

Section

6

Executing Process Group

Project Management Manual Sections

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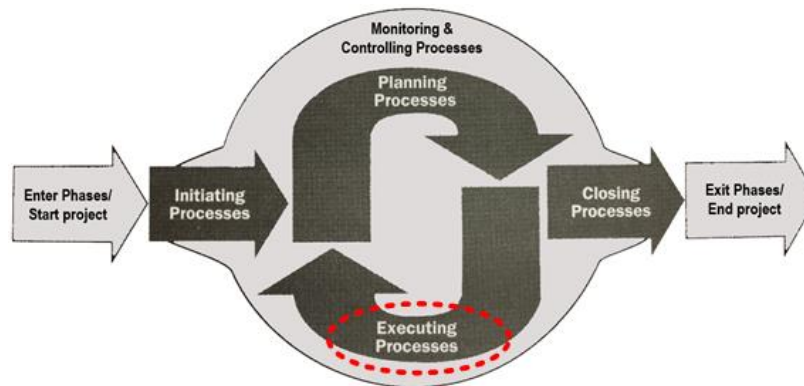
Executing is the third of the five project management process groups.

The purpose of this process group is to complete the work defined in the Project Delivery Plan to satisfy the project requirements. This involves coordinating resources, managing stakeholder engagement, and integrating and performing the activities of the project in accordance with the project delivery plan.

A large portion of the project budget, resources, and time is expended in performing the executing process group processes. The process may generate change requests. If approved, the change requests may trigger one or more planning processes that result in a modified project delivery plan, project documents, and possible new baselines.⁸

The executing process group includes processes for executing and updating plans developed in the initiating and planning process groups.

Figure 6-1. Executing Process Group



6.1 Acquire Project Team

The Project Manager, in consultation with the Project Sponsor, is responsible for identifying candidates to fill the roles identified on the project organization chart. For senior positions and most support functions, the roles are filled by human resources who already have organizational responsibility for a related function thus a candidate selection process is not required.

For the Major Capital Project Advisory Committee, a broad cross-section of the organization should be represented to provide objective advice, guidance, and recommendations for decision-making. A committee consisting of only end-users or customers may not be impartial about options and may cause the decisions to deviate from the Business Case.

For situations in which a selection process is required (such as for filling roles with human resources from the private sector), careful consideration must be given to matching the candidate's qualifications to the project needs. Many projects have positions, especially for the technical roles for which certification is required, and most projects benefit from selection of well-qualified human resources. The lack of qualified employees should be considered a project risk and should be addressed in the risk management process.

⁸ Project Management Institute (2017). *A Guide to the Project Management Body of Knowledge*, Sixth Edition. p. 595

6.2 Develop Team Charter



Project Team Charter
template
To be developed.

A Team Charter is produced to define internal team roles, responsibilities, and expectations. Consultants may produce additional Team Charters for their services in which the City team may also participate.

The Project Team uses the process of team chartering to define itself. Team chartering takes place early in the project, and after the Project Delivery Plan has been developed and approved, and the Project Team members have been selected. The main goal of a team chartering is to increase the probability of project success.

A project may have multiple team charters with the initial team charter developed during the planning phase for City team members. The internal team charter does not involve Consultant team members, however, Consultants normally hold another team chartering session once retained, which involves internal and external team members.

A Team Charter informs the team of the project plans, and defines their roles and expected participation while increasing cohesion, alignment, and motivation.

The team chartering process benefits the project by:

- Defining the project objectives for the team
- Identifying and clarifying team member roles, responsibilities, and authority
- Defining expectations
- Building agreement on how the team will function
- Building a common vision and goals
- Empowering team members
- Motivating the team

The benefits of team chartering far outweigh the costs, and results in team behaviours that are stronger than individual behaviours, and make better use of resources. Team chartering makes it possible to achieve far more than if each team member were performing solely as an individual.

6.2.1 How to Develop a Team Charter

The Team Charter identifies how the team will work together to achieve the objectives of the project as outlined in the Project Delivery Plan.

The Project Manager leads the team chartering process, however, all team members provide their written endorsement and take ownership of the team charter.

Team charter topics include:

- Review of Project Charter
- Team purpose
- Project Organization Structure as outlined in the Project Delivery Plan
- Team membership from the team acquisition process
- Roles, responsibilities, and authority as outlined in the Project Delivery Plan
- Measures of team success
- Issue resolution process

6.2.2 How to Hold a Team Chartering Session

A team meeting is an important component of team chartering. The meeting brings team members together to focus on common project goals, and begins the team-building process. The team chartering session must be tailored to the size of the project.

A generic agenda for a team chartering session includes:

- Introductions
- Purpose of team chartering
- Project description
- Project Organizational Structure
- Project Delivery Plan
- Team roles, responsibilities, and authority
- Issue resolution process
- Critical success factors
- Non-team chartering topic
- Team Charter endorsement

6.2.3 Endorse the Team Charter

It is imperative that the Team Charter is endorsed and signed by all team members. Endorsing the Team Charter is part of the team-building exercise, and builds a sense of ownership and commitment.

6.2.4 Update the Team Charter

A Team Charter is required from the time of the team's development in the planning phase to the final project close-out.

The Team Charter must be updated at the beginning of all execution sub-phases and at the beginning of the close-out phase as new employees may become involved with the project at any time or if the project changes.

6.3 Manage Project Team

Managing the Project Team is the process of engaging and communicating with team members, developing the team, building relationships, fostering teamwork, motivating the team, coordinating input and feedback, resolving issues, and celebrating successes.

Managing the team is one of the Project Manager's greatest and, often, most challenging responsibilities. The Project Manager must have the confidence to lead a team that, in many cases, includes senior members with more authority, more knowledge of the operation, and greater product knowledge and technical skills than the Project Manager. In other situations, the Project Manager must have the diplomacy to deal with junior members with less experience and knowledge (even in their own area of responsibility) than the Project Manager.

The Project Manager must be prepared to deal with a variety of team structures and team dynamics, and dedicate the time and effort required to ensure the Project Team's success.

6.3.1 How to Manage the Project Team

The first, and most effective, element for team management is the selection of a Project Manager with well-balanced leadership, business, and interpersonal skills. Team members with similar characteristics also benefit the team; however, as with most groups, a wide variety of personality types is likely.

A well-structured Project Delivery Plan has the following features to promote team success:

- Team chartering intended to address team-building directly by aligning the team to common goals and providing clarity for each team member's role.
- Clear direction and effective and transparent decision-making, as identified in the Project Organizational Structure, to aid in team buy-in and ownership.
- An Issues Log so team members are clear on expectations.

The Project Delivery Plan should be supplemented by the following Project Manager and Project Team actions:

- The Project Sponsor should be a project champion, and provide visible support.
- The Project Manager must provide regular and frequent communications to keep the Project Team informed.
- The Project Manager should include Consultants in Project Team-building exercises, and encourage them to adopt the same team strategies.
- A conflict management approach should be developed for handling challenges.
- All Project Team members should strive for consistent positive thinking, and celebrate successes as a team.

6.4 Conduct Procurement

As discussed in *PMM Section 5.6 – Plan Procurement Management*, most procurement for large projects will be through solicitation of competitive offers. This section defines the processes for selecting a Consultant and a Contractor.

The City defines the term 'Bidder' to mean any person submitting a Bid for the Work, and 'Consultant or Contractor' to mean the person undertaking the performance of the Work.

Processes for other delivery methods, whether P3 or another form of an Alternative Project Delivery, may have special requirements not addressed in this Project Management Manual.

The City has a structured procurement decision process through the Materials Management Division for bid opportunity preparation, bid solicitation, bid evaluation, contract award and contract commencement, which is illustrated in Figure 6-2: *Procurement: Decision Process for Procurement Planning*.

6.4.1 Prepare Request for Proposal

A Request for Proposal (RFP) is an invitation for bidders to submit proposals to the City to perform specific work, while the vendor's proposal in response to the RFP is an offer of the services.

Two common approaches to the proposal process are single-stage and two-stage requests.

1. A single-stage request is the most common approach with the request for qualifications and the technical approach all included in one RFP.

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2. A two-stage request process separates the qualifications from the technical submissions, and is typically only used in specific situations usually to reduce the number of RFP submissions on large and complex projects.
 - The first stage is a request for qualifications. After evaluation, the submissions are shortlisted based on pre-defined criteria. A general scope of work is required for the qualifications stage, and submissions are not expected to have a work plan or costs.
 - The second stage, for the technical and cost submission, is restricted only to proponents shortlisted in the first stage.

The Request for Proposal must define the City's expectations, including the detailed scope of work and terms and conditions under which the offer is to be made.

The City incorporates General Conditions (GCs) which are standard terms and conditions for use in RFPs. They are periodically updated, and are available on the City's website at winnipeg.ca/matmgt/gen_cond.stm

When the GCs are identified early in the process, the bidders are aware of the requirements and can accommodate them in their proposals.

The City uses a standard Request for Proposal template for that can be found on the City's website at: winnipeg.ca/matmgt/templates

The template incorporates the GCs and includes bidding procedures and forms to standardize and simplify the RFP's preparation. The RFP template requires proposals to be submitted prior to the submission deadline.

A fundamental feature of the RFP process is competition. The competitive nature allows equal access to public projects for all applicants and, at the same time, guarantees competitive pricing.

6.4.1.1 How to Prepare a Request for Proposals



Request for Proposals
(RFP)

template

Download from the
Materials
Management
website

The first step in preparing an RFP is to access the City's website for up-to-date documents.

The Project Manager is responsible for RFP preparation, including identifying requirements, preparing the document, coordinating selection team input, issuing the request, and communicating with bidders.

The RFP template is structured into:

- proposal submission forms
- bidding procedures
- General Conditions (GCs)
- Supplemental Conditions (SCs)
- and specifications

The RFP template provides a basic format, and the user enters project-specific inputs.

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Some key inputs are:

- **Scope of Work** – The major and most critical effort in preparing the RFP is developing the scope of work. A well-defined project scope is the cornerstone for a responsive proposal. The scope of work is developed from the statement of work in the Project Delivery Plan which reflects the intent of the Business Case.

The structure of the scope of work depends on the nature and intent of the project:

- A prescriptive approach can be used when the methods and deliverables are clear, and there is little advantage in pursuit of alternative and creative solutions.
- A performance-type scope is appropriate for projects that would benefit from creativity, industry experience, initiative, and innovation.
- **Evaluation Criteria** – The RFP must identify the intended criteria for evaluation. Sample criteria from the template and their weights are shown in Table 6-1. The RFP template may list the minimum weights to give various components of the RFP.

Table 6-1. Example Evaluation Criteria and their Weights from the Request for Proposal Template

Evaluation Criterion	Weight (%)
Fees (minimum)	40
Experience of proponent and sub consultants	20
Experience of key resources assigned to the project	10
Project understanding and methodology	20
Project schedule	10

- **Indemnity** – The GCs include an indemnity clause to protect the City against negligent acts, defects, errors, or omissions of the Consultant during the performance of the Contract.
- **Insurance** – Consultants/Contractors are required to carry insurance policies, with the minimum requirements identified in the Bid Opportunity or RFP template. The Corporate Finance, Risk Management Division, must be provided a copy of the Bid Opportunity or RFP to review prior to posting on the Materials Management website. Discussion or copy of the Risk Analysis and Evaluation Register is often referred to as part of the process to ensure appropriate coverage of the exposures. Special considerations for wrap-up policies with errors and omission coverage are discussed in *PMM Section 6.4.7.4 – Wrap-Up Policies*.
- **General Conditions** (GCs) – The GCs cover a number of standard boilerplate requirements. If the RFP requires exceptions to the GCs, they are stipulated in the
- **Supplemental Conditions** (SCs) without altering the GCs, and the SCs then take precedence over the GCs.

The Project Manager is responsible for coordinating a submission deadline, advertising, and submission with the Materials Management Division. The procurement solicitation process is the same for all types of projects with some variation in the procedures depending on whether an RFP or Bid Opportunity is used. The process for soliciting and receiving bids is described in more detail in *PMM Section 6.4.12 – How to Solicit and Receive Bids*.

