



Quincy's Capital Improvement Plan (CIP) is an investment program formulated to improve the quality of life for all citizens through the provision of quality services and promotion of limited, strategic government spending that minimizes impacts on local property taxes. The program is designed to utilize strategic management in infrastructure improvements to:

- Provide a quality educational environment to Quincy's children
- Increase public safety throughout the City of Quincy
- Prevent flood damage to public and private properties
- Repair crumbling infrastructure
- Ensure the efficient use of public funds

Proposed capital improvements included in this document total **\$25,485,000**.

ABOUT THIS DOCUMENT

The Capital Improvement Program (CIP) is a blueprint for investment in major public infrastructure projects and purchases. This document is designed to function as:

- **A communication device:** clearly explaining the need for a variety of capital projects in the City of Quincy and the method to provide them;
- **A policy document:** delineating each project and how it was prioritized through a rating process considering both finances and functionality;
- **A financial plan:** detailing the cost of each project, the source of funding, and the long-term budgetary impact on the City; and
- **An operations guide:** designed to provide a planning schedule for capital projects and equipment purchases over an extended period of time.

Many of the methods utilized in this plan are a reflection of best-practice modeling based on extensive research on nation-wide municipal capital improvement plans. Furthermore, the CIP utilizes policies and protocols developed by the Government Finance Officers' Association of America.

Through the policies and procedures put in place by this document, the city will ensure the maximum effectiveness and efficiency in the use of funds. The CIP will: 1) ensure coordination between the capital and operating budgets of all city departments; 2) increase transparency and oversight; and 3) ensure assets bought with public funds are properly maintained.

Definitions

This program is focused solely on capital investments (or projects). A capital investment is one that provides for the design, permitting, construction, renovation or replacement of a public infrastructure. This includes public buildings, facilities, streets, and sidewalks. Capital investments also include large equipment purchases and investments in the city's information technology infrastructure. Additionally, capital investments can include long-term development



planning. Generally, projects with an estimated cost of at least \$25,000 and with a life expectancy of five or more years are considered a capital improvement.

Capital improvements included in this plan are one-time costs. This means that the projects are not annually occurring items that would appear in the City General Fund budget. For instance, while school building maintenance is a regular, annually occurring cost, the reconstruction of a school roof is not. In addition, the purchase of equipment, like a fire engine, would also be considered a one-time cost.

As noted later, the CIP will require the city to borrow funds to complete many of the projects listed in this document. All city borrowing is conducted under the limits of Massachusetts General Law. The adoption of the Municipal Relief Act by the Massachusetts legislature in July 2010 eased a number of restrictions on municipal borrowing, including allowing borrowing for environmental cleanups on city-owned land. Those recent changes in municipal finance law have been considered and formulated into this program.

PROCESS

The City began developing its Capital Improvement Plan in August 2010. The Mayor tasked the Municipal Finance Office with the development of a framework to analyze both the proposed projects and the long-term financial impact on the City. Concurrently, the Mayor worked with department heads to identify capital improvement needs and to create a centralized inventory of those needs. This document is the culmination of those efforts.

The intent of the CIP is to provide a roadmap for citywide improvements. To accomplish this, the Mayor – acting in his capacity as the city’s chief executive – will use this document in his requests for funds to begin working on these projects. Council approval is required for any appropriation of funds and for any authorization to borrow funds to pay for improvements. Figure 1:1 illustrates a proposed timeline for the CIP.

Figure 1:1 CIP Development and Implementation Timeline

Oct-Nov	Dec-Jan	Feb	Feb-March	March ->
Mayor meets with department heads to review infrastructure needs.	Projects are analyzed and a system is developed to determine which projects will be funded.	Mayor submits CIP and a request for bond authorization to the Council.	Council reviews and approves bond authorization for the CIP.	Under the direction of the Mayor, projects are implemented by departments.



FINANCIAL POLICIES

Affordability

The infrastructure needs of the City of Quincy are tremendous. In formulating this strategic plan, \$25,485,000 in capital needs were identified. It is important to note that there are many worthwhile projects and initiatives that are not included in the document. Due to the difficult economic climate, and resulting reductions in state aid and local receipts, the City will be unable to directly fund all of its current capital needs. Furthermore, this plan must carefully project and limit the amount of debt to be carried in future year budgets. **General Fund financing is considered a source of last resort.**

To meet these ends, the City adopted three overarching principles in developing the CIP and determining which of the many projects would receive funding. These principals are to:

- **Preserve Current Investments**
- **Account for Future Costs**
- **Limit Expenses Based on Priority**

Together, the financing principles will ensure that the City meets the policy objectives set forth above in a fiscally responsible manner.

Preserve Current Investments

The City of Quincy, through its Capital Improvement Plan, will undertake projects that protect and maintain current city assets. Such undertakings will ensure that prior investments of tax dollars will continue to serve a high-performing public function. Specifically, the CIP will prioritize projects that put city buildings and facilities at risk of future decay. Such projects include: roof repairs, structural building improvements, and substantial improvements to City property.

Account for Future Costs

The CIP will account for future costs in three ways. First, it will target investments to areas items that would reduce any potential future liability either legally, financially, or as a hindrance to the provision of core services. Such investments are designed to identify and defray future costs. Second, the CIP will identify future costs associated with any proposed investments. This notion is accounted for in the document's Evaluation and Categorization section. Third, the CIP will project future costs. To meet this objective, Appendix A provides an analysis of potential future debt payment obligations. By identifying these costs early in the process, strategies can be implemented to reduce them over time.

Limit Expenses Based on Priority

The City has tremendous capital needs; however, these economic times have substantially limited our resources. As such, a comprehensive system has been developed to prioritize capital expenditures over the course of the next three years.

Funding Sources

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In order to ensure affordability, the CIP will be funded through a variety of sources, all designed to reduce the impact on local property taxes. These include: debt financing; grants; state revolving loans; and revenue offsets.

