

## 8. CAPITAL PROJECT MANAGEMENT

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## **8.1 CAPITAL PROJECT MANAGEMENT**

### **8.1.1 Purpose**

- To achieve the best value, to protect the integrity of the City's infrastructure, and to provide a logical and transparent process for the delivery of all capital projects.

### **8.1.2 General Statement**

The City, through the provision of services as a local government, must undertake capital projects of various scope and size. The responsibility for capital project administration (from design through to construction) is generally positioned within the Engineering Services Department.

The considerations outline herein are to be used as guidelines and used in tandem with the Engineering Services Manager's professional discretion and judgment.

### **8.1.3 Corporate Principles**

#### **8.1.3.1 Professional Ethics**

Employees shall not use their authority or office for personal gain and shall seek to uphold and enhance the City's image by:  
maintaining unimpeachable standards of integrity in all their business relationships;  
fostering the highest standard of professional competence amongst City employees;  
maximizing the use of resources for which they are responsible so as to receive the maximum benefit for the City.

#### **8.1.3.2 Declaration of Interest**

Any personal interest which may encroach or may reasonably be deemed by others to affect the impartiality of an employee in any matter relevant to their duties, should be declared by the employee to their supervisor.

#### **8.1.3.3 Confidentiality & Accuracy of Information**

Information received in the course of duty must be respected and shall not be used for personal gain. Information given in the course of duty should be true, fair and not designed to mislead.

#### **8.1.3.4 Competition**

When considering the advantages to the City of maintaining a continuing relationship with a contractor, any arrangement which might in the long term prevent the effective operation of fair competition, should be avoided.

## **8.1.3.5 Gifts**

To preserve the image and integrity of employees and the City, business gifts should be actively discouraged. Gifts, other than those of very small intrinsic value, shall not be accepted.

## **8.1.4 Budget**

Department Managers are responsible for ensuring budget funds are available in duly authorized accounts before making commitments for any capital projects.

## **8.1.5 Capital Project Management Guidelines**

### **8.1.5.1 Capital Projects to be completed by City forces**

The City is the owner and operator of the public utilities which includes the potable water treatment and delivery system, the sanitary sewage collection and treatment system and the rainwater collection and treatment system. The City recognizes its legal and moral obligations to ensure the integrity and effectiveness of these systems and as such will retain all responsibilities for the operations, maintenance and capital renewal of all existing underground City utilities. Should circumstances be such that in-house resources are not available to undertake such operations, maintenance and capital renewal works, this work may be contracted out if so approved by the appropriate authority as detailed in section 8.1.6.

### **8.1.5.2 Capital Projects to be completed by external forces**

Apart from incidental works and repairs, the City will contract out all capital works not specifically described in section 8.1.5.1 above. This would generally include roads, sidewalk, curbing, electrical, traffic signals, landscaping, pumping and treatment facilities and also includes the installation of any new or extended underground utilities. Should circumstances be such that contracted services are not readily available or should there be evidence that suggests that alternate means of completing these capital works would be in the City's best interest, then alternate construction means may be pursued subject to the approval of the appropriate authority as detailed in section 8.1.6.

## **8.1.6 Capital Project Management Procedure**

### **8.1.6.1 Capital Projects under \$250,000**

For capital projects with a total value of less than \$250,000, the Department Manager or designate will evaluate the capital project in terms of the estimated cost, budget availability, anticipated construction schedule, and construction management alternatives and will obtain the approval of the Director as to how the capital project shall be managed.

### **8.1.6.2 Capital Projects between \$250,000 and \$1 million**

For capital projects with a total value between \$250,001 and \$ 1 million, the Department Manager or designate will evaluate the capital project in terms of the estimated cost, budget availability, anticipated construction schedule, and construction management alternatives and will obtain the approval of the Director and the City Manager as to how the capital project shall be managed.

## **8.1.6.3 Capital Projects exceeding \$1 million**

For all projects with a total value exceeding \$1 million, the Department Manager or designate will evaluate the capital project in terms of the estimated cost, budget availability, anticipated construction schedule, and construction management alternatives and will obtain the approval of the Director, City Manager and Council as to how the capital project shall be managed.

