



**CAPITAL IMPROVEMENT PROJECT (CIP) REQUEST - FY23
FORM A - DESIGN & CONSTRUCTION**

Project Title:	Assembly Square Fire Station Fit-Out		
Project Address:	Corner of Middlesex Avenue and Foley Street		
Department:	Capital Projects		
Project Mgr.:	Melissa Woods	Email:	mwoods@somervillema.gov
New Project or Modification:	New Project		

Department Priority:

Rank your project(s) in order of priority from your point of view. If you propose four projects, rank them 1, 2, 3, 4, with 1 being the highest, and so forth.

Project Description/Scope of Work:
Design and construction for a new fire station in Assembly Square located within a new parking garage at the corner of Middlesex Avenue and Foley Street provided by developer BioMed Realty. The City is leasing space within this new construction and will require construction administration design services and construction to outfit the existing space to build the new fire station.

Justification:
Improve fire and emergency services response for Assembly Square and surrounding neighborhoods

Relationship to Other Projects:

Category: Please check all appropriate boxes

- Architectural/Engineering Feasibility Study
- Architectural/Engineering Construction Document Services & Construction Admin
- Building Alteration/Repair/Renovation/Addition/New Construction
- Building Improvements (non-construction)
- Purchase of Equipment (incl. vehicles, office equipment, hardware, etc.)
- Information Technology Systems/Platforms (e.g. cloud based, internet based, etc.)
- Street/Sidewalk/Monument Improvements
- Water Improvements
- Sewer Improvements
- Land Development
- Land Acquisition
- Land Disposition
- Parks and Open Space
- Other

Operational Impact:
New facility that will require new operational costs

What impact will this project have on operational costs?

- Reduce Cost (greater than 5%)
- Reduce Cost (less than 5%)
- Cost Unchanged
- Increase Cost (less than 5%)
- Increase Cost (greater than 5%)

Design and Construction Project Funding

	Total Estimated Cost	Prior Years Funding	FY 23	FY 24	FY 25	FY 26	FY 27
Capital Costs:							
Feasibility Study	\$ -						
Land Acquisition/Appraisal	\$ -						
Environmental Remediation/LSP	\$ -						
Demolition & Site Clearance	\$ -						
Owner's Proj. Mgr./Clerk of the Works	\$ -						
Designer Services (SD)	\$ 440,912	440,912					
Designer Services (CA)	\$ 122,250			100,000	22,250		
Construction	\$ 5,026,029			3,350,686	1,675,343		
Insurance (builder's risk, addtl. Polices)	\$ -						
Furniture & Equipment (FFE)	\$ 48,000			40,000	8,000		
Police Details	\$ -						
Contingency	\$ 707,697			471,798	235,899		
Other (Other misc soft costs)	\$ 326,662			217,775	108,887		
Other (Signal at Apron, RCN, FA)	\$ 200,000			200,000			
Total:	\$ 6,871,550	\$ 440,912	\$ -	\$ 4,380,259	\$ 2,050,379	\$ -	\$ -

Prior year spend on existing FY21 Building Improvements bond fund 5174

Please provide suggested sources. This section will be finalized jointly by Finance and the Department.

		Prior Years Funding	FY 23	FY 24	FY 25	FY 26	FY 27
Funding Sources:							
Stabilization Fund	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
GO Bonds	\$ 6,430,638			4,380,259	2,050,379		
Retained Earnings	\$ -						
General Fund	\$ -						
Special Assmnt.	\$ -						
Ch. 90	\$ -						
Grants	\$ -						
Receipts Reserved	\$ -						
Other - Existing bond, fund 5174	\$ 440,912	440,912					
Other (Specify)	\$ -						
Total:	\$ 6,871,550	\$ 440,912	\$ -	\$ 4,380,259	\$ 2,050,379	\$ -	\$ -

Evaluation Committee Use Only:

Reviewed and Approved By:

Requesting Department

Auditing

Purchasing

Date

Date

Date

Final Approval

Version

Draft

Revised

Accepted

Cost Estimate Quality Control

Questions & Answer Options

The following questions are used to determine the appropriate starting points for contingency and soft

What is the current phase of the project lifecycle / procurement?

- Concept - Initial general proposal for a new project or procurement
- Evaluation - Studying different options to fulfill identified need
- Preliminary Design - Refining scope of preferred option
- Final Design - Defining details of project / procurement
- Pre-Construction - Project / procurement ready to bid
- Construction - Contract awarded, managing potential change orders

What is the basis of the cost estimate?