Debt Financing

Debt financing is common in cities and towns. As with buying a house, a well-managed debt plan can allow one to buy large items (e.g. a house) when a purchase of that magnitude would not necessarily fit into a single year's annual budget. Quincy's debt payments represent over two decades of city projects and improvements in public services. The most notable of these projects is the new Quincy High School; however, there are many other projects that Quincy residents utilize on a daily basis. These projects included:

- New school roofs
- The new wing of the Thomas Crane Public Library
- Land acquisition
- Park improvements
- Information technology upgrades
- Public building improvements
- Street repaving

The City Council authorizes the Mayor to sell bonds to raise revenue for capital improvements. Those bonds are sold on the open market in exchange for cash payment, essentially functioning as a loan for the city. In selling and managing bonds, the city seeks the advice of both a bond counsel and an outside financial advisor. Interest rates on bond payments are based on market conditions and the city bond rating, as determined by private rating agencies.

The City uses two different types of financial instruments when it debt finances any project. These instruments are General Obligation (GO) Bonds and Bond Anticipation Notes (BANs). Both mechanisms are commonly used by municipalities to fund capital project needs.

General Obligation (GO) Bonds

GO bonds are long-term debt instruments that cities and towns may use to fund large projects. Funds are obtained through the sale of these instruments in the bond market. GO bonds are backed by the full faith and credit of the City of Quincy. As such, investors are guaranteed the City will pay its obligation through the City's taxes. Typically, bonds run for a period of twenty years.

Bond Anticipation Notes (BANs)

Bond anticipation notes are short-term financing instruments the City utilizes to borrow funds while projects are ongoing, or shortly thereafter. Generally, the City pays only the interest on these funds, which runs around 2 percent or lower. BANs are usually utilized for one to two year periods.

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Grants

The city will seek to reduce bond funds wherever possible by looking to grants for projects such as fire engine replacements, repair of seawalls, the rehabilitation of roads, and energy efficiency projects. One source of grants is from other levels of government, for example the Environmental Protection Agency, MA Department of Health and Human Services, U.S. Housing and Urban Development, MA Department of Environmental Services, and the Department of Transportation. Generally, these Federal and State sources provide an outright grant or matching funds to go with locally raised funds. The City will also pursue non-governmental private grants when applicable. Gaining access to grant funds will require the City to either develop grant writers from within the municipal government or to contract with a grant-writing firm.

Special Revenue Sources

The City anticipates using three sources of annual non-General Fund revenue to fund annual debt costs for a number of projects. These sources are: the local option Hotel/Motel tax, the sewer rehabilitation fund, and the Comcast revenue account.

Under its authorizing statute, Hotel/Motel tax revenue may be used for the repair of seawalls. In this plan, these funds are used to offset the annual debt costs associated with seawalls. Available revenue also pays for a land acquisition bonds. The amount available for seawalls on an annual basis considers both future revenues and future costs of land acquisition bond payments.

Sewer rehabilitation funds will be used in the City's efforts to improve drainage, thereby decreasing incidents of neighborhood flooding, throughout the City. Comcast funds will be used to offset information technology purchases.

A year-by-year estimate of the use of these funds is detailed in the Plan Overview section of this document.

One-Time Revenue

One time revenue is not a good funding source for the City's annual operating budget because operating costs recur year-to-year. In year two of any scenario, use of one time revenue leads to either budget cuts or increased reliance on property taxes. However, one-time revenue is an excellent funding source for capital projects. For example, a one-time court settlement in the City's favor could be used to offset the cost of a one-time purchase of a police cruiser. This would both reduce reliance on bond financing and eliminate potential future impacts on property taxes.

In order to limit the long-term costs associated with the CIP, one-time revenue will be used wherever possible in lieu of debt financing.



General Fund Revenue

The City’s General Fund Budget will ultimately pay a portion of the annual debt costs associated with this project. The City has made substantial reductions in expenses and personnel over the past three years. These reductions, as well as increasing fixed costs (discussed in more detail in the City’s FY2011 budget document), make it very difficult to procure large, needed capital improvements.

It should be noted that general fund expenditures can reduce the need for future capital improvement projects. For example, funding for custodial and maintenance staff reduces the need for major building renovations necessitated by unaddressed building issues. Vehicle maintenance staff can, and has, substantially prolonged the life of City vehicles. Proper funding of these program areas is essential in the preservation of city assets.

In addition, some items that would aid in this maintenance, and are too small in value to be considered a true capital improvement, should be paid for from the City’s annual budget. For example, custodial and maintenance equipment that aids in facility upkeep would fall under this category. Regular software updates also reduce the need for major file conversion projects that can occur when systems are out of date.

DEBT CHARACTERISTICS

The City of Quincy's current bond rating is Aa3. This bond rating is assigned by Moody’s Investment Services. Moody’s conducts research on governmental and commercial entities and assigns ratings based on the investment attractiveness of a particular organization. Essentially, Moody’s ratings identify the rate of risk to an investor when purchasing municipal bonds (described in detail below). Ratings below Baa3 are not considered investment grade. Figure 1:2 provides Quincy’s historic bond ratings. Figure 1:3 details Moody’s Bond rating scale.

Aa3 was the median Moody’s GO rating for 2009, the most recent year for which full data is available.

Figure 1:2 Quincy’s Historic Bond Ratings*

2010	2009	2008	2007	2006	2005	2004	2003	2002	2001	2000	1999
Aa3	A1	A1	A1	A2	A3	A3	A3	A3	A2	A2	A3
1998	1997	1996	1995	1994	1993	1992	1991	1990	1989	1988	1987
A3	A	A	A	A	A	A	A	A	A	BAA1	BAA

In 1997 Moody’s began further categorizing investment grade bonds with references of 1, 2, or 3.

**Source: Massachusetts Department of Revenue*

Figure 1:3 Moody’s Bond Rating Scale

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Best Quality	Aaa
High Quality	Aa1
	Aa2
	Aa3
Upper Medium Grade	A1
	A2
	A3
Medium Grade	Baa1
	Baa2
	Baa3

In addition to maintaining a strong bond rating, Quincy fairs well in comparison to debt characteristics of other communities within the Commonwealth. Of the ten largest cities in the Commonwealth, Quincy has the fourth highest bond rating, coming in behind only Boston, Cambridge and Newton. Moreover, of that same sampling, Quincy has the lowest debt per capita (resident) and the lowest debt as a percent of total land value within the city. Figure 1.5 illustrates these comparisons, including neighboring and similar-sized communities.