Such approval by Council to proceed with construction should not be given for any capital project exceeding \$1,000,000 unless all of the following steps have first been completed:

- i) Capital project concept is proposed (by staff, Council or general public) and presented to Council for formal consideration.
- ii) Council endorses the capital project concept and directs staff to proceed with a feasibility study. The feasibility study must define the anticipated scope of the project concept, review the technical merits of the project concept, provide order of magnitude cost estimates (Class 'D'), review the financial impacts of the project concept and review the City's financial capacity, establish probable project start and completion dates, and identify all available options for managing the conceptual project through to completion.
- iii) Council reviews and accepts the findings of the feasibility study and then directs staff to proceed with a preliminary design. The preliminary design must include a recommendation on the final scope of the project, provide a Class 'C' cost estimate, establish a preliminary financing strategy for the project, provide a preliminary construction schedule and a recommended project management strategy.
- iv) Council reviews and accepts the findings of the preliminary design and directs staff to proceed with detailed design. The detailed design would provide a clearly defined detailed final scope of work, a Class 'A' or pre-tender cost estimate, a detailed project schedule, a detailed financing strategy and a detailed project management strategy.
- v) Council reviews and accepts the findings of the detailed design and directs staff to proceed to tender (if constructed by outside forces) or to construction (if constructed with in-house forces). If required, tenders would be prepared and issued in accordance with the City's purchasing policies.
- vi) If the project is tendered, Council reviews and awards the tender, subject to the project budget, schedule and management strategy being consistent with the final detailed design report.
- vii) Upon project completion, a final post-construction review report on the project will be presented to Council. The final post-construction report must provide a description of the final scope of work, a summary of actual construction costs, a summary of the actual construction schedule, a comparison with the detailed design report and a list of recommendations for further improving future capital projects.

## 8.1.7 Definitions

### 8.1.7.1 Class A Estimate (Final Design or Pre-Tender)

This is the highest level of estimate, based on quantities and unit prices from a detailed design or direct quotation by supplier. The detailed design should be in the order of 95% to 100% complete. This category is to be used to confirm that the project is within available budget prior to proceeding or prior to issuing tender documents and is also used to evaluate tender submissions. Class A estimates will be reviewed and approved by a qualified professional engineer with appropriate project-related experience and expertise.

Class A estimates to include the following:

- 10% general contingency allowance
- 10% allowance for engineering, legal, construction, financial and administration costs
- 5% contingency allowance for inflation
- review and approval by a qualified professional engineer

### 8.1.7.2 Class B Estimate (50% Design)

This estimate is based on the early stages of detailed design work and is used as a check to ensure that the project is not substantially outside of the budgetary estimates established during the preliminary design stage. The detailed design should be between 40 and 60% complete, with all necessary site investigations and studies completed. Quantities should be accurate within 80% of the final design.

Class B estimates to include the following:

- 20% general contingency allowance
- 20% allowance for engineering, legal, construction, financial and administration costs
- 15% contingency allowance for inflation

### 8.1.7.3 Class C Estimate (Preliminary Design)

This estimate is based on the preliminary design that provides a recommended scope of work for the specific project. It includes estimates for consultant design fees where a proposal has not been received. This category is prepared with limited site information and is based on probable conditions affecting the project and past experiences with similar projects.

Class C estimates to include the following:

- 25% general contingency allowance
- 25% allowance for engineering, legal, construction, financial and administration costs
- 20% contingency allowance for inflation

### 8.1.7.4 Class D Estimate (Feasibility Study)

This estimate is based on little or no site specific detailed engineering but provides magnitude of order or 'ball park' estimates and is derived from lump sum or unit costs



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from comparable projects of similar magnitude. This category is used in developing long term capital plans and for comparing conceptual options.

Class D estimates to include the following:

- 30% general contingency allowance
- 30% allowance for engineering, legal, construction, financial and administration costs
- 25% contingency allowance for inflation