6.4.2 How to Make a Single Source Procurement

The justifications for single source procurement are detailed in FI-003 Materials Management Policy section B4. Single source negotiations and must be approved in accordance with FM-002 Materials Management Administrative Standard.

6.4.3 Evaluate Proposals and Award Contracts

Competitive proposals received from bidders must be treated equally and evaluated fairly in accordance with the evaluation criteria and methods stipulated in the Request for Proposal. The proposals are evaluated by an Evaluation Committee, which must commit to proposal review, scoring (individual and consensus) and attendance at interviews, if applicable.

Proposal scoring includes both financial and non-financial criteria that are combined into a single score. The City uses a standard scoring matrix that incorporates technical scores and fees into one combined value. The evaluation approach is available from the City's website at winnipeg.ca/matmgt/templates/Bid_Evaluation/Bid_Evaluation.stm. In some cases, interviews may be necessary. The interviews are for clarification and demonstration of aspects of proposals and must be used with caution. Interview protocols should be defined by the Evaluation Committee in advance and applied consistently throughout the process.

The final step of bidder selection is a debriefing to provide feedback to the bidders on only their submissions, if requested in writing. This must be tactfully managed as it typically involves negative feedback. A method that demonstrates objective scoring for defined criteria is the best way to approach the situation. Be aware that you can only share information about the evaluation of the bidder being debriefed. Do not provide the bidder with a copy of the evaluation matrix.

6.4.3.1 How to Evaluate Proposals and Make Awards

The Project Manager is responsible for coordinating the proposal reviews, scoring, and final evaluations, and for preparing the award recommendation.

The approach for evaluating proposals and recommending award is:

- Proposals are received in the Materials Management Division, where they are recorded, checked for obvious irregularities, and forwarded to the Project Manager.
- The Project Manager reviews the proposals for irregularities and responsiveness.
- The Evaluation Committee is assembled, and proposals are distributed.
- Evaluation Committee members independently review and score all proposals according to the evaluation criteria and scoring method in the evaluation matrix.
- The Project Manager contacts company references, if applicable, and documents findings.
- An Evaluation Committee consensus meeting is held to discuss merits and anomalies of each proposal, and identify potential points needing clarification. This consensus meeting may be repeated based on the results of any clarifications, interviews or demonstrations.
- Clarification letter must be vetted through Materials Management.
- All Evaluation Committee members must attend interviews, if applicable.
- At the consensus meeting, the Project Manager or designate, records the consensus non-financial scores, and justification for each score.
- The Project Manager or designate, combines financial and non-financial scores to determine proposal total scores.
- The proposal with the highest combined score is recommended for award. In some cases, negotiations may take place prior to award in consultation with Materials Management and Legal Services.

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- If the recommended bidder is not the lowest priced bidder, a detailed explanation of the reasons for non-award to any lower priced bidders must be provided to Materials Management prior to the award report.

The Project Team includes Corporate Subject Matter Experts (from areas such as Materials Management and Legal Services) who provide advice and assistance with irregularities that arise during the process.

Once the proposals have been evaluated, the Award process is the same as for all Bid Submissions, as described in *PMM Section 6.4.16.1 – How to Award Contracts*.

6.4.4 Prepare Bid Opportunities

The City uses a formal bidding process to solicit offers for a wide variety of purchases in addition to offers of Consultant services. These offers include bids for construction contracts, services, and the supply of goods. All these purchases fall under the FI-003 Materials Management Policy and are subject to the additional conditions stipulated under Administrative Standards. Refer to Figure 6-2: *Procurement: Bid Preparation, Bid Solicitation, Receipt of Bids Processes* for a high level view of the bid opportunity preparation process.

Each department that is responsible for either preparing a Bid Opportunity in-house or retaining a Consultant to prepare a Bid Opportunity must ensure that the document has been prepared in accordance with the prescribed format, and that the approved forms have been used.

A further requirement is that each Project Manager thoroughly reviews the Bid Opportunity before it is submitted to the Materials Management Division to ensure that it is clear and unambiguous, that the information it contains is accurate and complete, and that prescribed formats and forms have been used.

Guidance on Bid Opportunity preparation and rules for advertising, handling enquiries, and issuing addenda are given in the following section.

6.4.4.1 Forms and Documents Used in the Bidding Process



Bidding process
templates

Download from the
Materials
Management website

The City maintains standard documents, forms, and templates on a central website, including the items listed below.

- **Bidding Procedures**

Bidding procedure templates applicable to all Bid Opportunities are available from the City website at winnipeg.ca/matmgt/templates

- **General Conditions (GCs)**

GCs are requirements applicable to all Bid Opportunities. The GC area of the City website at winnipeg.ca/matmgt/gen_cond.stm must always be accessed to obtain the most current versions of the documents.

The GCs include contract clauses of general application which can be modified as required in the Supplemental Conditions. The GCs also define the respective roles and responsibilities of the City, the Contract Administrator, and the Contractor.

- **Supplemental Conditions (SCs)**

The SCs are the project-specific provisions in the Bid Opportunity. On projects with underground and surface works, the Supplemental Conditions section must incorporate the appropriate sections/specifications from the current *Standard Construction Specifications* available at winnipeg.ca/matmgt/Spec/Default.stm

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- **Drawings**

The drawings section consists of drawings that show the nature and scope of the work to be performed and that have been prepared or approved by the Project Manager and are referred to in the Bid Opportunity documents.

- **Specifications**

The Specifications section consists of a written description of the physical or functional characteristics of the work that is to be undertaken by the Contractor, including (without limitation) any requirement for testing or inspection. The role of the specifications is to describe the type and quality of materials and workmanship to be incorporated in the work.

While the drawings present the scope of work in terms of quantities, dimensions, form, and building details, the specifications provide the qualities of materials and workmanship for construction of the work.

- **Bid Opportunity**

The resultant Bid Opportunity establishes the terms and conditions for the Contract. The documents have the following multiple clauses that reduce the City's risk on the Contracts:

- **Qualifications** – Minimum qualifications can be stipulated so that only those with experience and capabilities to perform the work will be selected.
- **Contract Security** – Performance Bonds or other forms of security provide protection against contractual defaults.
- **Events of Default** – The GCs are structured to permit the work to continue if there is a legal dispute or terminate the work, if appropriate.
- **Insurance** – Minimum insurance levels are stipulated to protect the City against losses.
- **Indemnity** – The GCs include an indemnity clause to protect the City against loss from acts or omission as a result of the Contractor.
- **Warranty** – A 1-year warranty is standard in the GCs, however may be extended in the supplemental conditions. The warranty provides a proving period for the Work.
- **Liquidated Damages** – This clause allows the City to recover its additional costs if the contract is not completed on schedule.

The purpose of the liquidated damages clause is to clearly warn all bidders when bidding for the job (and ultimately the successful Contractor), the quantum of loss or damage that the City will suffer and that the Contractor will have to pay the City in the event that the interim completion dates, if specified, are not met or if the dates specified for Substantial and/or Total Performance are not met.

6.4.4.2 How to Select the Type of Pricing for a Bid Opportunity

The City has traditionally used two types of pricing for Bid Opportunity work:

- lump sum (or fixed price) contract; or
- unit price contract.

6.4.4.2.1 Lump Sum Contracts

In a lump sum contracts, the bidders must submit a single price for the complete work on *Form B: Prices (Lump Sum)*.

The onus is on the bidder, rather than on the City, to determine the quantities of materials that will be required to complete the work. The test to determine whether or not the City should use a lump sum contract for Bid Opportunity work is whether the work can be specified in precise-enough detail in the Bid Opportunity, drawings and specifications to ensure that there will be no possibility of or necessity for additional work.

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Arguments for using a lump sum contract are:

- The City will know, upon receipt of the bids and following award of contract, exactly what the work will cost.
- It is easy to administer provided that no additional work becomes necessary.
- It requires less administration effort to process progress payments.

Arguments against using a lump sum contract are:

- Unless the work is defined in precise detail, and the drawings and specifications are complete, the City cannot be sure the Bid/Contract price will be the price it must ultimately pay for the work.
- It is difficult to accurately value work-in-progress and, as a result, there is a potential for under/overpaying the Contractor during the various stages of the construction.
- A lump sum contract requires more administration effort if additional/extra work is encountered.

When preparing a Bid Opportunity for a lump sum contract, the Contract Administrator or Project Manager (the in-house representative or a consultant) must ensure that:

- A payment clause is included in the supplemental conditions section and that the payment clause clearly specifies the basis upon which the City will pay the Contractor. For example, the payment clause should specify when the City will pay the Contractor.
- The bidder is not requested to break down the lump sum price on *Form B: Prices*
- (*Lump Sum*). If the City requires a breakdown of the lump sum price, a clause should be included in the Supplemental Conditions section that requires the Contractor to provide the breakdown within a specified period of time after the award of contract.

6.4.4.2.2 Unit Price Contracts

For a unit price contract, the bidders are required to submit individual prices for specific items (material or segment) of the work. The individual prices may be based on either a unit price or a lump sum. A lump sum price for an individual item should be used only under the same conditions provided in the section above.

Arguments for using a unit price contract are:

- The City can estimate the cost of the work by multiplying the approximate number of units by the price bid for each unit.
- It is easy to administer, especially in terms of determining the cost of extra work.
- It requires a minimum number of individuals to administer it.

Arguments against using a unit price contract are:

- The work must be precisely broken down into individual items.
- The drawings and specifications must be complete, except for a final determination of the quantity of work to be performed.
- If the City has grossly underestimated or overestimated the quantities, the Contractor may have remedies available under the contract.
- The Contract Administrator must be able to measure the quantity of work performed.

When preparing the Bid Opportunity for a unit price contract, the Contract Administrator or Project Manager (i.e.: the in-house representative or the Consultant) must ensure that:

- Quantities, although expressed as approximations only, are as accurate as possible.
- Each type of work described in the specifications section is included as an individual item in *Form B: Prices (Unit Price)*.

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The unit price contract has particular application to heavy construction for which exact quantities cannot be determined in advance (for example, excavation of subsurface material).

6.4.4.3 How to Prepare Bid Opportunities

For Design-Bid-Build (DBB) projects, the Consultant or in-house design staff develop designs, drawings, and specifications for products or components during the project planning phase and assembles the information and requirements into Bid Opportunities for advertising and receipt of bids.

The type of Bid Opportunity to be used depends on what is being procured and whether there are any unique procurement requirements. The City's website has a page that helps users navigate the decision-making process to find the specific application developed to help in preparation of a Bid Opportunity. Refer to winnipeg.ca/matmgt/templates/decisions/Contract_Type_decision.stm

The Bid Opportunities incorporate a set of the City's General Conditions (GCs). Like the GCs for Consultant services, other GCs are a set of standard terms and conditions for use in a specific area. They are periodically updated, and are available on the City's website at winnipeg.ca/matmgt/gen_cond.stm

The website lists multiple versions of the GCs and the user must select the current version. Multiple versions of the same GCs may be posted. This is because revisions to the GCs are not retroactive to Contracts that have already been awarded, and whichever version was included in the Contract remains in effect. New Bid Opportunities must use the most recent version.

The City uses standard templates for each of the bid types. The website offers templates for various types of infrastructure that are applicable to DBB projects. A template for general construction (referred to as *Construction Complex Projects Contract*) and the conditions under which it applies can be found at:

winnipeg.ca/matmgt/templates/Const_Gen_HighRisk_template.stm

The General Construction template and others are formatted with hidden instructions to guide the user through preparation. The document references the GCs and the specifications and drawings to be appended to the document to form the Bid Opportunity.

The Bid Opportunity documents include multiple terms and conditions and contractual requirements that impact the project management processes. The Bid Opportunity document is normally prepared by the Consultant or in-house, however, the Project Manager and Project Team must review it and provide input.

Construction Contracts are normally structured as lump sum or unit price contracts. Evaluation criteria may be used, however, this occurs infrequently because the work is usually specifically defined with little opportunity for other criteria impacting the bids.