Figure 1:4 Comparative Debt Characteristics

Community	Moody's Rating	Debt Per Capita	Debt as a Percent of Value	Debt Limit
Quincy	Aa3	855	0.6	647,389,680
Boston	Aaa	1,414	0.9	5,293,826,290
Cambridge	Aaa	2,913	1.2	1,306,215,670
Newton	Aaa	1,353	0.5	1,111,071,005
Waltham	Aa1	1,241	0.8	496,703,320
Weymouth	Aa3	1,055	0.8	369,370,490
Brockton	Aa3	2,706	2.9	431,357,670
Worcester	A1	3,326	4.4	691,358,975
Lynn	A1	1,005	1.2	380,689,445
Malden	A1	1,841	1.7	303,972,155
Taunton	A1	1,785	1.5	330,968,090
Lowell	A1	1,886	2.4	409,322,070
New Bedford	A1	2,568	3.3	357,002,440
Fall River	A1	2,469	3.1	360,496,555
Haverhill	A1	1,734	1.6	335,016,025
Springfield	A2	2,087	3.8	423,992,705
Lawrence	Baa1	2,110	3.6	208,415,000

EVALUATION AND CATEGORIZATION

As noted previously, Quincy’s capital needs are tremendous. Though most projects have merit, the City is constrained by fiscal realities. In order to determine which projects would be funded, a comprehensive evaluation and categorization system was utilized. To accomplish this,

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the function, type, need, and budget impact of each capital project proposal was considered. The system adheres to the precepts of protecting current investments, defraying future costs, and prioritizing projects by need and usefulness.

Need Assessment

The first consideration in the evaluation of capital projects was a needs assessment. For purposes of this assessment, need was determined based on a project's ability to preserve City assets and the delivery of core services. Needs were assessed as follows:

- **Urgent** – The project is needed to combat an identified issue posing a threat to city assets or core services.
- **Necessary** – The project is needed to maintain core services at their current level or combat an issue that may present a future or growing threat.
- **Desirable** – The project would improve the current quality of services or quality of life.

Principle Need

The second factor in the consideration of capital projects was an analysis of principle need for the project. Essentially, this assessment was designed to test how closely aligned each project was with the principles set forth above. This assessment categorizes projects as follows:

- **Asset Protection** – The project is designed to maintain and/or protect city property.
- **Reduce Future Costs** – The project is designed to eliminate projected future costs incurred by the city.
- **Service Protection** – The project is designed to maintain core services.
- **Quality Improvement** – The project is designed to enhance the quality of life for residents.

Budgetary Impact

As noted previously, a key component of the CIP is to deliver needed improvements while minimizing any reliance on revenue generated by local property taxes. In order to achieve this objective, each project was analyzed to determine what, if any, impact it would have on the City's annual General Fund budget. It should be noted that long-term debt payment impact is not included in this evaluation. Each project was placed into one of the following categories:

- **Revenue Generator:** The project will generate some revenue to offset expenses associated with the project.
- **Reduce:** The project reduces General Fund operating costs upon completion.
- **Minimal:** The project will increase General Fund expenses by less than \$5,000 per year.
- **Moderate:** The project increases General Fund expenses by \$5,000 to \$25,000 per year.
- **High:** The project will increase General Fund expenses by \$25,001 to \$55,000 per year.



Functionality

Each project considered for the CIP was also categorized by function. Functions indicate which area of City services the project is designed to improve. Categories here mirror the departmental categories found in the City's General Fund Budget. These include:

- **Education** – Projects in this category relate to Quincy Public School buildings or the purchase of equipment by use for the school department.
- **Public Safety** – Public safety projects include the purchase of public safety equipment.
- **Administration and Finance** – Projects in this category are intended to increase general government services. They may include: voting machines, computers, and software.
- **Infrastructure Management** – Infrastructure management programs include: those that are intended to repair or rehabilitate City buildings; roadwork and sidewalk repair; park improvements; drainage projects; and equipment related to the care and maintenance of public land and facilities.
- **Stormwater** – Stormwater projects are designed to decrease incidents of flooding in residential and commercial areas.

Project Type

Projects are also more narrowly defined by type. This category identifies the actual type of service being rendered or product being procured. Project types include:

- **Buildings** – Projects in this category replace or renovate existing City buildings or provide for the payment of long-term leasing resulting from such projects.
- **Public Works** – Projects included in this category are intended to repair roadways, sidewalks, drainage systems, or traffic infrastructure.
- **Vehicles** – This includes the purchase of City fleet vehicles, including public safety equipment such as fire apparatus.
- **Equipment** – This includes all equipment that meets the definition of a capital project but does not fall into the Vehicle category.
- **Parks** – This category includes projects intended to renovate City parks.
- **Technology** – Projects in this category included computer hardware and software that meet the definition of a capital project.

MONITORING AND REPORTING

In addition to providing quality information at the funding request stage, the City is also committed to keeping the public informed during the project execution stage. In order to accomplish this, ongoing reporting will include: completion status; budget status; and reimbursement status, if any.

Completion Status

- **Completed** – The project has been completed.
- **In Progress** – The project is underway, but not yet completed.
- **Scheduled** – Funding has been identified and the project is scheduled.



Budget Status

- **Below Projection** – The project was completed and surplus funds are now available for another project.
- **At Projection** – The project was completed at its projected cost.
- **Above Projection** – The projected cost was inadequate to cover the full scope of the required project or purchase and additional funds will need to be identified.

Reimbursement Status

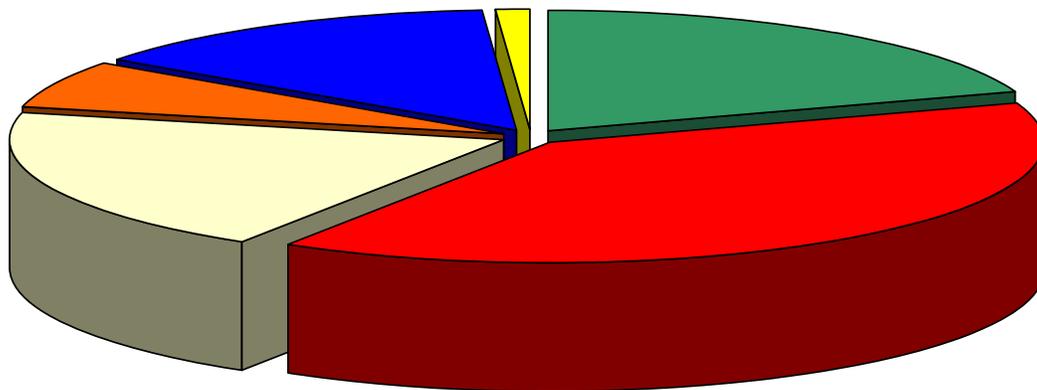
A number of projects within the CIP will be reimbursable through a variety of grants programs. The status of these grant receipts will also be reported. Categories will be as follows:

- **Collected**– The City has successfully collected payment for some or a portion of a capital project and the appropriate accounts have been credited.
- **Applied**- The City has applied to a third party for reimbursement of some or all of the costs of the project and is waiting for a determination.
- **Eligible**- A program is available to potentially refund the City for some/all of the costs associated with a capital improvement.
- **Not Eligible**- No reimbursement program has been identified for this project or a reimbursement application was rejected.

