		F, F, & E		
Federal or State Mandate						Technology		
New Technology		<b>Estimated Useful Life</b>				Contingency		
Performance Measure						Other		
<b>Project Manager</b>						Estimated Project Cost	\$75,000	
Project Funding Schedule								
	FY2010	FY 2011	FY 2012	FY 2013	FY 2014			
Engineering & Design	\$75,000							
Construction								
<b>Total</b>	<b>\$75,000</b>							
Operational Considerations							YES	NO
Are there additional costs to bid, design, construct, complete, and use (except future year operating costs) that are NOT included in this request?								X
If another department provides support (personnel or financial), has the department been consulted prior to submission of this request?							X	
Will the requested project require an increase in the next fiscal year operating budget for ANY department?								X
Will additional staff be required if the request is approved?								X
As Permanent Employees?								X
Hired Independent Contractors?								X
Does the request include or require new or additional technology?								X
Does the request support activities which produce revenue for the Town?							X	
If the request is not approved will Town revenues be negatively impacted?								X
<i>All "YES" responses must be explained in the narrative</i>								

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<b>Building, Infrastructure &amp; Other Facility Request CIP-BIF</b>			
<b>Project Title</b>	<b>Water Supply Development Feasibility Study</b>	<b>Fiscal Year</b>	<b>10-14</b>
Description and Explanation			
<p>The historical demand in water supply is seasonal in nature. The typical usage during non-summer periods is 2-3 million gallons per day (mgd). The summer usage can reach as high as 5-7 mgd. Therefore, the Town must supplement its supply from the MWRA. Ideally the reliance on the MWRA source would be for emergency purposes as a back-up supply. Becoming more self reliant would require the development of additional wells. The process for putting new or additional supply on-line is typically 10 years. Depending upon the conditions in the Watershed, these requests could be limited, conditioned, or even denied. This likelihood would have to be determined. Additionally, the development of more wells within the well field would allow the Town to better manage the water within the well field. It preserves the ability for maximizing of the currently permitted withdrawal volume. Routine servicing and maintenance of the wells can occur on a rotating basis while maintaining our permitted withdrawal volumes. This will assist in reducing the reliance on the expensive MWRA water supply. It would also allow the Town to produce additional water during special emergency conditions with only basic water treatment. This process would be initiated through a feasibility study.</p>			

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Building, Infrastructure & Other Facility Request CIP-BIF								
<b>Project Title</b>	Water System Rehabilitation Program				<b>Fiscal Year</b>	10-14		
Requestor	Public Works Water & Sewer Superintendent				Project Category	I		
Location	Various							
Funding	Water Enterprise Fund				CPA Eligible?	NO		
<b>Purpose</b>		<b>Timeline</b>		<b>Method to Determine Cost</b>		<b>Project Budget</b>		
Acquisition		Total Project Duration (months)	12 months	Consultant	X	A, D, & E	\$404,100	
New Construction (increase in square footage)	X	Engineering and Design Phase		In-House	X	Site Costs		
Reconstruction - Repair	X	Construction Phase	12 months	Industry References		Construction	\$3,295,000	
Health or Safety		Next Phase		Other		F, F, & E		
Federal or State Mandate						Technology		
New Technology		<b>Estimated Useful Life</b>				Contingency		
Performance Measure		80 years				Other		
<b>Project Manager</b>		Town Engineer			Estimated Project Cost	3,699,100		
Project Funding Schedule								
	FY2010	FY 2011	FY 2012	FY 2013	FY 2014			
Engineering & Design	\$75,800	\$98,300	\$95,000	\$90,000	\$45,000			
Construction	\$750,000	\$605,000	\$655,000	\$685,000	\$600,000			
<b>Total</b>	<b>\$825,800</b>	<b>\$603,300</b>	<b>\$750,000</b>	<b>\$775,000</b>	<b>\$645,000</b>			
Operational Considerations							YES	NO
Are there additional costs to bid, design, construct, complete, and use (except future year operating costs) that are NOT included in this request?								X
If another department provides support (personnel or financial), has the department been consulted prior to submission of this request?								X
Will the requested project require an increase in the next fiscal year operating budget for ANY department?								X
Will additional staff be required if the request is approved?								X
As Permanent Employees?								X
Hired Independent Contractors?								X
Does the request include or require new or additional technology?								X
Does the request support activities which produce revenue for the Town?								X
If the request is not approved will Town revenues be negatively impacted?								X
<i>All "YES" responses must be explained in the narrative</i>								

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<b>Building, Infrastructure &amp; Other Facility Request CIP-BIF</b>			
Project Title	Water System Rehabilitation Program	Fiscal Year	10-14
Description and Explanation			
<u>FY10</u>			
Chapel St./May St. - Construction -		}	\$750,000
Pickering St./Great Plain Ave. to End - New 8" (2000 lf) - Eng. & Design			\$ 75,800
<u>FY11</u>			
Pickering St. Construction -		}	\$505,000
Kimball St./Grant St. to Pleasant St. - New 8" (800 lf) - Eng. & Design			\$ 98,300
Lincoln St./Garfield St. to Dedham Ave - New 8" (1700 lf) - Eng. & Design			
<u>FY12</u>			
Kimball St./Lincoln St. - Construction -		}	\$655,000
Grant St./Junction St. to Dedham Ave. - New 8' (2500 lf) - Eng. & Design			\$ 95,000
<u>FY13</u>			
Grant St. - Construction -		}	\$685,000
Pleasant St./Howland St. to Dedham Ave. - New 8" (1160 lf) - Eng. & Design			\$ 90,000
Norfolk St./Warren St. to Webster St. - New 8" (1300 lf) - Eng. & Design			
<u>FY14</u>			
Pleasant St./Norfolk St. - Construction		}	\$600,000
Alfreton Rd./ Highland Ave. to Webster St. New 8" (500 lf) - Eng. & Design			\$ 45,000
Bennington St. / High St. to Concord St. New 8" (650 lf) - Eng. & Design			