The Project Manager coordinates a review of the Bid Opportunity prior to advertising. The review is to check conformance to the bidding process, bid documents, and procedures.

6.4.5 Cardinal Rules for Bid Opportunity Preparation

Five cardinal rules must be followed when preparing a Bid Opportunity, as described below.

1. Provide Accurate Information

The City is responsible for ensuring all information is included in the Bid Opportunity is accurate.

When the City prepares a Bid Opportunity in-house or retains a Consultant to prepare a Bid Opportunity on its behalf, the City or Consultant must ensure the document includes the best information in the City's/Consultant's possession (and all of it), and that the information is accurate.

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In addition, if the City and/or its Consultant become aware of an error or omission in the Bid Opportunity during the bid opportunity process, the City/Consultant must bring that error or omission to the attention of the bidders, and correct it by issuing an addendum before the bidders submit their bids.

If the City and/or its Consultant fails to include accurate information and/or to advise the bidders of an error or omission that has come to their attention, the City may not be able to successfully defend a Contractor's claim for breach of Contract and/or negligent misrepresentation if the Contractor who has relied on the accuracy of the information presented suffers a loss or damage as a result of the error.

The accuracy of information typically becomes an issue when dealing with the nature of an installation, site conditions, and estimated quantities.

2. Disclose all Pertinent Information

The City is responsible for including, or ensuring its Consultant includes, all information pertinent to the project or the Contractor's ability to carry out the work as disclosed, including the following types of information:

- Original as-built construction drawings including original structure drawings
- Rehabilitation and maintenance drawings
- Recent condition surveys
(i.e.: bridge deck surface delamination survey, pavement cores, sewer condition survey)
- Recent inspection reports
- Recent materials testing results (i.e.: concrete cores)
- Geotechnical test results and/or reports such as soils reports
- Structural evaluation reports
- Infrastructure upgrading alternatives report
- Previous on-going contracts awarded for the project that will overlap with the project in time
- Proposed additional on-going contracts scheduled to be awarded on the project that could overlap with the project in time
- Other on-going activities/work on the project managed by others
(i.e.: Manitoba Hydro, MTS, legal surveys)
- Restrictions on access to the site

If the City and/or its Consultant fails to disclose all information in its possession that is pertinent to the project, the City may not be able to successfully defend a Contractor's claim for breach of contract and/or negligent misrepresentation if the Contractor has relied on the information that was presented and suffers a loss or damage as a result of pertinent information in the possession of the City or its Consultant however not disclosed.

Pertinent information disclosure typically becomes an issue for site conditions, inspection/condition reports, and site accessibility.

3. Provide Clear, Unambiguous, and Consistent Provisions

The City must ensure that the provisions in the Bid Opportunity are unambiguous and consistent. Special care should be taken to avoid the practices described below, which commonly result in an ambiguous Bid Opportunity.

The **“Copy and Paste”** method of Bid Opportunity preparation involves copying provisions from an existing Bid Opportunity for a similar project and pasting them into the City's standard form. In theory, this method saves time; however in reality, the problems that may result requires more time to resolve than the time that might have been saved.

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The risks include:

- Incorrect specifications/cross references.
For example, references in the Supplemental Conditions section to BI:12 that should have been to BI:10.
- Inclusion of language that does not apply at all, is old, or is inappropriate for the current project.
- Inconsistent use of language between sections and use of language that conflicts either within a section or between sections.
For example, the General Conditions may specify that dates for 'Substantial and Total Performance' will be specified in the Supplemental Conditions section of the Bid Opportunity, however, the Supplemental Conditions section refers instead to 'completion dates'.

In the '**impossible**' method of Bid Opportunity, preparation is when the Contract Administrator or Project Manager designs engineering or architectural rules without considering the realities of construction.

The result is that the Bid Opportunity specifies things that cannot or should not be done such as:

- Required equipment that won't fit through the door
- Equipment that cannot be accessed after installation for servicing
- Anchors that are to be installed in inaccessible areas

In the '**incomplete**' method of Bid Opportunity, preparation is where the Contract Administrator or Project Manager fails to specify the work in enough detail to allow the bidder to understand the City's expectations. This problem may appear anywhere in the Bid Opportunity. Examples are notations such as "see specs" rather than "see Part 3, Clause 3.1, Section 15800, Air Distribution" and "Refer to soils information" rather than "Refer to soils information contained in Appendix A to this Bid Opportunity."

The incomplete method may also result in the Contractor not performing all the work that the City expected. An assumption is that the information has been provided, so its inclusion is not verified and it is left out. The Incomplete method may also lead to disputes between the City and the Contractor because they have different expectations of the work that was to be included in the Contract.

While the general conditions specify how conflicts between the sections of the contract documents (such as bidding procedures, general conditions, and supplemental conditions) will be resolved, it is of no assistance if the provisions within a section conflict or the provisions between sections are ambiguous. It is therefore imperative that each section of the Bid Opportunity is carefully reviewed to ensure that the provisions are clear, consistent, and complete.

4. Include All Bid Evaluation Criteria.

The City must include all criteria it intends to use to evaluate bids in the Bid Opportunity, and must use only those criteria in its evaluation of the bids.

The evaluation criteria are in the bidding procedures section of the Bid Opportunity.

Where the work/project includes purchase of major pieces of equipment or machinery that the bidder may purchase from a number of manufacturers, evaluation criteria such as the following may be included:

- Length and extent of warranty
- Availability of spare parts
- Service and maintenance – quality and response time
- Cost of replacement parts

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The consequence of not including criteria the City intends to use to evaluate bids or of using criteria that it has not disclosed to bidders is that the courts may find the City to be in breach of its duty to treat all bidders fairly.

5. Request only Relevant Information in Bid Opportunity Submission

The City must ensure that bidders are not required to be submitting information with their Bid Opportunity submissions that the City does not need to evaluate the bids. The Bid Opportunity template specifies that the Award Authority may reject a Bid as being non-responsive if the Bid is incomplete, obscure or conditional, or contains additions, deletions, alterations or other irregularities. The Award Authority may reject all or any part of any Bid, or waive technical requirements or minor informalities or irregularities, if the interests of the City so require.

The Bid Opportunity specifies that a bidder must complete and return the enclosed Bid Opportunity submission forms and documents with its Bid Opportunity submission and if the bidder either does not return the specified forms or does not supply the specified documents (or, alternatively, completes the forms in part or supplies some however not all of the specified information), then in consultation with Materials Management, a determination needs to be made if the bid is acceptable or should be determined to be non-responsive.

If an incorrect determination is made, the City may be liable for damages to the bidder, who would have been awarded the Contract had a correct determination been made.

6.4.6 How to Specify Insurance



Insurance
Requirements
Checklist
template

Download from the
City's Infrastructure
Planning Office
website

The Corporate Finance, Risk Management Division, Insurance Branch should be contacted to consult on and recommend the appropriate coverage and limits. The Risk Analysis and Evaluation Matrix will help to identify the risks which should be included as part of the discussion with the Insurance Branch. As much lead time and detail as possible should be provided in order to gather the correct requirements. Refer to the Insurance Requirements Checklist for assistance in determining the type of insurance required for the project, Projects with values over \$10 million require⁹ the City to provide the insurance.

The Insurance Branch will provide the insurance clauses to be included in the Bid Opportunity and will arrange for the respective policies.

To protect itself against liability and property damage claims, the City must insist on contractual indemnities from both its Contractor (addressed in the General Conditions) and its Consultant, as well as on insurance protection from both its Contractor (addressed in the General Conditions and the Supplemental Conditions) and its Consultant.

On certain types of major projects, the City may elect to provide contract wrap-up insurance, with the Contractor providing their own automobile and equipment insurance. However, on most projects, the Contractor is required to provide all insurance coverage in accordance with the contract requirements.

Claims arising out of a construction project generally fall into two broad categories – *liability and property damage claims*. Claims that arise or occur prior to the total performance of the work are called *course of construction occurrences*, and those that occur any time after total performance of the work are called *past construction occurrences*. Refer to *PMM Appendix F: Claims Management Process* for additional information on claim prevention, mitigation, identification and quantification, and resolution.

⁹ This dollar value is based on insurance requirements and is not meant to align with the threshold of Major Capital Project definition.

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6.4.7 Liability Insurance Policies in Construction

Construction projects commonly require four types of liability insurance policies as described below:

6.4.7.1 Comprehensive or Commercial General Liability Policies ('CGL Policies')

The City requires its Contractors to provide and maintain a Comprehensive or Commercial General Liability (CGL) policy of at least \$2 million listing the City as an additional insured and containing a cross-liability and contractual liability clause.

For all construction projects, the City will require its Contractor to include products and completed operations endorsement to the policy. Deductibles must be borne by the Contractor and set at amounts acceptable to the City.

In brief, a CGL policy protects the City from third-party claims of bodily injury or property damage that allegedly arise as a result of the Contractor's operations or work on the construction project from persons not associated with the project.

CGL policies do not protect the City from claims of professional negligence (such as errors and omissions) of its consultant/design professionals. In fact, professional negligence is expressly excluded from coverage in CGL policies.

6.4.7.2 Automobile Liability Policies

The City also requires its Contractor, especially on large bridge, sewer, and road renewal projects and on large building construction projects, to provide and maintain an Automobile Liability Policy for owned and non-owned automobiles of at least \$2 million. For these policies, the City is not listed as an additional insured. Deductibles must be borne by the Contractor and set at amounts acceptable to the City.

An Automobile Liability Policy protects the Contractor, and therefore, the City against a claim from a third party who has been injured by one of the Contractor's cars or trucks while undertaking the construction work.

While the City is not an additional insured on the Contractor's policy, the Contractor's insurance can be called upon to back up the contractual indemnity it has given the City and to respond to claims for damage assessed against the City provided we can identify the Contractor and/or vehicle.

6.4.7.3 Professional Liability Insurance Policies (Errors and Omissions)

The City should always require its architectural and engineering Consultants to provide and maintain an Errors and Omissions (E & O) Policy in an amount that is satisfactory for the particular project.

The current Materials Management templates suggest coverage limits based on consulting fees. The Insurance Branch should be consulted when determining the appropriate insurance coverage limits for projects, including high risk projects and sewer and water treatment plant design.

E & O policies protect the City against claims of professional negligence of its Consultant (such as for defects or deficiencies in the drawings or specifications resulting in a failure). These policies should remain in effect either 12 or 24 months after total completion of the project to allow for discovery/recovery under this coverage.

6.4.7.4 Wrap-Up Policies

Depending on the capital cost and/or the complexity of the project the City may provide or can require its Contractor to provide the wrap-up liability policy and its Consultant to provide the E & O wrap-up policy.

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The advantages of Wrap-up Liability Policy to a General Liability Policy are:

- Overlapping coverage and the problems associated with multiple insurers are eliminated. Overlapping coverage results when the City requires the Contractor to provide a single CGL Policy and the Contractor requires each of its subcontractors to provide a CGL Policy.
- Broader coverage can be provided and higher limits are available.
- Wrap-up coverage provides greater certainty of coverage as the insurance is for a specific project and the limit of liability has not been eroded by other claims.
- When purchased by the City, wrap-up coverage allows the City greater input into the settlement of a claim.

6.4.8 Property Insurance Policies in Construction

Construction projects commonly require three types of property insurance policies:

6.4.8.1 Course of Construction Insurance Policies (also known as Builders Risk Insurance Policies)

Depending on the value of the project or its complexity the City may purchase or require its Contractors to provide and maintain an All Risks Builders' Risk/Course of Construction Policy for all building construction projects in the amount of 100 percent of the contract price, listing the City as a named insured. Deductibles are borne by the Contractor and must be acceptable to the City.

While the need may sometimes be less apparent, it is just as important to require an all risks policy for engineering-type work such as water mains, sewers, tunnels, overpasses, bridges, roads, towers, and transmission lines (i.e., structures). In building projects, as well as land drainage projects, it is necessary to ensure that testing and commissioning is included in the policy for 10 days after testing is expected to be completed. This enhancement to the coverage will protect the structure/equipment in the case of failure that results in physical damage.