In addition to the above monitoring criteria, each project is also assigned a project number. These numbers will correspond to project numbers assigned in the City’s accounting system, MUNIS, and will track all revenue and expenditures relating to that project.

PLAN FINANCING OVERVIEW

\$25,485,000 Capital Improvements by Type



Building Repairs	Drainage	Seawalls	Equipment	Streets/Sidewalks	Environmental
\$5,000,000	\$10,000,000	\$5,000,000	\$1,680,000	\$3,500,000	\$305,000
19.62%	39.24%	19.62%	6.59%	13.73%	1.20%



Quincy’s CIP will expend \$25,485,000 in the following categories: building repairs, drainage improvements, seawalls, equipment, street and sidewalk repair, and environmental remediation. A detailed description of each proposed project is provided in the pages below. Currently, the plan is to debt finance the total costs of these projects. The City will work to identify any grants funds that may be available to reduce the cost of these projects or enhance the scope of projects.

As noted above, three annual revenue sources will be used to offset debt service costs. These sources are: the local option Hotel/Motel tax, the sewer rehabilitation fund, and the Comcast revenue account. Revenue from these accounts will help to offset annual debt service costs. A detailed, year-by-year analysis of the cost of the CIP is provided in the table below.

Long-Term Annual Debt Service Costs for the \$25.485M CIP*

Fiscal Year	Short Term Debt	Long Term Debt	Hotel/Motel Offset	Sewer Rehab Offset	Comcast Offset	Net Debt Service	Fiscal Year
2012	489,700		(150,000)	(300,000)	(22,500)	17,200	2012
2013	489,700		(150,000)	(300,000)	(22,500)	17,200	2013
2014		2,336,675	(394,425)	(550,000)	(22,500)	1,369,750	2014
2015		2,370,575	(394,425)	(550,000)	(22,500)	1,403,650	2015
2016		2,361,175	(394,425)	(550,000)	(22,500)	1,394,250	2016
2017		2,369,025	(394,425)	(550,000)	(22,500)	1,402,100	2017
2018		2,373,025	(394,425)	(550,000)	(22,500)	1,406,100	2018
2019		2,368,175	(394,425)	(550,000)	(22,500)	1,401,250	2019
2020		2,369,750	(394,425)	(550,000)	(22,500)	1,402,825	2020
2021		2,367,200	(394,425)	(550,000)	(22,500)	1,400,275	2021
2022		2,365,525	(394,425)	(550,000)	(22,500)	1,398,600	2022
2023		2,364,450	(394,425)	(550,000)	(22,500)	1,397,525	2023
2024		2,373,700	(394,425)	(550,000)	(22,500)	1,406,775	2024
2025		2,367,450	(394,425)	(550,000)	(22,500)	1,400,525	2025
2026		2,366,250	(394,425)	(550,000)	(22,500)	1,399,325	2026
2027		1,359,550	(394,425)	(550,000)	(22,500)	392,625	2027
2028		1,357,350	(394,425)	(550,000)	(22,500)	390,425	2028
2029		1,362,125	(394,425)	(550,000)	(22,500)	395,200	2029
2030		1,363,325	(394,425)	(550,000)	(22,500)	396,400	2030
2031		1,360,950	(394,425)	(550,000)	(22,500)	394,025	2031

*Assumes project short term interest rate of 2%, projected long term interest rate of 5.5%, and that all bonds will be issued as level debt.



Project Nos. 1101 - 1116

School Building Repairs

Assessment	Function	Type	Need	Budget Impact
Asset Protect.	Schools	Building	Urgent	Reduce

ESTIMATED COST: \$2,397,750

Description:

Quincy school buildings are in need of serious repairs, particularly in the area of roof maintenance. Recently, city and school maintenance staff conducted an assessment of the roofs of every school buildings. This assessment resulted in a number of findings. These included: porous roofs, poor material condition, damaged flashing, and damaged pointing. Each of these findings is resulting in water infiltration in a number of locations. These infiltrations are a serious threat to the sustainability of city assets and will lead to reduced quality in provided services. The repairs will reduce the annual costs of patchwork and replacement of damaged items.

The projects that will be undertaken in the plan include:

Project No.	School	Needed Repair	Cost
1101	Montclair Elementary	New roof and flashing	\$150,000
1102	Wollaston Elementary	New roof and flashing	\$130,000
1103	Sterling Middle	New roof and flashing	\$170,000
1104	Squantum Elementary	New roof	\$120,000
1105	Lincoln Hancock	New roof	\$340,000
1106	Goals Program	New roof	\$65,000
1107	Broadmeadows Middle	New roof and flashing	\$70,000
1108	Atlantic Middle	Flashing and repointing	\$40,000
1109	Parker Elementary	Repointing, roof repair, flasing	\$40,000
1110	Merrymount Elementary	Repointing, flashing, and lentils	\$42,750
1111	North Quincy HS	New roof- original building	\$250,000
1112	Della Chiesa Center	New roof	\$500,000
1113	Point Webster Middle	Flashing	\$10,000
1114	Beechwood Knoll	New Roof	\$350,000
1115	Atherton Hough	Masonry and repointing	\$100,000
1116	Bernazzani Elementary	Minor flashing and coating	\$20,000



Selected Examples of School Roofs Needing Repair

Parker Elementary School



Lincoln Hancock Elementary School



Sterling Middle School



Wollaston Elementary School





Project No. 1117 - 1121

City Building Repairs

Assessment	Function	Type	Need	Budget Impact
Asset Protect.	Infrastructure	Building	Urgent	Reduce