- Judgement based on comparison to historical projects / similar expenses
- High-level calculation based on comparison to historical unit costs
- Semi-detailed unit cost calculation
- Detailed unit cost calculations based estimated quantities
- Detailed unit cost calculations based firm take-offs of final design quantities
- Firm bid from contractor / vendor

Who prepared the cost estimate?

- City of Somerville Subject Matter Expert
- Consultant with expertise in the project / procurement (e.g. Architect, Engineer)
- Professional cost estimator
- Hard bid (e.g. contractor, vendor)

Was the cost estimate reviewed by an independent third party, and/or more than one cost estimate prep

- Yes
- No

The following questions are used to properly escalate / inflate costs to the time of investment

When was the cost estimate prepared or last updated?

(enter date)

To what date was the cost estimate escalated?

(enter date, typically mid-point of construction, if escalated)

If the investment is a lump-sum, what is the estimated date of the expense?

(enter date)

If the investment is a project with multiple payments, what are the start and end dates of the expense?

(enter start date)

(enter end date)

$$F=P(1+i)^n$$

ft cost calculations

pared and reconciled?



Cost Estimate Contingenies & Soft Costs

Based on Association for the Advancement of Cost Engineering (AACE) Classification Matrix

Project Lifecycle	AACE Classifications			
	AACE Class	Project Definition	Methodology	Prepared by
Concept	5	<5%	Historical project comparison, Judgement	CoS SME
Evaluation	4	5 to 15%	Historical project comparison, Gross unit cost	CoS SME
Preliminary Design	3	15 to 30%	Semi-detailed unit cost	Design consultant
Final Design	2	30 to 70%	Detailed unit costs with estimated take-offs	Design and/or cost est. consultant
Pre-Construction	1	70 to 100%	Detailed unit costs with firm take-offs	Design and/or cost est. consultant
Construction / Delivery	1	100%	Detailed unit costs with firm take-offs	Contractor and/or consultant

Note: Matrix is based on vertical & horizontal construction projects; however, the methodology shown is for vertical construction projects. Orange fields are the input values based on the questions on the Quality Control tab. The first set of Blue fields are the default values for calculating contingency and soft costs. There will likely be a second set of Blue fields for soft costs. Grey fields are sub-totals. Note that for projects / procurements not at hard-bid lifecycle, we can use the soft cost percentages. Yellow fields are soft costs calculated based on Orange input amounts and Blue percentages. The Green fields are the calculated all-in costs that become the input for the CIP form.

Fit for Purpose	Undefined			
	Escalated Estimate Input	Scope Contingency	Scope-Adjusted Estimate (G&H)	Design & Management
Concept screening	\$1.00	20%	\$1.20	15%
Feasibility study, Alternative screening	\$1.00	12%	\$1.12	15%
Value management, Project funding authorization	\$1.00	10%	\$1.10	15%
Value management, Project funding authorization	\$1.00	5%	\$1.05	15%
Project funding authorization, Hard bid preparation			\$1.00	2%
Change order approval			\$1.00	2%

ould be applied to other procurements (e.g. IT equipment, fleet vehicles, real estate) by drawing analo
et of questions drive the correct row, the second set of questions escalate / inflate the proponent's
ases in which we will want to adjust those percentages at the administrative level.
rry an "undefined scope" or "design" contingency to account for inevitable scope creep.
ese fields should be overridden at the user level if actual costs are known (e.g. we have a designer c

Input and Calculations					
Design & Management	Construction Services	Construction Services	Police Details	Police Details	Sub-Total (K,M,O)
\$1.38	15%	\$1.38	7%	\$1.28	\$1.64
\$1.29	15%	\$1.29	7%	\$1.20	\$1.53
\$1.27	15%	\$1.27	7%	\$1.18	\$1.51
\$1.21	15%	\$1.21	7%	\$1.12	\$1.44
\$1.02	15%	\$1.15	7%	\$1.07	\$1.24
\$1.02	15%	\$1.15	7%	\$1.07	\$1.24

ologies to the project lifecycle & cost estimate methodology
initial cost estimate.

contract in place) or not appropriate (e.g. no Construction Services or Police Details for IT equipment).

	Output
Owner's Contingency	Total Project Cost (P,Q)
20%	\$1.97
20%	\$1.84
20%	\$1.81
20%	\$1.73
20%	\$1.49
20%	\$1.49