All risks policies protect an insured against all risks of direct physical loss or damage to an insured's building or structure and equipment unless a peril is expressly excluded by the policy. Risk of loss or damage due to a fire is typically included.

6.4.8.2 Installation Floater Insurance Policies

For smaller projects that do not require a Builder's Risk/Course of Construction Policy, and where no testing or commissioning of equipment is required, a Contractor will be requested to provide an Installation Floater Policy.

This coverage will provide the cost of the materials that a Contractor is planning to include in the project while they are en route to the site or while being stored at the work site. It will not pay for damage to a structure as a result of improper installation.

6.4.8.3 Contractor's Equipment Insurance Policies

The City may require its Contractor to provide and maintain a Contractor's equipment policy on large projects such as tunnelling, sewer renewals, or other projects involving extensive outlays. This insurance relates to construction equipment such as backhoes, excavators, graders, including tools, etc.

On some occasions due to the known history or condition of a site, the insurance branch may also recommend Contractor's Pollution Liability.

6.4.9 How to Specify Bid and Contract Security

The City may require the bidder to provide bid security initially in the form of a bid bond, or agreement to bond with their bid.

The City may also require the Contractor to provide a contract security in the form of a performance bond letter of credit, bank draft, or certified cheque after the award of contract. FM-002 Materials Management Administrative Standard provides guidelines for amounts of contract security.

Bid Bond, Agreement to Bond and Contract Security – The requirements for bid and contract security and the standard forms are set out in the Bid Opportunity templates.

6.4.10 How to Specify Liquidated Damages

When time-is-of-the essence in a construction contract, it is absolutely imperative that a clause be included in the supplemental conditions specifying the dates upon which the Contractor is to achieve both Substantial and Total Performance of the Work. Beyond that, if certain phases of the Work must be completed by particular dates, then those key dates must also be specified in the supplemental Conditions.

In the event that the Contractor does not complete those portions of the Work on the dates specified, then the Contractor will be in breach of the terms of its Contract. The consequence of a breach is that the Contractor will be liable to the City for losses or damages sustained by the City as a result of that breach.

The City has elected to specify in the Contract, a genuine pre-estimate of the losses or damages that it will suffer, by including a liquidated damages clause in the supplemental conditions of the Bid Opportunity template.

In the event of a delay breach by the Contractor, the Contractor will be liable to pay the City the sum stipulated in the Contract as liquidated damages for each and every day the Work is late, ending on the day immediately preceding the day that the Work has been achieved, and is so certified by the Contract Administrator, unless specified otherwise in the supplemental conditions.

As a result, it is a requirement that the supplemental conditions contain specific details on specified dates, whether the assessments will be based on calendar or working days, and liquidated damages amounts. It is imperative that the determination of "calendar" or a "working" day basis be made. There are certain types of major contracts where a "calendar day" basis may be more appropriate. For example, the Contract may impose an obligation on the Contractor to work Saturdays, Sundays, and holidays in order to facilitate an early opening or re-opening of a facility.

A properly drafted liquidated damages clause will:

1. Explicitly confer a power to extend time in general terms for any breach of contract or prevention by the City and in particular by reasons of Changes in the Work or delay in issuing instructions or information;
2. Define with precision any other circumstances for which an extension of time is to be granted;
3. Make it clear that the power to extend time is exercisable at any time;
4. Empower the City either to deduct liquidated damages from any payment or sum certified under the Contract or to recover them from the Contractor by way of action or arbitration; and
5. Define the per diem amount for liquidated damages.

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6.4.10.1 Determination of Liquidated Damages Amount

Liquidated damages are intended to be a genuine pre-estimate of the City's loss in the case of default by the Contractor, and documentation of its value and the basis of estimate is to be retained in the Contract file.

Examples of costs which should be included when determining the amount of liquidated damages for any given contract would be:

- Additional engineering fees and disbursements
- Extra costs for engaging another Contractor to complete the Work in the event that neither the defaulting Contractor nor its Bonding Company is prepared to acknowledge the default.
- Utility costs.
- Cost of hiring a security firm to secure the site.
- Legal costs.

In the event that a default occurs and the recommended amount of liquidated damages is found to be inadequate, the City would not be able to recover the shortfall from the Contractor. That is, if the supplemental conditions specify liquidated damages of \$2,000 per working day and it actually costs the City \$3,000 per working day, the City will not be able to recover the extra \$1,000 per working day from the Contractor. However, for a Consultant Delivered Project, the City may be in a position to recover the deficiency from the Consultant.

6.4.11 How to Specify Training

Training is an obvious prerequisite to long-term operation and maintenance of new works. Training often begins at the design phase, ideally carries through construction, and becomes a prominent activity during commissioning.

The specifications must give an indication as to duration and types of training required. In addition the knowledge and skill-level of the trainees and the expectations of the trainer should be considered in the development of the specification.

Often, several training sessions must be set up for one system. In a complex system, operators are trained in a separate session from mechanical maintenance employees. Electrical and control maintenance employees may be trained separately on the same components. Finally, programmers, users, and even managers may need training, all at different levels, about different aspects of a product or project.

The specifications must indicate what products are to be included in training. Often, training manuals, video training tapes, and other operations & maintenance manuals should be included in a training specification.

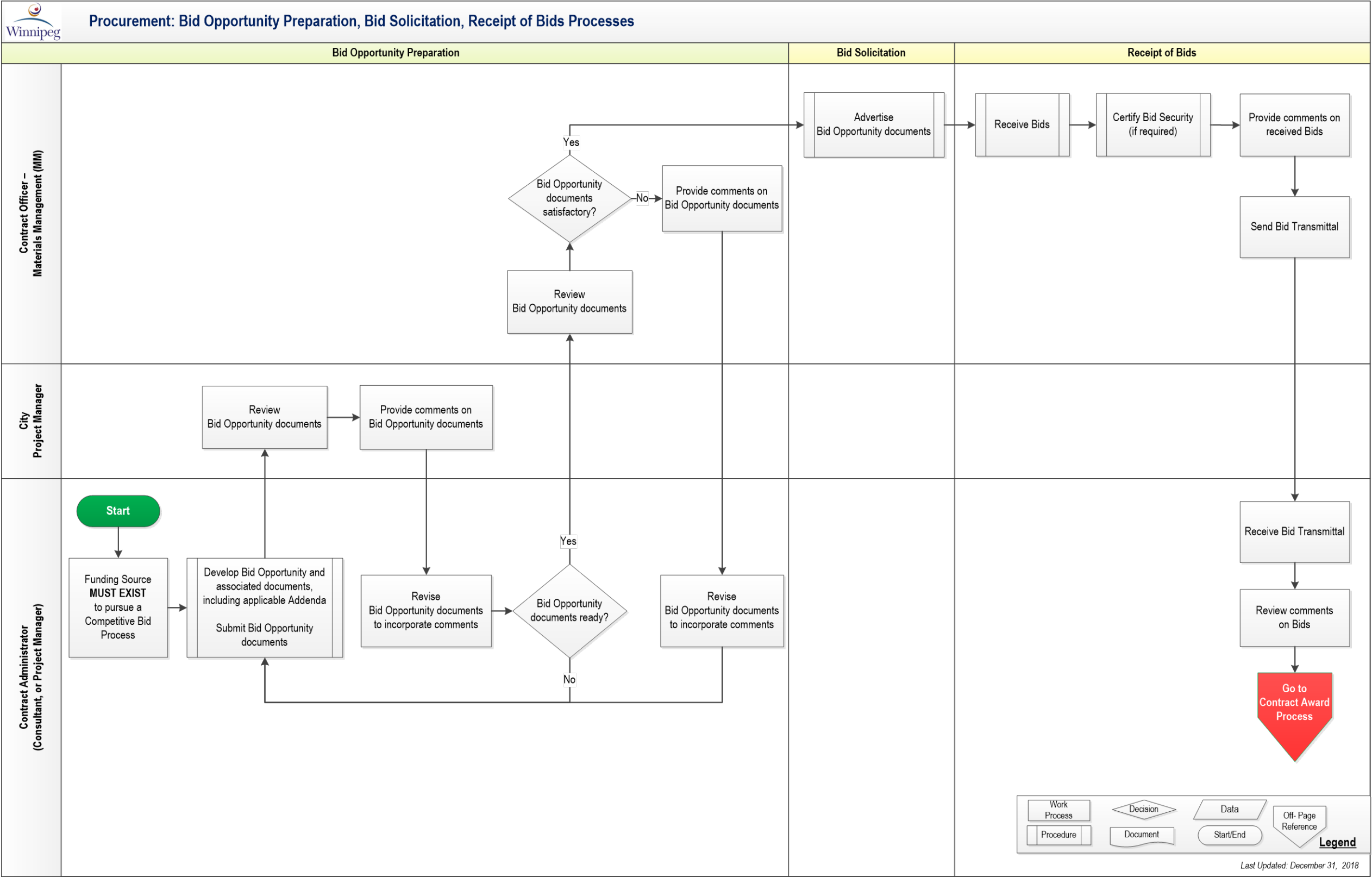
6.4.13 How to Solicit and Receive Bids

The City has a structured process through the Materials Management Division for soliciting and receiving bids, which is illustrated in Figure 6-2: *Procurement: Bid Preparation, Bid solicitation, Receipt of Bids Processes*.

The solicitation must not be advertised until all the preliminary requirements have been met. These include:

- All funds associated with the proposed construction work have been approved by Council for the project.
- Any additional funds required to offset a projected contract or project shortfall based on the Pre-bid Opportunity Estimate have been secured.
- All outside agency approvals associated with the contract or project have been secured.
- ** All arrangements concerning land associated with the contract or project have been completed.
- Documentation is on file verifying how the amount specified for liquidated damages was determined.
- The Bid Opportunity has been thoroughly reviewed by the department, and approved by the Project Manager who then authorizes advertising. Materials Management reviews prior to advertising.

Figure 6-2. Procurement: Bid Preparation, Bid Solicitation, Receipt of Bids Processes



6.4.14 The Bid Solicitation Process

The solicitation process begins once all of the authority requirements have been fulfilled.

The bid solicitation process uses the online services of Materials Management Division. Materials Management provides the users with support and assistance during the process.

The Contract Administrator (CA) requests a Bid Opportunity number using the forms on the City's website at winnipeg.ca/matmgt/templates/bidoopp_num_request.stm

After receiving the completed Bid Opportunity document, Materials Management begins their review and processing, including checking the following for conformance with the template:

1. Check bid document for consistency with the advertisement on Materials Managements internal bid system:
 - a. Time and date set for final receipt of bids
2. Check bid document for completeness:
 - a. Bid Opportunity submission forms
 - b. Bidding procedures
 - c. General Conditions (GCs) (to be inserted or referenced)
 - d. Supplemental Conditions (SCs)
 - e. Specifications
 - f. Drawings
3. Check forms in Bid Opportunity submission for errors:
 - a. Validity period of bids
 - b. Amounts of bid security/contract security where required.
 - c. Duration of warranty period

The Contract Administrator contacts Materials Management to arrange a mutually acceptable date for final receipt of bids, considering:

- The worst case scenario for the processing of the Bid Opportunity evaluation and award period, especially if the recommendation for award has to go to Standing Committee or Council.
- The number of bid closings already scheduled in the same timeframe and on any particular day.
- The date for final receipt of bids, which must not be less than 15 calendar days following the advertisement date: (30 days where estimated value exceeds \$340K (Goods and Services) or \$8.5M (Construction))
- Any key event (for example: a site tour) that occurs before the time and date set for final receipt of bids must be made known at this time and must be included in the advertisement.

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6.4.14.1 Bid Opportunity Enquiries

The Contract Administrator must fully document all enquiries received during the bidding period, and the resolution of each.

The resolution of each matter brought forward must be one of the following:

1. By satisfactory clarification in accordance with the Bid Opportunity in the case of simple misinterpretations.
2. By issuance of a specific addendum clause to provide the necessary clarification in the case of any inconsistency, omission, discrepancy, change, and/or approval of a substitute.