ESTIMATED COST: \$2,602,250

In addition to school buildings, there are a number of city buildings that are in need of renovation and repair. City building projects will include:

Project No.	Building	Item	Cost
1117	Coddington Hall (School Department)	Renovations/repairs	\$1,500,000
1118	City Hall Annex	Roof replacement and HVAC	\$350,000
1119	Park/Recreation Complex	Roof replacement, insulation, facial	\$150,000
1120	DPW	HVAC	\$175,000
1121	Multiple Sites	Architectural/Engineering Design and Schematics	\$427,250

- **Coddington Hall** will be repaired and renovated to be used for school administration and other city services. This will remove the need to rent the NAGE building.
- **City Hall Annex** has leaky roofs that create an unsafe work environment and present a serious possibility for the loss of City records and electronic equipment. In addition, the HVAC system does not meet modern standards of utility or efficiency.
- **Park/Recreation Complex** is prone to leaks that risk the loss of City property and compromises the integrity of the structure.
- **DPW Building** has an HVAC system that does not meet modern standards of utility or efficiency.
- **Architectural/Engineering** designs and schematics will be needed for the above projects. In addition, these services will be used to ensure that other City assets are assessed and provided a proper level of maintenance and repair.

City Hall Annex Roof Leaks



Park/Recreation Complex





Project Nos. 1122 - 1123

Environmental Remediation

Assessment	Function	Type	Need	Budget Impact
Reduce Future Costs	Infrastructure	Public Works	Urgent	Reduce

ESTIMATED COST: \$305,000

Project No.	Location	Issue	Cost
1122	Beale Street Fire Station	Gasoline release	\$230,000
1123	DPW yard	Petroleum release	\$75,000

Underground storage tanks at both the DPW yard and the Beale Street Fire Station released substances into surrounding soil. Specifically, the Beale Street Fire Station had a 500-gallon underground storage tank that leaked gasoline into surrounding soil. The DPW yard had multiple underground storage tanks that leaked oil, gasoline, and diesel fuel into surrounding soil. Funds will be used to contract with a vender to remediate this issues.

Without this project, in addition to the negative environmental impact, the City will see substantial fines and a remediation mandate from the Massachusetts Department of Environmental Protection.



Project Nos. 1124 - 1128

Equipment Purchases

ESTIMATED COST: \$1,680,000

No.	Item	Cost	Assess.	Function	Type	Need	Impact
1124	Ladder Truck	\$750,000	Service	Safety	Vehicle	Necessary	Minimal
1125	Incident Command Vehicle	\$45,000	Service	Safety	Vehicle	Necessary	Minimal
1126	Communication System	\$700,000	Service	Safety	Tech.	Necessary	Minimal
1127	GIS Integration System	\$50,000	Quality	A&F	Tech.	Desirable	Moderate
1128	Bucket Truck	\$135,000	Service	Infrastructure	Vehicle	Desirable	Minimal

Ladder Truck – Project 1124

There are currently three Ladder trucks in service: a 2001 MME/Smeal 110 foot aerial; a 1998 E-One Quint 75 foot aerial; and a 1995 E-One 110 Foot Aerial.

Incident Command Vehicle – Project 1125

The Incident Command/Deputy Chief vehicle is an SUV that is utilized to respond to incidents that require two or more fire companies. An new vehicle is needed that can support electronic and communications demands of current equipment.

Communication System – Project 1126

Quincy’s public safety communications system is over 20 years old; repair and replacement parts are no longer available. In addition, the federal government has mandated that all public safety communications be converted to narrow band by 2013. While it has provided new radios, the federal government will not pay for the needed infrastructure improvements. This project will replace the aged public safety communication transmittal system in accordance with the federal mandate.

GIS Integration System – Project 1127

Currently, the City has three software programs that handle property information: the engineering department’s Geographic Information System (GIS); the assessor’s Vision appraisal software; and the finance/treasury department’s MUNIS system. Unfortunately, the interconnectivity of these programs is limited. Funding for this project will effectively integrate the three systems, and provide decision-makers with better information on city properties. New functionalities will include: automated abutter generation, visual assessment integration, and enhanced assessment ability. In addition, hardware will be purchased to fully modernize the assessing department.

Bucket Truck – Project 1128

The traffic department’s bucket truck is used to repair overhead traffic signals and street lighting. Currently, the 1992 model owned by the City has been inoperable and unrepairable for over a year.

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Project No. 1129

Edgewater Drive Seawall Assessment and Repair

Assessment	Funding	Function	Type	Need	Budget Impact
Quality / Future Costs	Funded	Stormwater	Public Works	Urgent	Reduce

ESTIMATED COST: \$4,500,000

Description:

The Edgewater Drive Sea wall and tide gate system (two gates) have eroded over time and are in need of repair. Although a DCR assessment report estimated the full cost of repair at over \$30M, the city will invest \$4.5M in designing, permitting, and construction repairs to the Edgewater Drive seawall system including but not limited to , replacement of undermining sections, revetment replacement, capstone modifications, and earthwork modifications along the landside. The two tide gates indented to relieve land side flooding will also be modified.

Funding:

Funding for this project will be provided through debt financing. This project will reduce the City’s Drainage Department costs associated with the management, cleanup, and repairs caused by flooding. This project will also improve the flooding conditions that impact many residential property owners.



Project No. 1130

Sea Wall Assessment and Cost / Benefit Study

Assessment	Funding	Function	Type	Need	Budget Impact
Quality / Future Costs	Funded	Stormwater	Public Works	Urgent	Reduce

ESTIMATED COST: \$500,000

Description:

The City has over 7 miles of Sea Walls, and many have not been rehabilitated since the No Name storm of the early 1990s. This project will fund the assessment of the city-owned sea walls to provide updated condition analyses and cost / benefit analyses in order to prioritize future sea wall repairs / modifications. The City will select a sea wall consultant to lead the effort and will coordinate with DCR and other sea wall “owner” within the City limits to ensure a coordinated effort for sea wall repair.

Funding:

Funding for this project will be provided through debt financing.