The Contract Administrator must not disclose any confidential information related to the project, such as the pre-bid opportunity estimate or the project budget.

6.4.14.2 Addendum Issuance

The Contract Administrator must ensure that each Addendum is developed accurately in accordance with the standard City format and practice. The addendum is delivered to Materials Management for issuance to the City's Materials Management website.

6.4.14.3 Bid Opportunity Opening

Materials Management will oversee the final receipt of bids and conduct the Bid Opportunity opening in the Materials Management office immediately following the expiration of the time and date set for final receipt of bids. Any bid received after the deadline for final receipt will not be accepted.

The bids received by Materials Management will be recorded on the bid receipt record form. Any bid not containing the required submissions may be rejected. Materials Management will notify the Contract Administrator of any informalities noted during the bid opening.

The Project Manager and Contract Administrator may attend the Bid Opportunity opening to observe the process.

6.4.14.4 Bid Opportunity Submission Document Disposition

Materials Management forwards a PDF of all bids to the Contract Administrator. The Contract Administrator ensures that all bid information provided by each bidder in the Bid Opportunity submission documents remains confidential.

After reviewing the bids, the Contract Administrator's recommendation for contract award is sent to the Project Manager for department record and contract preparation purposes. Four sets of the Bid Opportunity, complete with all addenda, must also be returned to the applicable department for contract preparation purposes.

6.4.14.5 How to Determine Whether a Bid is Responsive

A responsive bid is one that conforms to the invitation to bid opportunity in all material respects; that is, there is no non-conformity or irregularity in the bid that would materially affect the contractual relations of the parties or the Contractor's performance the waiver or correction of which would not reasonably be expected to cause prejudice against other bidders.

A non-responsive bid is one that fails to conform to the bid opportunity in a way that materially affects the contractual relations of the parties or the Contractor's performance, or for which the waiver or correction would reasonably be expected to cause prejudice against other bidders.

Details on determining whether a bid is responsive or non-responsive are:

1. The authority having jurisdiction to award must make the determination.

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2. The determination depends on the unique characteristics (requirements, evaluation criteria, and so forth) of the particular bid opportunity.
3. A bid may be responsive even though it has one or more irregularities (items that do not conform exactly to the bid opportunity requirements).
4. The correction of clerical errors in bids and revisions made for clarification may be allowed if the irregularities do not render a bid non-responsive (that is, they do not offend the criteria) and the changes are related to technical requirements that the award authority to waive.
5. Examples of irregularities in a bid that would not automatically render the bid non-responsive are:
 - a. The bidder fails to affix its corporate seal to its bid opportunity forms. This failure does not materially affect the contractual relations between the City and the bidder because the Corporations Act of Manitoba provides that an instrument executed on behalf of a corporation by a Director, an Officer, or an Agent of the corporation is not invalid merely because a corporate seal is not affixed. Lack of the seal does not affect the Contractor's performance, and waiver or correction would not reasonably be expected to cause prejudice against other bidders.
 - b. On a unit price contract, the bidder makes an extension error by multiplying the approximate number of units by their bid/unit price improperly or totals the correctly extended unit prices improperly.
 - c. The bidder makes corrections or erasures without initialling them.
 - d. The bidder submits the wrong form of bid bond or agreement to bond.
 - e. An incorrect warranty period is shown on the agreement to bond (i.e.: 1 instead of 2 years).
6. Examples of irregularities in a bid that may render the bid non-responsive are:
 - a. The bidder fails to submit bid security with their bid opportunity submission.
 - b. The bidder qualifies/conditions their bid; for example:
 - Proposing commencement or completion dates other than those required by the bid opportunity;
 - Failing to submit or complete forms required for evaluation of bids;
 - Making the bid conditional on being awarded the whole contract when the bid opportunity states that the City may award the sections of work separately; or
 - Proposing an alternative to the specified work (i.e.: an XYZ pump instead of the ABC pump specified in the Invitation to Bid Opportunity) without obtaining the Contract Administrator's prior written approval.

The authority having jurisdiction to award the contract has no discretion to award a contract to a bidder submitting a non-responsive bid. The authority must reject the non-responsive bid.

6.4.14.6 How to Determine Whether a Bidder is Responsible

A responsible bidder is one who meets the following criteria:

- Adequate financial resources;
- Necessary experience, organization, and technical qualifications;
- Satisfactory record of performance on work similar in scope and value, and also has the present capability (employees, equipment) to comply with the specified performance schedule including the contract completion date, considering all existing commitments.

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No contract can be awarded to any bidder who, in the judgment of the award authority, is not a responsible bidder or does not have all the necessary experience, capital, organization, and equipment to perform the work in strict accordance with the terms and provisions of the contract.

The authority having jurisdiction to award a contract must determine whether a bidder is responsible prior to the award of a contract. The authority having jurisdiction to award is prohibited from awarding a contract to other than a responsible bidder.

The Bid Opportunity document sets out the requirements for a responsible bidder.

6.4.15 Evaluate Bids and Award Contracts

Bids must be evaluated strictly in accordance with the criteria specified in the Bid Opportunity. If the City either does not evaluate the bids received strictly in accordance with the specified criteria or uses other than the specified criteria to evaluate the bids received, the unsuccessful bidder(s) may bring an action for damages against the City that the City cannot successfully defend.

6.4.15.1 How to Evaluate Bids and Recommend Award

The Materials Management Division sends an email with a link to the bid submissions (bid transmittal) to the Contract Administrator (CA), whether the CA is a City employee or a Consultant.

The procedure for the CA's detailed bid evaluation is:

- **Determination of the Responsiveness of the Bids** – Based on a thorough evaluation of the bid submissions received from each bidder, the CA independently assesses whether the informalities are material (so the bid is non-responsive) or technical (only the Award Authority has authority to waive informalities related to technical details).

The CA must provide reasons for determining the bid to be responsive or non-responsive, (in consultation with Materials Management or Legal Services).

- **Evaluation of the Prices (*Form B: Prices-Unit Prices*)** – The CA must first extend all unit prices to verify the total price bid for each item of work and for the total bid price for each bidder. These results are summarized in a “tabulation of bids” in the standard City format, showing and describing all informalities.

The final tabulation of bids shall be sent back to Materials Management for posting to the website.

- **Evaluation of the Prices (*Form B: Prices-Lump Sum*)** – The CA must confirm that each bidder has entered a total bid price on *Form B: Prices—Lump Sum*.
- **Evaluation of all Other Bid Submission Forms and Documents Required to Be Submitted by the Bidder** – The CA must examine all other forms and documents submitted by each bidder, identify all informalities found in the forms and documents, and summarize the results in the Receipt of Bids document, showing and describing all informalities (i.e.: what areas are incomplete).
- **Unsolicited Information** – The CA must not review or consider any unsolicited information or documentation that may appear during the bid evaluation period. The CA also must not contact any bidder or otherwise request additional information or clarification from any bidder without the prior approval of the Materials Management or Legal Services.

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6.4.15.2 Bid Mistakes

The law provides that the City cannot accept a bid submission from a bidder if a mistake is apparent on the face of the bid unless the bidder consents to waive the mistake.

Mistakes apparent on the face of a bid submission for a lump sum contract typically are in one of these two categories:

1. The bid price of the lowest bidder is substantially lower than the pre-bid estimate (which is located on the Bid Opportunity Number request form). This assumes the other bids received are close to the estimate; if all of the bid prices received are substantially higher or lower than the estimate, the estimate does not help in assessing a bidder's request to withdraw on the grounds that its submission contains a mistake.
2. The bid price of the lowest bidder is substantially lower than all the other of the bids received.

Mistakes apparent on the face of a bid submission for a unit price contract are generally easier to detect than on a lump sum contract. They include:

1. The bidder has failed to include a price for a work item on Form B: Prices—Unit Prices.
2. The bid prices of the lowest bidder for one or more items of work on Form B: Prices—Unit Prices or for the work as a whole are substantially lower than the pre-bid opportunity estimate(s).
3. The bid price of the lowest bidder for any one or more of the work items on Form B: Prices—Unit Prices or for the work as a whole is substantially lower than the bid prices received from all other bidders.

6.4.15.3 Procedure to Follow When Bidder Advises of Bid Mistake

A bidder seeking to withdraw a bid on the grounds that it contains a bid mistake usually does so within hours of the bid opportunity closing.

If the City receives an oral communication (i.e.: a telephone call) from a bidder advising of its bid mistake, the bidder is instructed to put the information in writing, including:

1. details of the mistake, and how it was made
2. make a request to withdraw bid
3. send it to the Manager of Materials

The Contract Administrator or other City employees should make no comments to the bidder. The entire Project Team should also be instructed to refer any similar oral communications, without comment, directly to the Manager of Materials.

The Manager of Materials, in consultation with Legal Services, determines whether the mistake is a bid mistake apparent on the face of the bid.

If the Manager of Materials and Legal Services concur that the bidder has made a mistake that is apparent on the face of its bid submission, the Manager of Materials prepares a letter to the bidder permitting the bidder to withdraw the bid without penalty.

If the Manager of Materials and Legal Services concur that there is no mistake apparent on the face of the bidder's bid submission, the Contract Administrator, on behalf of the department, should immediately write an award report recommending that the contract be awarded to the bidder, notwithstanding its request to withdraw, and should forward the recommendation to the Award Authority that the bidder has made a request to withdraw its bid due to an alleged mistake. It must provide the Award Authority with all details and reasons the bidder gave to the City for the mistake and it must detail why the Manager of Materials, in consultation with Legal Services, has concluded that there is no mistake apparent on the face of the bid submission and why it has recommended that the Award Authority reject the bidder's request to withdraw without forfeiting its bid security.

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Immediately following a decision of the Award Authority not to allow the bidder to withdraw the bid without forfeiting the bid security and in no event later than the time period specified in the bid opportunity form, the Department Head must issue a Letter of Intent (LOI) to the bidder advising that the bidder has been awarded the contract. If the Letter of Intent is not issued within the specified time period, the bidder's bid, together with any entitlement the City may have to its bid security, will lapse.

On receipt of the Letter of Intent, Legal Services prepares the Contract documents and forwards them to the bidder for execution and return. The bidder advises the City upon receipt of either the Letter of Intent or the Contract documents that it will undertake the work for the price bid or that it will not undertake the work, notwithstanding the Award Authorities' decision. If the latter, the Department must notify Legal Services, which will make demand on the bidder's surety company if its bid security was a bid bond, or on the bidder's financial institution if its bid security was a letter of credit.

Following a demand on the bidder's Surety Company or financial Institution, and on the advice of Legal Services, the Department then instructs the authority with jurisdiction to award the contract to issue a letter of intent to the bidder submitting the second-lowest evaluated responsive bid.

6.4.15.4 Withdrawal of Bids prior to the Award of Contract

Bidders are only entitled to withdraw their bids without forfeiting their bid securities at any time prior to the time and date set for final receipt of bids specified in the bid opportunity.

Bidders are not entitled to withdraw their bids without forfeiting their bid securities after the time and date for final receipt of bids.

Bidders who withdraw their bid after the time and date set for final receipt of bids, and before an award of contract, forfeit their bid securities unless the Manager of Materials or Award Authority in consultation with Legal Services allows otherwise.

6.4.15.5 Contract Administrator's Recommendation of Award

After completing evaluation of bids, the Contract Administrator meets with the Project Manager to review the findings summarized in the *Summary of Bids* and *Tabulation of Bids* forms to:

1. Discuss any informalities found in the bids.
2. Determine whether the Contract Administrator's assessment that a bid is either responsive or non-responsive can be supported by the reasons the Contract Administrator has given (the department may have to follow up and obtain the opinion of the Legal Services Department before confirming).
3. Discuss the qualifications of the lowest-evaluated responsive bidder and their subcontractors to perform the work, and (upon resolution of all uncertainties) tentatively schedule an early date for the pre-award meeting.

6.4.15.6 Pre-Award Meeting with Lowest Evaluated Responsive Bidder

The Pre-Award Meeting should generally involve only the three principal participants:

1. the lowest evaluated responsive bidder
2. the Contract Administrator
3. the Project Manager

The Contract Administrator may also request that certain or all of the designated subcontractors listed in the bid submission be available for discussions involving their capabilities and commitment to their aspects of the work.

The Contract Administrator should chair the Pre-Award Meeting, opening with the standard disclaimer:

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“that it is not the intent of this meeting to award the contract or make any changes however only to confirm the intent and ability of the Contractor to undertake and perform the work in accordance with the Bid Opportunity documents and the Bid.”

The Contract Administrator should then review the scope and schedule of the work to ensure that the bidder has no misunderstanding about the extent of the work and to confirm that they have no reason to believe that they cannot perform the contract in accordance with the Bid Opportunity documents.

The Contract Administrator should advise the Contractor that they have an obligation to enter into contracts with the subcontractors that require them to perform their work in complete conformance with and subject to the terms and conditions of the Contractor's contract with the City.

Further, the Contract Administrator should discuss any site investigations carried out by the bidder to ensure that the bidder's findings were consistent with the site information disclosed in the bid opportunity.

The Contract Administrator keeps proper detailed minutes of the pre-award meeting, and promptly transmits a copy of them to all parties for confirmation of accuracy in the recording.

6.4.16 Contract Administrator's Final Recommendation of Award

The Contract Administrator prepares and transmits to the department an unequivocal recommendation for award, supported by reasons.

The letter of recommendation must be accompanied by the *Summary of Bids* and *Tabulation of Bids* forms, and the Bid Opportunity submissions of all bidders.

A recommendation to reject any bid(s) as non-responsive, and/or a recommendation to award to other than the lowest evaluated responsive bidder, must be fully explained to the satisfaction of the department.

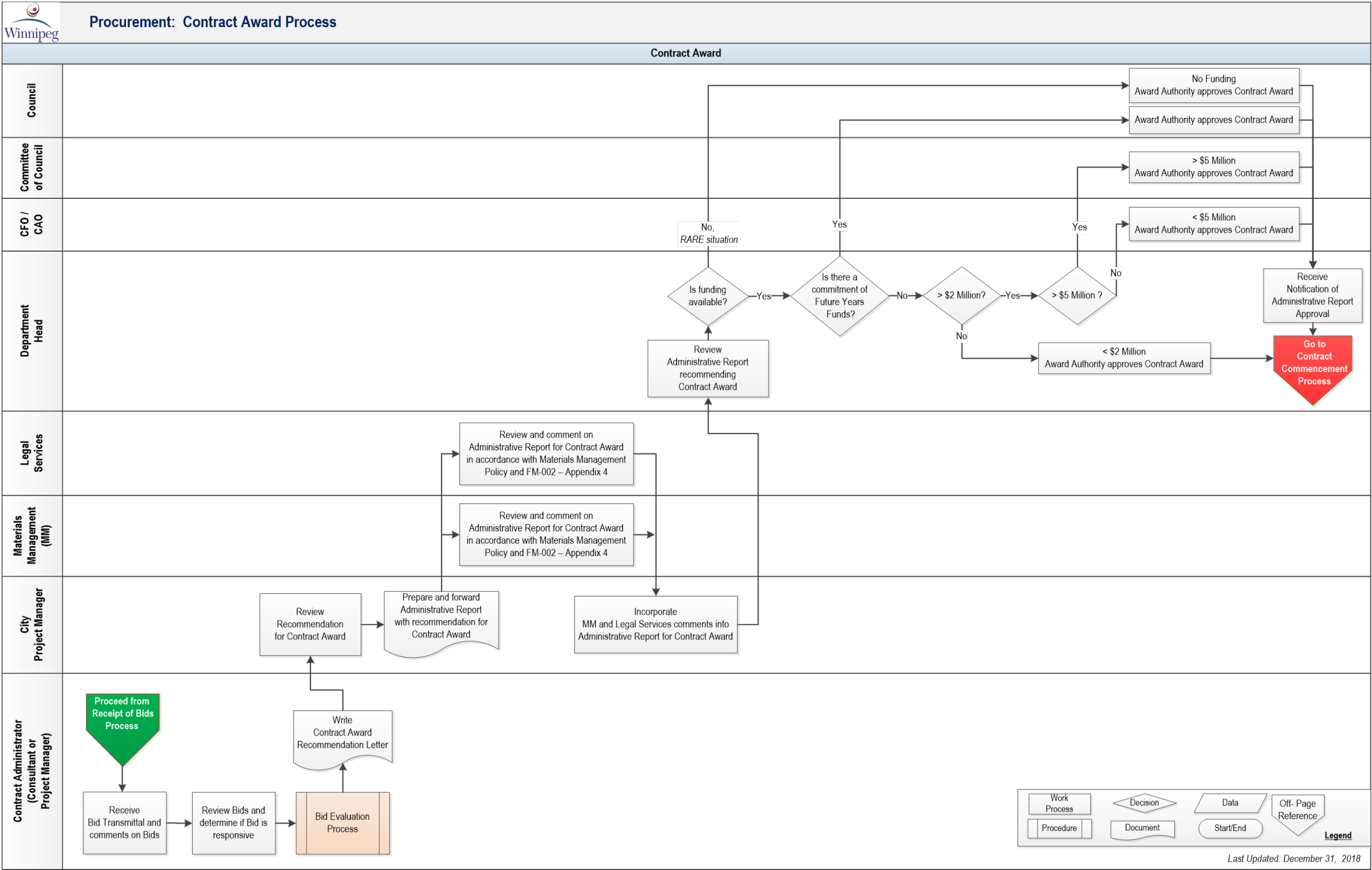
6.4.16.1 How to Award Contracts

The department reviews the final recommendation of award from the Contract Administrator and promptly resolves any identified inconsistencies that could impede concurrence or implementation of the contract award.

If the department and Contract Administrator recommendations differ, the difference must be resolved in consultation with Materials Management and Legal Services prior to the department's Award Report.

The City has a structured process for approval of award and final award. The Contract Award Process is shown in Figure 6–3.

Figure 6-3. Procurement: Contract Award Process



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6.4.16.2 Prepare the Award Report

The Project Manager must prepare an Award Report in accordance with the current standard format.

Award Reports must address bidding irregularities, construction alternatives, budget complications or overruns, or the exercise of an option to add/delete alternative or separate price items must be expanded to fully explain and justify the proposed course of action.

6.4.16.2.1 History/Discussion

An expanded history/discussion section is required related to the following award complexities:

1. If additional funding required
 - a. Applies to either the contract or other parts of the project.
 - b. If not available from surplus funding in the department, must be sought from other funding sources.
 - c. Approvals of additional fundings varies.
2. Outside agency approvals
 - a. All approvals required for the project to proceed must be secured.
 - b. Explanation of each approval must be provided.
 - c. Property acquisition or easement agreement for the project to proceed must be in place.
3. Construction alternatives
 - a. Explanation of the alternative.
 - b. Reason for recommending the one chosen.
4. Public (traffic) disruption
 - a. Identify impact based on project schedule/alternatives.
5. Accelerated completion bonus
 - a. Cost/benefit statement to justify recommendation.

6.4.16.2.2 Legal Services, Materials Management, and Controller Approvals

The Award Report must be approved by Legal Services, Materials Management, and the departmental Controller before being forwarded for approval and award at the designated level.

Legal Services

Legal Services reviews the Award Report, and may either approve it (with or without comments) or not approve it, stating the legal concerns and/or ramifications associated with proceeding with the Award.

Materials Management

Materials Management reviews the Award Report, and may either approve it (with or without comments) or not approve it, stating the reason(s) for withholding the approval.

Departmental Controller

The Controller reviews the Award Report, and may either approve or not approve it on the basis of verification of the availability of sufficient authorized funding for the designated project work.

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Legal Services and Materials Management reviews the Award Report to ensure that:

1. The recommendation for award is to the bidder submitting the lowest evaluated responsive bid (or most advantageous offer in the case of an RFP).
2. The department has correctly determined that the bidder recommended for the contract award is indeed the bidder submitting the lowest evaluated responsive bid.
3. Known informalities or irregularities in the recommended bidder's Bid Opportunity submission have been identified and that a correct determination has been made about their materiality.
4. The department and its Consultant have determined that the recommended bidder is responsible (qualified to do the work).
5. The department has confirmed that there are sufficient monies available in the budget (or to be transferred in) to pay for the work once the contract is awarded.

Approval of the Award Report from Legal Services and Materials Management does not mean that the department has evaluated the bid submissions correctly unless the department has consulted with Legal Services or Materials Management during the evaluation process.

6.4.17 Award Process

The Award Report must be routed to the appropriate approvers and award authority. In some cases, however, not all approval and award are by the same authority. Council and its committees may approve of an award of contract to be made by the CAO. The CAO has delegated the issuance of all Letters of Intent awarding the contract to the Department Head.

The award authority for a contract depends on its type and value, and on availability of budget funds. A complete explanation of the process is provided in FM-002 Materials Management Administrative Standard.

6.4.17.1 How to Form a Contract

After all approvals have been obtained, a contract must be formed. There are three options for this identified in one or more of the RFP and Bid Opportunity templates and general conditions:

1. A Letter of Intent (LOI) is issued by the Award Authority with a requirement to execute a formal contract within a specified time period. The contract is prepared by Legal Services.
2. A Purchase Order (PO) is issued in lieu of the execution of a contract.
3. A Letter of Intent is issued by the Award Authority in lieu of the execution of a contract with the bid documents in their entirety deemed to be incorporated into, and form part of, the contract. There is a specialized form of Letter of Intent to engage Consultants located on the City website at:

winnipeg.ca/matmgt/templates/contract_administration/Contract_Administration_Letters.stm

The Procurement – Contract Commencement Process is illustrated in Figure 6-4.

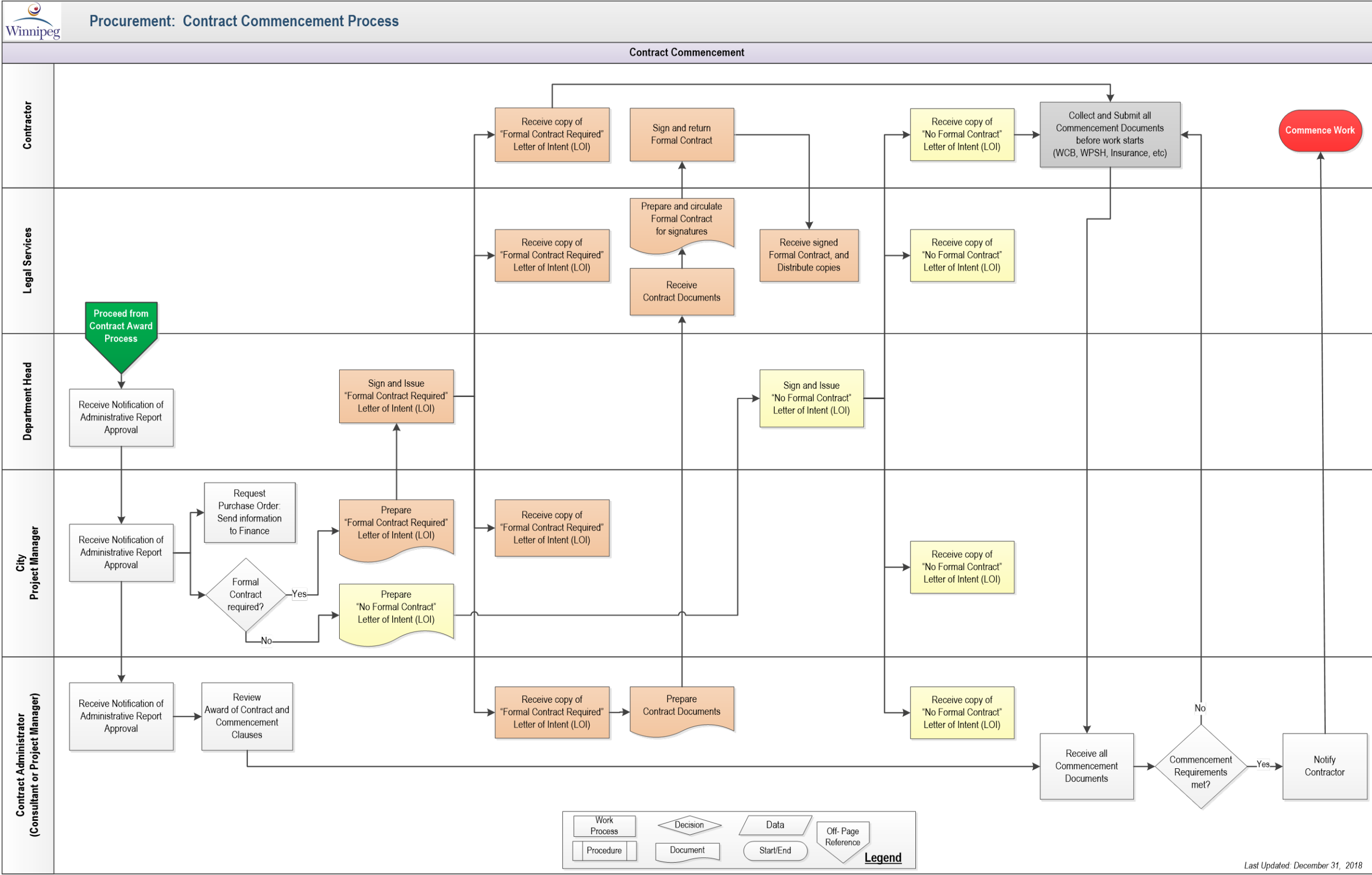
The contract must be signed by an approved signing authority. The Award Authority and Signing Authority are not the same.