Project No. 1131

Inspection and Cleaning of the Furnace Brook

Assessment	Funding	Function	Type	Need	Budget Impact
Quality / Future Costs	Funded	Stormwater	Public Works	Urgent	Reduce

ESTIMATED COST: \$2,500,000

Description:

Flooding from the Furnace Brook has been a recurring problem, with the March 2010 rain event being the most recent large-scale event. Some of the areas tributary to the Furnace Brook that were flooded during this event were Sheldon Street, Ballou Street and Stedman Street (upstream of Furnace Brook along the Cunningham Brook), Alrick Road and Joyce Road (near the confluence of the Cunningham and Furnace Brooks), Miller Street, Cross Street, and Furnace Avenue (where Furnace Brook overflows) an area east of the Bernazzani Elementary School near Willow Avenue, and where the Brook crosses under the Furnace Brook Parkway.

The project will be performed in three stages:

1. The culverted sections of the Brook will be inspected and cleaned to remove any potential clogging from miscellaneous debris, to identify any tree roots, pipe collapses, and other flow impediments that may be present, and to make an assessment of the infrastructure’s condition to identify sections that may need rehabilitation in the near future.
2. The open channel sections of the Brook will be inspected and cleaned to remove potential clogging from miscellaneous debris and collapsed wall sections and to make an assessment of the infrastructure’s condition to identify and repair sections in the near future. The possibility of channel widening will be investigated as part of this effort as it may offer an added value to the permitting and cleaning that needs to be performed. It should be noted however that the physical widening the Furnace Brook is not included in this estimate.
3. Preliminary engineering for the use of St. Mortiz Pond as flood storage by working with DCR to change the overflow weir at the start of Furnace Brook. The goal of this effort is to allow the City to drain St. Mortiz pond prior to storm events and to create capacity to hold back initial storm flows thus creating capacity in the Furnace Brook.

Funding:

Funding for this project will be provided through debt financing. This project will reduce the City’s Drainage Department costs associated with the management, cleanup, and repairs caused by flooding. This project will also improve the flooding conditions that impact many residents and business owners.



Project No. 1132

Miller Street / Cross Street / Furnace Ave Area Flood Control Station

Assessment	Funding	Function	Type	Need	Budget Impact
Quality / Future Costs	Funded	Stormwater	Public Works	Urgent	Reduce

ESTIMATED COST: \$900,000

Description:

The capacity issues within Furnace Brook appear to cause flooding issues in several locations along the brook. The Miller Street, Cross Street, and Furnace Avenue neighborhood is one isolated area where the Brooks flows out of the catch basin system causing localized flooding. This localized flooding is exacerbated by the difficulty in using mobile pumps to push the water over Copeland Street and Crescent Ave where it can rejoin the brook. The project involves creating a flow control system to allow drainage into the catch basin system while preventing backflow/flooding into the area with a pumping system and protocol to pump any flood waters over Copeland Street and Crescent Ave and back to the brook.

Funding:

Funding for this project will be provided through debt financing. This project will reduce the City’s Drainage Department costs associated with the management, cleanup, and repairs caused by flooding. This project will also improve the flooding conditions that impact many property owners.



Project No. 1133

Alrick Road Pumping Station and Drainage Modifications

Assessment	Funding	Function	Type	Need	Budget Impact
Quality / Future Costs	Funded	Stormwater	Public Works	Urgent	Reduce

ESTIMATED COST: \$900,000

Description:

The capacity issues within Furnace Brook culminate in the Alrick Road / Joyce Road neighborhood, which suffers major flooding (first floor damage to several homes) during 25-year storm events. The two streets are located at the confluence of Furnace Brook and Cunningham Brook and endure the overflow when the Brooks back up.

The City has constructed and operates a groundwater pumping station which is intended to keep the groundwater from seeping into basements following wet weather events. This station is not directly connected to the storm drain system (catch basins and drain pipes) therefore it is not immediately effective during flood conditions.

The proposed project would modify the existing groundwater pumping station to also be a stormwater pumping station and to pump overflow from the catch basin and drain pipe system further downstream in Furnace Brook. This approach would provide a first line of flood protection to the neighborhood and rehabilitate the antiquated groundwater pumping system.

Funding:

Funding for this project will be provided through debt financing. This project will reduce the City's Drainage Department costs associated with the management, cleanup, and repairs caused by flooding. This project will also improve the flooding conditions that impact many property owners.



Project No. 1134

Black’s Creek Capacity and Tide Gate Enhancements

Assessment	Funding	Function	Type	Need	Budget Impact
Quality / Future Costs	Funded	Stormwater	Public Works	Urgent	Reduce

ESTIMATED COST: \$800,000

Description:

The Black’s Creek tide gates can only be operated during a specific time in the tide cycle and have proven unreliable in severe, long-duration storm events. Since Black’s Creek is the stormwater retention basin for the Furnace Brook, the limitations of the gates are very problematic during storms that last longer than a 12-hour tide cycle. The gates are in need of replacement. The project will balance the installation of vertically opening “slide” type gates, which will allow the City to operate the gates at any time, with the cleaning of portions of Black’s Creek basin, for example between Furnace Brook Parkway and Merrymount Parkway, to create additional storage capacity.

With more flexibility in opening and closing the gates and additional storage capacity, the DPW will be able to maximize the hydraulic capabilities of the existing Furnace Brook Drainage system.

Funding:

Funding for this project will be provided through debt financing. This project will reduce the City’s Drainage Department costs associated with the management, cleanup, and repairs caused by flooding. This project will also improve the flooding conditions for all of the Furnace Brook basin.



Project No. 1135

The Sagamore Creek Tide Gate

Assessment	Funding	Function	Type	Need	Budget Impact
Quality / Future Costs	Funded	Stormwater	Public Works	Urgent	Reduce

ESTIMATED COST: \$810,000

Description:

The Sagamore Creek flows to the Neponset River via a culvert underneath the State Street Bank complex near the Newport Avenue extension. During severe storm events the storm surge backflows through the culvert and marsh, into the drainage system, and creates/exacerbates flooding in low-lying neighborhoods connected via the drainage system (John/Division, Fayette/Farrington, Atlantic Middle School area). The installation of a tide gate at the outfall to the Neponset River is an initial step toward resolving the broader flooding issues in the areas tributary to the outfall. With the tide gate present, the City’s DPW can close the gate at low tide when severe storm events are expected, and this ability will begin to reduce the frequency, duration, and severity of upstream flooding from stormwater runoff because it maximizes available flood storage in the marsh area.