Templates for the Letters of Intent and Letters of Regret for the unsuccessful bidders are available from the City's website at:

winnipeg.ca/matmgt/templates/contract_administration/Contract_Administration_Letters.stm

Standard consulting agreements are available on the City's website at winnipeg.ca/matmgt/templates/consultants/Consultant_Information_Page.stm

Figure 6-4. Procurement: Contract Commencement Process



6.5 Direct and Manage Work

The work activities are directed and managed in order to achieve the project's objectives.

Directing and managing may include one or more of the following:

- Managing project activities
- Administering contracts, which may include those for Consultants, construction or third parties
- Directing and managing in-house delivery

Directing and managing work involves a variety of activities such as:

- managing the team
- directing project communications
- reviewing project deliverables
- making decisions
- generating and providing project data.

Contract administration for Consultants, construction Contractors, and third-party Contractors is similar. Each is a type of vendor that has a contract with the City, and contract administration for any of the three involves managing the work provided in accordance with the terms and conditions of the contract.

The contracts with the three types can be different, which creates differences in the City's role, relationship with the vendor, and administration activities, however, the applicable project management and contract administration processes are the same.

Directing and managing differs from monitoring and controlling, which involves managing changes and taking corrective action, as described in *PMM Section 7 Monitoring and Controlling Process Group*.

6.5.1 Manage the Project Delivery Plan

The project management work defined in the Project Delivery Plan (PDP) is based on an overarching plan for project management and delivery, encompassing the entire project delivery chain to be managed by the Project Manager.

The Project Manager is responsible for acquiring a Project Team and directing their work assignments, including scope of services, level of effort, and expectations. The Project Manager confirms that the services are being provided and delivered as required to meet the objectives of the Business Plan.

For projects involving in-use facilities, it can be particularly challenging to maintain normal operations during construction. The Project Manager must coordinate either directly, by communicating with operations staff, or indirectly, by facilitating and monitoring other set procedures.

The coordination requirements may include:

- Maintaining operation of the existing facility during construction
- Maintaining proper lines of communication
- Planning and preparing for operation of the new work well in advance of actual transfer

City representatives for site work may be assigned to assist or take a lead role to support the Project Manager. Under either working relationship, the Project Manager must retain responsibility for quality and project delivery. Communication and coordination responsibilities are vulnerable to breakdown under these situations, particularly when the Contractor's work

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encroaches on the operating employees' daily responsibilities. Even though authority may be assigned to the Consultant to act on the City's behalf for these services, the Project Manager must monitor site communications for conformance with protocols and formal lines of communication as identified in the Project Delivery Plan and the Contracts.

Projects may have third-party commitments, such as utility coordination. The Project Manager must see that the required coordination is carried out, either directly, by communicating with others, or indirectly, by facilitating and monitoring other set procedures.

The Project Manager is responsible for the entire project budget throughout the full project delivery chain. This may include cost items in addition to the product itself, such as application fees, utility coordination, and engagement of third-party services. The Project Manager reviews progress and billings and coordinates with Accounts Payable for payment. The Project Manager is responsible for taking corrective action if the costs or projections do not conform to the Project Delivery Plan and project budgets, as described in *PMM Section 7 – Monitoring and Controlling Process Group*.

The Project Manager is responsible for coordinating events within the Project Delivery Plan schedule. The Project Delivery Plan schedule for the full project delivery chain is likely to commence earlier and extend well beyond those for Consultant or Contractor services. The Project Manager reviews schedules and confirms that critical dates and milestones are being met and are achievable.

Project-level communication is required as identified in the Project Delivery Plan. The Project Manager is responsible for arranging and undertaking the communications, which may include communications with the following individuals:

- Project Sponsor, to provide project updates or request advice or input
- Major Capital Project Advisory Committee, to address risks and major project issues
- Project Advisory Committee, for updates and decisions
- Business Owners and operations employees, to receive input or provide information on operating issues or impacts
- Other business units or departments, for coordination
- Manager, Major Capital Projects Oversight, for project updates and issues

6.5.2 Manage Design-Bid-Build Projects

For Consultant delivered Design-Bid-Build (DBB) delivered projects, the Contract Administrator (Note: per *PMM Section 5.6 – Plan Procurement*, the role is designated as 'Contract Project Manager') must administer the Consultant's Contract.

Maintaining focus on the unique product, service, or result is of paramount importance since the project is undertaken to achieve a benefit as defined in the Business Case.

The most effective way for the City and Consultant Project Team(s) to meet this goal is to work collaboratively. The Project Manager and Project Teams accomplish this through a teamwork approach by administering, by facilitating and supporting the Consultant in developing deliverables and providing timely reviews and approvals.

The Contract Administrator is responsible for administering services in accordance with the Consultant contract, which is drawn from the Request for Proposal (RFP), General Conditions, proposal and the Consultant Project Execution Plan (PXP). The Consultant will be required to prepare the Consultant Project Execution Plan consistent with the requirement of the City's Project Delivery Plan (PDP). The services include a variety of coordination, facilitation, and decision-making relating to scope, schedule, and deliverables and making payments for the services. The City Project Manager will have specific deliverables and task assignments based on the approved Project Delivery Plan and must manage and facilitate City interactions and participation.

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The Consultant service contracts may vary with a wide range in the deliverables. For the DBB project the Consultant will normally be responsible for the means and methods of the assignment and the City Project Manager will be responsible for contract administration of the Consultant contract regardless of the details. The City Project Manager is responsible for approval and monitoring of the Consultant Project Execution Plan.

The Consultant will develop their Project Execution Plan based on the requirements in the contract, the Project Management Manual and their own internal project management and product delivery processes. If any conflicts exist in best practises, the City will provide the Consultant formal direction via the change control process. The goal is for Consultants to follow the Project Management Manual processes, procedures, tools and templates, and conform to the Project Delivery Plan in meeting the project goals, and to ensure consistency and best practise in how projects are managed and delivered. This will not interfere or limit the Consultant from implementing new concepts or designs in the product, service or result being delivered.

The Consultant Project Execution Plan will include a team chartering process. Project management best practices identify project team chartering as a key enabler for project success in developing a Project Team. The preferred approach is for the Consultant team chartering session to include the City's Project Manager, at a minimum; however, preferably the entire City Project Team, operations, and Senior Management employees, including the Project Sponsor.

The main work to manage and direct the project is defined in the Consultant Contract and as detailed in their Project Execution Plan. Contract administration is carried out by the Contract Administrator (the Contract Administrator is role based – the Project Manager may also fill the Contract Administrator role) for all types of projects.

The Contract Administrator's responsibilities generally include the following:

Deliverables	Deliverables to be provided. When and for how much money.
Information Transfer	<p>Providing information is a City deliverable for the Consulting Contract, and it is a critical task that must be carried out in a timely manner since the Consultant's ability to perform work depends on it.</p> <p>The Project Manager and Project Team collect, or coordinate collection of, all internal data and information, and confirm that the information has been transferred.</p>
Decisions	<p>The City is responsible for timely review and a prompt response for decisions to Consultant submissions and requests.</p> <p>Response times for City review periods should conform to those identified in the Project Execution Plan or Contracts and are to be managed by the Project Manager.</p>
Communications	<p>Communications are carried out according to the Contract or as further agreed on.</p> <p>For larger projects, regularly scheduled meetings should be held between the Project Manager and Consultant representative along with regular or milestone project update meetings with the City's Project Management team and Project Advisory Committee.</p>
Schedule	<p>The Consultant's work schedule included in the Contract should be used for coordinating and scheduling work.</p> <p>The Consultant and Project Manager regularly update progress against the baseline. The original schedule must not be changed even if target dates will not be met, unless authorized through a change process as part of the project controls.</p> <p>The Project Manager is responsible for providing any City input to the schedule within the timeframes identified.</p>

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Deliverables	Deliverables to be provided. When and for how much money.
Quality Management	For major projects, Consultants should have an internal quality assurance/quality control process. While the process should be developed, owned, and administered by the Consultant, familiarity with the program and its use will give the Project Manager an additional quality assurance measure to use. An effective Consultant quality assurance/quality control program may warrant reduction of the level of risk assigned under the risk assessment.
Cost Estimating	Cost estimates for a product are required as part of most Consultant assignments. While there are well-defined techniques for developing estimates, the process can be challenging on certain types of projects. The Contract should identify the estimating technique to be used and the estimate classification system, which the Project Manager can then monitor under the quality assurance process.
Payments	Standard Consultant Contracts provide for monthly billing with the billing method and conditions defined in the Consultant Contract. The process for approving payments is: <ul style="list-style-type: none">• The Consultant submits a monthly invoice based on the deliverables status and progress.• The Contract Administrator reviews the invoice and notifies the Consultant of any errors or omissions.• The Project Manager verifies the progress and authorizes payment for Consultant services.

The Contract Administrator is responsible for measurement and payment. Work progress is measured through the monitoring and control processes, and is usually straightforward as it is readily measured and confirmed through submission of deliverables. It may be more complex at interim levels of completion where level of progress must be estimated. Regular communications between the Contract Administrator and the Consultant should provide sufficient validation of progress and support for approval of payments.

6.5.2.1 How to Manage Consultants

Consultants are an important part of the City's project delivery chain. They typically have a close working relationship with the Project Manager and Project Team, and play a major role in shaping or influencing the project direction.

Consultants work under Contract with the City, and the Project Manager/Contract Administrator must, without exception, administer their services according to the terms and conditions of the Contract. This means that if the Consultant is expected to manage a project in a certain way, it must be stipulated in the RFP, incorporated in the Contract, and detailed in their Project Execution Plan.

In most cases, the Consultant has expertise in project management as well as in providing technical services. Prescribing Consultants' work methods and procedures should be balanced and consistent with the Contract considering both the extent of the need and the potential increase in costs and benefits.

6.5.3 Manage Design-Bid-Build Construction Contract

Design-Bid-Build (DBB) contracts are the most common method of delivery for construction projects, and are used for Consultant and in-house delivery. They also have unique contractual arrangements for the construction contract.

For Consultant-Delivered DBB contracts, the Consultant usually provides resident and non-resident contract administration services with authority for Contract Administrator granted to the Consultant by the City under the General Conditions (GCs) and Supplemental Conditions (SCs).

The GCs define the Contract Administrator as the City's representative throughout the duration of the Contract, and state that the Contract Administrator shall have authority to act on behalf of the City to the extent expressly provided for in the Contract. The person or firm filling the role is identified in the supplemental conditions of the Bid Opportunity.