Funding:

Funding for this project will be provided through debt financing. The City has applied for a FEMA Hazard Mitigation Grant which may cover a portion of the cost if granted. This project will reduce the City’s Drainage Department costs associated with the management, cleanup, and repairs caused by flooding. This project will also improve the flooding conditions that impact many residents and business owners.



Project No. 1136

North Quincy Area Drainage System Cleaning

Assessment	Funding	Function	Type	Need	Budget Impact
Quality / Future Costs	Funded	Stormwater	Public Works	Urgent	Reduce

ESTIMATED COST: \$1,300,000

Description:

Stormwater runoff in North Quincy must be effectively conveyed to the Sagamore Creek from areas prone to flooding. The Sagamore Creek Tide Gate project will create capacity, however the ability to properly collect and convey stormwater to the creek must be addressed. The inspection and cleaning of the main drain lines in the drainage system to remove potential clogging from miscellaneous debris, to identify any tree roots, pipe collapses, and other flow impediments that may be present, and to make an assessment of the infrastructure’s condition to identify sections that may need rehabilitation in the near future should be performed. Areas have been identified in the following neighborhoods for inspection:

- Fayette/Farrington area
- Teal Field area
- Atlantic Middle School area
- Arlington, Brook, Belmont & Hobart area
- Burgess Street area

The area immediately around the Sagamore Creek marsh has also been identified by the EPA as having evidence of illicit connections between the drains and sewers. Inspections will also focus on identification of these issues, furthering the City’s steps toward compliance with EPA NPDES Compliance Regulations.

Funding:

Funding for this project will be provided through debt financing. The City has applied for a FEMA Hazard Mitigation Grant which may cover a portion of the cost if granted. This project will reduce the City’s Drainage Department costs associated with the management, cleanup, and repairs caused by flooding. This project will also improve the flooding conditions that impact many residents and business owners.



Project No. 1137

Division Street Pump Station Upgrades

Assessment	Funding	Function	Type	Need	Budget Impact
Quality / Future Costs	Funded	Stormwater	Public Works	Urgent	Reduce

ESTIMATED COST: \$150,000

Description:

The area of Division and John Street is particularly susceptible to flooding because it is both close to and only marginally higher in elevation than the salt marsh upstream of the Sagamore Creek outfall. While the pump station located at the northern end of Division Street helps lessen flooding conditions and duration, flooding still occurs during severe storm events. The pump station currently connects to a piping network that serves both John and Division Streets pump station presently has the capacity for three pumps, however it has only one active pump. The design and installation of these two additional pumps offers a cost-effective way of optimizing the existing drainage infrastructure.

Funding:

Funding for this project will be provided through debt financing. This project will reduce the City’s Drainage Department costs associated with the management, cleanup, and repairs caused by flooding.



Project No. 1138

The Broad Street Tide Gate

Assessment	Funding	Function	Type	Need	Budget Impact
Quality / Future Costs	Funded	Stormwater	Public Works	Urgent	Reduce

ESTIMATED COST: \$650,000

Description:

The tide gate system located on Broad Street is in poor condition. The structure at the end of Broad Street has the inner gate that shows signs of corrosion, the outer gate is not present, and the concrete structure that houses these structures is in disrepair and its reinforcement bars are exposed. The lack of a well-functioning tide gate compromises the capacity for draining the YMCA lot and the Russell Park neighborhood, which are both currently subject to flooding. When the tide gate does not function effectively, the tide is allowed to surcharge the drainage system and the system’s hydraulic capacity is compromised – a condition that compounds any current drainage issues. The proposed project is either the rehabilitation of the existing tide gate or the reconstruction of the headwall at the outfall along with the installation of a new tide gate, depending on the results of a detailed inspection. This will ensure that the system’s hydraulic capacity is not compromised.

Funding:

Funding for this project will be provided through debt financing. This project will reduce the City’s Drainage Department costs associated with the management, cleanup, and repairs caused by flooding. This project will also improve the flooding conditions that impact many residents and business owners.



Project No. 1139

The Broad Street Tributary System Rehabilitation

Assessment	Funding	Function	Type	Need	Budget Impact
Quality / Future Costs	Funded	Stormwater	Public Works	Urgent	Reduce

ESTIMATED COST: \$590,000

Description:

Following the repair of the Broad Street Tide Gate System, the upstream piping serving the Russell Park neighborhood, the general area between McGrath Highway and Coddington Street, and other tributary pipe to Broad Street should be clean and realigned with stop repairs. The project will use the TV video Camera to inspect the piping network and will construct spot repairs and realign pipe segments to maximize capacity flowing to the Broad Street Tide Gates.

Funding:

Funding for this project will be provided through debt financing. This project will reduce the City’s Drainage Department costs associated with the management, cleanup, and repairs caused by flooding. This project will also improve the flooding conditions that impact many residents and business owners.



Project No. 1140

Drainage Improvements in the Circuit Road / Spence Ave Area

Assessment	Funding	Function	Type	Need	Budget Impact
Quality / Future Costs	Funded	Stormwater	Public Works	Urgent	Reduce
	Possible MEMA Grant				

ESTIMATED COST: \$730,000

Description:

Flooding in this area is mainly attributed to the undersized and bottlenecked configuration of drainage piping that connects the Circuit Road System to the Quincy Avenue system and to the Martensen Street system. The proposed project involves the inspection, cleaning, and replacement of specific sections of the stormwater drainage conveyance system, along with the installation of a new tributary line to collect water from low-lying areas. The replacement of the undersized pipes will allow the runoff from 50-year storm events to pass through without flooding.

Funding:

Funding for this project will be provided through debt financing. The City has submitted a Flood Hazard Mitigation Grant application in FY10 for this project and may learn of its scoring in fall of 2011 (FY12). Due to the urgency of this project, Bond funding is also being pursued in case the MEMA grant does not arrive. This project will reduce the City's Drainage Department costs associated with the management, cleanup, and repairs caused by flooding. This project will also improve the flooding conditions that impact many property owners.



Project No. 1141

Centre Street Drain Pipe Realignment

Assessment	Funding	Function	Type	Need	Budget Impact
Quality / Future Costs	Funded	Stormwater	Public Works	Urgent	Reduce

ESTIMATED COST: \$100,000

Description:

The drainage system in the Centre Street and Roberts Street area experiences hydraulic damming at the intersection of Brooks Avenue. This is due to the volume and rate of stormwater flow entering the manhole in the intersection Roberts and Brooks. Roberts Street drainage travels through the bottom of this manhole, and flow drops in from both sides of Brooks Avenue. The flow dropping in from Brooks Avenue causes Roberts Street’s flow to backup. To eliminate this effect, the project will install a drop manhole on Brooks Avenue and bring this flow into the drainage system just downstream of the current manhole. This will minimize the turbulence created in the Roberts Street flow and reduce or eliminate the hydraulic damming effect on the flow. The work includes installation of a drop manhole, installation of PVC sewer pipe, modifications to the existing manhole, and associated pavement restoration.

Funding:

Funding for this project will be provided through debt financing. This project will reduce the City’s Drainage Department costs associated with the management, cleanup, and repairs caused by flooding. This project will also improve the flooding conditions that impact many property owners.



Project No. 1142

Sachem Brook and Sachem Street Tide Control System

Assessment	Funding	Function	Type	Need	Budget Impact
Quality / Future Costs	Funded	Stormwater	Public Works	Urgent	Reduce

ESTIMATED COST: \$350,000

Description:

It is suspected that the Sachem Brook tide gate is not operating properly based upon high-tide/wet weather conditions in the areas near the outfall. Although the location of the structure (under Quincy Shore Drive) prevented a physical inspection, it is reasonable to expect that salt water corrosion and sedimentation have either damaged or destroyed the tide gate. Replacement of the current gate with a new 60” stainless steel flap valve with all new seals will keep sea water from entering the drainage system at high tide and improve drainage from upstream areas.

The areas along Sachem Street closest to Quincy Shore Drive experience significant flooding that appears to the City DPW to be associated with high tides, significant rain events, or a combination of both. According to the DPW, it is common to see water surcharging from neighborhood street drains, which creates a small wet area between residences at 114 and 116 Sachem Street during high tide events with precipitation. The drain line serving this neighborhood discharges through a flap-style tide gate located inside a concrete chamber under Quincy Shore Drive, which was installed in the 1950s. Due to heavy traffic and the potentially hazardous nature of inspecting the tide gate chamber via the outfalls, no visual inspection of the facility was possible to confirm the continued operation of the tide gate; however, it is suspected that it is not operating properly based upon high-tide/wet weather conditions in the areas near the outfall. Replacement of the current gate with a new stainless steel flap valve with all new seals will keep sea water from entering the drainage system at high tide and improve drainage from upstream areas. The installation of a bypass pump station to allow stormwater to be pumped around the tide gate under high tide conditions will further the beneficial effects of the new tide gate and offer greater drainage capacity when it is most needed.

The installation of a low-lift bypass pump station to allow stormwater to be pumped around the tide gate under high tide conditions will reviewed to weigh the beneficial effects of the new tide gate and offer greater drainage capacity when it is most needed to the cost.

This effort will also be linked to the ongoing Wollaston Beach area drainage assessment work which focuses on the cause and remedy of illicit sewer to drain cross connections and beach closures, furthering the City’s efforts towards compliance with the EPA’s NPDES Discharge Regulations.

Funding:

Funding for this project will be provided through debt financing. This project will reduce the City’s Drainage Department costs associated with the management, cleanup, and repairs caused by flooding. This project will also improve the flooding conditions that impact many property owners.

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Project No. 1143

Agency Support on Drainage Projects

Assessment	Funding	Function	Type	Need	Budget Impact
Quality / Future Costs	Funded	Stormwater	Public Works	Urgent	Reduce

ESTIMATED COST: \$220,000

Description:

Several state and federal agencies have performed stormwater based assessment and projects with the City of Quincy, and all look for a local share appropriation during the study, design, and construction phases. Currently the following efforts are underway and this project forecasts the local share costs that will require a funding source:

- Army Corp of Engineers Study of the Penns Hill area drainage system = \$50,000 in local share. Agreement is expected to be signed in March 2011.
- Coordination with Army Corp on updating the Furnace Brook Bypass Concepts = \$70,000 in engineering and local support. This project is to re-initiate the large scale (\$50M-\$60M) concepts such as the project to install box culvert diversion structures within Furnace Brook Parkway from Quarry Street to Black’s Creek.
- Coordination with Town of Milton and DCR on the concept to divert Cunningham Brook within the Town of Milton will require \$25,000 in engineering services.
- Coordination the Coastal Zone Management concerning their efforts to study and rehabilitate coastal pollution around the Bayswater area. This effort includes sewer and drain pipe inspections and repairs to eliminate any potential for illicit cross connection. Local Share estimated at \$50,000.
- Division of Marine Fisheries study of the Town Book overflow weir and eventual modifications to support base flow for the smelt population. Local share is expected to be \$25,000.

Funding:

Funding for this project will be provided through debt financing. Each project will have a separate impact on budget and quality of life in Quincy.



Project No. 1144

City-Wide Street and Sidewalk Repair

Assessment	Funding	Function	Type	Need	Budget Impact
Quality / Service Protect	Funded	Infrastructure	Public Works	Desirable / Necessary	Minimal

ESTIMATED COST: \$3,500,000

Through the City, streets and sidewalks are in need of repair. These funds will help to address the most serious roadway and walkway issues in neighborhoods across the City.

Funding:

Funding for this project will be provided through debt financing. Each project will have a separate impact on budget and quality of life in Quincy. In addition, these funds will be supplemented with state highway funds to expand the scope of paving and sidewalk repairs.



Appendix A: Proposed Council Order

CITY OF QUINCY IN COUNCIL

ORDER NO. 2011-

February 7, 2011

Be it ordained by the Quincy City Council that the aggregate amount of \$25,485,000 is appropriated for the following purposes: (i) repairs and improvements to City buildings and land, including environmental mitigation in the amount of \$5,305,000; (ii) seawall repairs in the amount of \$5,000,000; (iii) drainage improvements in the amount of \$10,000,000; (iv) equipment purchases in the amount of \$1,680,000; (v) street and sidewalk repair in the amount of \$3,500,000; and for the payment of all other costs incidental and related thereto; that to meet this appropriation the Collector-Treasurer with the approval of the Mayor is authorized to borrow \$25,485,000 under MGL c.44, or any other enabling authority; that the Mayor is authorized to take any other action necessary to carry out his project. The Collector-Treasurer is authorized to file an application to qualify under MGL c44A any or all of the bonds and to provide such information and execute such documents as may be required for these purposes.