This situation can cause confusion at the Project Team level between the City and individuals in consulting roles. The City representative role in the construction Contracts is City Representative (*PMM Section 5.7 – Plan Resource Management*). To effectively perform the Contract Administrator services, the project delivery team must understand their roles, responsibilities and authority and the Consultant must have the autonomy and support needed.

The Consultant Contract Administrator is responsible for:

- Administering the construction contract(s)
- Communicating with the Contractor
- Providing project direction
- Administering contract deliverables
- Quality assurance and quality control inspections
- Measuring (verifying) for payment for the construction contract

While carrying out these Contract Administrator services, the Consultant coordinates with the City (City Representative) on:

- Advice to the City
- Review of alternatives
- Status updates and reports
- Regular communication

For DBB, Consultant deliverables are in the form of both products and services. Since the Consultant is the Contract Administrator, the deliverables are construction information, including schedule, quality, and adherence to budgets, as well as information needed for transferring the completed project.

The Project Manager is responsible for administration of the consulting contract and, therefore indirectly, for the construction contract. Accordingly, the Project Manager must monitor the Consultant's services, referring to Consultant-provided information in construction status reports and forecasts.

Standard construction contracts provide information regarding monthly progress payments. As Contract Administrator, the Consultant is responsible for measuring or verifying that the amount billed matches the actual completed work. The Consultant then recommends that the City pay the Contractor. Monitoring and managing changes for construction projects is discussed in *PMM Section 7 – Monitoring and Controlling Process Group*.

The Consultant may be responsible for the actual commissioning or for coordination of commissioning, or a separate contract may be used for commissioning. The Project Manager must provide coordination and process oversight in either the case.

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6.5.3.1 How to perform Contract Administration

Refer to *PMM Section 9 Contract Administration*. This section describes best practices for administration of construction contracts throughout their duration and during the warranty period.

Change control on contract is provided in *PMM Section 7 – Monitoring and Controlling Process Group*. Construction contracts are part of the delivery chain, they need to be monitored and controlled and must be included in the integrated change control process.

6.5.4 Manage In-House Projects

The project management processes for in-house delivery are the same as for consultant projects, using the planning processes and outputs described in *PMM Section 5 – Planning Process Group*. The main difference is that City employees takes on the technical role and produce product, services, or results deliverables such as conceptual designs, detailed designs, and drawings and specifications for construction projects. The organizational structure includes internal City employees for this method of delivery. As for Consultant projects, study managers, design managers, task leads, and discipline employees may be needed.

6.5.5 Design Management

Design management is the oversight of design efforts and encompasses the ongoing processes, business decisions, and strategies that enable innovation and create effectively-designed products, services, or results. Design management aims to link design, innovation, technology, management and stakeholders to provide competitive advantage across the triple bottom line: economic, social/cultural, and environmental factors. Design Management is about empowering design to enhance collaboration and synergy between ‘design’ and ‘business’ to improve design effectiveness.¹⁰

Design management encompasses design planning, design inputs, design development, design reviews, design outputs, design verification, design validation and control of design changes.

Design development is the progression of the design against the agreed upon scope, from the design outline produced in the Feasibility part of the Major Capital Project process through to Preliminary Design, Detailed Design and culminating into a final design which ultimately produces the information packages for tendering and construction. Design work is an iterative process; as the design matures the detail of the design increases, the number of assumptions decreases and the associated risks are reduced.

Design change is when the fundamental design aspects that have been agreed upon are subject to change or vary from the expected deliverables. For example, when there is a clear change in scope or aspects of the design are modified to suit new regulatory requirements.

At certain intervals in the design process, a complete package of information is assembled for approval. Once this approval has been given, the integrated change control process is employed to ensure that the approved information is not changed without express permission from the approving body for the project.

Any change to the design by reason of a change to the scope, detail, material or specification which occurs after the agreement of the outline design, and approval of the associated budget cost, should be implemented using the Integrated Change Control process. Refer to *PMM Section 7.2.2 – How to Perform Integrated Change Control* for additional information on the Integrated Change Control Process.

¹⁰ Design Management Institute. www.dmi.org. 6-37.

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Design changes can be minimized by:

- Conducting effective integrated design meetings.
- Ensure legislative requirements are properly integrated into the project.
- Ensure risks are properly identified and assessed.
- Ensure undertaking of thorough site investigations and condition surveys.
- Ensure that designs are properly organized before tender.

Design reviews involve a formalized, structured approach to assure interdisciplinary coordination and compliance with design criteria and site, environmental, and operational constraints. Design reviews are conducted to assure quality of products in development and generally occur at 30%, 60%, 99% design deliverables complete points in the design process. City staff will work in collaboration with Consultants throughout the design process.

Design reviews ensure:

- adherence to design criteria, and environmental documents
- quality of the design
- identification of errors and omissions
- operational and functional objectives are met
- adherence of cost estimates to the project budget
- building codes compliance
- interdisciplinary feedback is obtained before progressing the design further
- the design is biddable, cost-effective and constructible

6.6 Manage Quality

6.6.1 Perform Quality Control

Quality Control (QC) involves preparing and following the plans identified in the Project Delivery Plan or Project Execution Plan, and carrying out the quality control methods and techniques defined in the Quality Management Plan.

Quality is a shared responsibility, and each team member must:

- Be aware of their shared responsibility for quality.
- Follow quality and design standards as defined.
- Carry out draft reports and interim reviews as scheduled.
- Complete calculation and design checks.
- Use checklists and validate information.

For quality related to the Project Delivery Plan, the Project Manager is assigned the role of Quality Manager. The Quality Manager is responsible for development of quality plans, dissemination of quality procedures to the team, and confirmation of compliance with the procedures. The Quality Manager is not necessarily responsible for carrying out all of the quality checks, as quality is a shared responsibility.

6.6.2 Perform Quality Assurance

Quality Assurance (QA) is performed in accordance with the Project Development Plan's (PDP) Quality Plan. Quality Assurance includes those tasks specifically listed in the Quality Management Plan (QMP), and the following:

- Assess the quality control result to determine what processes and procedures need to be revised to ensure the customer requirements are met.
- Review outputs and deliverables at defined phases.
- Timely reporting of results.
- Review and updating the processes, procedures and quality control standards.

Quality assurance is an inherent requirement of the Project Manager. The expectation is that the Project Manager develops the Project Delivery Plan according to the Project Management Manual. The Project Manager will plan, arrange, monitor, and administer the project to the Project Delivery Plan that meets the project goals and objectives.

Quality Assurance, from this perspective, is carried out through review or auditing of Project Delivery Plan-related activities, including the review and monitoring of:

- progress for the entire project for completeness and ability to meet the defined goals and objectives.
- progress for the entire project for impact on operations and ability to meet the defined goals and objectives.
- project performance measures.

The Quality Plan identifies specific review and audit requirements. The Project Manager and Project Team provide formal quality assurance during the project phases through direct reviews of the reports and designs submitted by Consultants. This includes review of draft documents and staged and final design reviews.

The Project Manager must manage problems identified from the quality reviews. Remedies for deficiencies are addressed in the monitoring and control processes discussed in *PMM Section 7 – Monitoring and Controlling Process Group*.

6.7 Manage Communications

Managing communications is the process of:

- distributing information
- carrying out stakeholder communications
- managing stakeholder expectations

The execution of communications means to follow the detailed Communications Plan in the Project Delivery Plan.

6.7.1 Distribute Information

This process involves carrying out the communications defined in the Project Delivery Plan's Communications Plan. New data is produced continually during project execution, and any relevant data and information must be reported and distributed as identified in the Communication Plan.

6.7.2 How to Manage Consultant Communications

Consultants sell knowledge and confidence with their primary resource being human talent. 70 percent of a Consultant's operational cost is made up of salaries and benefits. The critical operational element in any project is, therefore, to ensure effective use of the Consultant's human resources. This is naturally a management role with the success of the service being a direct function of the Project Manager's involvement. The ability to effectively communicate with the Consultant is therefore a vital element of project success.

Effective communication is the key to project success, and it is also critical in avoiding unnecessary disagreement, and the potential for costly and protracted legal actions that frequently stem from misunderstanding, misinformation, or no information at all.

When dealing with the Consultant, whether 'speaking' or 'sending', it is important to be clear and concise about the message, and to know its purpose which may be to:

1. Give project-related information and objective data.
2. Reveal concerns, opinions, feelings, or subjective data.
3. Initiate action (for example, requests, requirements, commitments, or changes).

The Project Manager and the Consultant should understand that communication effectiveness decreases considerably as communication moves from face-to-face (direct communication), to telephone communication, and again from telephone to written communication. However, each communication mode has its place in continuing coordination, and each must be used appropriately.

Generally, these communication guidelines apply:

- Direct communication during meetings or consultations is useful to address issues, problems, or complex matters; gather ideas interactively; and initiate important actions or decisions.
- Telephone conversations (or conference calls) are useful to solicit information, provide sensitive information, or serve as an urgent substitute for direct communication.
- Written communications, such as memorandums, letters, or reports, are useful to transmit factual information, request formatted information, or provide updates or routine changes confirming discussions and interpretations.

While speaking directly to the Consultant is the most effective means of communication, in a court of law, unwritten evidence may be considered hearsay, and is always considered less reliable than written records. Therefore, maintaining clear and concise business records for every project must be standard operating procedure for every Project Manager. Moreover, these procedures must be designed to build chronological records of a service undertaking from its inception to its conclusion.

While most documentation is the Consultant's responsibility, it is advantageous for the Project Manager to maintain records that clearly identify all decisions, instructions, changes, progress check points, inspection results, and other activities affecting the outcome of the work effort.

The following written records should be maintained for all projects:

- Memoranda of all conferences (i.e.: minutes of meeting)
- Names and addresses of all parties concerned with the project
- List of all data provided to the Consultant
- Copies of all communications to and from the Consultant, to include memoranda of all telephone communication
- Memoranda listing all work products submitted from the Consultant, with date of submittal and date of acceptance and/or approval by the Project Manager

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- Proposed and actual completion dates for each service activity or phase of service production
- Date of submission and approval of drawings and other data required by governmental review and regulatory agencies
- Final construction estimate
- Amounts of all bids and sub-bids
- Date of issuance and return of all documents by Contractors
- Date of approval or acceptance and copies of surety bonds, certificates of insurance, progress schedules, tests, and schedules of values
- Dates and results of shop drawing and sample review
- Copies of certificates for payment and change orders
- Reports from project inspectors and field representatives
- Dates of approval or rejection of work or materials
- Copies of Certificate of Completion, Certificate of Total Performance, and Certificate of Acceptance
- Final construction costs
- Summary of all project service expenses
- Photographs taken before, during, and after construction

Meetings can be productive methods to provide and receive continuing updates of project status; the Project Manager's and Consultant's time is valuable.

The following guidelines are used to help make meetings brief and effective:

- Call meetings only when they facilitate problem-solving, or when direct communication or resolution is required.
- Explain the purpose of the meeting, and have an agenda.
- Identify each item as meant to:
 - (1) provide information,
 - (2) promote discussion, or
 - (3) initiate action.
- Set time estimates or targets for each item on the agenda, as well as for the entire meeting; keep presentations and discussions moving along.
- Agreements, conclusions, and responsibilities resulting from the meeting must be summarized usually after each point (if practical to do so), and also preferably in writing at the end of the meeting by means of minutes, memoranda to file, telephone memoranda, job memoranda, or field memoranda.

6.7.3 Manage Stakeholder Expectations

Managing stakeholder expectations involves planned and unplanned communications with stakeholders to minimize their concerns and influence their expectations. The objective is to increase the likelihood of project success; with communication goals to resolve issues, build trust, increase buy-in, and overcome resistance to change.

Sensitive unplanned communications may be needed. Undertaken directly by the Project Manager or coordinated through the Project Manager these include communication with:

- Regulatory or permitting authorities
- Stakeholders, for education, information, and input
- The public, for general communications
- The media
- Any special protocols as identified in the Project Delivery Plan's Communication Plan for the type of communication must be followed.

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